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CONNECTION

NEW ENGLAND'S JOURNAL
OF HIGHER EDUCATION AND ECONOMIC DEVELOPMENT
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NEW ENGLAND WORKS

CONNECTION
NEW ENGLAND'S JOURNAL
OF HIGHER EDUCATION AND ECONOMIC DEVELOPMENT

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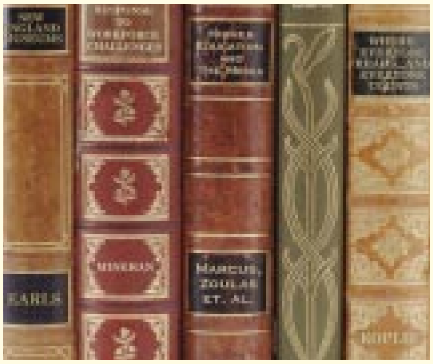

COVER STORIES

COMMENTARY

DEPARTMENTS

CONNECTION

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OF HIGHER EDUCATION AND ECONOMIC DEVELOPMENT

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The **New England Board of Higher Education** is a nonprofit, congressionally authorized, interstate agency whose mission is to foster cooperation and the efficient use of resources among New England's approximately 260 colleges and universities. NEBHE was established by the New England Higher Education Compact, a 1955 agreement among the states of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont.

Chair: David C. Knapp, President-Emeritus, University of Massachusetts

President: John C. Hoy

EDITOR'S MEMO

A Washington State University grad with a cannon for an arm is not exactly the kind of skilled worker CONNECTION has obsessed about during its decade-plus of exploring the New England higher education-economic development nexus. But the press-time blowup over Drew Bledsoe and the New England Patriots possibly moving from Foxborough, Mass., to Hartford, Conn., could hardly be more relevant to our region-minded readers for what it says about the State of New England at the end of the 20th century.

Football fans in Greater Boston have reacted as if their Pats were being seduced by some sun-drenched upstart like Charlotte or Orlando, bent on sneaking away with the spirit of New England Sunday afternoons as surely as they once snagged New England manufacturing companies and, more recently, New England college students and research prowess.

In actuality, of course, Hartford lies north of the 41st parallel and west of the 72nd meridian—very much in New England. What's particularly odd is that when New England's prized edge in brainpower really did migrate to newer, warmer places, nary a peep was heard. Certainly, there was no broad-based call for state legislatures to keep students or research here by improving upon their generally last-in-the-nation record on funding both public higher education and university research and development (R&D).

The Southern Regional Education Board (SREB) recently released a study showing how the South had improved by virtually every educational measure—to say nothing of professional sports franchises—since Franklin Roosevelt declared Dixie to be "the nation's No. 1 economic problem." Nearly half the growth in U.S. college enrollment during the past decade occurred in the South—this, while New England enrollment plunged from 825,000 to about 795,000. And between 1993 and 1996, up-and-coming universities in the South increased their R&D expenditures by 17 percent to more than $4.2 billion, while New England university research spending rose by just 6 percent to $1.9 billion.

How is it that the South is rising again? "There is an uncommon sense of being Southern and working together to solve problems," reports the SREB.

Which brings us back to the state of Connecticut's offer to build the Patriots (and the would-be big time University of Connecticut Huskies football team) a $375 million stadium in Hartford. The latest evidence of that other full-contact New England pastime where the object is to lure businesses away from your neighbors, the offer comes one year after Rhode Island dangled a stadium deal in front of the Pats. Never mind that the return on Connecticut's investment is expected to be small and many years away. States have used tax dollars to attract or keep more dubious businesses.

Culturally, the whole Pats deal was testing the "New Englandness" of Greater Boston sports fans, who had only recently watched their Red Sox drop the ball on peerless hitter and community supporter (and Connecticut native) Mo Vaughn. Sure, Bostonians are willing to trek to Vermont's ski slopes, for not since Bill Parcells left town have fans felt they could move mountains. But why, they ask, would the Pats coax them to the very spot where traffic bottles up on the way to New York?

Some of the regional dysfunction at work in the Pats deal will be clarified by a New England Board of Higher Education (NEBHE) survey that we told you about briefly in the Summer 1998 issue of CONNECTION. As part of its New England Public Policy Collaborative, NEBHE mailed the *1998 Future of New England Survey* to about 6,000 New England "opinion leaders" including college presidents, think tank directors and elected officials, to find out what they think makes New England a region and what challenges it faces.

In early February 1999, NEBHE will host the second annual *New England Agenda* conference in Boston to explore the survey results, and an upcoming issue of CONNECTION will feature analysis of the findings by thoughtful New Englanders.

Notably, one idea raised at the first *New England Agenda* conference was the possibility of a joint New England effort to land the Olympics. Just imagine those planning discussions!

***John O. Harney** is executive editor of* CONNECTION.

Sticker Shock

America's most expensive public colleges and universities are found in the same region as the nation's priciest private institutions: New England.

The region's public four-year institutions charged state residents $4,635 in average tuition and mandatory fees in 1998-99, compared with a national figure of $3,243, according to the College Board's most recent national survey of college charges.

New England's private four-year institutions, meanwhile, charged average annual tuition and mandatory fees of $19,211 for full-time undergraduates, compared with a national average of $14,508.

The lowest rates were reported in the Southwest, where tuition this year averaged $10,701 at private four-year institutions and $2,526 at public four-year institutions.

Nationally, private four-year institutions hiked tuition this fall by 5 percent on average, according to the College Board, while public institutions and private two-year colleges reported increases averaging 4 percent—about three times the rate of inflation.

The College Board also reported that student aid from federal, state, institutional and other sources reached $60 billion nationally, fueled by continued growth in federal student loans, which account for well over half of all aid.

Sans Castle

As the number of New England 18-year olds dropped steadily through the 1980s and early '90s, enrollment at the region's 260 colleges and universities slid too—from well over 825,000 at the high point to about 795,000 in 1996.

Though dire warnings about a wave of college closings seem now to have been overstated, a handful of higher education institutions have fallen victim to the demographic squeeze. The latest is Castle College, which announced it will close in May 1999 due to declining enrollment.

The New Hampshire Sisters of Mercy opened the Windham, N.H., college in 1963 as the Castle Secretarial School. Ten years later, the college won approval to grant associate degrees and was renamed Castle Junior College. Castle shed "junior" from its name in 1991, though it remained a two-year college.

Last summer, dwindling enrollment also shut down the tiny college-level program at Mount Sacred Heart College, a Catholic women's school in Hamden, Conn.

The latest national demographic studies by the Western Interstate Commission for Higher Education and the College Board show that New England is not out of the woods.

By the year 2012, the number of high school graduates will grow by 31 percent in the West and 23 percent in the South, but by just 17 percent in the Northeast, according to projections. And Maine is among the half-dozen states where the number of new high school graduates will actually decrease by 2012.

Community College Boom

New England's community colleges are experiencing something of a building boom.

In Danvers, Mass., North Shore Community College is building a three-story multipurpose facility that will house up to 30 classrooms, lecture halls, a library, cafeteria and day care center, and allow the college to close its Beverly campus.

Connecticut's Community-Technical College Board of Trustees, meanwhile, adopted a five-year capital plan, which includes construction projects at eight community-technical college campuses between 1999 and 2004.

Foreign Talent

Foreign-born workers accounted for 86 percent of New England labor force growth from 1986 to 1996, compared with 35 percent nationally, according to a new study by Northeastern University's Center for Labor Market Research.

In fact, the workforces of Massachusetts, Connecticut and Rhode Island would have shrunk during the past decade were it not for the influx of foreign workers.

High-tech executives want access to still more foreign workers to fill skilled jobs and, according to labor officials, to keep a lid on wages. Congress has obliged, passing a bill allowing more highly skilled foreign workers to enter the United States to fill technical jobs. The law raises the limit on the skilled foreign professionals from the current 65,000 per year to 115,000 during 1999 and the year 2000, then 107,500 in 2001, and back to 65,000 in fiscal 2002.

The new law charges employers a fee for each foreign worker hired and sets aside the revenue to fund job training and math and science programs for low-income, native-born students. The law also requires certain companies with large complements of skilled foreign workers to show they have not replaced U.S. workers, though employers who violate the latter provision will not be required to give workers their jobs back.

The Center for Labor Market Research reports that foreign immigrants to New England tend to have more schooling than their counterparts who settle in other parts of the country and more than their predecessors who came to the region.

While many immigrants have very little education, fully 36 percent of those who came to Massachusetts between 1985 and 1996, for example, had bachelor's degrees.

Paul E. Harrington, associate director of the Center for Labor Market Research, says the easing of immigration restrictions puts New England colleges in direct competition with overseas institutions.

"We've already seen the globalization of product markets. Now we're seeing the globalization of the market for higher-end labor," says Harrington.

"Employers are shipping jobs overseas and finding new sources of labor, particularly engineers and scientists, to bring here," he says. "They'll build relationships with overseas institutions, which will be in competition with American institutions."

Coming to New England

The Southern Growth Policies Board recently noted that the mix of immigrant children and workers in some states will influence the demand for language and cultural training programs tailored to both newcomers and native-born residents.

Of the more than 915,000 immigrants admitted to the United States in 1996, about 40,000 intended to settle in New England, according to the U.S. Immigration and Naturalization Service.

Mexico is by far the largest source of immigrants to the United States, followed by the Philippines, India, Vietnam and the People's Republic of China.

But the New England immigration pattern is different. Not surprisingly, immigration from Canada is a bigger factor in the region, while immigration from Mexico is less important; indeed, nearly two-thirds of the 163,000 Mexican immigrants admitted to the United States in 1996 planned to live in California or Texas.

The top three countries of origin among immigrants who intended to settle in New England were as follows:

- **Connecticut** Jamaica, Poland, India
- **Maine** Canada, People's Republic of China, Vietnam
- **Massachusetts** Dominican Republic, People's Republic of China, Vietnam
- **New Hampshire** Vietnam, Canada, People's Republic of China
- **Rhode Island** Dominican Republic, Colombia, Guatemala
- **Vermont** Canada, Yugoslavia, Vietnam

Hot Hubs II

Eight years ago, CONNECTION explored an assortment of old cities, planned technology parks and college towns that seemed to "have what it takes to be centers of New England's competitiveness in the '90s." Some of these "Hot Hubs"—as we dubbed them—were cooled down by the region's deep recession at the start of the decade; others are indeed thriving.

Updating the question we posed back then: Which hubs might historians someday associate with the New England economy of the early 21st century?

A few candidates:

Everett-Malden-Medford, Mass. A $750 million project planned for 200 acres straddling the close-in Boston suburbs of Everett, Malden and Medford aims to boost development of the Bay State's already formidable telecommunications industry. U.S. Rep. Edward Markey of Malden has secured federal funding for infrastructure improvements in so-called Telecom City, and state legislators have pushed a system of special tax breaks for companies that locate in the area. Several area universities have agreed to play roles in product commercialization and workforce training, while industry heavyweights such as Bell Atlantic have funded a "lifelong skills center" to study local workforce issues.

Hartford, Conn. One of America's poorest cities has new hope. The main catalyst is Trinity College, which has developed a package of public and private initiatives that will invest close to $200 million in the capital city's impoverished neighborhoods and, in the process, create a model for economic revitalization. The plan includes three new schools; new home ownership opportunities; a new science and technology center; recreational, cultural and support facilities for the city's children, families and communities; and retail and business incubation opportunities. The city also has state and federal money to revitalize its riverfront and has wooed the New England Patriots football team.

Providence, R.I. The monumental rerouting of rivers, flourishing arts scene, controversial upscale shopping mall and flamboyant mayor are all part of the new mystique that has national commentators talking up Rhode Island's resurgent capital city. But any serious accounting of the city's success begins with its concentration of colleges and universities. Brown University, Providence College, Johnson & Wales University, Rhode Island College and the Rhode Island School of Design enroll more than 30,000 full- and part-time students, while the University of Rhode Island offers continuing education in a former downtown department store. Moreover, the colleges work together—through the Health & Education Leadership for Providence (HELP) coalition—and individually on a variety of programs designed specifically to reinvent a city once known mostly for its organized crime and declining industries.

College Town Blues

Town-gown relations in the region's largest city are showing signs of strain. The key stress point is the college student population's tendency to put upward pressure on rents.

In October, Shirley Kressel, president of the Alliance of Boston Neighborhoods, noted in a letter to the weekly *Boston Business Journal* that heavy concentrations of college students have led to displacement of established families in certain Boston neighborhoods such as Fenway/Kenmore (where college students represent 63 percent of the population) and Brighton (where they represent 27 percent).

"The market is distorted, as rents are inflated by co-rooming students," wrote Kressel. "Buildings suitable for students soar in price, while others lose value as the neighborhood starts 'tipping.'"

Boston City Councilor and congressional candidate Thomas M. Keane Jr., meanwhile, proposed that the federal government push colleges to house their students on campus as part of a plan to make housing more affordable.

The upward pressure on rents is not the only scourge brought by students, according to Kressel. They also attract "downmarket" businesses and rob neighborhoods of political influence. "Campaign volunteers canvassing for votes find endless pages of phone numbers leading to departed addressees or non-registered transients," observed Kressel. "Crowds for public meetings and signatures for petitions are hard to gather because so many afflicted residents have moved away."

A Family-Friendly Future?

Two national magazines recently lauded New England's child care champions and family-friendly companies.

Parents magazine inaugurated a Child Care Awards program to recognize America's best child care providers and champions. Four of the seven first-year winners are New England-based.

They are: Wheelock College in Boston for its focus on preparing graduates for careers in preschool education; U.S. Sen. Christopher Dodd of Connecticut for his family-friendly legislative efforts in Washington; New Hampshire day-care center founder Kathy Aubin for the success of the Little Angels Learning Centre in Hooksett; and Yale University child care advocate Edward Zigler for his efforts to create child-care facilities in schools.

Meanwhile, *Working Mother* magazine's "100 Best Companies for Working Mothers" for 1998 in terms of pay, advancement, child care, flexibility and family friendly benefits includes 13 New England-headquartered companies.

They are: Aetna Inc. (Hartford, Conn.); Beth Israel Deaconess Medical Center (Boston); Deloitte & Touche (Wilton, Conn.); Hill, Holliday, Connors, Cosmopulos Inc. (Boston); Lotus Development (Cambridge, Mass.); MassMutual (Springfield, Mass.); Millipore Corp. (Bedford, Mass.); Phoenix Home Life Mutual Insurance Co. (Hartford, Conn.); Southern New England Telecommunications (New Haven, Conn.); The Stride Rite Corp. (Lexington, Mass.); Tom's of Maine Inc. (Kennebunk, Maine); Unum Life Insurance Co. of America (Portland, Maine); and Xerox Corp. (Stamford, Conn.).

But does the flexibility reflect permanently changed employer attitudes or temporarily good economic times?

At a recent forum on workforce issues, Lynn Browne, senior vice president at the Federal Reserve Bank of Boston, suggested that an economic downturn could affect the labor market's treatment of people with special circumstances—among them, workers with child care needs.

Comings and Goings

Jean A. Scott became president of Bradford College, succeeding **Joseph Short.**

Debra M. Murphy, former dean of academic affairs at Nichols College, became the first woman president of Nichols, succeeding **James J. Darazsdi**, a former food processing executive who assumed the post in 1996.

Kathleen "Casey" Crabill, former dean of learning and student development at Quinebaug Valley Community-Technical College, became acting president of Gateway Community-Technical College, succeeding **Diana Van Der Ploeg**, who resigned during the summer.

Warren Simmons, executive director of the Philadelphia Education Fund, became director of the Annenberg Institute for School Reform at Brown University, succeeding **Theodore Sizer**, who retired in 1996.

John K. Bullard, former mayor of New Bedford, Mass., became executive director of the Family Business Center at the University of Massachusetts Dartmouth.

College Board President **Donald M. Stewart** announced he would resign in September 1999 and spend the 1999-2000 academic year as a visiting scholar at Harvard University's Kennedy School of Government. Stewart has been president of the College Board since 1987.

Clayton Spencer, former chief education counsel to the U.S. Senate Committee on Labor and Human Resources, was named to the new post of associate vice president for higher education policy at Harvard.

Sr. Janice E. Ryan, former president of Trinity College of Vermont, was named Vermont education director for U.S. Sen. James M. Jeffords, who chairs the Labor and Human Resources Committee.

L E T T E R S

To the Editor:

I was very pleased to see how much attention the Summer 1998 issue of CONNECTION devoted to arts education. Authors Hoy, Feinsod, Coleman, Sloan, Freeman and Sproll all make considered arguments that underscore the importance of arts in learning, professional practice and community life. I was very gratified to see you give readers such thoughtful material about this subject.

Unfortunately, the overall excellence of your information made a few inaccuracies all the more noticeable. Specifically, the current national per-capita investment is quoted as 82 cents. Actually, that figure is for 1992. The 1998 per-capita arts investment for all states is up to $1.13. It remains true that the New England per-capita investment is proportionately larger [$1.55] than the national aggregate, but the national baseline is now much higher.

Furthermore, Hoy writes that "As federal arts funding has suffered from political attacks, state arts funding has been buffeted by recession." This statement is sandwiched between comments about the shrinking National Endowment for the Arts budget and the negative effects of the recession on state art dollars. Read in context, Hoy's comments give readers a misleading sense of overall decline in the arts funding environment, masking the fact that nationwide state-level arts funding has enjoyed a remarkable ascendance in the last six years.

Although both state cuts and federal cuts certainly did happen in significant magnitude, they didn't happen simultaneously. State funding took large hits in 1992 and 1993—years when federal arts funding was at an all-time high. Similarly, state arts support achieved an all-time high of more than $304 million in 1998, just as federal funding hit a 22-year low.

The numbers don't really allow one to imply any sort of relationship between state and federal arts funding trends nor do they support the characterization of overall arts funding being "in a precarious position."

Marked differences among states within any given region add further complexity. Hoy is quite correct in attributing most of the New England decline to the precipitous drop in Massachusetts state funding in the early 1990s. But characterizing arts appropriations as experiencing "gradual improvement since then" is perhaps another oversimplification. Connecticut and New Hampshire posted all-time high state arts appropriations in fiscal 1998, and Massachusetts itself increased state arts funding by 140 percent between 1993 and 1998.

CONNECTION'S coverage of the arts is, on balance, superb and full of helpful and accurate information. The National Assembly of State Arts Agencies applauds the journal's clear-sighted positioning of the arts as an educational, economic, civic and creative asset.

Kelly Barsdate
Information Services Director
National Assembly of State Arts Agencies

Hoy responds: *The National Assembly of State Arts Agencies' optimism about state arts funding is understandable in light of the increased investment in arts at statehouses across the nation. But as is often the case, the regional picture is quite different from the national one. Indeed, just two New England states—Connecticut and New Hampshire—invested as much per-capita in the arts in 1998 as they did in 1990, according to data supplied by the assembly. In the other four states, the economic recovery has not yet been long enough or robust enough to bring arts funding all the way up from its recession-era depths.*

To the Editor:

I was very pleased to read the Summer 1998 issue of CONNECTION, with its emphasis on the importance of fine arts in society and in higher education.

The articles contained in the issue go a long way in cogently developing not only the importance of arts education, but also the role the arts play in the total college curriculum and the need for arts knowledge and understanding in maintaining our social fabric.

CONNECTION is an important voice for New England higher education, and it's nice to see the publication giving the arts prominent attention.

William F. O'Neil
Executive Officer
State Colleges of Massachusetts College of Presidents

Sven Groennings

1934-1998

The New England higher education community mourns the loss of Sven Groennings who passed away on Aug. 1, 1998, after a nine-month illness. Colleague, scholar, visionary and much more, Sven will be remembered for his warmth, sense of humor and enthusiasm as well as his distinguished thinking, writing and speaking.

Sven's first contact with the New England Board of Higher Education (NEBHE) occurred in 1983 when, under his stewardship, the U.S. Department of Education's Fund for the Improvement of Postsecondary Education (FIPSE) awarded a multiyear grant to NEBHE to support an "educate the lawmakers" program for New England's more than 1,300 state legislators. The three-year project—lauded by the *Christian Science Monitor* as a model for the nation—increased legislators' understanding of the significance of higher education to the region's economy.

Following his 1981-1985 tour at FIPSE, Sven joined NEBHE as a senior fellow and director of the board's newly launched study of higher education in the emerging global economy. While at NEBHE, Sven published two far-reaching papers: *Economic Competitiveness and International Knowledge* (New England Board of Higher Education, October 1987) and *The Impact of Economic Globalization on Higher Education* (New England Board of Higher Education, December 1987). These papers conceptualized and delineated the interrelationships among economic change, global competitiveness and international knowledge.

Based on Sven's penetrating analysis of the internationalization of New England's economy and the issues it raised for higher education, NEBHE received a grant from AT&T to conduct a series of special policy briefings for the region's six state legislatures on the connection between economic competitiveness and international knowledge.

Sven also authored four articles for CONNECTION while at NEBHE. The topics of those articles ranged from international knowledge to education reform.

Sven's distinguished 35-year career included service as a U.S. State Department officer, political science professor, U.S. senator's chief of staff and vice chair of the International Partnership for Service-Learning, a New York-based initiative combining college study and volunteer service.

During the 1990s, he served in a series of administrative and advisory positions, including vice president for education at American Express, provost and vice president for academic affairs at Governors State University in Illinois and vice president for the Bell School Reform Network. He was also a member of the Clinton administration transition team's advisory education council.

Sven was the author or editor of four books: *The Study of Coalition Behavior*, *Scandinavia in Social Science Literature*, *To Be a Congressman* (co-authored with Jon Hawley), and *Group Portrait: Internationalizing the Disciplines*.

A scholarship fund has been established in Sven's name at the International Partnership for Service-Learning. The scholarship awards will enable students from the United States and abroad to participate in programs that combine academic study with planned volunteer service. Scholarship winners will also receive a collection of Sven's articles, so they will know about the depth of his work and his leadership in providing a clear vision across the field of international education.

Sven is survived by his wife Suzanne, his son Kai and daughter Kristina.

