Access

How Basic Skills & Family Income Predict College Going

Also in this issue:

Deborah Meier on Schools
Changing New England’s Culture of Philanthropy
Maine’s New Investment in Research & Development
Careers for a Community Service Generation
Cover photograph by John Forasté courtesy of Brown University.

COVER STORY

15 Access Is About More Than Money
Paul E. Harrington and Andrew M. Sum
Much of the discussion about improving access to higher education has centered around making college more affordable by improving financial aid and limiting tuition growth. But is financial aid enough? Can we solve the problems of access to higher education simply by improving the affordability of college?

COMMENTARY

18 Making Change: Careers for a Community Service Generation
Steven K. Katona

20 A Conversation about Schools with Deborah Meier

24 Targeting Technology: Maine’s New Investment in Research and Development
Carol Kontos

28 E-College: New England Institutions Marry Traditional Strengths to Cybertools
Alan R. Earls

32 A New England Renaissance? Changing the Region’s Culture of Philanthropy
George McCully

37 Progress Report: Institutional Autonomy and Public Accountability
Eleanor M. McMahon

DEPARTMENTS

5 Editor’s Memo
John O. Harney

6 Short Courses

13 Data Connection

39 Books
Rebel with a Cause reviewed by Edmund T. Cranch
Best Practices in Higher Education Consortia reviewed by Carol Angus
The College on the Hill (History of Middlebury) reviewed by John O. Harney

42 Excerpts
A Break from Pork: The Knight Higher Education Collaborative on Campus Lobbying

43 Campus: News Briefly Noted

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Access. If one word captures the range of compelling issues that the New England Board of Higher Education should focus its energy on at the start of the new century, the word is access.

That was the consensus of NEBHE delegates who met recently in North Conway, N.H., to discuss NEBHE priorities for the first five years of the 21st century. Their task: to make sense of a year’s worth of “focus group” meetings in which NEBHE staff traveled to each of the New England states to ask leaders of education, government, business and the nonprofit sector what they see as the most crucial higher education, economic and social issues facing the region.

That access to college should rate so high is hardly surprising. While New England is the world’s most famous importer of young talent from across the nation and around the globe, large groups of New England residents from urban Bridgeport, Conn., to rural Aroostook County, Maine, have little chance of tapping into the region’s vaunted higher education enterprise. Without a college education, they are deprived of the fruits of the region’s booming knowledge-based economy, which is paradoxically starved for workers.

They have virtually no social mobility—no chance of the American Dream.

Access then is the linchpin in another issue that clearly preoccupied focus group participants: the growing economic disparity between New England’s distressed rural areas and old industrial cities on one hand and the region’s bustling, technology-intensive suburbs on the other.

The stakes are obviously high. But what is the nature of the access problem? Access is frequently coupled with affordability. Focus group participants noted that the price of college—especially in New England—effectively denies access to many nontraditional students and those raising families (and indeed, some suggested a new G.I. Bill is needed to help people pay for college).

Yet many focus group participants echoed University of Rhode Island Professor Harold Bibb’s observation that “the notion of access needs to be expanded beyond cost—that students must be prepared to go to college.”

Several spoke of the particulat obstacles facing inner cities where overburdened high school guidance counselors contend with issues such as drugs, crime and teen suicide. Others spoke of rural communities where higher education is considered a luxury, and a live-for-today mentality discourages borrowing for college. Worse, parents steer children away from college, fearing that young people may never return once they’ve seen the bright lights of Burlington or Orono, to say nothing of Paris.

At a minimum, the access issue encompasses inadequate attention to early childhood education, uneven K-12 preparation, hit-and-miss college guidance and low aspirations—all symptoms of the growing gap between haves and have-nots. As the demographer Harold Hodgkinson has written: “Many low-income, ethnic minority and immigrant children do not get exposed to the folklore of ‘how you get into college’ in junior high years, while the ‘favored’ have brothers and sisters in college, parents who are college graduates and lots of advice.”

Focus group participants also emphasized NEBHE’s capacity to bring New England higher education’s considerable policy expertise to bear on complex problems. In this issue of CONNECTION, Northeastern University economists Paul Harrington and Andy Sum begin to tackle the issue of access, suggesting that the problem is first and foremost a function of basic skills—essential reading, writing and arithmetic. We trust Harrington and Sum’s article will be the first of many on the complexities of access.