—Melvin H. Bernstein,
NEBHE Senior Fellow

DATA CONNECTION

- Percentage of Yale University's Class of 2002 freshmen who attended private or parochial schools: **47%**
- Percentage of the class who have a parent who attended Yale: **13%**
- Percentage of the class whose parents do not have a college education: **8%**
- Ratio of degrees from private colleges to degrees from public colleges held by major candidates for governor in New England, November 1998: **5-to-2**
- Percentage of Americans who believe a four-year college education is "usually" worth the price: **59%**
- Percentage who think an American automobile is: **27%**
- Percentage of college students who have at least one credit card: **64%**
- Percentage of those students who have used their credit cards to pay college tuition and fees: **19%**
- Percentage change in freshman engineering enrollment among whites between 1992-93 and 1997-98: **-3%**
- Percentage change in freshman engineering enrollment among African-Americans during the same period: **-17%**
- Number of New England colleges among U.S. top 50 in minority freshman engineering enrollment: **0**
- Number of African-Americans among *The Improper Bostonian* newspaper's 40 "most influential Bostonians in Netspace": **0**
- Number of women: **5**
- Percentage of Massachusetts African-Americans who say they have a "great deal" of confidence in business: **24%**
- Percentage of Massachusetts whites who say they do: **46%**
- Percentage of Massachusetts African-Americans who say they have a "great deal" of confidence in public schools: **24%**
- Percentage of Massachusetts whites who say they do: **49%**
- Number of New England colleges among *Mother Jones* magazine's "Top 10 Activist Schools" for 1998: **2**
- National rank of Boston University in reported lobbying expenses: **1**
- Chance that one of Massachusetts' 25 largest manufacturers is headquartered out-of-state or owned by an out-of-state parent company: **1 in 3**
- Chance that one of Massachusetts' 25 largest engineering firms is headquartered out-of-state or owned by an out-of-state parent company: **1 in 3**
- Percentage of 1997 overseas visitors to Massachusetts (excluding visitors from Canada and Mexico) who came from Western Europe: **66%**
- Percentage from the Far East: **16%**
- Percentage from South America: **8%**
- Percentage of 1997 U.S. visitors to Massachusetts who came from other New England states: **27%**
- Unemployment rate in Quebec, August 1998: **10.5%**
- Unemployment rate in New Hampshire, August 1998: **2.1%**
- Percentage of New Hampshire men who thought New Hampshire was headed down the wrong track as of September 1998: **30%**
- Percentage of New Hampshire women who thought so: **8%**
- Chance that a Providence, R.I., preschooler has elevated blood lead levels: **1 in 3**

Sources: 1,2,3 Yale University; 4 NEBHE analysis of *Chronicle of Higher Education* data, 5,6 American Council on Education; 7,8 The Education Resources Institute and The Institute for Higher Education Policy; 9,10,11 National Action Council for Minorities in Engineering; 12,13 NEBHE analysis of *The Improper Bostonian* data; 14,15,16,17 John W. McCormack Institute of Public Affairs, University of Massachusetts Boston; 18 NEBHE analysis of *Mother Jones* data (the two are #5 Roxbury Community College and #6 College of the Atlantic); 19 *Chronicle of Higher Education* survey; 20,21 NEBHE analysis of *Boston Business Journal* data; 22,23,24,25 Greater Boston Convention & Visitors Bureau; 26 Province of Quebec; 27 Bureau of Labor Statistics; 28,29 University of New Hampshire; 30 Health & Education Leadership for Providence

The Skilled Worker Crunch

John C. Hoy

It's crunch time again in New England's skilled labor markets, and the implications for higher education in the region are profound. Or at least, they should be.

At a recent budget hearing in Concord, N.H., University System of New Hampshire Chancellor William Farrell summed up the situation well: "Today, every state in New England faces a crisis in workforce development," he said. "We have an aging population and limited growth in the number of young educated citizens. As a result, there is fierce competition among the states in the region to keep their college-age students at home and to attract out-of-state students, because they know those who stay and those who come are likely to remain."

Farrell went on to warn that his state is "not making the investment our southern neighbors are in trying to build an educated workforce—so critical to the future economic well-being of any state." A similar warning was sounded by economists, college presidents and legislators who gathered at a recent New England Board of Higher Education conference on the condition of the region's skilled workforce.

The speakers made it plain that as job growth outpaces labor force growth across New England, the region's economy is headed for trouble.

Asked to sum up New England's immediate challenge, William A. McEachern, economics professor at the University of Connecticut, warned, "We're running out of people."

Echoing an argument made by New England economist Jim Howell during the region's last economic boom, McEachern noted that economic activity percolates around good ideas, resulting in the creation of industrial "clusters" such as Route 128, Silicon Valley and Hollywood. Those clusters—Howell calls them agglomerations—come about where the following are present: an existing base of high-technology companies; specialized businesses such as law and consulting firms that serve the cluster; a trained labor force, including graduates of community colleges and four-year-colleges; quality university research and development labs; venture capital; and importantly, cultural amenities because, as McEachern notes, "smart people are drawn to an area where there's stuff to do."

Asked whether desperate employers might go after fresh high school graduates to fill jobs, McEachern explained that high school graduates are increasingly aware of the earnings premium associated with going to college: "They know there's a plum out there."

Still, the market is tight indeed. With only the faintest hyperbole, Patricia M. Flynn, dean of the Bentley College Graduate School of Business, told colleagues: "If we let our students have lunch with a recruiter, they won't come back."

Flynn suggested that New England companies work more closely with the region's colleges to encourage graduates to stay in the region after they complete degrees.

Lynn E. Browne, senior vice president at the Federal Reserve Bank of Boston, observed that the skills shortage should come as no surprise considering how low unemployment rates have been. What's unusual, according to Browne, is that labor markets are tight all over the country and shortages exist among virtually all kinds of workers.

A good deal of the workforce dilemma, of course, is a higher education dilemma.

Though New England generally leads the nation in educational attainment, the percentage of the total population age 25 and over who have bachelor's degrees or more varies significantly within New England from 27 percent in Connecticut and Massachusetts to just 19 percent in Maine. Moreover, New England's share of bachelor's degrees granted has fallen from nearly 8 percent at the start of this decade to under 7 percent, due mostly to the region's slow population growth. And though New England continues to draw a disproportionate share of the foreign college students who travel to America, Browne questioned whether foreign students are as likely as native ones to stay in the region upon graduation.

Robert L. Woodbury, director of the McCormack Institute of Public Affairs at the University of Massachusetts Boston, noted that college tuition is growing faster than incomes, and a recession would aggravate the situation, because the No. 1 target for cutbacks when recession hits is public higher education.

Nellie Mae President Larry O'Toole advocated federal tax incentives for employers to offer student loan repayment to their employees as part of flexible benefit plans. He said the tax incentive would be revenue-neutral because the loan repayment benefit would be traded off against other tax-favored benefits that younger employees don't need at this point in their lives.

Beyond costs, higher education faces new predicaments such as the backlash against growing remedial education in state colleges.

Andrew G. De Rocco, commissioner of the Connecticut Department of Higher Education, quipped that extra help in algebra, for example, might be called (disparagingly) "remediation" for one student and "workforce development" for another.

Andrew M. Scibelli, president of Springfield Technical Community College, noted that while college programs in fields such as telecommunications are thriving, many high school graduates are inadequately prepared in science or math to pursue these fields.

University of Southern Maine President Richard Pattenaude noted that 1,000 Maine residents moving from welfare to work enrolled in the UMaine System last year under Maine's (sad to say, unusual) program that allows recipients to attend college without sacrificing benefits.

New Hampshire state Rep. William Belvin argued that no specific academic major prepares people for contemporary skills. The highly skilled technical workers at one successful Route 128 high-tech firm, said Belvin, boast degrees in business, history, English, music and a wide range of other liberal arts majors.

De Rocco wondered if "employability" should become a more important notion than "employment."

By day's end, it was clear that as the skills crunch continues, New England will face tough questions about higher education. Who will have the answers?

John C. Hoy *is president of the New England Board of Higher Education and publisher of* CONNECTION.

Reinventing New England's Response to Workforce Challenges

Cathy E. Minehan

No issue is more critical to New England's growth than the quality of the region's workforce. New England has a tradition of prospering not because of its raw materials, which are less abundant than those of other regions, but because of its stock of skilled entrepreneurial workers. With the advent of the "knowledge" economy of the 1990s and the new century, this regional advantage can only become more important.

New England's prosperity has depended upon the region's success in providing education to those whose occupations involve "thinking for a living." Now, and for the foreseeable future, prosperity will depend on providing access to thinking skills for a wider group of the population.

During the summer, unemployment rates in New England hit record lows, and we began to hear that businesses could expand even faster if only more skilled workers were available.

To be sure, things hadn't developed into a bubble situation as in the late 1980s when the loss of manufacturing jobs was completely obscured by the growth in construction employment, and overbuilding sowed the seeds of the difficult recession to come in the early 1990s. No, New England job growth this time around has occurred in a broad range of service, construction and even some manufacturing industries. The region has been healthy because of its diversity, but it also has been straining to bring in the skills needed to keep its industries competitive.

More recently, however, the prospects for continued strong growth, both nationally and regionally, seem challenged. International currency and debt crises threaten New England's export businesses, and surveys show that business confidence, especially among manufacturers, has declined. Credit spreads have widened, posing the threat of a reduction in business financing.

This is not to say all is doom and gloom. The U.S. and New England economies remain sound. In the aggregate, they have been operating beyond most estimates of potential for some time. A cooling breeze was needed, but the risk that this breeze could turn into something stronger seemed to grow a bit with the arrival of fall.

So what does this increased risk of slower growth mean for New England's workforce? Does it mean that supply will come back into balance with demand? Or does it mean that we must work even harder to ensure that the quality of the region's workforce meets current and future needs? I would argue the latter.

In the economy of the past, slowing growth or recessions meant job destruction surpassed job creation in the aggregate, and unemployment rose. As growth picked up, however, job creation dominated and the unemployed returned to work, often to the same jobs in the same industries. In the new knowledge-based economy, however, the combination of competitive pressures and technological change means that the worker whose job is destroyed in a downturn may not

Illustrations by Russell Brennen, The Publication Group

find that job re-created or his service needed when growth picks up. New England's job markets are going through more than "cyclical buffeting." They are experiencing significant structural change.

In the new knowledge-based economy, the combination of competitive pressures and technological change means that the worker whose job is destroyed in a downturn may not find that job re-created or his service needed when growth picks up.

In every sector, from manufacturing to services to construction, businesses have to be smarter, more technically proficient, more efficient and more effective at what they do. They cannot afford to retain the workers of the past during a downturn or to rehire them when strong growth resumes. Rather, the premium on high skills will grow no matter where we are in the business cycle. Thus, the challenge to workforce development remains and even grows, particularly as the last to be hired in the current economy—the unskilled and those coming off welfare—are likely to be the first affected by slowing growth. The skill development needs of these and other workers will be extensive, but we must find a way to meet those needs if we are to be successful both economically and socially.

New England boasts an enormous array of world-class colleges and universities and, in every state, considerable resources are focused on improving elementary and secondary education. Also in every state, there is concern about the ability of public education to meet the standards needed in the workplace. Moreover, there is a sense that segments of the working-age population remain disconnected from both education and the working world—even as skilled workers are becoming increasingly important.

How can New England ensure that the educational opportunities on its doorstep work to the advantage of New England residents and businesses? That is the heart of the workforce development challenge.

Connecting education and work

A program I have become familiar with as chair of the Boston Private Industry Council has elements that might be useful in broader workforce development. The School-to-Career effort sponsored by the Private Industry Council for the past five years or so links the classroom with internships in specific business areas—medical technology or financial services, for example—and redesigns the high school curriculum to take advantage of these real-world learning experiences. Students learn the relevance of, say, biology or geometry in a much more hands-on way when they see in the workplace what they've learned in class.

Many Boston high schools are now creating smaller learning communities within the large district high schools and calling them "career pathways." This naturally leads to increased attention on the individual student. Teachers also become aware of workplace needs—often through summer programs and on-site visits—and can adjust curricula to the standards of employers. And the interdisciplinary knowledge required for success in the workplace encourages teachers to work in teams. Supervisors in the workplace play a key role, and so the School-to-Career initiative has expanded to provide evaluation tools to help them as well.

School-to-Career efforts are not cheap. The Private Industry Council employs 40 to 50 staffers whose job is to ensure that the connection between the school, the student and the employer is strong and beneficial to all.

But the program does succeed in creating a more highly skilled workforce. How do we know? Take the case of the New England Medical Center, which over the past several years has employed more than 50 School-to-Career students in various technical jobs. All these students—without exception—have gone on to college or university training. They are mostly minority, inner-city students from Boston public high schools. During the same period, their peers had less than a 50 percent rate of post- high school education.

School-to-Career lends relevance to the educational experience and responds to the need among many students to have a hands-on experience as well as an intellectual one.

The New England Medical Center students have seen the connection between education and work—and have realized that higher skills equate with better jobs and higher income. Additional statistical evidence shows that School-to-Career students are absent less frequently and get better grades than their peers, and at least hold their own on the challenging new standardized tests being introduced into the Boston Public Schools. The program was intended to involve a large concentration of Hispanic and African-American students, and more recently has attracted many Asian applicants. It seems that word has gotten around that School-to-Career is also the way from school to higher education.

A relevant experience

Some would argue that School-to-Career runs a risk of "dumbing down" the high school experience by focusing on technical education rather than the liberal arts. But I believe that School-to-Career lends relevance to the educational experience and responds to the need among many students to have a hands-on experience as well as an intellectual one. Moreover, the income earned in the process is a powerful incentive as well; employers will not keep a student on if he or she is not learning and performing on the job.

How is the School-to-Career program pertinent to the broader consideration of higher education and workforce development?

The thinking, writing and analytical skills developed in a liberal arts curriculum can be enhanced, not diminished, by application in the world of work.

Both high school *and* college students would benefit from a closer linkage between the classroom and the workplace—and not just at the community college level, but in New England's more renowned houses of learning as well. The application of lessons learned in the workplace lends relevance and direction to college education.

How many parents bemoan the return of college graduates to the home with no clear sense of career direction? How many employers find recent college graduates relatively clueless on how to apply their education to solving the challenges of the modern workplace? And how many students who must work to pay the increasing cost of a college education would be far better off if that work was linked to their educational experience rather than perhaps waiting tables at a local restaurant?

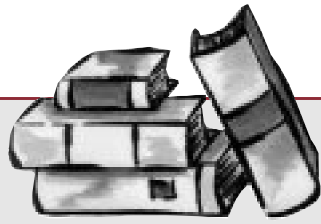
Finally, while I believe deeply in the value of a strong liberal arts education for the undergraduate, the thinking, writing and analytical skills developed in a liberal arts curriculum can be enhanced, not diminished, by application in the world of work.

To better prepare the New England workforce of the future, higher education must be more open to applied learning strategies in the college classroom and to extending the classroom to the workplace and the community.

This could be pursued proactively in several ways. First, colleges and universities could be urged to give positive recognition to applicants' School-to-Career activities and other work-based learning as part of the admissions process. Second, schools of education could train new teachers in the use of the workplace as a learning experience. And finally, professors could be urged to visit workplaces to develop lessons for the college classroom and strategies to extend teaching to the workplace.

Business cycles are a fact of life. But the need to increase the quality and quantity of New England's workforce will remain—and indeed become more important—regardless of where we are in the cycle. If the region is to grow and thrive, we must work to ensure that *all* graduates of New England's high schools and colleges can successfully enter that workforce.

Cathy E. Minehan *is president of the Federal Reserve Bank of Boston. This article is adapted from Minehan's remarks at a New England Board of Higher Education conference on higher education and the workforce, which was held in Boston in October 1998.*



WHERE EVERYONE READS ... AND EVERYONE COUNTS

Stanley Z. Koplik

We all experience education and its outcomes differently, but few would argue with its capacity to change lives. From the founding of our country, education has been a critical means for achieving the so-called American Dream.

Education has never been more essential than it is today. Between 11 percent and 20 percent of the growth in U.S. economic productivity from 1948 to 1990 is attributable to increasing educational attainment, according to the U.S. Department of Education. College attendance has a particularly substantial effect on productivity. Workers who have attended college are between 51 percent and 75 percent more productive than their counterparts who did not attend college, according to the Education Department.

Other research by the nonprofit National Center on the Educational Quality of the Workforce shows that a 10 percent increase in schooling is associated with an 8.6 percent increase in output. Education also improves workers' ability to remain employed or find new jobs quickly, which is particularly crucial in a volatile economic climate.

But what many people think really drives the American Dream is income. The American Association of Community Colleges reports that a graduate with an associate degree can expect to earn an average of $250,000 *more* over his or her lifetime than an individual with a high school diploma only. This "earnings premium" increases with each progressive increment of college achievement.

Role of educators

Today, the call resonates in every state for higher education to be a positive community force, helping create and improve the economic climate and working to develop workforce and human resource assets. Put simply, people want higher education to:

- Increase access so no one who is able and prepared is excluded from participating in education beyond high school.
- Make higher education more affordable so families with the most meager incomes may participate if they desire and are prepared.
- Improve the basic literacy and problem-solving skills of the workforce.
- Improve the technical skills of the workforce, including skills related to computers, electronics and information-gathering.
- Improve the social skills of the workforce, including skills related to teamwork, collaboration and communications.
- Provide a place for business to receive industry-specific and job-related training for employees.

Massachusetts is meeting these challenges. Recently, there has been heated rhetoric about access to and affordability of public higher education. Amidst this furor, the cost of providing higher education—and the price paid by students—has continued to rise. In Massachusetts, however, we recognized a few years ago that public higher education was moving beyond the reach of an increasing number of people. The demographics demanded that we look at our pricing policies and we did. As a result, three years ago, Massachusetts began *lowering* tuition.

This fall, Massachusetts residents whose annual family incomes are below $36,000 may attend a community college at effectively no net cost, thanks to a combination of federal tuition tax credits, Pell grants and substantially increased funding of state financial aid programs. For those families whose annual income exceeds $36,000 but is below $80,000, tuition is a modest $500. Other states can do this too. But it takes a genuine commitment to access and to creating an educated workforce.

Workforce development

At the beginning of this decade, the national Commission on the Skills of the American Workforce warned that postsecondary education was not designed to meet the needs of increasingly important "frontline" workers. The commission asserted that "education is rarely connected to training or to an effective job service function."

Massachusetts community colleges are now making this connection through innovative partnerships with private industry. For example, they are teaming up with Bell Atlantic to offer a degree program in telecommunications technology. Bell Atlantic is providing $8 million for participants' tuition, books, fees and computers.

The community colleges are working with Texas Instruments to provide training not only in technical skills, but also in the social skills people need to be productive in the workforce. Meanwhile, General Motors, Toyota and Chrysler are working with one Massachusetts community college to train automotive service technicians. Indeed, the state's two-year colleges are involved in a host of other workforce partnerships, about half of which are with small businesses and half with companies with familiar names like Raytheon, Crane & Co., and Microsoft.

Importantly, community college presidents are showing their own entrepreneurial skills and willingness to take financial risks in an effort to provide the highest quality training opportunities. Instead of waiting for their ship to come in, entrepreneurial presidents like Middlesex Community College's Carole Cowan are going out and meeting it. For example, Cowan recently embarked on a partnership with a dozen other New England colleges and 20 microchip manufacturers to meet the growing demand for trained semiconductor technicians.

Massachusetts is also working to increase standards to ensure that students get what they are looking for and that we produce graduates with the skills they will need to be successful and productive. We are raising the standards used in training teachers. And we are working to ensure that in Massachusetts, getting an education means gaining the skills and qualifications needed to make a positive economic impact in society, and more importantly, to have a fulfilling and meaningful life.

In no New England state has the problem of illiteracy achieved sufficient political visibility to be attacked in a comprehensive and meaningful way.

Yet all these efforts and accomplishments will be diminished almost to the point of irrelevance if we fail as a society to address a fundamental plague preventing millions of Americans from enjoying success.

A plague

In Massachusetts alone, at least 800,000 adults are functionally illiterate, meaning they cannot read at the fifth-grade level, according to the Massachusetts Institute for a New Commonwealth, a Boston think tank. If you define illiteracy as not being able to read and write at a high school level, the number could climb to 2 million—that's about twice as many people as are currently enrolled in all the state's elementary and secondary schools.

We will never develop a society based on equality if this is allowed to continue. We need to marshal our forces—to declare war on illiteracy. But higher education cannot fight this war alone. It must be fought by government, nonprofits, chambers of commerce, businesses and all organizations that care about economic prosperity, and more importantly, about our social fabric.

Moreover, our elementary and secondary schools must make each year of mandatory schooling really count. If these years are not productive and a student attends school, but fails to achives the required levels of proficiency and attain literacy, then the problem is compounded.

To be sure, no system is perfect, and some residents will fall through the cracks and need additional training. Those individuals should have access to community colleges. These two-year institutions must continue to work to identify these populations and, in an enterepreneurial way, design programs that address their needs. In addition, our communities and local governments must build programs for those who do not possess the English skills or have not received the academic training needed in today's workplace. Finally, businesses must act to upgrade the literacy of their workers, not only to make them more productive in their jobs, but also to make them more able citizens.

Like Carole Cowan and her colleagues, leaders of the business, government and nonprofit sectors must think and act as entrepreneurs if we are to eradicate illiteracy.

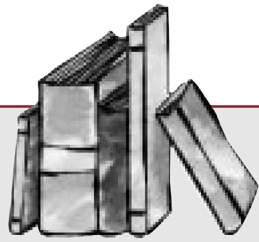
The Massachusetts Family Literacy Consortium has noted that doing so will benefit not only those individuals who cannot now function adequately in the workforce and society, but also the children in the 113,000 families where one or both parents cannot read aloud to them.

Schools will also benefit, because literate parents will have the skills to be more involved in their children's educations and to communicate effectively with teachers and school administrators. Businesses will benefit with more able workers who are better prepared to solve problems, communicate and work in groups. And the broader society will benefit because of the increased social capital that literate individuals bring to a democracy.

The lessons of history are clear. When a society fosters a growing class of disenchanted, disillusioned, disheartened and disgruntled citizens who have no stake in the democratic institutions that drive civic life, the consequences are destructive. Civil outrage and rebellion will rule, and the once-prosperous civilization will cave in on itself.

Regrettably, in no New England state has the problem of illiteracy achieved sufficient political visibility to be attacked in a comprehensive and meaningful way. The New England states—through an organization such as the New England Board of Higher Education—should give serious consideration to declaring an all-out war on illiteracy. What's wrong with living in a region where highway signs and billboards proclaim: "Welcome to New England, where everyone reads … and everyone counts."

Stanley Z. Koplik *is chancellor of the Massachusetts Board of Higher Education. This article is adapted from Koplik's remarks at a New England Board of Higher Education conference on higher education and the workforce, which was held in Boston in October 1998.*



Equity for Student Borrowers

Jane Sjogren

A historically large number of students graduating this past spring from New England colleges and graduate schools faced one more requirement before moving on: the exit interview for their student loans.

These students no doubt think regularly about the significance of their education. Their student loan exit interviews served notice that they would face a very concrete reminder of their investment in higher education when their first loan repayment bill arrived six months later. Most can anticipate monthly reminders for the next 10 years as they repay the loans and interest they accumulated during their college and graduate school years.

Borrowing by students for higher education has increased dramatically. It has increased because more people, especially women and minorities, are investing in higher education; because higher education costs more in real terms than ever before; because it has become easier for students to borrow (due to federal student aid policies which are increasingly based on loans as opposed to grants); and because somehow higher education, in its many guises, has become a *sine qua non* in our society.

Who borrows and how much? More than half of all undergraduates at both public and private institutions take out formal loans for their postsecondary education, usually through the U.S. Department of Education. Average debt in 1995-96 was approximately $12,500 for men and $13,200 for women; students at private schools borrow about 15 percent more than those at publics on average. Students whose family incomes are relatively lower than their peers' are more likely to borrow and borrow more. Blacks and Hispanics are more likely to borrow than whites. And for the first time, women undergraduates are somewhat more likely to borrow than men, especially those who attend private rather than public institutions.

In some sense, equity of access to higher education has been clearly improved by the increased availability of student loan funds. Students whose access to financial capital was limited in the past—women and minorities in particular—now have a much better chance of going to college and being able to choose the educational institution which best suits them. And it can be reasonably argued that having these students bear some of the costs of their higher education by repaying loans is appropriate. After all, students reap much of the reward from their educational investment and, with a college education, they are better able help their families, institutions and states pay for their educational costs from their future (enhanced) earnings.

Equity in access to higher education is an important national goal. The availability of loans for higher education increases both access and choice. Indeed, several recent studies of student borrowing have indicated that access to student loans is widely and equitably available. But what these numbers and considerations don't really convey is that the debt burden shouldered by college students varies widely.

A young woman who earns an undergraduate degree from a relatively high-cost, small out-of-state private school might graduate with more than $20,000 of debt. Her male peer attending an in-state university might graduate with a

Financial burden measures can be incorporated into student loan repayment requirements and used to adjust either monthly or annual repayments or the period of repayment.

$4,000 debt. And about half of her cohort could graduate with no debt at all.

Built into this disparity is an often unpredictable amount of other student financial aid in the form of grants, scholarships and even school-year earnings—financial aid packages that become less and less related to the student's financial circumstances as colleges compete for students.

These students' post-college earnings, from which most will repay their loans in the 10 years after graduation, also vary greatly. One recent study found that young women who borrowed for college have earnings that are about 80 percent of their male peers' earnings two years after college graduation.

Having made very important progress toward making a college education more financially feasible, it is crucial to maintain momentum by looking at the other side of equity in student borrowing—the distribution of student debt burden.

Students come to higher education with different educational needs and financial constraints. This variance is widened by imperfect information. Students can not predict the amount of borrowing they need to finance an undergraduate education even when their choice among institutions is relatively well-informed. Nor can they accurately predict their earnings in the 10 years just after college. As a result, a large range of debt burden, however defined, exists within cohorts of students.

Investment in education, like any other investment, necessarily involves some uncertainty. But given that both the individual student and society benefit from a student's investment—and the reality that some students begin their adult lives with very large debt while others do not—some adjustment to student debt burden, at least for undergraduates, should be considered.

How can this be done? Lending policy could be adjusted to take into account the relative size of debt burden. Here's what would have to be factored into a formula for measuring undergraduate debt burden: family income for the period the student attended college, net cost of tuition and fees for the period of undergraduate studies (adjusted for non-loan-based student financial aid), and post-college earnings for 10 to 12 years (excluding periods of full-time graduate studies).

Financial burden measures can be incorporated into student loan repayment requirements and used to adjust either monthly or annual repayments or the period of repayment.

Federal student financial assistance is now largely loan-based and likely to remain so for the foreseeable future. If these important public policies can be adjusted to make debt burden for undergraduate education more equitable than it is now, we will take another large step toward making college education truly more equitable and accessible.

Jane Sjogren *is a professor at Johnson & Wales University.*

On the Beat

A Former Higher Education Reporter Reflects on Coverage

Jon Marcus

When colleges and universities finally responded this fall to the decade of complaints about their escalating costs, it wasn't by explaining why tuition has consistently increased at double the rate of inflation or by outlining the measures they were taking to save money.

No, the higher education honchos, in their wisdom, launched a campaign to explain how, with the right combination of loans and savings, a family could still afford the $120,000-plus price of an undergraduate degree from a private, four-year college or university.

This could, of course, be seen as an outrageously condescending tactic serving only to prove the widely held belief that academia remains completely out of touch with an increasingly hostile public. But I see it as a commentary on education journalism.

After all, the colleges figured they could get away with it. And in many newspapers, magazines, television broadcasts and wire services, they did. That's because American journalists in general—and education writers in particular—have become unquestioning stenographers whose reporting, to twist an old cliche, is 24 hours wide and 10 seconds deep.

Most Americans would probably agree that journalism is in crisis, an intrusive and celebrity-centric perversion of an age when ink-stained wretches worked to comfort the afflicted and afflict the comfortable. Where I depart is to suggest that higher education coverage in particular should be more, not less, questioning and critical. In other words, higher education coverage leaves a lot to be desired not because it's too tough, but because it isn't tough enough.

Many editors seem to read "education beat" as "training ground for new reporters." Few people want the job, and most get out of it before they learn the difference between FTE and headcount, with the connivance of news organizations that pay too little attention to the topic. The education beat has an indisputably high turnover rate—even in New England where higher education is a major industry.

And make no mistake: higher education *is* an industry. It is no coincidence that some of the best higher education coverage in New England and elsewhere appears in business publications. As much as colleges and universities resist the idea that they offer a consumer product, the ones that do well on those annual magazine rankings send out reprints to reporters, donors and prospective students—much the way advertisers sell soap.

The lack of an investigative tradition among education writers stems in part from the fact that higher education once was viewed as largely sacrosanct and incorruptible. Academia's moral high ground gave way slowly, but the ultimate collapse might be traced to the day the former president of Stanford University was caught using taxpayer money to throw parties and redecorate a yacht. Before that time, few papers ran stories critical of such things as administrative bloat, high presidential salaries and tenured faculty who teach only about 28 weeks a year.

Still, too few media outlets pursue these angles. It took years before most higher education writers went beyond the news releases and dared to pose the questions: *Why exactly* *does tuition increase every year at double the rate of inflation? Exactly what component of a higher education has increased in price at double the rate of inflation?*

Even today, too many reporters and editors readily accept the explanation they get from colleges and universities, which goes something like this: *Everything just costs more.* Or, *There still are affordable community colleges.* Or this year, *If you save all your disposable income and work two jobs and take out loans, your kid can go here.*

Feeble as it is, the media continues to be blamed by higher education administrators for blowing college costs out of all proportion—part of a rationalization every Psych 101 student knows as "denial." If the increases continue to be extravagant, it doesn't matter what the base cost is—especially at the same time the proportion of the budget spent on actual instruction has been shrinking, along with the average faculty workload and the length of the academic calendar, while the proportion of budgets spent on marketing and public relations is growing.

Maybe there are reasonable answers to the questions about higher education costs and productivity. Maybe Americans would be sympathetic to them. But reporters have to ask, and universities to answer.

My favorite example of such unasked questions comes from a story about primary education: the patriotic Philadelphia summit convened by President Clinton and General Colin Powell in 1997 to recruit millions of public-spirited volunteers whose jobs would be to help third-graders learn to read. Despite virtual saturation print and broadcast coverage, no one asked why, in a nation that spends $600 billion a year on education, there are millions of illiterate third-graders.

Nor are universities and colleges above attempting to mislead the public. Why shouldn't they, if they can pull it off so easily? Witness the campaign to persuade families that they can still afford tuition—that beats explaining why the big annual increases have far outstripped income. Or an announcement of an early buyout plan one cash-strapped local university described as a "voluntary tenured faculty sep-

Elevating the Higher Education Beat

John O. Harney

The irony was thick last spring as *Boston Magazine* senior editor Jon Marcus told a group of academics meeting at Boston College that he considered *Boston Business Journal* higher education reporter Scott Van Voorhis to be one of the best in the business.

It's always newsworthy when one reporter compliments another in public, but there's more to this story.

Turns out Van Voorhis was about to leave the higher ed beat to cover commercial real estate for the *BBJ*—much as Marcus had left the Associated Press a few months earlier after establishing the AP's Boston bureau as the hub of the national wire service's higher ed coverage.

Boston Globe higher education reporter Richard Chacon had been scheduled to join Marcus at the BC gathering, but never showed. Chacon was also in the process of ditching the higher ed beat at that very moment.

A seismic shift in Boston's higher education reporting?

Hardly. If there's one constant on the higher education beat at New England's newspapers, it's high turnover.

Chacon was at least the fourth reporter to head the *Globe's* higher education beat since the start of the '90s. Also in the past year, Carol Gerwin, who had emerged as a key higher ed reporter at the Quincy, Mass., *Patriot Ledger*, left the daily to join *CommonWealth*, the quarterly magazine of the Massachusetts Institute for a New Commonwealth.

Another talented higher ed reporter at the *Brockton Enterprise* landed a high-paying p.r. job at the University of Massachusetts.

Some observers inside and outside higher education note that the short tenure among higher ed reporters hurts coverage. "There's no memory," says public relations consultant Soterios Zoulas whose clients include several Massachusetts colleges. Exhibit A, according to Zoulas, is press corps reaction to calls for eliminating certain public campuses.

"They think proposals to close colleges are idle threats," he says, "because not one of them was around to cover the closing of Boston State."

There are some bright spots. The *BBJ* covers higher education competently in the context of business. A few dailies in markets with heavy concentrations of colleges—such as the *Springfield Union-News*—provide significant coverage of local campuses. And the *Globe* has begun featuring thoughtful opinion pieces by college leaders in an occasional editorial page feature called "The President's Corner."

Nonetheless, the higher education beat cuts a remarkably low-profile in a region where it should be front and center.

Turnover is not the only problem.

Time is a problem too. Even at larger newspapers, higher education reporters often shoulder other responsibilities. The *Boston* aration." Problem is, too few education journalists challenge the evasions and euphemisms. Just as few who covered the findings of the National Commission on the Cost of Higher Education exercised the discretion to point out that 11 of the commission's 13 members represented universities or university associations.

Education is, in fact, one of the most important topics in America. Few stories elicit reactions as strong as news about colleges and universities. Educators ought to take this as a compliment. Theirs are institutions where parents aspire to enroll their children and where students enjoy their first true taste of independence. Sports fans follow the athletic teams. Alumni savor the nostalgia. Businesses depend on them for competent employees and for basic and applied research.

Yet criticism of colleges and universities has increased as fast as their tuition. And cost is not the only complaint. There also is the ongoing debate about political correctness, in which even false charges are regurgitated by reporters who reprint them uncontested.

Weak higher education coverage does not help higher education. Good education journalism would remind its audience of the huge economic impact of colleges and universities, and detail gains from campus research, for example. But it would also intelligently report criticisms and reflect growing public anger at a time when colleges themselves appear too often to dismiss concerns about cost and other controversies.

Not all campuses are public places in the legal sense, but they are public possessions in the emotional (and financial) sense, and therefore accountable to neighbors, parents, students, prospects and alumni. And yet important higher education stories in New England are more often absent than on the front page or the evening news. Except, unfortunately, the ones that recapitulate the press releases.

Jon Marcus *is a senior editor at Boston Magazine and former Associated Press reporter.*

Herald education reporter covers K-12 and higher education both—a sensible pairing perhaps, but in these parts, a lot of work for one reporter. Indeed, few higher education reporters have sufficient time to get out and visit campuses.

That's one reason why what little higher ed coverage there is focuses heavily on a dozen or so very prestigious institutions and state colleges, where the news (often negative) is easily gathered from bureaucrats in a convenient central office. Meanwhile, about 250 other New England colleges and universities—the New Hampshire and Anna Maria colleges of the world—plug along with little media notice. Says Zoulas, "There's a whole group of institutions that are below the radar screen."

Moreover, when the gravity of a higher education story crosses a certain threshold—such as last year's comprehensive *Globe* series on the power of Harvard—editors often bypass the higher education beat in favor of more seasoned reporters.

Other big stories slip through the cracks. Consider the likely profound impact of the Asian financial crisis on New England campuses in terms of lost foreign enrollment and tuition revenue—covered briefly by Van Voorhis at the *BBJ* but generally missed.

The sad truth is that the *Chronicle of Higher Education,* a Washington D.C.-based national weekly that relies on stringers for local stories, regularly scoops New England dailies on New England campus news and trends.

To be sure, a wide range of traditional newspaper beats such as state government reporting are suffering at the hands of bottom-line-oriented, corporate journalism. So why fret about the sorry condition of the higher education beat?

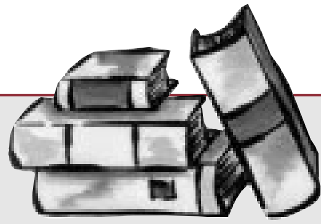
The reason is simple. New England is America's academic breadbasket. The region grants a disproportionate share of college degrees, conducts a disproportionate share of university research, snares a disproportionate share of scientific patents, attracts a disproportionate share of foreign college students—you get the picture. New England newspapers should be all over higher education like the *Washington Post* on government. But they're not.

A modest proposal:

Boston-area colleges run centers for animals and public policy, war and social consequences, work and family—and notably, defense journalism. Maybe it's time for Boston University's College of Communication or some aspiring J-school to launch a Center for Higher Education Journalism, complete with reporters-in-residence and serious research on higher education news and news reporting. Maybe a graduate school of education would be willing to play a role.

In the meantime, if you want to be the dean of the New England higher education beat, the position is wide open.

John O. Harney *is executive editor of* CONNECTION. *This piece is adapted from a column which first appeared on BusinessToday.com, a Boston-based daily news service on the World Wide Web.*



Press Pass

Boston News Organizations Ignore Higher Education

Soterios C. Zoulas

Last spring, Dr. Judah Folkman and his research team at Boston's Children's Hospital discovered two new drugs that interfere with the blood supply which tumors need to grow. Boston television stations quickly dispatched an army of reporters and producers to Boston's Longwood Medical area to cover the story of a possible cancer cure. The city's broadcast media whipped themselves into a frenzy.

The attention paid to this medical story is neither atypical nor excessive. Boston, after all, is home to several of the world's best hospitals and medical research centers. For years, the major Boston television news stations have assigned a reporter to cover medicine and medical research. Their commitment to medical news coverage has produced compelling, innovative and important television news reporting and commentary by Dr. Timothy Johnson and others. Indeed, coverage of medical news by WCVB-TV, Boston's ABC affiliate, has visibly influenced the network's national coverage.

Boston—and New England—can claim one other similarly towering industry. But it's hard to imagine it attracting the attention that the Children's Hospital story commanded. That industry, of course, is higher education. Yet none of the Hub's TV news stations maintains a real education beat, much less a *higher* education beat. And the neglect of education is not restricted to broadcast journalism.

Poll after poll shows that the No. 1 issue in the hearts and minds of Americans these days is education. Even politicians this election season focused on class size, teacher testing, education quality and reform, college costs and tenure. But the media—broadcast and print—tend to stay home. Especially when the story involves higher education.

Higher education

Massachusetts is the Mecca of higher education. Harvard and MIT reside like twin colossuses on the banks of the Charles River. More than 125 public and private colleges and universities located in Massachusetts enroll more than 400,000 students every year. Their impact on the Massachusetts economy is obviously profound.

You might expect then that the Boston media would pursue a relatively high level of education reporting. You might even expect that the major daily newspapers in the city would cover education in the same way that the *Los Angeles Times* covers Hollywood or the way the *Washington Post* covers Beltway politics and government policy. Alas, not so.

The *Boston Globe* is the dominant daily newspaper in New England. Now owned by the *New York Times*, the *Globe* has overwhelmed its rival, the *Boston Herald*, with superior numbers and more extensive coverage of important education issues. The *Globe* also hired away several *Herald* education reporters over the years, including Ian Foreman of the old *Traveler* (which merged with the *Herald*), who helped write a watershed series on education in the mid-1960s, called "The Mess in Bay State Schools." That series led to a massive restructuring of Massachusetts public education from kindergarten to graduate school—and ushered in new, albeit modest, interest in education reporting.

In 1974, Muriel Cohen, also formerly of the *Traveler*, helped the *Globe* win a Pulitzer Prize for its coverage of the court-ordered desegregation of Boston's public schools. Cohen dominated education overage for the next two decades.

More recently, the *Globe* has assigned at least three reporters to cover the Boston public schools, suburban education and higher education. After years of traveling around the deep back pages of the *Boston Sunday Globe*, a weekly "Learning" section now occupies a regular place at the rear of the "Books" section. During the past year or so, the paper has introduced op-ed space for college presidents and a regular weekly column called the "Lesson Plan," which is written by the three education reporters. Meanwhile, the *Boston Sunday Globe's* weekly regional sections cover, in the words of a former *Globe* education reporter, three topics: education, shopping and real estate.

But despite its dominant position through much of New England, the *Globe* focuses narrowly on a few top institutions—Harvard, MIT and Boston College—and on the Massachusetts public higher education system mainly when the state Board of Higher Education lowers or raises tuition or threatens to close down programs. The more than 100 other private colleges in Massachusetts alone receive little or no coverage unless there is a scandal. Colleges and universities in other New England states have to struggle mightily for even a mention.

Meanwhile, the worst laggard in covering higher education not surprisingly, is television news. While competition is keen among Boston's major television news operations—WBZ, WCVB, WHDH, WLVI, Fox 25 and New England Cable News—it's no secret that glitz has supplanted substance. Even WABU, owned and operated by Boston University, does little or no news and has no education programming. WGBH-TV, the premier public broadcasting station in the country and a major producer of national PBS programming, does no regular local (or national) education programming.

Documentaries on local as well as national television are an endangered species. No, they are nonexistent. In the 1970s, WBZ and WCVB could produce and air hard-hitting documentaries on important education issues. (One on special education that I wrote and produced for WSBK-TV was nominated for an Emmy and won a national media award from ABC Television.) But those days are long gone.

Sure, WGBH-TV's *Greater Boston* examines serious education issues on occasion. WCVB's *Chronicle* explores college costs and higher education trends at least once a year—and actually visits colleges to talk to students, teachers and administrators. But by and large, television news and public affairs programming skims the surface of any education topic. Stories such as the death of an MIT student from excessive alcohol consumption and the Commonwealth's first statewide teacher proficiency exam capture attention for a few days, but the coverage tends to be superficial. Meetings of state education boards, important pronouncements of commissioners and chancellors, and outrageous comments of board chairs are covered by reporters with little or no background or no institutional memory—if they are covered at all. Not surprisingly, these stories are rarely placed in a proper context or followed up.

Local radio talk shows are hosted in large measure by shock jocks like WRKO's Howie Carr whose interest in education seems to languish until a public college president is in trouble or the opportunity to ridicule public school teachers presents itself. Even WBUR's Christopher Lydon, a former *New York Times* and *Boston Globe* reporter who ran for mayor of Boston several years ago on an education platform, has paid scant attention to education on his *Connection* program. And WBZ's David Brudnoy, a fixture on Boston radio for more than 25 years, takes a rigidly libertarian and anti-government point of view toward most issues. Brudnoy, to his credit, freely shares his microphone with people who hold differing points of view. But his own attitude toward public education at all levels is negative, condescending and full of ridicule.

Boston radio news is mostly of the rip and read variety. Some of the most popular rock stations such as WBCN offer no news at all. WBZ radio, Boston's all-news station, rarely covers higher education. WBUR, one of the two local National Public Radio affiliates, has become a major news outlet in the Boston market. While it does devote airtime to all kinds of education stories and covers them intelligently, its commitment seems lukewarm given the importance of higher education in this market.

Issues such as distance learning, the growth of for-profit institutions of higher education like the University of Phoenix and its foray into the Northeast have not been examined. Locally, the *Globe* rarely explores the small, private New England colleges that have reinvented themselves dramatically over the years and educated thousands of students. Nor have many papers seriously assessed how community colleges are coping with an increased responsibility to provide remedial education to thousands of students ill-prepared by the public schools.

Today's reporters want the quick hit, the front-page story, the scandal. Education coverage, most of the time, doesn't fit that mold. It takes time to develop contacts that lead to good stories; it takes effort and institutional memory to do them right. The solution to the problem of lackluster higher education coverage is an old-fashioned one: have reporters spend less time in boardrooms and newsrooms and more time in classrooms and on campuses, where students, faculty and administrators do the real work of education.

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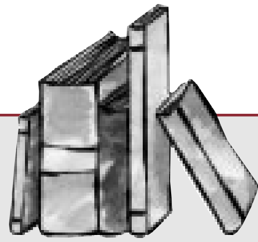

Technical Foul

The Growing Communication Gap Between Specialists and the Rest of Us

Kristin R. Woolever

The most important skill for technical professionals is the ability to communicate technology, and it is the skill in shortest supply in the fields of science and technology.