Special thanks also to NEBHE intern Sean Bowditch who contributed greatly to the writing and editing of this issue.

John O. Harney is executive editor of CONNECTION.
Losing Faculties?
The much talked about shift from full-time, tenured professors to generally lower-paid, part-time adjunct faculty is borne out by an analysis of federal data by the National Education Association (NEA).

In 1993, public four-year institutions employed more than 287,000 full-time faculty and fewer than 89,000 part-time faculty, the NEA reports. Four years later, the full-time figure had inched up 2 percent to about 293,000, while the part-time number jumped 19 percent to more than 105,000.

The trend at private institutions has been only slightly less pronounced, with the ranks of full-timers declining slightly and the number of part-timers rising by 5 percent. (At public two-year institutions, both classes of faculty shrank.)

Meanwhile, despite years of efforts to increase minority representation on college faculties, the share of newly hired full-time, tenured faculty who were Hispanic, African-American or American Indian also dropped from 15 percent in 1993 to below 12 percent in 1997, according to the NEA study.

Campaigning
It’s a time of big money and, New England colleges hope, a time of fat checks.

By the third year of a five-year campaign to raise $125 million, the University of Massachusetts at Amherst had garnered $91 million, attracted 9,000 new alumni givers and announced its next campaign: a $300 million effort to begin in 2002. With its sophisticated marketing and high-profile network of “ambassadors,” the current campaign is not only raising money, but also elevating the public land-grant university’s academic reputation.

The University of New Hampshire is also in the midst of its most ambitious fundraising initiative to date: a five-year, $100 million campaign aimed at bolstering student scholar-ships, faculty development, academic programs and campus technology.

In some Midwestern states, public campaigns have been so successful that small private institutions feel squeezed out, according to a recent article in the national Chronicle of Higher Education. But not so in New England, where public and private college fundraisers operate in starkly different worlds. This fall, the Massachusetts Institute of Technology received a single gift from alum and software entrepreneur Kenan Sahin worth the equivalent of UNH’s five-year goal. Harvard, meanwhile, will complete a six-year campaign on New Year’s Eve worth well in excess of $2.3 billion—about 10 times the UNH and UMass goals combined.

And Tufts University so easily reached its $400 million campaign goal, it’s raising the target to $600 million.

New England’s public campuses may never have the luxury of earmarking $100 million “to fund new ideas” as MIT’s recent $1.5 billion capital campaign does, or funding fully one-fifth of their annual budgets with endowment income as Yale does.

Still, the big public campaigns come as New England taxpayers—historically America’s least generous in funding higher education—are showing their support in other ways. State tax appropriations to New England higher education grew by 17 percent between 1997 and 1999, outpacing the national average. And Maine voters recently approved a $26 million bond (to be matched by $7 million in private donations) to ensure that the state’s technical colleges prepare students for the high-tech workplace of the 21st century.

Comfort Levels
Compare a state’s fiscal capacity (simply put, its ability to raise revenue) to its fiscal need (its demand for state and local services from residents and visitors) and you get a sense of the state’s fiscal comfort.


By 1996, no New England state had the comfort level it enjoyed in the economic boom of the late 1980s, Tannenwald finds, but the region was far more comfortable than any other in America. Moreover, New Hampshire ranked second nationally in comfort, behind only Nevada. Connecticut ranked fifth; Massachusetts, eighth; Vermont, 15th; and Rhode Island 25th.

Maine, which ranked 30th, was the only New England state less comfortable than the national median.

Advanced Diapering?
Just 29 percent of U.S. colleges offer on-campus day care for children of students, according to the U.S. Department of Education. But the figure rises to 53 percent for public two-year colleges and 56 percent for public four-year institutions.

Dozens of New England colleges are among those doling out morning snacks and tuning in to Arthur the aardvark. In October, the University of Massachusetts at Amherst opened a new 3,000-square-foot campus facility to offer day care for the toddler- and preschool-age children of UMass students. New university-subsidized “flexible-schedule” rooms are targeted to low-income families with part-time child care needs. Professional teachers and graduate interns do the teaching.