That assertion may raise eyebrows in these days of second-generation Internet and space travel for septuagenarians. But the preliminary results of a new survey of corporate executives and engineering and science professors reveals that the relatively low-tech skill of communicating technical information is the one employers yearn for most.

Sadly, neither industry nor educational institutions pay sufficient attention to remedying this problem. And New England, with its reputation as the cradle of American education and technology, lags well behind other regions in this regard.

Back in 1982—when Bill Gates was a software neophyte, the Internet was essentially unheard of and we did our banking with live tellers—Ray Stata, founder of Analog Devices, and forward-thinking colleagues Dan Dimancescu and James Botkin, sounded an important warning in their book *Global Stakes: The Future of High Technology in America*. "As scientific knowledge becomes more and more advanced," the authors observed, "fewer and fewer people are privy to its meaning and able to control the power it confers."

Today, the balance of power is at a precarious tilt.

Communication is a critical component in creating access to anything. In today's increasingly global economy, where it is important to be able to join conversations around the world, we are often unable to converse intelligently even among ourselves concerning science and technology.

Open almost any technical writing textbook and somewhere in the early pages you will find a discussion of technical "discourse communities." While encouraging students to participate in these technical conversations, the textbook authors—myself included—go on to suggest that the language spoken and written in technical fields is highly specialized with key terms, organizational structures and conventions all its own. Even more frustrating for students, each specialized area of the sciences and technology has its own discourse community that may not talk the same talk as those professionals working in other technical specialties. In the computer industry, for example, programmers, publication specialists and marketing professionals might as well be speaking foreign languages, so specialized are their vocabularies.

With technology advancing at lightning speed, the communication gaps among different technical professionals—and between those specialists and the general public—are growing to chasm proportions.

Those who understand the language of science and technology—those who can participate fully in the technical conversations—have the power to control the discourse. At a dangerous extreme, when only a few are privy to meaning, as Stata and colleagues noted, they become "gatekeepers" with the power to selectively approve research to be funded, developed and published. In competitive research and development environments, the ability to control the discourse becomes the key to intentional disinformation, misinformation and unethical behavior.

In this regard, history provides many examples from the Tuskegee experiments on black men early in this century to the controversies over the health risks of Viagra, fluoride-treated water and Fen-Phen diet aids. And the stakes will only get higher. Congress has vowed to double the budget of the National Institutes of Health over the next five years, already approving $15.6 billion for 1999—a 15 percent increase over the funding for the previous year. Research labs that get the bulk of the funds will be those that gain the attention of the Senate Appropriations Committee. Much depends on who controls the information and who presents the best argument.

Of course, professions will always have their own terms of art. But even as science and technology permeate nearly every aspect of our daily lives, specialized discourse excludes most of us from joining a meaningful conversation about what matters. Indeed, the general public is disenfranchised from knowledge that would allow people to make sense of their world and make informed decisions about how to navigate fields as diverse as politics, banking, theater, photography, medicine, insurance, computer technology, library science and so on. Negotiating on-line card catalogs in a library, for instance, banking on-line or evaluating the soundness of a medical recommendation are commonplace activities where most of us have to place our trust in the professional delivering the goods.

The communication gap has enabled an odd assortment of corporations, celebrities and media outlets to foist false cures, expensive weapons and other dubious scientific advances upon a vulnerable public.

In countless instances, miscommunication has been the catalyst for public outcry and fear of new technology. Was nuclear power a godsend or was it responsible for radiation poisoning of those living near reactor sites? In other instances, the communication gap has enabled an odd assortment of corporations, celebrities and media outlets to foist false cures, expensive weapons and other dubious scientific advances upon a vulnerable public.

New England boasts one of the greatest concentrations of high-tech and biotech companies in the world, as well as an unparalleled concentration of colleges and universities. So we must have the pieces in place to close the technical communication gap, right? Wrong.

The communication breakdown is not restricted to the widening gap between specialists and the public. Within technical and science environments, the professionals themselves are too often unable to convey basic information to their colleagues. Consider the case of the health professional who miscommunicates appropriate treatment on a patient's medical chart or the software developer whose muddled technical specifications cause delays in product shipments and cost overruns. Or worse, the memorandum from Babcock & Wilcox Co. that warned of a potential nuclear reactor meltdown prior to the Three Mile Island disaster, but was so obtuse it was ignored.

Technical workers need to be able to communicate with each other in order to conduct business and grease the wheels of productivity. When one product developer or scientist cannot communicate her work clearly to another, the research grinds to a halt until sufficient understanding allows work to resume. The ability to convey technical information provides a foundation for constructing new knowledge and greater insight in these fields.

Tech Comm 101

New England boasts one of the greatest concentrations of high-technology and biotechnology companies in the world, as well as an unparalleled concentration of colleges and universities. So New England, of all places, must have the pieces in place to close the technical communication gap, right?

Wrong. While some New England community colleges and a few universities offer coursework or programs in technical communication, this field is vastly underrepresented in the region's curricula. Only eight New England institutions—all of them in

Massachusetts—offer programs in technical communication, according to the Washington, D.C.-based Society for Technical Communication, a professional group. By contrast, 14 institutions in Ohio and 16 in California offer such programs.

Students are taught freshman composition—the tenets of good prose writing. But they are not trained to speak and write in their fields of specialization.

Only Bentley and Fitchburg State colleges offer bachelor's programs in technical communication, while a handful of others offer continuing education certificates in the field. Almost all of these undergraduate and continuing education programs focus only on writing for the computer industry.

Northeastern University and Simmons College offer master's degree programs specifically in technical communication, while Boston University offers a master's in science journalism—that's it at the graduate level.

Not a single New England institution offers a Ph.D. in technical communication. And despite their rich technical resources, New England academic institutions have collaborated little with one another or with businesses on matters of technical communication.

At the basic level in any profession, people should be able to organize, synthesize, understand and apply information in various situations. Yet, most employers in technical fields find that their workforces are unprepared to handle these basic functions.

In spite of increased attention to hands-on learning and practice-oriented education, there is a serious "disconnect" between academic institutions and business when it comes to preparing students to communicate technology.

In many colleges and universities, students are taught freshman composition—the tenets of good prose writing—where they read essays by writers such as Annie Dillard, Henry Louis Gates Jr. and E.B. White. But they are not trained to speak and write in their fields of specialization.

Writing-across-the-curriculum programs, which gained popularity in the 1970s, attempted to remedy this problem by requiring students to take writing courses in their major fields of study. But teachers responsible for the classroom work were either practitioners in specialized technical fields who had no training in how to teach writing or writing teachers who had never been good technical practitioners. Students then and now are left with the impression that "good writing" (the subject of freshman composition classes) is not applicable or useful in their engineering or science courses, and certainly not useful in the real world.

At a more advanced level, education for technical communicators should also provide opportunities for serious graduate students—theorists and practitioners alike—to study the field of technical communication in depth and perhaps develop breakthrough methods aimed at improving our ability to understand and use technology.

Doctoral programs in technical communication could be particularly important in providing meaningful connections between education and business where both parties work together to increase the efficiency of communication and increase the productivity of the workplace. Such Ph.D.-level programs would not only provide necessary training for those who will teach technical communication in colleges and universities. They would also produce graduates able to partner with industry and operate at more than just a basic skill level—addressing real-world problems in communication on a theoretical level and enabling solutions to be systemic and preventative, rather than quick fixes.

At the New England Board of Higher Education's semiannual meeting in October 1998, delegates identified understanding the impact of technology upon New England among the board's key goals. Surely, devising creative and collaborative ways to address the issue of communication and technology will help provide all New Englanders with access to the scientific and technological advances that so permeate the present and, without a doubt, will determine our future.

Kristin R. Woolever *is an English professor at Northeastern University and a New England Board of Higher Education fellow.*

Treasure Troves

New England Museums Exhibit Collection of Pressures

ALAN R. EARLS

The Federal Reserve Bank of Boston has long offered programs about money, banking and economics to school groups and a variety of special audiences such as bankers, professional organizations and senior citizens. But for just as long, Boston Fed leaders, including President Cathy Minehan, have wished they could do more to place economic issues in context for all New Englanders. This fall, the bank announced ambitious plans to do that through a New England Economic History Museum. The new museum will serve an audience ranging from "sophisticates to semi-rambunctious kids," according to the Fed.

Meanwhile, a variety of groups in Rhode Island have announced plans to open the $34 million Heritage Harbor Museum at the site of an abandoned power plant on the Providence River. The museum will feature a full size three-decker and other exhibits on Ocean State history and culture.

New England is already museum-intensive, sustaining 569 museums of all kinds—or about one for every 22,700 people, according to the American Association of Museums. By comparison, the Middle Atlantic states offer one museum for every 28,500 people; the Southeastern states, one for every 33,000; the Midwest, one for every 33,000; the Mountain states, one for every 22,900; and the West, one for every 34,800.

The Fed museum will occupy about 10,000 square feet in the Boston Fed's office tower, opposite South Station and between the city's financial district and the Fort Point Channel/South Boston Seaport district.

It's not easy to explain economic concepts in an engaging way. But the Fed's museum project director, economist Steven A. Sass, promises the project will be more than a museum of the dismal science. (Sass has experience presenting the Boston Fed to general audiences: he was editor of the *Regional Review*, the bank's zippy economic quarterly.)

The museum's exhibits—many of them interactive—will illuminate five economic epochs: New England in the Atlantic Economy, through 1770; Extending the Market in

Web Sites of a Few Relevant Organizations

- American Association of Museums, www.aam-us.org
- Americans of the Arts, www.artsusa.org
- Association of College and University Museums and Galleries, www.omnh.ou.edu/acumg
- National Assembly of State Arts Agencies, www.nasaa-arts.org
- National Trust for Historic Preservation, www.nthp.org
- New England Foundation for the Arts, www.nefa.org
- New England Museum Association, www.nemanet.org
- Society for the Preservation of New England Antiquities, www.spnea.org

New England and the Larger World, 1770-1830; New England's Industrial Revolution, 1830-1880; New England's Long Stagnation, 1880 to 1940; and, New England and the Human Capital Revolution, 1940 to the present.

Tangible artifacts associated with each time period will show how New Englanders worked, produced and consumed. More abstract nuances of the study of economics will be covered in ongoing museum conferences and seminars.

"We want to get people excited and get them involved in discussing ... the process of economic growth," says Sass. "We want people to understand that we live a helluva lot better than our grandparents."

Many New England museums have economic themes. One of the region's newest museums, for example, is the Museum of Work and Culture in Woonsocket, R.I., where exhibits depict the stories of immigrants to the city, particularly French Canadians. On display are an authentic mill floor and 1899 classroom.

Still, the Boston Fed museum will offer something else special: a look at a real-life, unfolding chapter in New England's economic history. For outside its windows, Boston's Fort Point Channel is being transformed from a manufacturing and warehousing district into a cultural destination anchored by the Children's Museum, Computer Museum, Boston Tea Party Ship and soon, the New England Economic History Museum.

So you think you know New England's museums? The following list doesn't even include most of the historical societies that offer exhibits on the local history of nearly every New England hamlet.

Harrison House, Branford, Conn. • The Barnum Museum, Bridgeport, Conn. • Beardsley Zoo, Bridgeport, Conn. • The Discovery Museum, Bridgeport, Conn. • Housatonic Museum of Art, Bridgeport, Conn. • University Art Gallery, Bridgeport, Conn. • American Clock and Watch Museum, Bristol, Conn. • New England Carousel Museum, Bristol, Conn. • Brookfield Craft Center, Brookfield, Conn. • New England Center for Contemporary Art, Brooklyn, Conn. • Prudence Crandall Museum, Canterbury, Conn. • Stanton House, Clinton, Conn. • Danbury Scott-Fanton Museum and Historical Society, Danbury, Conn. • Military Museum of Southern New England, Danbury, Conn. • Old Newgate Prison and Copper Mine East Granby, Conn. • Shore Line Trolley Museum, East Haven, Conn. • Connecticut Trolley Museum, East Windsor, Conn • Scantic Academy Museum, East Windsor, Conn • Connecticut River Museum, Essex, Conn. • Connecticut Audubon Birdcraft Museum, Fairfield, Conn. • Connecticut Audubon Center at Fairfield, Fairfield, Conn. • Thomas J. Walsh Art Gallery, Fairfield, Conn. • Regina Quick Center for the Arts at Fairfield University, Fairfield, Conn. • Falls Village-Canaan Historical Society, Falls Village, Conn. • The Art Guild, Farmington, Conn. • Friends Museum of the University of Connecticut, Farmington, Conn. • Health Center School of Dental Medicine, Farmington, Conn. • Hill-Stead Museum, Farmington, Conn. • Stanley-Whitman House, Farmington, Conn. • The Bruce Museum, Greenwich, Conn. • Putnam Cottage, Greenwich, Conn. • Submarine Force Museum and Historic Ship Nautilus, Groton, Conn. • Henry Whitfield State Historical Museum, Guilford, Conn. • Eli Whitney Museum, Hamden, Conn. • The Antiquarian and Landmarks Society, Hartford, Conn. • Connecticut Audubon Society, Hartford, Conn. • Connecticut Historical Society, Hartford, Conn. • Harriet Beecher Stowe Center, Hartford, Conn. • Mark Twain Memorial, Hartford, Conn. • The Menczer Museum of Medicine & Dentistry, Hartford, Conn. • Museum of Connecticut History, Hartford, Conn. • The Old State House, Hartford, Conn. • Wadsworth Atheneum, Hartford, Conn. • Widener Gallery, Hartford, Conn. • Austin Arts Center, Hartford, Conn. • New Britain Youth Museum, at Hungerford Park, Kensington, Conn. • The Kent Art Association, Kent, Conn. • Sloan-Stanley Museum and Kent Furnace, Kent, Conn. • White Memorial Conservation Center, Litchfield, Conn • The Cheney Homestead, Manchester, Conn. • Lutz Children's Museum, Manchester, Conn. • Davison Art Center, Wesleyan University, Middletown, Conn. • Ezra and Cecile Zilkha Gallery, Middletown, Conn. • Eels-Stow House, Milford, Conn. • Denison Pequotsepos Nature Center, Mystic, Conn. • Mystic Art Association, Mystic, Conn. • Mystic Seaport, Mystic, Conn. • Museum of Central Connecticut State University, New Britain, Conn. • New Britain Museum of American Art, New Britain, Conn. • New Britain Youth Museum, New Britain, Conn. • New Canaan Nature Center, New Canaan, Conn. • Silvermine Guild Arts Center, New Canaan, Conn. • Harvey Cushing/John Hay Whitney Medical Library, New Haven, Conn. • John Slade Ely House, New Haven, Conn. • Knights of Columbus Headquarters Museum, New Haven, Conn. • Marsh Botanical Garden, New Haven, Conn. • Peabody Museum of Natural History, New Haven, Conn. • West Rock Nature Center, New Haven, Conn. • Yale Center for British Art, New Haven, Conn. • Yale University Art Gallery, New Haven, Conn. • Yale University Collection of Musical Instruments, New Haven, Conn. • Connecticut College Arboretum, New London, Conn. • Lyman Allyn Art Museum, New London, Conn. • U.S. Coast Guard Museum,. New London, Conn. • Museum of Amateur Radio, Newington, Conn. • Children's Museum of Southeastern Connecticut, Niantic, Conn. • East Lyme Historical Society/Thomas Lee House, Niantic, Conn. • Norfolk Historical Museum, Norfolk, Conn. • Lockwood-Mathews Mansion Museum, Norwalk, Conn. • The Maritime Aquarium at Norwalk, Norwalk, Conn. • Musical Box Society International, Norwalk, Conn. • The Leffingwell House Museum, Norwich, Conn. • The Slater Memorial Museum, Norwich, Conn. • Florence Griswold Museum, Old Lyme, Conn. • The Aldrich Museum of Contemporary Art, Ridgefield, Conn. • Keeler Tavern Museum, Ridgefield, Conn. • Academy Hall Museum of the Rocky Hill Historical Society, Rocky Hill, Conn. • Sharon Audubon Center, Sharon, Conn. • Massacoh Plantation, Simsbury, Conn. • Bartlett Arboretum, University of Connecticut, Stamford, Conn. • Stamford Historical Society, Stamford, Conn. • Stamford Museum and Nature Center, Stamford, Conn • Whitney Museum of American Art at Champion, Stamford, Conn • Captain Nathaniel B. Palmer House, Stonington, Conn. • Old Lighthouse Museum, Stonington, Conn • Connecticut State Museum of Natural History, Storrs, Conn. • Mansfield Historical Society Museum, Storrs, Conn. • The William Benton Museum of Art, Storrs, Conn. • The Stratford Historical Society & Catherine B. Mitchell Museum, Stratford, Conn. • Clock Museum of America, Terryville, Conn. • The Benton Homestead, Tolland, Conn. • Tolland County Jail and Warden's Home Museum, Tolland, Conn. • Tantaquidgeon Indian Museum, Uncasville, Conn. • Gunn Memorial Library and Museum, Washington, Conn. • The Institute for American Indian Studies, Washington Green, Conn. • The Mattatuck Museum of the Mattatuck Historical Society, Waterbury, Conn. Harkness Memorial State Park, Waterford, Conn. • Gallery of the Hartford Art School, West Hartford, Conn. • Museum of American Political Life, West Hartford, Conn. • Noah Webster Foundation and Historical Society of West Hartford, West Hartford, Conn. • Saint Joseph College Art Study Gallery, West Hartford, Conn • Science Center of Connecticut, West Hartford, Conn • The Company of Military Historians, Headquarters and Museum, Westbrook, Conn. • The Coley Homestead & Barn Museum, Weston, Conn. • Nature Center for Environmental Activities, Westport, Conn. • The Webb-Deane-Stevens Museum, Wethersfield, Conn. • Windham Textile and History Museum, Willimantic, Conn. • Weir Farm National Historic Society, Wilton, Conn. • Wilton Heritage Museum, Wilton, Conn • New England Air Museum, Windsor Locks, Conn. • Amity and Woodbridge Historical Society, Woodbridge, Conn. • The Glebe House Museum and Gertrude Jekyll Garden, Woodbury, Conn. • Bowen House, Roseland Cottage, Woodstock, Conn. • Ashland Logging Museum, Ashland, Maine • Blaine House, Augusta, Maine • Maine State Museum, Augusta, Maine • Old Fort Western, Augusta, Maine

Region on Exhibit

New England's museums and institutions of higher education share much in common. Both are in the business of preserving and furthering human knowledge. Both serve audiences that value learning. And both play an economic role in their host communities—as magnets for visitors and, in some cases, as employers. Although that economic role has become explicit for many college campuses, it remains somewhat less clear to the region's museums—even the 100 or so that are affiliated with colleges or universities.

In addition, new consumer preferences along with an increasingly competitive philanthropic environment have New England's museums navigating rough waters, according to Dona Brown, a member of the faculty at the University of Vermont and author of *Inventing New England: Regional Tourism in the 19th Century*, a 1995 book that confounds some deeply held notions about what is unique, even sacred in New England.

Inventing New England documents how down-on-their luck New England communities deliberately capitalized on the thirst of a growing traveling public for natural wonders and rural experiences as antidotes to the frenetic pace of urban, industrial life. Thus, when Nantucket's whaling revenues disappeared, the island was consciously repackaged as a tourist destination; even island residents were seen to represent a lost age of heroism or innocence. "Wherever they could," Brown wrote, "local promoters put their dilapidated buildings and grass-grown streets to work, creating 'old Deerfield' or 'romantic Marblehead.'"

Today, Brown contends, tourism continues to rest on half-truths. Only now, consumers are more sophisticated; they still seek antiquities and quaintness, but they also want to experience world culture and modern science—or simply to be part of the museum *in crowd*.

Museum of Modern Commercialism?

At the same time, the genre of museums created by hucksters in the mold of P.T. Barnum—Perry's Nut House in Belfast, Maine, for example—seems to be dying out. (Perry's closed its doors just last year.) But another kind of commercialism is alive and well. Consider how many New England museums capitalized on Halloween spending this fall with programs such as "Eerie Events" (stories of New England ghosts at the Peabody Essex Museum) or "Haunted Happenings" (hands-on activities at the Harvard Museum of Natural History). Or visit the West Wing of Boston's Museum of Fine Arts, where much of the space is devoted to profit-making ancillary activities, including a sprawling gift shop and cafe.

Like the New England communities that sought economic salvation by repackaging their assets, the region's museums—large and small,

Cole Land Transportation, Bangor, Maine • Isaac Farrar Mansion, Bangor, Maine • Abbe Museum, Bar Harbor, Maine • Isleford Historical Museum, Bar Harbor, Maine • The Natural History Museum, Bar Harbor, Maine • Sieur De Monts Spring Nature Center, Bar Harbor, Maine • Maine Maritime Museum, Bath, Maine • Mason House Museum, Bethel, Maine • Jonathan Fisher House, Blue Hill, Maine • Boothbay Railway Village, Boothbay, Maine • Boothbay Region Art Foundation, Boothbay Harbor, Maine • Bowdoin College Museum of Art, Brunswick, Maine • The Peary-MacMillan Artic Museum, Brunswick, Maine • Conway Homestead Complex and Museum, Camden, Maine • Castine Scientific Society, Castine, Maine • Ruggles House Society, Columbia Falls, Maine • Deer Isle-Stonington Historical Society, Deer Isle, Maine • Dexter Historical Society Museum, Dexter, Maine • Blacksmith Shop Museum, Dover-Foxcroft, Maine • Pownalborough Court House, Dresden, Maine Colonel Black Mansion, Ellsworth, Maine • Nordica Homestead, Farmington, Maine • The Fryeburg Fair Farm Museum, Fryeburg, Maine • Baxter House Museum, Gorham, Maine • University of Southern Maine Art Gallery , Gorham, Maine • Bigelow Gallery Hallowell, Maine • L.C. Bates Museum, Hinckley, Maine • Sailor's Memorial Museum, Islesboro, Maine • Brick Store Museum, Kennebunk, Maine • Seashore Trolley Museum, Kennebunkport, Maine • Parsonfield-Porter Historical Society, Kezar Falls, Maine • Stanley Museum, Kingfield, Maine • Kittery Historical & Naval Museum, Kittery, Maine • Bates College Museum of Art, Lewiston, Maine • Roosevelt Campobello International Park Commission, Lubec, Maine • Burnham Tavern, Machias, Maine • Gates House, Machiasport Historical Society, Machiasport, Maine • Tante Blanche Museum, Madawaska, Maine • The Monhegan Museum, Monhegan, Maine • Shaker Museum, New Gloucester, Maine • Colonial Pemaquid, New Harbor, Maine • Lars Noak Blacksmith Shop, Larson/Ostlund Home & One Room Capitol Room, New Sweden, Maine • Ogunquit Museum of American Art, Ogunquit, Maine • Old Town Museum, Old Town, Maine • The Fay Hyland Botanical Plantation, Orono, Maine • Hudson Museum, University of Maine, Orono, Maine • University of Maine Museum of Art, Orono, Maine • Owls Head Transportation Museum, Owls Head, Maine • Patten Lumberman's Museum, Patten, Maine • Fifth Maine Regiment Center, Peak's Island, Maine • The Fisherman's Museum, Pemaquid Point, Maine • The Children's Museum of Maine, Portland, Maine • Institute of Contemporary Art at Maine College of Art, Portland, Maine • Maine Historical Society, Portland, Maine • Portland Museum of Art, Portland, Maine • Tate House, Portland, Maine • Victoria Mansion, Portland, Maine • Wadsworth-Longfellow House, Portland, Maine • Fort Knox State Historic Site, Prospect, Maine • Shore Village Museum, Rockland, Maine • Wiliam A. Farnsworth Library and Art Museum, Rockland, Maine • Maine Coast Artists Gallery, Rockport, Maine • The York Institute Museum, Saco, Maine • Scarborough Historical Museum, Scarborough, Maine • Penobscot Marine Museum, Searsport, Maine • The Jones Museum of Glass and Ceramics, Sebago, Maine • Sedgwick-Brooklin Historical Society, Sedgwick, Maine • Skowhegan History House, Skowhegan, Maine • Hamilton House, South Berwick, Maine • Sarah Orne Jewett House, South Berwick, Maine • Mount Desert Oceanarium, Southwest Harbor, Maine • Wendell Gilley Museum, Southwest Harbor, Maine • Marrett House, Standish, Maine • Stockholm Historical Society Museum, Stockholm, Maine • Montpelier-The General Henry Knox Museum, Thomaston, Maine • Matthews Museum of Maine Heritage, Union, Maine • The Vinalhaven Historical Society Museum, Vinalhaven, Maine • Colby College Museum of Art, Waterville, Maine • Redington Museum, Waterville, Maine • Meetinghouse Museum, Wells, Maine • Wells Auto Museum, Wells, Maine • Castle Tucker House Museum, Wiscasset, Maine • Maine Art Gallery, Wiscasset, Maine • Musical Wonder House, Wiscasset, Maine • Nickels-Sortwell House, Wiscasset, Maine • The Old Lincoln County Jail and Museum, Wiscasset, Maine • Museum of Yarmouth History, Yarmouth, Maine • Old York, York, Maine Sayward-Wheeler House, York Harbor, Maine • Dyer Memorial Library, Abington, Mass. • The Discovery Museums, Acton, Mass. • The Bartlett Museum, Amesbury, Mass. • The Greenleaf Whittier Home, Amesbury, Mass. • Amherst History Museum at the Strong House, Amherst, Mass. • Dickinson Homestead, Amherst, Mass. • Mead Art Museum, Amherst, Mass. • Museum of Zoology, Amherst, Mass. • National Yiddish Book Center, Amherst, Mass. • The Pratt Museum of Natural History, Amherst, Mass. • University Gallery, Amherst, Mass. • Addison Gallery, Andover, Mass. • Robert S. Peabody Museum of Archaelogy, Andover, Mass. • The Old Schwamb Mill, Arlington, Mass. • Col. Ashley House, Ashley Falls, Mass. • Attleboro Area Industrial Museum, Attleboro, Mass. • Attleboro Museum, Attleboro, Mass. • Donald G. Trayser Memorial Museum, Barnstable, Mass. • Old Colonial Courthouse, Tales of Cape Cod,. Barnstable, Mass. • Sturgis Library, Barnstable, Mass. • The Stone House Museum, Belchertown, Mass. • Berlin Art and Historical Collections, Berlin, Mass. • Ancient and Honorable Artillery Company, Boston, Mass. • Arnold Arboretum, Boston, Mass. • The Art Institute of Boston Gallery, Boston, Mass. • Boston Athenaeum, Boston, Mass. • Boston Fire Museum, Boston, Mass. • Boston University Art Gallery, Boston, Mass. • Bromfield Art Gallery, Boston, Mass. • Bunker Hill Museum, Boston, Mass. • The Children's Museum, Boston, Mass. • The Commonwealth Museum, Boston, Mass. • Franklin Park Zoo, Boston, Mass. • The Gibson Society, Boston, Mass.. • The Institute of Contemporary Art, Boston, Mass. • Isabella Stewart Gardner Museum, Boston, Mass. • John F. Kennedy Presidential Library-Museum, Boston, Mass. • Massachusetts Historical Society, Boston, Mass. • Museum of Afro American History, Boston, Mass. • Museum of Fine Arts, Boston, Mass. • Museum of Science, Boston, Mass. • Museum of the National Center for Afro-American Artists, Boston, Mass. • New England Aquarium, Boston, Mass. • Nichols House Museum, Boston, Mass. • Old South Meeting House, Boston, Mass. • Old State House, Boston, Mass. Paul Revere House, Boston, Mass. • Shirley-Eustis House, Boston, Mass. • The Society for the Preservation of New England, Boston, Mass. • Otis House, Boston, Mass. • The Sports Museum of New freestanding and campus-affiliated—are rethinking their exhibits and facilities and contemplating ways to boost their earnings.

Museums increasingly complement traditional income sources such as admissions fees, endowments and operating funds from parent organizations whether they be universities or municipalities, with newer strategies such as retail sales and contracts, facilities rentals, food services, publishing, group chartered travel and exhibition rentals.

"The sources of museum funding are incredibly diverse," says Charles C. Browne, executive director of the Fairbanks Museum and Planetarium in St. Johnsbury, Vt.

Scott Swank, director of New Hampshire's Canterbury Shaker Village, says "The museum profession has shifted its thinking out of necessity."

Adds Swank: "Museums used to focus on increasing their endowments, but the broader entrepreneurial way of thinking is no longer looked upon with suspicion as it would have been a few years ago."

But mission add-ons in the name of commerce or community—large scale retailing, for instance—can be a danger. Swank notes that institutions like the Smithsonian and Metropolitan Museum of Art have drawn scrutiny from the Internal Revenue Service. And local authorities may be tempted to withdraw the special tax-exempt status of museums—as they have on occasion with nonprofit hospitals—if they see museums getting too successful at the art of making money.

Campus collections

Among college-affiliated museums, however, the calculus remains more traditional.

Despite the abundance of higher education institutions in New England, fewer than 100 of the region's museums are affiliated with college campuses, compared, for example, with 192 in the geographically larger Midwest and 201 in the Southeast, according to the Association of College and University Museums and Galleries (ACUMG).

There are other regional differences. West of the Hudson, public land-grant universities tend to be the chief guardians of history and culture. "When you have a college or university [in these states] it is often the primary cultural facility in the community and it tends to get more support," says ACUMG director Pete Tirrell, the associate director of the Oklahoma Museum of Natural History at the University of Oklahoma.

By contrast, New England's college-affiliated museums tend to be found on the campuses of the region's Ivy League universities and revered private liberal arts colleges. Those campuses offer everything from Dartmouth College's acclaimed Hood Museum of Art to the MIT Museum's Hall of Hacks.

Tirrell notes that college-affiliated museums contribute not only to the broader com-

England, Boston, Mass. • USS Constitution Museum, Boston, Mass. • Aptucxet Trading Post, Bourne, Mass. • Worcester County Historical Society/Tower Hill Botanic Garden, Boylston, Mass. • Cape Cod Museum of Natural History, Brewster, Mass. • New England Fire and History Museum, Brewster, Mass. • Fuller Museum of Art, Brockton, Mass. • Frederick Law Olmsted National Historic Site, Brookline, Mass. • John F. Kennedy National Historic Site, Brookline, Mass. • Longyear Museum, Brookline, Mass. • Museum of Transportation, Brookline, Mass. • Burlington Historical Museum, Burlington, Mass. • Capt. Charles H. Hurley Library, Buzzards Bay, Mass. • Botanical Museum of Harvard University, Cambridge, Mass. • Harvard University Art Museums, Cambridge, Mass. • The Harvard University Herbaria, Cambridge, Mass. • The Harvard University Semitic Museum, Cambridge, Mass. • Longfellow National Historic Site, Cambridge, Mass. • MIT-List Visual Arts Center, Cambridge, Mass. • The MIT Museum, Cambridge, Mass. • Margaret Hutchins Compton Gallery, Cambridge, Mass. • Mineralogical Museum of Harvard University, Cambridge, Mass. • Museum of Cultural and Natural History, Cambridge, Mass. • Peabody Museum of Archaeology and Ethnology, Cambridge, Mass. • Atwood House Museum, Chatham, Mass. • Edwards Memorial Museum, Chesterfield, Mass. • McMullen Museum of Art, Boston College, Chestnut Hill, Mass. • Caler Lothrop House, Cohasset, Mass. • David Nichols-Captain John Wilson House, Cohasset, Mass. • Maritime Museum, Cohasset, Mass. • Concord Art Association, Concord, Mass. • Concord Museum, Concord, Mass. • Minuteman National Historical Park, Concord, Mass. • The Old Manse, Concord, Mass. Orchard House, Concord, Mass. • Ralph Waldo Emerson House, Concord, Mass. • Cahoon Museum of American Art, Cotuit, Mass. • Kingman Tavern Historical Museum, Cummington, Mass. • William Cullen Bryant Homestead, Cummington, Mass. • Crane Museum, Dalton, Mass. • Danvers Archival Center, Danvers, Mass. • Rebecca Nurse Homestead, Danvers, Mass. • Fairbanks House, Dedham, Mass. • Historic Deerfield, Deerfield, Mass. • Memorial Hall Museum, Pocumtuck Valley Memorial, Deerfield, Mass. • Cape Museum of Fine Arts, Dennis, Mass.. • Caryl House, Dover, Mass. • Sawin Memorial Building, Dover, Mass. • Art Complex Museum, Duxbury, Mass. • Duxbury Rural and Historical Society, Duxbury, Mass. • John Alden House, Duxbury, Mass. • The Vineyard Museum, Edgartown, Mass. • The Shipbuilding Museum, Essex, Mass. • Battleship Massachusetts, Fall River, Mass. • Fall River Historical Society, Fall River, Mass. • The Marine Museum at Fall River, Fall River, Mass. • Fitchburg Art Museum, Fitchburg, Mass. • Danforth Museum of Art, Framingham, Mass. • Framingham Historical and Natural History Museum, Framingham, Mass. • The Gardner Museum, Gardner, Mass. • Beauport, the Sleeper-McCann House, Gloucester, Mass. • Cape Ann Historical Museum, Gloucester, Mass. • Hammond Castle Museum, Gloucester, Mass. • The North Shore Arts Association, Gloucester, Mass. • Willard House and Clock Museum, Grafton, Mass. • The Association for Gravestone Studies, Greenfield, Mass. • Hadley Farm Museum, Hadley, Mass. • Porter-Phelps-Huntington Foundation, Hadley, Mass. • Fruitlands Museum, Harvard, Mass. • Brooks Academy Museum, Harwich, Mass. • Brooks Free Library, Harwich, Mass. • Old Ordinary, Hingham, Mass. • Children's Museum at Holyoke, Holyoke, Mass. • Wistariahurst Museum, Holyoke, Mass. • Major John Bradford House, Kingston, Mass. • Fifth Meeting House, Lancaster, Mass. • Immigrant City Archives, Historical Society of Lawrence and its People, Lawrence, Mass. • Lawrence Heritage State Park, Lawrence, Mass. • Council for Creative Projects-Warehouse Gallery, Lee, Mass. • Pleasant Valley Trailside Museum, Lenox, Mass. • Museum of our National Heritage, Lexington, Mass. • Codman House on the Grange, Lincoln, Mass. • DeCordova Museum and Sculpture Park, Lincoln, Mass. Drumlin Farm Education Center, Lincoln, Mass. • Gropius House, Lincoln, Mass. • The Thoreau Institute, Lincoln, Mass. • Richard Salter Storrs House, Longmeadow, Mass. • American Textile History Museum, Lowell, Mass. • Lowell National Historical Park, Lowell, Mass. • Lowell Telecommunications Corp., Lowell, Mass. • Middlesex Canal Collection, Lowell, Mass. • New England Quilt Museum, Lowell, Mass. • Whistler House Museum of Art, Lowell, Mass. • Peter Rice Homestead, Home of Marlboro Historical, Society, Marlboro, Mass. • Mattapoisett Museum and Carriage House, Mattapoisett, Mass. • Sewall House, Medford, Mass. • Tufts University Gallery, Medford, Mass. • Robbins Museum of Archaelogy, Middleborough, Mass. • Blue Hills Trailside Museum, Milton, Mass. • Captain Forbes House Museum, Milton, Mass. • Suffolk Resolves House, Milton, Mass. • Artists Association of Nantucket, Nantucket, Mass. • Egan Institute of Maritime Studies, Nantucket, Mass. • Main Street Gallery, Nantucket, Nantucket, Mass. • Nantucket Maria Mitchell Association, Nantucket, Mass. • New Bedford Whaling Museum, New Bedford, Mass. • The Rotch Jones Duff House & Garden Museum, New Bedford, Mass. • Coffin House, Newbury, Mass. • Spencer-Peirce-Little Farm, Newbury, Mass. • The Custom House Maritime Museum of Newburyport, Newburyport, Mass. • Cushing Historical Museum, Newburyport, Mass. • The Jackson Homestead & Newton City Museum, Newton, Mass. • University Art Gallery, North Dartmouth, Mass. • The Children's Museum in Easton, North Easton, Mass. • Clara Barton Birthplace, North Oxford, Mass. • The Botanic Garden of Smith College, Northampton, Mass. • Calvin Coolidge Memorial Room, Forbes Library, Northampton, Mass. • Smith College Museum of Art, Northampton, Mass. • Words And Pictures Museum, Northampton, Mass. • Northborough Historical Society, Northborough, Mass. • Watson Gallery, Wheaton College, Norton, Mass. • South Shore Natural Science Center, Norwell, Mass. • Porter Thermometer Museum, Onset Mass. • French Cable Station Museum in Orleans, Orleans, Mass. • Oxford Library Museum, Oxford, Mass. • Moll Art Center at Anna Maria College, Paxton, Mass. • Fisher Museum of Forestry, Petersham, Mass. • Berkshire Artisans/Lichtenstein Center, Pittsfield, Mass. • Berkshire County munity, but also to the colleges themselves in areas ranging from recruitment to course development. And though many are subsidized by their campuses, they often attract major grants that benefit the whole institution. The Oklahoma Museum of Natural History recently completed a $45 million fundraising effort, topped by more than $6 million in grants.

Campus-based museums generally adhere to missions that dovetail with the larger institution's goals and objectives, avoiding the battles that sometimes hinder staff and trustees of independent or municipal museums.

"We have more freedom to focus on our mission." says Marion Geothals, assistant director of the Williams College Art Museum in Williamstown, Mass.

Academic tourism

Meanwhile, the potential for synergy between New England communities and museums and other cultural institutions is immense. The Massachusetts Cultural Council, in partnership with the New England Foundation for the Arts (NEFA), recently published a report titled the *Economic Impact of the Not-for-Profit Cultural Industry in Massachusetts*, claiming cultural institutions in the state generate a total annual economic impact of $2.6 billion, including $1.4 billion in direct spending.

Just as critical, the authors noted, "the abundant cultural resources in Massachusetts are essential to the state's quality of life and are a major lure for businesses to locate in the state and to attract and retain employees."

Capitalizing on New England's museum wealth has the potential to benefit not only local communities but also the region as a whole and the museums in particular. The art museum at Williams is an active member of the Berkshire Visitors Bureau and a powerful draw for tourists—a role that Geothals says helps defuse town-gown tensions. "We are quite happy to be able to contribute to our region in that way," she says.

Still, perhaps the best example of how cultural tourism can transform a place is Lowell, Massachusetts.

Mill town model

In the late 1970s, Lowell, was a byword for everything that was wrong with the New England economy. All but a few of its traditional textile businesses had closed their doors; unemployment, crime, and social ills were rampant.

Thanks to an unusual degree of cooperation between business, political and institutional leaders—and the drive of the late U.S. Sen. Paul Tsongas—the city managed to convert its mill legacy into the cultural and economic attraction known as the Lowell National Historic Park, the first urban national park.

When cultural attractions work, they snowball. The state complemented the national park

Historical Society, Pittsfield, Mass.. • Berkshire Museum, Pittsfield, Mass. • Hancock Shaker Village, Pittsfield, Mass. • Howland House, Plymouth, Mass. • Mayflower Society Museum, Plymouth, Mass. • Pilgrim Hall Museum, Plymouth, Mass. • Plimouth Plantation, Plymouth, Mass. • Plymouth Antiquarian Society, Plymouth, Mass. • Richard Sparrow House, Plymouth, Mass.. • Pilgrim Monument and Provincetown Museum, Provincetown, Mass. • Provincetown Art Association and Museum, Provincetown, Mass. • Provincetown Heritage Museum, Provincetown, Mass. • Adams National Historic Site, Quincy, Mass. • Parker Tavern, Reading, Mass. • Rockport Art Association, Rockport, Mass. • Sandy Bay Historical Society & Museum, Rockport, Mass. • The Kemp-McCarthy Memorial Museum of the Rowe Historical Society, Rockport, Mass. • Rowley Historical Society, Rowley, Mass. • The House of Seven Gables, Salem, Mass. • Peabody Essex Museum, Salem, Mass. • Salem Maritime National Historic Site, Salem, Mass. • Salem 1630: Pioneer Village, Salem, Mass. • Salem Witch Museum, Salem, Mass. • Heritage Plantation of Sandwich, Sandwich, Mass. • The Old Hoxie House, Sandwich, Mass. • Sandwich Glass Museum, Sandwich, Mass. • Thornton W. Burgess Museum, Sandwich, Mass. • Yesteryear Doll & Toy Museum, Sandwich, Mass. • Saugus Iron Works National Historic Site, Saugus, Mass. • Kendall Whaling Museum, Sharon, Mass. • Somerville Museum, Somerville, Mass. • Children's Museum in Dartmouth, South Dartmouth • Yankee Candle Car Museum, South Deerfield, Mass. • Mount Holyoke College Art Museum, South Hadley, Mass. • The Skinner Museum of Mount Holyoke, South Hadley, Mass. • Historical Natural History & Library Society of Natick, South Natick, Mass. • Connecticut Valley Historical Museum, Springfield, Mass. • George Vincent Smith Art Museum, , Springfield, Mass. • Museum of Fine Arts, Springfield, Mass. Naismith Memorial Basketball Hall of Fame, Springfield, Mass. • Springfield Armory National Historic Site, Springfield, Mass. • Springfield Science Museum, Springfield, Mass. • Berkshire Botanical Garden, Stockbridge, Mass. • Chesterwood, Stockbridge, Mass. • Historical Room, Stockbridge Library, Stockbridge, Mass. • Merwin House, Tranquility, Stockbridge, Mass. • The Mission House, Stockbridge, Mass. • The Norman Rockwell Museum, Stockbridge, Mass. • Randall Library, Stow, Mass. • Stow West 1825 School Museum, Stow, Mass. • Old Sturbridge Village, Sturbridge, Mass. Longfellow's Wayside Inn, Sudbury, Mass. • Gingerbread House, Tyringham, Mass. • American Jewish Historical Society, Waltham, Mass. • Charles River Museum of Industry, Waltham, Mass. • Gore Place, Waltham, Mass. • Lyman Estate, Waltham, Mass. • Rose Art Museum, Brandeis University, Waltham, Mass. • The Waltham Museum, Waltham, Mass. • Armenian Library and Museum, Watertown, Mass. • Museum on the History of Blindness, Watertown, Mass. • David Museum and Cultural Center, Wellesley, Mass. • Wellfleet Historical Society Museum, Wellfleet, Mass. • Wenham Museum, Wenham, Mass. • Storrowtown Village Museum, West Springfield, Mass. • Jasper Rand Art Museum, Westfield, Mass. • Cardinal Spellman Philatelic Museum, Weston, Mass. • Golden Ball Tavern Museum, Weston, Mass. • Library of Rare Books, Williamstown, Mass. • Sterling and Francine Clark Art Institute, Williamstown, Mass. • Williams College Museum of Art, Williamstown, Mass. Aquarium of the National Marine Fisheries Service, Woods Hole, Mass. • Woods Hole Oceanographic Institution Exhibit Center, Woods Hole, Mass. • American Antiquarian Society, Worcester, Mass. • Higgins Armory Museum, Worcester, Mass. • Iris & B. Gerald Cantor Art Gallery, College of the Holy Cross, Worcester, Mass. • New England Science Center, Worcester, Mass. • Salisbury Mansion, Worcester, Mass. • The Worcester Arts Museum, Worcester, Mass. • Worcester Center for Crafts, Worcester, Mass. • Worcester Historical Museum, Worcester, Mass. • Historical Society of Old Yarmouth, Yarmouthport, Mass. • Winslow Crocker House, Yarmouthport, Mass. • Pauline E. Glidden Toy Museum, Ashland, N.H. • Whipple House Museum, Ashland Historical Society, Ashland, N.H. • Crossroads of America, Bethlehem, N.H. • Canterbury Shaker Village, Canterbury, N.H. • Sandwich Historical Society, Center Sandwich, N.H. • Old Fort Number 4, Charlestown, N.H. • Art Center in Hargate, Concord, N.H. • Audubon Society of New Hampshire., Concord, N.H. • Museum of New Hampshire History, Concord, N.H. • The Pierce Manse, Concord, N.H. • Robert Frost Farm, Derry, N.H. • Annie E. Woodman Institute, Dover, N.H. • UNH Art Gallery, Durham, N.H. • Durham Historic Association Museum, Durham, N.H. • Lower Shaker Museum, Enfield, N.H. • Lockerhaven Schoolhouse Museum, Enfield, N.H. • Enfield Historical Society Museum, Enfield Center, N.H. • American Independence Museum, Exeter, N.H. • Gilman Garrison House, Exeter, N.H. • The Lamont Gallery, Exeter, N.H. • New England Ski Museum, Franconia, N.H. • Carpenter Museum of Antique Outboard Motors, Gilmanton, N.H. • Tuck Museum, Hampton, N.H. • Hood Museum of Art, Hanover, N.H. • New England College Gallery, Henniker, N.H. • The Franklin Pierce Homestead, Hillsborough, N.H. • Science Center of New Hampshire, Holderness, N.H. • N.H. Antiquarian Society, Hopkinton, N.H. • Thornes-Sagendorph Art Gallery, Keene, N.H. • The Wyman Tavern, Keene, N.H. • The Belknap Mill Society, Laconia, N.H. • Lancaster Historical Society, Lancaster, N.H. • The Children's Metamorphosis, Londonderry, N.H. • Chapel Art Center, Manchester, N.H. • The Currier Gallery of Art, Manchester, N.H. • Lawrence L. Lee Scouting Museum, Manchester, N.H. • N.H. Institute of Art, Manchester, N.H. • N.H. Farm Museum, Milton, N.H. • Barrett House, Forest Hall, New Ipswich, N.H. • Mount Washington Museum, North Conway, N.H. • America's Stonehenge, North Salem, N.H. Karl Drerup Fine Arts Gallery at Plymouth State College, Plymouth, N.H. • Children's Museum of Portsmouth, Portsmouth, N.H. • Governor John Langdon House, Portsmouth, N.H. • John Paul Jones House Museum, Portsmouth, N.H. • Moffatt-Ladd House, Portsmouth, N.H. • Portsmouth Atheneum, Portsmouth, N.H. • Rundlet-May House, Portsmouth, N.H. • Strawberry Banke, Portsmouth, N.H.

in Lowell by opening the Lowell State Heritage Park. Add to that the New England Quilt Museum, the Whistler House Museum of Art, the American Textile History Museum (whose recently vacated digs in nearby North Andover were quickly eyed by a new Museum of Printing) and the Brush Art Gallery and Studios, where visitors can watch artists at work. The city also hosts the nationally known Lowell Folk Festival every summer.

The University of Massachusetts Lowell (then the University of Lowell) also played a key role in the city's transformation, which in turn, attracted Middlesex Community College to a new downtown campus.

Rick Sherburne, a doctoral candidate at UMass-Boston, notes that the federal government's $12 million investment in the national park's Boott Mills Museum alone attracted an additional $60 million in private investment in the Boot Mills complex.

All this new intellectual and financial capital has had an impact. Unemployment is down substantially and several thriving businesses are once again calling Lowell their home.

Working together

One of the ways smaller museums, like the Danforth Museum of Art in Framingham, Mass., are fighting the survival battle is by working more closely together.

The Consortium of New England Community Art Museums, launched in 1992 by Barry Dressel, then director of the Berkshire Museum in Pittsfield, Mass., now has more than a dozen "members" in its informal structure. These museums have found that sharing resources and ideas can help, not only in approaching philanthropists, but also in garnering support from the general public. One obvious benefit has been reciprocal membership privileges among some of the institutions.

But working with other kinds of organizations isn't necessarily easy. James Quay, executive director of the California Council for the Humanities, tried to characterize the challenge in a report issued recently by the American Association of Museums, titled *Partners in Tourism: Culture and Commerce*.

"Culture and tourism begin as uneasy, even contentious partners," Quay noted. "Cultural institutions like museums tend to be driven by a mission and an urge to educate, while tourism is driven by markets and the profit motive. A marriage between the two is often driven by economic opportunity rather than natural affinity and, like any relationship, requires a lot of talking and listening to ensure understanding."

Museums, individually and collectively, must make choices to survive and prosper. And those choices increasingly will have implications for New England tourism and economic development.

***Alan R. Earls** is a writer based in Franklin, Mass.*

Wentworth-Coolidge Mansion, Portsmouth, N.H. • Wentworth Gardner & Tobias Lear Houses Association, Portsmouth, N.H. • Coast Science Center, Rye, N.H. • Sandown Historical Society and Museum, Sandown, N.H. • The Sharon Arts Center, Sharon, N.H. • South Sutton Old Store Museum, South Sutton, N.H. • Remick Country Doctor Museum and Farm, Tamworth, N.H. • Libby Museum, Wolfeboro, N.H. • Wright Museum, Wolfeboro, N.H.. • Griswold Mansion and Gardens, Bristol, R.I. • Coggeshall Farm Museum, Bristol, R.I. • Haffenreffer Museum of Anthropology, Brown University, Bristol, R.I. Herreschoff Marine Museum/America's Cup Hall of Fame, Bristol, R.I. • Western R.I. Civic Historical Society, Coventry, R.I. • James Mitchell Varnum House and Museum, East Greenwich, R.I. • New England Wireless & Steam Museum, East Greenwich, R.I. • Varnum Memorial Armory & Military Museum, East Greenwich, R.I. • Jamestown Museum, Jamestown, R.I. • Watson Farm, Jamestown, R.I. URI Fine Arts Center, Kingston, R.I. • Blackstone Valley Historical Society, Lincoln, R.I. • South County Museum, Narranganset, R.I. • Artillery Company of Newport Military Museum, Newport, R.I. • Belcourt Castle, Newport, R.I. • Colony House Newport, R.I. • International Tennis Hall of Fame Museum, Newport, R.I. • Museum of Yachting, Newport, R.I. • Naval War College Museum, Newport, R.I. • Newport Art Museum, Newport, R.I. • The Museum of Port History, Newport, R.I. • The Preservation Society of Newport County/Newport Mansions Newport, R.I. • Redwood Library and Athenaeum Newport, R.I. • Thames Science Center, Newport, R.I. • Slater Mill Historic Site, Pawtucket, R.I. • Museum of Primitive Art and Culture, Peace Dale, R.I. • Portsmouth Historical Society, Portsmouth, R.I. • Annmary Brown Memorial, Providence, R.I. • Betsey Williams Cottage, Providence, R.I. • Children's Museum of Rhode Island, Providence, R.I. • Culinary Archives and Museums, Johnson & Wales University, Providence, R.I. • David Winton Bell Gallery, Providence, R.I. • Governor Henry Lippitt House Museum, Providence, R.I. • Governor Stephen Hopkins House, Providence, R.I. • The John Nicholas Brown Center for the Study of American Civilization, Providence, R.I. • The RISD Museum of Art, Providence, R.I. • Museum of Natural History, Roger Williams Park, Providence, R.I. • Providence Preservation Society, Providence, R.I. • R.I. Black Heritage Society, Providence, R.I. • R.I. Historical Society, Providence, R.I. • R.I. State Archives, Providence, R.I. • Roger Williams National Memorial, Providence, R.I. • Roger Williams Park Zoo, Providence, R.I. • Casey Farm, Saunderstown, R.I. • Gilbert Stuart Memorial, Saunderstown, R.I. • Warwick Museum of Art, Warwick, R.I. • Westerly Public Library, Westerly, R.I. • John Strong Mansion, DAR, Addison, Vt. • Barnet Historical Society, Barnet Vt. • Crystal Lake Falls Historical Association, Barton, Vt. • Adams Old Stone Grist Mill, Barton, Vt. • Community Historical Museum of Mount Holly, Belmont, Vt. • The Bennington Museum, Bennington, Vt. • Southern Vermont College Art Gallery, Bennington, Vt. • Brattleboro Museum & Art Center, Brattleboro, Vt. • Marvin Newton House, Brookfield, Vt. • Museum of the Americas, Brookfield, Vt. • Francis Colburn Gallery, Burlington, Vt. • Robert Hull Fleming Museum, Burlington, Vt. • Chester Art Guild, Chester, Vt. • East Poultney Museum, East Poultney, Vt. • Children's Discovery Museum of Vt., Essex Junction, Vt. • Chester A. Arthur Historic Site, Fairfield, Vt. Ancestral Estate of Rowland Evans Robinson, Ferrisburgh, Vt. • Bread & Puppet Museum, Glover, Vt. • Grafton Museum of Natural History, Grafton, Vt. • Hubbardton Battlefield Museum, Hubbardton, Vt. • Birds of Vermont Museum, Huntington, Vt.. • Isle La Motte Historical Society, Isle La Motte, Vt. • Jericho Historical Society, Jericho Corners, Vt. • Black River Academy Museum, Ludlow, Vt. • The American Museum of Fly Fishing, Manchester, Vt. • Southern Vt. Art Center, Manchester, Vt. • Southern Vt. Natural History Museum, Marlboro, Vt. • Middlebury College Museum of Art, Middlebury, Vt. • The Sheldon Art Museum, Archaeological and Historical Society, Middlebury, Vt. • Vermont Folklife Center, Middlebury, Vt. • Milton Museum, Milton, Vt. • The Image Co-op, Montpelier, Vt. • T.W. Wood Gallery & Arts Center, Montpelier, Vt. • Vermont Historical Society Museum, Montpelier, Vt. • Park-McCullough House, North Bennington, Vt. • Norwich University Museum, Northfield, Vt. Montshire Museum of Science, Norwich, Vt. • Bennington Battle Monument, Old Bennington, Vt. • Old Stone House Museum, Orleans, Vt. • Mount Independence Historic Site, Orwell, Vt. • Pittsford Historical Society Museum, Pittsford, Vt. • The Calvin Coolidge Memorial Foundation, Plymouth, Vt. • Calvin Coolidge Historic Site, Plymouth Notch, Vt. • Vermont Marble Museum, Proctor, Vt. • Wilson Castle, Proctor, Vt. • Putney Historical Society, Putney, Vt. • Chandler Gallery, Randolph, Vt. • New England Maple Museum, Rutland, Vt. • St. Albans Historical Museum, Saint Albans, Vt. • Fairbanks Museum and Planetarium, Saint Johnsbury, Vt. • St. Johnsbury Athenaeum, Saint Johnsbury, Vt. • Shaftsbury Historical Society, Shaftsbury, Vt. • National Museum of the Morgan Horse, Shelburne, Vt. • Shelburne Museum, Shelburne, Vt. • South Hero Bicentennial Museum, South Hero, Vt. • Eureka School House, Springfield, Vt. • Miller Art Center, Springfield, Vt. • Helen Day Art Center, Stowe, Vt. • Justin Smith Morrill Homestead, Strafford, Vt. • Thetford Historical Society Library and Museum, Thetford, Vt. • The Lake Champlain Maritime Museum, Vergennes, Vt. • Vernon Historical Museum & Pond Road Chapel, Vernon, Vt. • General Wait House, Waitsfield, Vt. • Chimney Point Tavern, West Addison, Vt. • Westminster Historical Society, Westminster, Vt. • Farrar-Mansur House & Old Mill Museum, Weston, Vt. • Whitingham Historical Museum, Whittingham, Vt. • American Precision Museum, Windsor, Vt. • Old Constitution House, Windsor, Vt. • Billings Farm & Museum, Woodstock, Vt.

Photo by John Mottern.

Moments of Meaning

Religious Pluralism, Spirituality and Higher Education

VICTOR H. KAZANJIAN JR.

The effects of globalization and rapidly increasing ethnic, cultural and religious diversity within American Society are nowhere more prevalent than on college campuses. Not surprisingly, educators are wrestling with the question of what role colleges will play in shaping the moral, ethical and spiritual character of students in the context of this more pluralistic society. This challenge brought more than 800 college presidents, deans, faculty members, trustees and students to Wellesley College in September 1998 for a "National Gathering" to discuss the impact of religious diversity on campuses and the role of spirituality in higher education. The meeting at Wellesley reflects the latest effort to consider the complicated history of religion and higher education in a way that better reflects the changing face of America and new global realities.

Many New England colleges and universities trace their beginnings to religious, in most cases, Protestant Christian, roots. Even as colleges and universities shed their formal religious ties by the end of World War II and declared themselves secular, a Christian ethos continued to permeate their institutional culture. Today on many campuses, past mono-religious practices are colliding with multi-religious realities. This collision has precipitated a crisis in dealing with the increasing religious diversity on campus and addressing issues of spirituality and education.

I arrived at Wellesley College in 1993, charged with the task of creating a new program of religious and spiritual life based on principles of religious pluralism. These principles were broad enough to celebrate particular expressions of religious faith while fostering a dialogue about nurturing common moral, ethical and spiritual principles.

Wellesley's decision to embrace religious and spiritual life was an unusual step for a leading secular liberal arts institution. Most academic institutions—confused by the apparent contradiction of a mono-religious and mono-cul-

Religious School

Yale University's new Institute for the Advanced Study of Religion will focus its first year of work on how religion has impacted American race relations and how race and ethnic identity has affected religion. The institute, funded with $2.2 million from The Pew Charitable Trusts, will study a different theme each year as it pursues its goal of focusing attention on the role of religion in American life. The theme for academic year 2000-2001 will be American religion and economic policy.

tural institutional history existing side by side with a multi-religious contemporary community—were abandoning even minimal religious support for students.

To suggest that spirituality—even free from its institutional religious context—plays an essential role in a college's basic educational mission was certain to be seen as blasphemous or, at the very least, regressive in an educational world where objectivism is the ideological orthodoxy. This is, however, precisely what Wellesley set out to do by creating a multi-faith religious and spiritual life program under the direction of the newly established position of Dean of Religious and Spiritual Life.

My initial work at Wellesley was to develop a new multi-faith model of religious life, in which all religious traditions and spiritual perspectives are valued, in contrast to usual religious life programs, in which one tradition, usually Protestant Christian, is dominant and everyone else must orient themselves.

My charge is to nurture 13 different religious traditions without representing any single one. In establishing this collaborative multi-faith program, Wellesley is exploring the possibility of religious pluralism in the life of the college community. A multi-faith team of advisors and student leaders includes adherents of Bahai, Buddhist, Christian (Evangelical, Protestant and Roman Catholic), Hindu, Jain, Jewish, Muslim, Native African, Native American, Pagan, Sikh, Unitarian Universalist and Zoroastrian traditions, who work together to develop new models for religious life and community worship. Each religious tradition is respected and no single voice dominates. We support each other's group life while exploring, in depth, the possibilities of interdependence and interreligious cooperation.

As the program grew, many students who do not identify with a specific religious tradition but are spiritual seekers, began to seek out religious and spiritual life programs. They asked questions about how to integrate religious or spiritual dimensions into their learning. Their questions challenged some of the most basic assumptions of higher education as a place where one develops the mind separately from the emotional, social and the spiritual.

Today's students, whatever their religious traditions and spiritual perspectives, are asking for a college community where the life of the mind is not separate from the life of the spirit.

In the spring of 1998, I gathered a group of students and asked them to share stories of "moments of meaning" they had experienced in their classes. I was searching for a way to present a more inclusive vision of education as an integrative process encompassing all dimensions of life and learning. The divide between mind and spirit, head and heart, is so deeply embedded in Western education that it seemed any attempt to bridge the gap would be futile. But as I listened to the students' stories, I saw a way across the abyss.

Man with a Mission

Merrimack College recently created the new position of Vice President for Mission Effectiveness "to help ensure that Merrimack continues to excel as a Catholic liberal arts college with a national reputation for both high academic standards and Augustinian community."

The students told of moments of inspiration, connection, wonder and awe in the classroom. The classes in which these moments occurred cut across the curriculum from biology to history, sociology to theater, ethnic studies to mathematics—story after story of moments when students were awakened to a deeper understanding of themselves, of others around them and of the world.

One student told of a moment in a molecular biology class when she suddenly made the connection between the smallest forms of life and the largest living ecosystems of the planet. Another related an experience of working on a psychology project with her mentor when the faculty member's encouragement of her research resulted in their co-authoring a paper. Still another student explained how her political science studies came alive during a winter trip to Mexico with her class. Students spoke of moments of meaning experienced through service, through learning opportunities and through literature. In each case, the students talked of these moments as representing a spiritual dimension to their education.

I listened to students pose the questions that were foremost on their minds, questions which I considered profoundly spiritual: *What is the purpose of all this learning? What does it mean to be an educated person? What does my learning have to do with my living? How is my learning relevant to the lives of others?*

Buried in the stories and questions was a vocabulary that seemed to bridge the chasm between the language of spirituality and the language of scholarship. Students repeatedly used words such as "meaning," "inspiration," "connection," "relevancy," "purpose," "understanding," "wonder," "awe," "joy" and "love" in describing their educational experience.

During discussions with students, I settled on a definition of spirituality in education as that which animates the mind and body, giving meaning, purpose and context to thought, word and action. Think of it as the *meaning-making* aspect of learning.

I decided to approach faculty members with the stories told by their students. I e-mailed the faculty members, telling them that a student in their class had described having experienced a moment of meaning which they connected to a spiritual dimension of their education. I then invited the faculty members to a discussion about such moments in the learning and teaching process.

Over the course of the next month, 55 faculty members met for discussion and shared similar stories with one another about such moments of meaning in their own learning and teaching. Eventually, the discussion centered on their original decision to become scholars and teachers. Some spoke of a passion for seeking truth, others of a desire to kindle a flame within their students. Many described having been affirmed by a faculty mentor in their own lives as someone whose ideas were of value. Many spoke of the joy of watching students come alive as connections between self and world began to be made.

Some faculty members—who responded in the past with blank stares and occasionally overt expressions of anger at the presumption of speaking about spirituality and scholarship in the same breath—seemed now to see the connection. Indeed, it was becoming clear to students and teachers alike that teaching and learning was more than passing on information. What we needed was a language to speak about it.

The stories told by the students and faculty awakened in them a vision of education as liberation for the human spirit from the bondage of ignorance. This vision challenges the notion that colleges and universities are simply dispensers of marketable skills that enable individuals to manipulate others in order to gain power, prestige and material wealth.

This vision sees education not simply as the imparting of information, but as a process of transforming information into knowledge to enable us to engage the world in a heartfelt way. It echoes T.S. Eliot's haunting question, "Where is the knowledge that is lost in information? Where is the wisdom that is lost in knowledge?" Eliot suggests that the goal of education is wisdom. Wisdom, he says, is based on understanding information in the context of understanding ourselves as well as others and applying this knowledge with a deep regard for the world.

From our conversations, a national project began to take shape around the issues of religious pluralism and spirituality in higher education. With Peter Laurence, then working at the World Conference on Religion and Peace at the United Nations, we at Wellesley began to develop a strategy to engage a national conversation around these issues. We established dialogue teams on campuses across the country. After nearly two years of conversations with college presidents, faculty members, students, administrative staff, alumni, trustees and campus religious life professionals, we realized there was a growing movement to address issues of religious pluralism and spirituality in higher education.

In September 1998, we convened the National Gathering at the Wellesley campus. Plenary sessions were held in a tent in front of the Houghton Chapel, the 100-year-old Protestant chapel where today all religions worship together while remaining faithful to their own traditions. The point of the gathering was to explore together the challenges that religious diversity holds for the educational community and confront the role of spirituality in higher education.

Speakers included Wellesley President Diana Chapman Walsh; Parker Palmer, senior associate of the American Association of Higher Education and author of *To Know as We are Known: Education as a Spiritual Journey*; and Diana Eck, professor of comparative religion and Indian studies and director of the Pluralism Project at Harvard University. More than 75 other scholars, educators, scientists and religious leaders spoke at the plenary sessions and led workshops.

The conference, planned by representatives of 27 colleges and universities, was the start of a multiyear project on campuses throughout the country.

A powerful moment during the National Gathering came when students from traditions ranging from Bahai to Christian to Pagan led a multi-faith celebration. Unlike interfaith experiences where participants set aside their traditions in favor of universal language that will not offend anyone, this service encouraged participants to speak, dance, sing, and play music from their own unique traditions.

There amidst the mono-religious iconography of the Christian Chapel, worship was offered through Chinese Lion Dance, Native African Drumming, a Buddhist Bell chant, a Christian anthem, Jewish and Muslim readings, classical Indian/Hindu dance, and prayers in a dozen different languages and traditions. These religion-specific offerings were then woven together by a student reflection entitled "Beyond Tolerance," in which Wellesley students told of their journey into the world of religious pluralism and spirituality, and their discovery that they could maintain a deep connection with their own tradition while seeing the beauty of other worship.

In closing the National Gathering, Vincent Harding, veteran of the Civil Rights Movement, said of the multi-faith celebration, "I am going to carry that vision of the students home with me. I have a feeling that at the chapel, we were visiting the future and the future was visiting us … and I am promising myself that I want to be faithful to that vision all the rest of my life."

The changing religious and cultural face of America will change the look of U.S. higher education profoundly. Colleges will become global learning communities where all kinds of diversity—cultural, racial, ethnic, ideological and religious—will be essential to a vibrant educational experience. Education of this kind will include an exploration of the moral, ethical and spiritual issues facing individuals, communities, countries and the world. Education of this kind will play a transformative role in leading the world to a more just and peaceful future.

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Spirituality.com

A distance learning network run by the Coalition of Christian Colleges and Universities has received $1.65 million from an anonymous donor to develop college-level Internet courses in areas such as Biblical studies and "leadership development." Christian University GlobalNet is chaired by Gordon College President R. Judson Carlberg. According to a news release, the network "is committed to the essentials of being Christ-centered, spirit-directed and scripturally anchored."

Illustration by Russell Brennen, The Publication Group.

New England: State of Mind or Going Concern?

NATE BOWDITCH

I may be the consummate New Englander. I grew up in New Hampshire, learned to ski in Vermont, went to school in Massachusetts, taught city kids in Connecticut, played soccer in Rhode Island and raised a family in Maine. Today, I live and work in Greater Boston, where I direct a New England Public Policy Collaborative (NEPPC), which is aimed in part at encouraging the six states to work together.

Sure, I know that half the people in Connecticut don't care about the Red Sox, and that Fairfield County gravitates toward New York (one Nutmegger ended a call to her Connecticut state legislator by saying: "You people in Albany don't know what you're doing."). Yeah, I realize New Hampshire and Maine fight over borders and lobster grounds, just as Vermont and Rhode Island march to different drummers, and Bay Staters—particularly Bostonians—think the region, if not the world, revolves around them.

So you might say the *state* of New England is just "a state of mind." But my gut tells me the *state* of New England should be a going concern.

The six New England states are, as Connecticut Higher Education Commissioner Andrew G. De Rocco observed, "far more than a geographic circumstance between Greenwich and the Allagash!"

Tied together by geography, climate and history, they continue to boast important distinctions: the world's foremost concentration of renowned colleges and universities; an unparalleled concentration of medical specialists; the center of mutual fund management; and a proximity to Europe and the emerging markets of Africa that will become ever more crucial as regional trading blocs blur international borders.

In short, New England is sitting atop a tremendous opportunity to stem its long-running outflow of population and to flourish—if more of us could just figure out how to work together.

In 1955, six New England governors—Abraham A. Ribicoff of Connecticut, Edmund S. Muskie of Maine, Christian A. Herter of Massachusetts, Lane Dwinell of New Hampshire, Dennis J. Roberts of Rhode Island, and Joseph B. Johnson of Vermont—concluded that New England's advantages argued for a concerted effort to work together, particularly in higher education. They created the New England Board of Higher Education (NEBHE) to carry out this work.

The NEPPC is NEBHE's most recent initiative aimed at fostering regional cooperation on behalf of New England's economic development. The collaborative brings together experts at the region's approximately 300 public policy centers and institutes in the flesh and via the Internet. The NEPPC was formally launched in February 1998, when NEBHE convened 100 state policymakers, think tank directors and others at a conference exploring the *New England Agenda*. Shortly afterwards, the AT&T Foundation awarded NEBHE a two-year grant to push ahead with the collaborative, and by April, NEBHE had linked most of the think tanks on its World Wide Web site.

The NEPPC seeks to encourage collaboration among the region's policy think tanks and to help foster the sharing of important policy analysis. But the NEPPC also aims to focus the attention of New England's public policy community on *regional* issues and opportunities.

Road trip

During the past summer, I visited with a cross-section of public policy practitioners and scholars around the region to get a feel for where New England seems to be going and how NEBHE's collaborative can help it get there. Here's what I heard:

New England has important competitive advantages. ... Everybody I met with spoke of crucial New England competitive advantages. New England Council President James T. Brett, for example, observed that New England is the mutual fund capital of the world, a center of American higher education (the outside world sees us as *the* center) and a major tourist destination.

But some of the opinion leaders wondered whether New England was capitalizing on its strengths. Did the existence of New England's acclaimed health care delivery systems lend itself to a solution for the problem of uninsured people? It seemed so, but how?

As we approach the millennium, we just don't know enough about our advantages because our economy and institutions are changing so fast and because governance structures and politics confine our thinking to known political jurisdictions such as the states. Our think tanks and others do a lot of analyzing, but they don't spend much time or money analyzing the *region*.

... and important disadvantages. To be sure, New England has some notable disadvantages, as well. Our Congressional clout is going, going, gone. Don't look there for salvation. The demographics are powerfully against us. As NEBHE chair and former University of Massachusetts President David C. Knapp reminded me: "People have been going west from New England ever since the Huguenots went west from Salem. Mass., in the 1600s."

Added Knapp, "I'm concerned that New England is going to be nothing other than a historic district."

As for the Greats—Muskie, Smith, Mitchell, Cohen, O'Neil, Weicker and so many more—they've gone to the great beyond (or the private sector), taking with them America's appetite for entrepreneurial public policy and national risk-taking—and leaving a region, if not a nation, at risk.

Moreover, New England is a high-cost region. Our higher education is high cost, the electricity is high cost, everything is high cost. Observed Jan Eastman, director of Vermont's Snelling Center for Government: "It takes three working to earn what one did."

New England's economic history is a story of boom and bust, rich and poor. When booms occur, New Englanders quickly become complacent about their prosperity. Politicians begin jockeying to give back surplus money to the people, while lamenting the lack of available training programs to fuel the economy. Then a recession comes along and our lack of competitiveness is conveniently blamed on liberal public expenditures.

The current boom notwithstanding, New England is really a region of subregions, according to many opinion leaders. "The region is typified by places of immense wealth and power and others which are marginal and in decline. This has always been the case and this duality persists throughout the region," noted University of Southern Maine Provost Mark Lapping.

We seem to lack the commitment to propel those at the bottom end of the labor force into meaningful careers. Instead, we ignore tens of thousands of relatively poorer, relatively less educated, relatively less white, relatively less technologically literate people. We sentence them to tough lives in tough neighborhoods far away from our employee-hungry companies. Rather than invest adequately in the education and training of New England workers, an increasing number of whom are non-white, business executives press for liberalized immigration policies so they can import workers to fuel expansion.

Working together? New England has produced important models for regional cooperation. NEBHE's Regional Student Program, for example, is the nation's foremost interstate tuition reduction program. And the region's chief executives have found common ground on issues such as energy and tourism. "New England's governors have never let their political differences get in the way of working together," explained William Gildea, the long-time executive director of the New England Governors' Conference.

But there is also a serious side to New Englanders' fabled individualism, stubbornness and stone walls. It manifests itself in widely varying property taxes and town meetings—and difficulty in collaboration. "Localism in New England is very intense," observed Knapp.

Added Andy Torres, director of UMass-Boston's Mauricio Gaston Institute for Latino Community Development and Public Policy: "Beneath the surface of New England civility, there's a 'you've-got-to-pay-your-dues' type of thing."

Rachel Talbot Ross, director of Equal Opportunity & Affirmative Action in Portland, Maine, summed up the difficulty: "Collaboration is not an easy thing to achieve when you take populations that have not been empowered."

Keith Stokes, executive director of Rhode Island's Newport County Chamber of Commerce, insisted New England's problem is not racism. Stokes describes New Englanders this way to his friends from the South: "They are traditionalists, and their traditions tell them the way it *is* is the way it should be."

And how do you know when a collaborative venture is truly diverse? Paula Rayman, director of the Radcliffe Public Policy Institute, told me to ask a simple question: "Are you the most inclusive that you can be?"

Regional value chains

So, how to ensure that New England remains a going concern?

One way is to better understand "value chains." University of New Hampshire Associate Professor of Strategic Management Ross Gittell sees economic value chains as the basis for building sound economic development strategies. An idea from Cambridge, Mass., is transmitted to a New Hampshire company. The company works with its corporate clients to turn the Cambridge idea into a product to serve them. From this point on, a product design and product manufacturing process are created which may extend the value chain into Maine or Canada or Malaysia.

What value chains are to be found in New England?

Michael Meotti, president of the Connecticut Policy and Economic Council, noted that state officials and business leaders in Connecticut have concluded that the only way to form meaningful strategies for cooperation in the Greater Hartford area is to closely examine the interflows of people, ideas and goods that truly define a region. Once that's done, a compact or compacts can be forged to pursue common interests.

We might ask further how the Connecticut headquarters of a paper company is linked to northern New England's forest lands and manufacturing facilities. How is the Vermont dairy farm connected to the Massachusetts supermarket conglomerate? Doug Fisher, manager of economic and community development for Northeast Utilities Systems, told me the string of corporate headquarters along New England's coast from Portland, Maine, to Stamford, Conn., weathered the 1990s recession better than other places because of CEO loyalty to the New England quality of life. How did New England's hinterlands fare? These are regional value chains.

What about the fact that for-profit higher education, having settled firmly in New York and New Jersey, is making inroads in New England? As Maine Technical College System President John Fitzsimmons said: "The wolf is at the door with just-in-time higher education and it's scary as hell!"

Or is it a blessing in disguise? "What makes people work together is a threat from a common enemy," quipped Massachusetts state Sen. David Magnani.

I would add common opportunity—as in "I can't do it without you."

Global value chains

Global value chains are also at work. Robert L. Woodbury, director of the UMass-Boston's McCormack Institute of Public Affairs and a one-time Maine gubernatorial candidate, wondered how New England might work with emerging markets?"

Rachel Talbot Ross noted that Maine's "small businesses [could be] connecting with similar places in the emerging markets."

Music to my ears! For years I have preached the benefits of developing ties with emerging African nations. Daily press reports of starvation make most Americans scoff at this notion. My response is: you stick your head in a bag of your own air at your own peril.

Consider how profoundly the Asian Miracle transformed America's West Coast. Ever stop to think what could occur *here* if there's an African miracle? According to World Bank data, the economies of 21 of the 48 countries in sub-Saharan Africa grew at better than 5 percent last year, up from 15 in 1995. Africa's 650 million people are about eight hours by plane from Boston, but not a single airline offers a scheduled flight from Boston to anywhere on the entire African continent.

We mustn't overlook the fact that Africans are primarily black. Suppose African businesses, governments and students conclude, over the next 20 years, that New England's lack of interest and history of rocky ethnic relations suggest that the American South would be a better partner?

If New England is to flourish, we had better understand these kinds of value chains.

Action!

Andy Torres observed that "collaboration works best when it's issue-oriented."

As a step toward better defining the crucial issues facing the region, NEBHE recently launched the *Future of New England Survey,* canvassing 6,000 New England opinion leaders, including corporate CEOs, elected officials, college presidents, school superintendents, news editors and civic leaders.

The survey asks 15 questions about New England's strengths, weaknesses, priorities and regional opportunities.

Early results suggest grave concerns about K-12 education, New England's cost of living and the threat of economically weak cities, poor access to health care and child care and a lack of basic skills and technical proficiency.

The second NEPPC *New England Agenda* conference, scheduled for February 1999, will bring together New England public policy practitioners and think tank staff to discuss the results of the survey and forge a consensus around issues and opportunities that demand the attention of the region as we approach the new century.

NEBHE will then work with policy analysts and practitioners to identify issues where regional collaboration can make a real difference.

In the meantime, elected officials and other appointed leaders within the region need to understand the region's dynamics far better than they do today. What could legislators from Greenwich and Stamford learn from their counterparts in Madawaska? What might the Maine fisherman learn from the marine biologist in Rhode Island? Shouldn't the New Hampshire newspaper editor understand the problems of inner-city Bridgeport?

A good model: the Maine Development Foundation's Policy Leaders Academy offers economic tours of the state, seminars and "job shadowing" for legislators and business leaders. The program has contributed hugely to the state's ability to forge and implement shared economic programs and establish statewide benchmarks of success. A similar regional initiative could provide New England legislators, business executives and community leaders with a regional context.

Moreover, everyone I spoke with agreed that New Englanders must find ways to learn about one another's approaches to public policy issues and to share "best practices." National conferences and trade associations bring like-minded professionals together. But few regional forums exist, and New Englanders frequently know little about how their closest neighbors have dealt with common problems.

Andy Coburn of the University of Southern Maine told me, "collaboration is an unnatural act between consenting adults." True enough. Yet partnerships and teamwork—and even corporate consolidations—have become this society's chosen strategies. Regional collaboration can be accomplished and sustained by people who understand its potential. We know you're out there.

***Nate Bowditch** is a senior fellow at the New England Board of Higher Education and author of The Last Emerging Market, a book on management culture and economic development in Africa, forthcoming from Praeger.*

We Must Represent!

WALTER LECH

The following is adapted from an address by Walter Lech before 350 minority students who took part in the seventh annual meeting of the New England Board of Higher Education's Science & Engineering Academic Support Network, which was held in October 1998 at the Massachusetts Institute of Technology. NEBHE's regionwide network aims to increase the number and success of New England minority students (from high school through graduate school) who specialize in science, math and engineering. The GE Fund is the major corporate sponsor of the network. MIT is the major campus sponsor. Lech, a former electrical contractor, is a graduate student researcher at Harvard Medical School and at Tufts University's Sackler School of Graduate Biomedical Sciences.

So I've been asked to talk to you today about my life. My friends will tell you that when it comes to talking about myself, they usually can't shut me up. But when actually faced with the task of describing how I find myself at Harvard Medical School, I'm a bit at a loss for words. I will say this: until I received my acceptance in the mail, I never really thought I had a chance of getting in. That's the problem, and it's one of the reasons I've agreed to be here today.

I'm an American Indian who did NOT grow up on the Rez. In fact, I was very much an urban Indian, growing up on the streets of Buffalo, N.Y., with very little money. Trouble was always easy to find, and I sure as hell didn't seem to be avoiding it. My grades were good in high school, which wasn't a surprise because it was a vocational-technical school. For those of you unfamiliar with what goes on at a voc-tech, we spend half the day in basic subjects and the other half in "shop." The basic subjects were exactly that: nothing too complicated and certainly no AP credit. The school was designed to train us for work when we graduated, not for college. Interestingly, the entire time I was in high school, attending college was never even discussed as an option.

I was trained as an electrician, and after graduation, I tried to find work as one. Couldn't get into any of the unions because I didn't have a dad or uncle already there. So I took a job in a repair shop making five bucks an hour (instead of 18 bucks an hour like my classmates from the lucky sperm club). What drove me nuts was that I felt I wasn't being challenged enough; I felt I could do so much more if somebody would just give me a chance. With so few opportunities around, I jumped at the chance to move to Los Angeles with a couple of buddies when I was 19 years old.

Most of the construction in California was non-union, so I was able to convince an electrical contractor to hire me as an apprentice, even though he didn't need any help. That first day on the job site, I thought I was so cool. Hey, I had three years of schooling in electricity; still got the books to prove it. Easy money!

All that schooling didn't mean jack when he handed me that drill. I was having a hard enough time trying to figure out where to plug the thing in, let alone what to do with it once I did. Didn't have a clue where to begin. "I'll be sellin' all them books for food," is about all I could figure. Having had *classes* and having had *calluses* are two entirely different things. BIG wake-up call.

Fortunately, I liked working with my hands, and I caught on quick. Within a year, the contractor promoted me to crew foreman, making me responsible for five other journeymen electricians; some of them had been in the field longer than I'd been alive. It was after I'd been in California for a year and become a resident that I decided to go to community college. I wasn't quite sure what I would major in, but I had so much basic stuff to do first, it didn't matter.

When I applied for financial aid, I was told I made too much money the year before to get any aid. At that time, anything more than $8,000 a year was "too much." (Try living in LA on less than $167 a week!) To qualify for aid, I would have to quit my job for one that paid about four bucks an hour and wait a year before applying for aid. This would necessitate my getting on some sort of welfare in order to continue living in LA. I didn't come this far to go back to eating government cheese. I decided to keep working.

So I started putting in 50 hours a week during the day and carrying 12 units a semester at night. Needless to say, at 12 units a semester, I was going to be in college quite a while. After five years of night school, I couldn't get any more of the classes I needed at night, so I had to start looking to transfer to a four-year school. I liked UCLA, but it didn't offer much in the way of night classes. And I knew I couldn't count on the university for financial aid. I was stuck.

Then I started thinking, "I'm already running job sites. Billing clients can't be that much harder. Maybe I could get my contractor's license and start up my own business." So I did. It wasn't a bad deal either: show up on the job site at 7 a.m. to line up the crew, go to school until noon, then head back to the site to work and check up on things. Billing and homework were saved for nights and weekends. It kept me busy, but at least I was still in school and off welfare.

And that's how I earned my undergraduate degree. I graduated with departmental honors from UCLA's Department of Microbiology and Molecular Genetics in 1996. Nine years for a bachelor's degree! Can't say I wouldn't rather have taken an easier, more direct path, but at least I wasn't in debt. More importantly, the road I took had a lot of living along the way. When you have to work hard for something, I think you appreciate it more than if it were given to you.

There's a greater sense of accomplishment when you succeed in your struggle. All I wanted was an opportunity to do what I could with what I had. Fortunately, there were a few people along the way who, with a little arm-twisting, were willing to give me a chance to prove myself.

One of these people was Dr. Andrew Kaplan. Andy was an assistant professor at UCLA who lectured on HIV pathogenesis. The field was very interesting to me, and he seemed like a pretty good guy. So I went down to his lab one day and asked him if I could work in his lab. I told him I didn't have any lab experience, but was a

Photo by Paula Lerner

Networking. *Lech (center) poses with Roxbury Community College Science Professor Krysis Rodriguez (left) and Boston University Associate Professor of Electrical Computer & Systems Engineering Roscoe Giles (right). The three delivered keynote addresses at the seventh annual meeting of NEBHE's Science & Engineering Academic Support Network, which was held in October 1998.*

quick learner. He was obviously a little reluctant. I told him I'd bust my ass for him and all I wanted in return was to be first author on any work I did. He was quite amused with all of this, considering I had no lab skills and had never written a journal article. But I was nothing if not persistent, and after the security guards wrestled me off him, he agreed to take me on in the lab.

When you see that window in front of you, you've got to jump through it before it closes down on you and everyone else behind you.

I lived up to my end of the bargain, and so did he. My first paper, entitled, "In Vivo Sequence Diversity of the Protease of HIV-1: Presence of Protease-inhibitor Resistant Variants in Untreated Subjects" was published in the *Journal of Virology*. I was the lead author on the first study to demonstrate the pre-existence of drug-resistant mutants to the newest class of anti-virals aimed at HIV. Andy gave me the opportunity to speak at professional conferences all over the country on my work, which went a long way in helping me feel confident in what I could accomplish. But Harvard Med? Forget about it.

Why didn't I think I had a chance at Harvard?

I think it stems from the fact that I've never seen anybody like me in a position of prominence. I never had a Native American professor in high school or college (nor an African-American or Latino, for that matter). Never saw people of color in positions of power. Not in my neighborhood. Didn't have anyone like me to look up to. That's the real problem. Think back to how many times you were asked as a child, "What are you going to be when you grow up?" Fact of the matter is, all you can expect is what you've seen, and if you don't see much like yourself, you won't expect much of yourself.

But you and I are changing that. This is the first step on a long road. We are the first generation to live our entire lives under the Civil Rights Act. Think about that for a moment. Our parents grew up in a society where it was *accepted* that women and people of color could be treated as inferiors under a government that sanctioned the discrimination our ancestors endured. The people who graduated from college before the Civil Rights Act are still in positions of power today. They are the CEOs, the deans of admissions, the regents, the judges and the politicians who run this country. If these people grew up in a society that *believed* we were inferior, do you really think passing a law was going to change the way they *thought*?

This is what we are up against. Fortunately, there have always been courageous men and women of the majority who spoke out against the unfair practices of society. I stand before you today on the shoulders not only of my ancestors, but also on the shoulders of these white men and women who stood up for justice in this country. The same few people who gave some of our parents and grandparents opportunities to do what they could when nobody else would.

Opportunity. That word keeps coming up, doesn't it? But I want to change the way you think about opportunities. The next time you are presented with an "opportunity" to move forward in your career, be it through an advanced degree, a promotion or whatever, I want you to consider your acceptance as an *obligation*. A Ph.D. or an M.D. takes a considerable amount of work; promotions entail much more responsibility. It's tempting to just settle for where you are and not put in the extra effort. Don't do it. Don't settle. Don't live *down* to their expectations.

With the passage of the Civil Rights Act and the policy of Affirmative Action, a window was opened. If recent events [banning Affirmative Action] in Texas and California are any indication, that window is rapidly closing. When you see that window in front of you, man, you've *got* to jump through it before it closes down on you and everyone else behind you, because that window can only be opened from the *inside*. We've been trying to bust it open from the outside for generations, and it hasn't worked. The more of us who get on the inside now, the more of us will get on the inside later. We will be the ones who affect society, not by changing its laws, but by changing its *mind*.

The more of us who get on the inside now, the more of us will get on the inside later. We will be the ones who affect society, not by changing its laws, but by changing its mind.

When this society changes the way it thinks about women and people of color, we won't need to force it to provide opportunities. It will realize the vast, untapped resource that it has had all along and welcome our diverse contributions to the evolution of our combined cultures.

It starts here. With us. We are the ones who must take up the challenge.

You and I must *represent*.

I'll see you on the other side...

Books

Reinventing Region 1

Melvin H. Bernstein

1998 State of the New England Environment Report for Region 1, EPA, 1998, Free

John DeVillars recognizes that the U.S. Environmental Protection Agency (EPA) is at a turning point. That is the driving force behind the Region 1 administrator's re-invention approach to the EPA's New England office. The basic elements of his strategy: use the region as a laboratory to introduce efficient new environmental technologies, restructure and streamline the way the EPA does business in the region, pursue a dialogue with industry and employ incentives to encourage better performance instead of the traditional policing approach of threatening fines and penalties to control behavior.

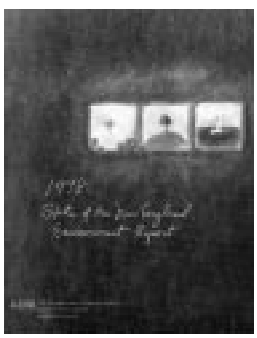
The strategy is illustrated in a recent report on the state of the environment and environmental protection in the six states. The *1998 State of the New England Environment Report for Region 1* heralds the achievements of EPA's New England office on a variety of fronts, including improving air quality, restoring the quality of the region's waters, lowering vehicle emissions in the atmosphere, reducing the contamination of groundwater used for drinking purposes and facilitating better collection of beach debris along the region's 456 miles of shoreline.

A rich array of charts, tables and graphs illustrate the region's progress in addressing such environmental issues as: days with good air quality, tracking ozone concentrations, public water systems that meet drinking water quality standards, plant species at risk, causes of water pollution in rivers, lakes and estuaries, Superfund sites cleaned up, compliance and enforcement actions, the state of underground storage tanks and progress in recycling efforts.

Noteworthy among Region 1's bold programs is the Charles River Initiative—an effort launched in 1995 to make the badly degraded river fishable and swimmable by the year 2005. Already, the ambitious project has resulted in a doubling of the amount of time swimming and boating standards have been met.

DeVillars has also initiated two private-sector pollution prevention programs whose success is being replicated by the national EPA in other parts of the country. One is CLEAN, targeted at small companies; the other is Star Track, designed for larger organizations. Both rely on environmental self-audits and company actions coaxed along by incentives from the EPA and public disclosure of the results.

"John DeVillars is leading the rest of the country in innovative programs, removing regulatory barriers and moving beyond the limits of compliance to bring New England's EPA into the 21st century," says Daniel Moon, president of the Environmental Business Council of New England



and vice chairman of the Environmental Industry Coalition of the United States.

Even as resolute a public watchdog as the Massachusetts Public Interest Research Group (MassPIRG) acknowledges DeVillars's effectiveness as an environmental innovator, although it reserves judgment on his performance in dealing with Superfund and hazardous waste issues, according to environmental attorney Paul Burns, who directs MassPIRG's Toxics and Clean Water Programs.

Although EPA's New England environmental report is a formidable presentation, it is hardly friendly to the audience EPA should be seeking to educate, namely the lay reader.

A national Roper Starch survey in November 1997 reported that two out of three Americans failed a test of simple questions about the environment. The National Science Foundation, meanwhile, reports that public interest in environmental issues has declined in the 1990s and that fewer than 25 percent of American adults feel well-informed about environmental issues. Given the current softness of public interest, information and attentiveness to environmental issues, it seems more timely than ever for a national innovator and leader like EPA New England to present its technical information in a reader-friendly format.

But the New England report's small print, density of text on each page, use of technical terms and level of detail is simply uninviting to the average reader.

Beyond the readability of the 1998 report lies the question of how the reader is to assess the significance of the progress reported. The reader is presented with absolute numbers and trend figures, but is left wondering: "Compared to what?" The New England data would be more convincing if it were ranked against other EPA regions and national norms. Unfortunately, the reader is left to look elsewhere to place the Region 1 findings in context.

This problem is not unique to New England. No recognized indicators are available to help judge regional performance on environmental issues as there are to evaluate the economy or workforce, says David E. Blockstein, senior scientist of the Committee for a National Institute for the Environment (CNIE).

A national scientific body such as CNIE charged with collecting environmental data, analyzing it and presenting it for policymakers and public consumption would help New Englanders, and all Americans, to read EPA reports with a reasonable degree of understanding and to place them in some sensible frame of reference, which is now lacking. (A bill in Congress to establish such a National Institute for the Environment had 83 cosponsors as of October 1998.)

Finally, the importance of New England's universities in spurring environmental research and new technologies to clean up and prevent pollution should be noted. A 1996 New England Board of Higher Education study reported that New England is ideally suited to the development of new technologies because of its special strengths in scientific research and cross-fertilization of disciplines. Two years later, a study prepared for exiting Massachusetts Secretary of Environmental Affairs Trudy Coxe recommended that partnerships between higher education and government be strengthened and expanded.

In the same vein, Professor Joseph Larson, who directs the Environmental Institute at the University of Massachusetts Amherst, proposes that the EPA be authorized to enter into cooperative research agreements with universities and place federal senior scientists on campuses to direct agency-funded research programs, teach graduate courses and advise graduate students. Legislation to that effect has been introduced into Congress by U.S. Rep. John Olver of Massachusetts. Olver's bill permitting the EPA administrator to enter into such cooperative agreements for environmental protection has been referred to the House Committee on Science—and the proposal itself is under consideration by DeVillars. In essence, the bill extends to the EPA administrator the same authority long held by the U.S. secretaries of Interior and Commerce to establish cooperative research operations on university campuses.

"Interior and Commerce have found those university-based units to be cost effective, responsive to program needs and effective ways to meet recent Congressional directives without having to add new federal positions," says Larson.

John DeVillars and his 800 associates at EPA New England are to be congratulated for their innovations and pioneering efforts in reshaping the Region 1 program. They could further enhance their accomplishments by placing greater stress on educating the public and expanding the EPA's relationship with colleges and universities.

***Melvin H. Bernstein** is a senior fellow at the New England Board of Higher Education.*

And Away We Go!

Susan W. Martin

Peterson's Guide to College Visits, Peterson's, Princeton, N.J., 1998, $24.95

Once upon a time, college-bound high school seniors would travel to a large central hotel such as the Biltmore in New York City to meet individually with the admissions director of their dream college. It was an opportunity for the admissions rep to estimate the probable fit between the prospective student and the campus culture—and vice versa. Such interview sessions today are mostly conducted by local alumni—at least among those grander institutions that have lists of willing alumni to call on.

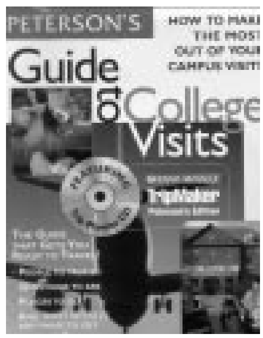
Another interface for student and institution is the college fair. The New England Association for College Admissions Counseling, for example, organizes about 20 fairs each fall at different venues around New England, where representatives of both public and independent institutions sit behind six-foot tables displaying glossy brochures, fact sheets and other information, and beleaguered parents seek out tips on everything from filling out financial aid forms to sizing up majors.

Beyond interviews and fairs, today's prospective college students and their parents increasingly plan a closer encounter of a third kind. The obligatory "campus visit" provides an opportunity for students to kick the tires before shelling out the thousands of greenbacks for freshman year. The campus visit phenomenon is important for another reason: its capacity to bolster New England tourism and related cottage industries. For example, the "Campus Visit" venture started a few years ago by Boston entrepreneurs Cherlene and Todd Hoffman enables area colleges and hospitality businesses to make customized pitches to prospective student-tourists and their parents.

Where there's higher education confusion to clear up—and money to be made—there's also a Peterson's guide. The publishing company's new *Guide to College Visits* comes complete with a Rand McNally TripMaker compact disc for travel planning once campus selections have been made. Together, the book and software promise to enable families to efficiently plan, navigate and conduct their college visits.

The several introductory chapters advise students and families on how to create a visiting strategy, schedule the visit and assess the experience.

Don't just accept an appointment for a guided tour. Ask the admissions counselor if you will be able to meet students who share your special needs and interests. Write a letter to thank people specifically for taking the time to meet with you. And so on.



Profiles of 487 colleges and universities organized alphabetically by state follow the general information. The profiles include the name of the contact person (usually the admissions officer) and the campus mailing address, telephone, fax number, e-mail and Web site. The profiles also include facts about the college's visit calendar, information sessions, interviews and campus tours, as well as whether and when class visits or overnight stays are available.

The guide's editors say careful advance planning is needed to help the visitor make the most of being "on site." They suggest that several questions be kept in mind at the outset: Which special programs are important to you? What cost range can you afford? How strong is your academic record? How likely are you to be accepted by the college—and how likely are you to attend if you are?

The guide also maintains that only a visit can supply the important facts making up an institution's special identity, and that catalog shopping or secondhand information is limited at best. Perhaps. But visits also require time and money, although the authors blithely assume parents and students can afford to "at the least" make a visit to every school to which the student applies.

Indeed, campus visits could represent yet another dividing line in college choice between the haves and have-nots. A lower- to middle-income Midwesterner hoping to find a place in one of the renowned colleges of New England, or a Vermonter longing to study linguistics at the University of Chicago, might find a campus visit financially impossible. After all, few hotel rooms in Boston can be booked for much under $200 a night.

Yet the guide deals little with cost and other obstacles to visits except to acknowledge that colleges which offer only "prepackaged" guided tours of campus or little more information than already appears in the school's catalog or on its Web site, may not be worth the effort if the student lives hundreds of miles away.

Colleges have recruiting goals they expect to attain through offering personalized campus visits. They want to make a good impression on the student. Peterson's wisely warns readers that a carefully timed visit period on the college's part can hide the fact that a campus becomes a ghost town on weekends or that students have few social and cultural events on campus and in the surrounding area.

Depending on specific interests, the campus visit can be an occasion to look at a school's art department or sports facilities. Thus, the best time to schedule a visit might be determined by when an appointment with the coach or an interview with a department chair can be arranged. Meeting with a current student whose field of study matches the prospective student's might also be arranged with a little foresight and the assistance of the admissions counselor.

Finally, although the essential criterion for inclusion in the guide is that a college be an accredited, bachelor's degree-granting institution, the number of colleges profiled is relatively small. Peterson's says this is so because its "aim was to produce a guide that can be easily packed, carried and used on a trip." While 66 New England four-year institutions are listed, more than 100 are left out. Such omissions in directories always breed suspicions. For example, Mount Holyoke College is included, but Smith College is not. Boston College is in, but Boston University is not.

If you're looking for point-to-point maps, route planning, driving instructions and information about lodging, restaurants and local sights between any location in the United States and any college or university, the Rand McNally TripMaker CD could be a major selling point. But your best tools in preparing for college visits might be an engaged guidance counselor, an interested college admissions rep, a helpful travel agent and plenty of common sense.

Susan W. Martin *is assistant editor of* CONNECTION.

Down and Out

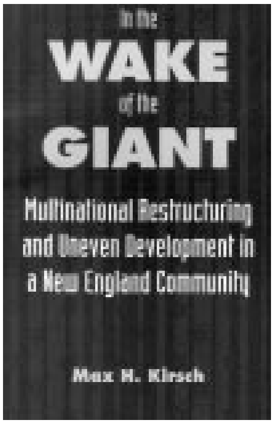
Alan R. Earls

In the Wake of the Giant: Multinational Restructuring and Uneven Development in a New England Community, Max H. Kirsch, State University of New York Press, Albany, 1998, $19.95

How do community leaders respond to a major plant closing? What are the social consequences of mass layoffs? These questions and more get an anthropologist's scrutiny in a new book by Max H. Kirsch, a professor at Oberlin College and former dean of the Graduate Faculty of Social and Political Science at the New School for Social Research.

Part of a SUNY series on the anthropology of work, *In the Wake of the Giant* describes an all-too-familiar New England theme—the slow death of a one-company or one-industry town. In this instance, the city is Pittsfield, Mass., long dominated by General Electric.

From its settlement in 1752 to the dawn of the 20th century, Kirsch notes, this Berkshire community, named in honor of America's best friend in London, Pitt the Elder, earned its living in diverse ways, though manufacturing began to predominate by the early years of the 19th century. Its chief industries included silk thread, mohair braid, tacks, metal goods, textiles and paper.



But in the early 20th century, the rapid expansion of General Electric nationally led to the 1904 acquisition of the local Stanley Works, a failing textile mill property, and the establishment of new kinds of manufacturing. General Electric, the prototype high-tech enterprise, fared well and made Pittsfield a prosperous if not glamorous community. For a time, Pittsfield was the fastest growing city in Massachusetts. At peak, the company employed residents in manufacturing products as diverse as large utility transformers, naval torpedoes, ordnance and control systems and plastics.

In many ways, the city's interests and GE's interests became indistinguishable.

Fast forward to the 1980s. When globalization of production became a reality in many industries, GE chose to radically curtail operations and employment in Pittsfield leading to social and economic disruption. Kirsch's volume focuses on this "results" phase of the story.

While it is mostly a tale of lost opportunities, broken careers and massive residual pollution of the landscape, positive developments are noted, too. Indeed, Kirsch's interest in Pittsfield stemmed partly from the fact that GE had given rise to so many spinoff companies in the area, particularly in plastics. All told, nearly 40 small firms trace their roots directly or indirectly to the people and processes at GE.

Bearing in mind those entrepreneurial successes, Kirsch says he wanted to explore the role kinship ties within Pittsfield played in maintaining this kind of community resilience.

In telling the tale of Pittsfield—and its people—Kirsch reveals both strengths and weaknesses. Certainly, his many interviews with individuals go a long way toward helping us understand the mechanics of responses to changing circumstances.

Rather than quoting statistics about unemployment or underemployment, he tells compelling stories of how individuals with advanced, but no longer valued, job skills were relegated to repairing cars for friends and neighbors, taking care of kids, cleaning out yards and basements and perhaps earning a small salary from a part-time job in what was left of the formal economy. Similarly, he points out that many of the spinoffs were purely "defensive" ventures intended to help a group, family or community hold on to its economic status.

Kirsch contends that it is the insensitivity of modern managers at faraway corporate headquarters that caused GE to restructure, largely ignoring the competitive issues with which managers must wrestle on a daily basis (as if locally run businesses never experience mass layoffs!). He blames most of the woes of Pittsfield squarely on defects in the capitalist system rather than on any particulars of local commerce or technology. Indeed, Kirsch's attempt to summarize the history of American cities does little to enlighten us about the problems of Pittsfield or other smaller industrial communities.

Kirsch leaves Pittsfield in the mid-1990s, a dispirited and schizophrenic town still highly dependent on GE's remaining operations, but also fighting the company to clean up hazardous-waste sites. The city's interests and the company's by then had become distinguishable indeed.

Alan R. Earls *is a writer based in Franklin, Mass.*

MEDFORD, MASS. — Tufts University announced plans to create an endowed "seed fund" of $3 million to $5 million to support research by Tufts arts and sciences faculty, primarily junior professors. The endowment will fund scientific research by up-and-coming science faculty, and support writing projects, graduate assistants and travel to museums and libraries for humanities faculty.

PROVIDENCE, R.I. — About 40 scientists at Brown and Tufts universities and their affiliated hospitals were awarded a five-year, multimillion-dollar grant from the National Institutes of Health to collaborate on AIDS research. The grant—worth $650,000 in the first year—will support researchers ranging from molecular biologists studying HIV in the laboratory to behavioral scientists studying how human behavior affects HIV transmission.

DANVERS, MASS. — North Shore Community College announced that it would take over a variety of administrative functions at the nearby Essex Agricultural and Technical Institute upon completion of a recent state decision to eliminate the government structure of Essex County. Essex Aggie associate degree programs have been accredited through the community college for more than 20 years.

HARTFORD, CONN. — Trinity College was awarded a two-year, $100,000 grant from the William and Flora Hewlett Foundation to support the Trinity Center for Collaborative Teaching and Research. Specifically, the grant funds intensive semester-long Center Fellows Seminars on broad urban topics that invite interdisciplinary and collaborative inquiry, as well as less formal Center Reading Groups that can be developed quickly in response to compelling urban issues.

PLYMOUTH, N.H. — Two Plymouth State College professors received a $20,000 Eisenhower grant from the New Hampshire Department of Education to teach a biotechnology course for secondary school teachers during the summer of 1999. The one-week, hands-on course will focus on DNA manipulation.

PROVIDENCE, R.I. — The Rhode Island School of Design Museum was awarded $500,000 by the Pew Charitable Trusts to support a system of artist residencies at the branches of the Providence Public Library. Works of art created by the resident artists will be displayed in the RISD Museum.

BOSTON, MASS. — The Art Institute of Boston became part of Cambridge, Mass.-based Lesley College under a merger agreement between the two colleges. The 86-year-old institute will retain its name, its current location in Boston and its mission of providing art education to students pursuing careers in the visual arts.

AMHERST, MASS. — An art history professor at the University of Massachusetts Amherst was awarded a three-year, $250,000 grant from the U.S. Department of Education's Fund for the Improvement of Postsecondary Education to develop a CD-ROM intended to serve as a key "computerized textbook" for teaching art history. The interactive CD-ROM to be developed and tested by Professor Laetitia La Follette and colleagues will offer bigger and better images than printed textbooks and allow instructors to juxtapose artworks of different cultures.

FALL RIVER, MASS. — Bristol Community College was awarded $10,000 from the Oliver S. and Jennie R. Donaldson Charitable Trust to educate students, staff and residents of southeastern Massachusetts about domestic violence. The year-long "Stop the Violence, Break the Cycle" project includes a series of informal workshops and presentations, development of relevant library materials and a guide to local resources and a spring semester, multidisciplinary course on violence.

BOSTON, MASS. — Boston University was awarded a five-year, $2.5 million grant from the National Science Foundation to support the university's interdisciplinary program in bioinformatics, an emerging field that combines biology and information sciences. BU's bioinformatics program integrates courses and research in biology with computational sciences to teach students how to synthesize and understand the rapidly expanding body of information stemming from advances in biotechnology and genetic engineering.

PROVIDENCE, R.I. — Brown University was awarded a four-year, $1.4 million grant from the Howard Hughes Medical Institute to expand undergraduate opportunities in the biological sciences. The grant will be used to support undergraduate research opportunities, produce new undergraduate courses in biomedical technology and computational biology, modernize equipment and technology and fund outreach programs, which bring students and faculty from historically black colleges to Brown for research and academic programs.

NEW HAVEN, CONN. — Yale University was awarded a four-year, $1.8 million grant from the Howard Hughes Medical Institute to support a variety of science education programs for New Haven students and teachers, as well as Yale undergraduates. In one component of the program, New Haven students in grades 3 through 5 do hands-on science experiments with Yale undergraduate volunteers. In another, Yale faculty provide seminars for city science teachers.

WALTHAM, MASS. — Brandeis University was awarded a four-year, $1.2 million grant from the Howard Hughes Medical Institute to continue a summer program allowing undergraduates to conduct scientific research and to provide research internships for minority students drawn from various colleges. The funds will also upgrade instrumentation in chemistry and molecular biology labs and support interactive classroom technology.

AMHERST, MASS. —The University of Massachusetts Amherst received a gift of $260,000 from the estate of a former New Jersey groundskeeper to fund scholarships for students majoring in turfgrass management or related fields at the university's two-year agricultural school in Stockbridge. The late Charles Osterman was occasionally given blue-chip stock as a bonus for his groundskeeping work on the estate of a former New Jersey state senator.

KINGSTON, R.I. — A University of Rhode Island professor was awarded a five-year, $1.3 million grant from the National Science Foundation to provide a hands-on science curriculum for elementary and middle school teachers and students in southern Rhode Island. Under the initiative, dozens of URI scientists act as mentors and trainers to lead teachers who, in turn, train their colleagues.

SALEM, MASS. — Salem State College was awarded a two-year, $150,000 grant by the U.S. Department of Heath and Human Services to train students for entry-level staff positions at public child welfare agencies.

MEDFORD, MASS. — A Tufts University associate professor of economics was awarded $240,000 by the National Science Foundation for research on environmental policy design. Gilbert E. Metcalf and a colleague at the University of Texas are studying the interaction between tax codes and environmental policy instruments.

NEW HAVEN, CONN. — Yale University's Center for International and Area Studies launched a Central Asia Scholars Program to bring graduate fellows from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan to Yale for graduate-level programs in various fields. The program, supported by the Sumitomo Bank Global Foundation, will also support a Sumitomo Visiting Fellow who will teach courses on Central Asia at Yale.

AMHERST, MASS. — The Materials Research Science and Engineering Center at the University of Massachusetts Amherst was awarded a four-year, $6 million grant from the National Science Foundation to support polymer research by more than 40 scientists and graduate students in a variety of scientific fields. The center's research focuses on: processing polymers using highly compressed carbon dioxide gas rather than environmentally hazardous solvents; producing materials with specific surface qualities such as water repellence; and changing the architecture of molecules.

PROVIDENCE, R.I. — Johnson & Wales University officially kicked off the $136 million "Vision 2001" capital campaign, having already secured nearly three-quarters of the total through a $68 million internal allocation of operating funds to endowment and $32 million in "quiet phase" gifts raised since 1995. University officials say the new funds will be used to enhance facilities and equipment, improve information technologies and provide scholarships.

CAMBRIDGE, MASS. — The Joint Center for Housing Studies at Harvard University introduced a new economic indicator to estimate how much money Americans spend improving and repairing owner-occupied homes. The policy center's Remodeling Activity Indicator, to be released quarterly, is derived from: manufacturers' shipments of floor and wall tile products; retail sales at building materials and supply stores; sales of existing one-family homes; and the prime bank loan rate. The indicator suggests that Americans spent $88 billion on home remodeling during the four quarters ending in September 1998.

KINGSTON, R.I. — University of Rhode Island engineering professor Brent Stucker was awarded $500,000 worth of industrial design and modeling software from Parametric Technology Corp. of Waltham, Mass. Stucker directs URI's Rapid Manufacturing Center, which gives member companies access to research into rapid manufacturing methods for a fee of $30,000. Stucker's work focuses on "rapid protoyping," in which companies develop sample products on a computer rather than by hand-crafting plastic or other materials.

BOSTON, MASS. — Boston University received a $1 million gift from its chancellor and former president John Silber and his wife Kathryn. The charitable gift annuity will fund at least two full-tuition scholarships for financially needy and academically qualified native Texans who graduate from Texas public high schools and enroll as undergraduates at BU's College of Arts and Sciences. Both the Silbers were born and raised in Texas.

CLARIFICATION

The University of New England's tuition was misstated in our FACTS 1998 directory edition. For the record, the University of New England's tuition for academic year 1997-98 was $13,575 plus $510 in mandatory fees. The university's tuition this academic year is $14,320 plus $510 in mandatory fees.

CONNECTION

NEW ENGLAND'S JOURNAL
OF HIGHER EDUCATION AND ECONOMIC DEVELOPMENT

INDEX OF ARTICLES BY AUTHOR

Vol. I, No. 1 through Vol. XIII, No. 2 — Spring 1986 through Summer 1998

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Fall 1992, Vol VII, No. 2

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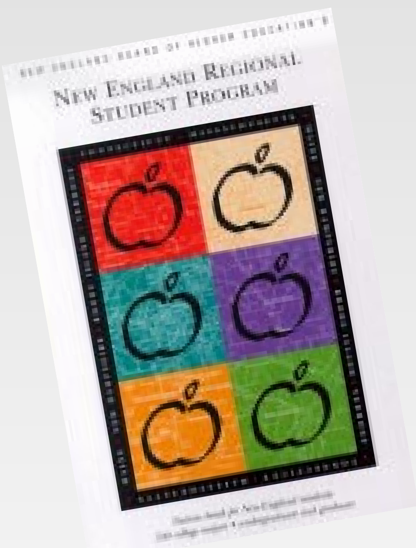

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