Nearby, Holyoke Community College began building a $1.4 million, 11,800 square-foot, on-campus child care facility. The new “Kids’ Place” center is expected to accommodate 192 children and 30 staff members when it opens in early 2000.

In 1997, New England Sens. Chris Dodd of Connecticut and Olympia Snowe of Maine introduced legislation to provide $60 million in grants to support campus-based child care, particularly for low-income students pushed off public assistance by welfare reform legislation. Lawmakers tacked a $45 million program onto the 1998 reauthorization of the
Higher Education Act but appropriated only $5 million for the grants in 1999.

University Bostoniensis

Classical studies plunged in popularity during the 1960s due partly to a backlash against academia’s focus on the work of “dead white males.” Now, the classics are staging a comeback for a very 1990s reason: the rigor of the programs is good preparation for a range of professional pursuits.

At Boston University, enrollment in Latin and Greek language, literature and history courses has nearly doubled from 817 in 1986 to 1,611 in 1999.

A quid pro quo? Since the early 1990s, BU has offered three full-year scholarships and three half-year scholarships annually to students who study Latin and Greek in 120 high schools throughout New England, New York and New Jersey.

The Sea’s Bounty

We know New England is inextricably linked to the sea. But getting a read on the size and nature of the region’s “marine economy” is difficult, particularly given the unwieldiness of what is by far its largest component: coastal tourism.

Now three University of Maine researchers have estimated that marine-related activities added $2 billion to the Maine economy in 1996, accounting for 7 percent of Maine’s gross state product.

Writing in the Fall 1999 issue of Maine Policy Review, the journal of UMaine’s Margaret Chase Smith Center for Public Policy, UMaine professors Brian Roach, Jonathan Rubin and Charles Morris estimate that recreation and tourism in Maine’s coastal regions added $788 million to the state’s economy, while shipbuilding and boatbuilding accounted for $437 million, nearly 90 percent of it related to military contracts at Bath Iron Works.

Other coastal military spending, notably at Portsmouth Naval Shipyards in Kittery and Brunswick Naval Air Station, added $501 million, while commercial fishing added $310 million, and water shipping and transportation accounted for $28 million. The figures do not include “multiplier effects.”

The only marine sector that is shrinking is shipbuilding and boatbuilding, which declined by 40 percent since 1990, according to the UMaine authors. But that loss is offset by gains in tourism and other sectors, including a small but growing assortment of marine biotechnology, research and education organizations estimated to account for at least $20 million.

Still, the relative contribution of the marine sectors to the overall Maine economy is declining due to growth in other sectors such as health services and technology.

Massachusetts researchers estimated that marine sectors injected
about $7 billion into the Bay State economy in 1996, buoyed by $5 billion in tourism expenditures in the state’s coastal counties [CONNECTION, Spring 1998].

Magnets
One of the most frequently asked and politely deflected questions from higher education reporters is: what percentage of New England college graduates stay in the region after graduation? No one keeps track on a statewide or regionwide level, but a mishmash of data is available:

- Though fewer than 15 percent of Harvard students and 10 percent of MIT students are Massachusetts natives, more than 20 percent of Harvard and MIT grads live in the Bay State, according to a report by the Massachusetts Taxpayers Foundation.
- Of the Maine Technical College graduates who take jobs after graduation, 94 percent go to work in Maine, according to technical college system officials.
- Of Westfield State College’s approximately 21,000 living alumni, 79 percent live in Massachusetts.

Hot Flicks?
Video has become a popular medium for colleges trying to differentiate themselves with prospective students, donors and others. But videos have always had two key disadvantages: they are linear and allow for no interactivity.

Now, a new medium offers video’s advantages without those limitations. Digital Versatile Discs (DVDs) can

Clarification
To the Editor:
Robert V. Ward is by no means the first African-American dean of a New England law school. David Hall was dean at Northeastern for years before moving up to provost.

Andre Mayer
Senior Vice President
Associated Industries of Massachusetts
Hispanic Enrollment
Nine of the 10 New England institutions where Hispanic students represented the largest share of total enrollment in 1996 were community colleges. And the Hispanic share of all students at most of those colleges has risen significantly during the 1990s, according to data from the U.S. Department of Education.

<table>
<thead>
<tr>
<th>Institution</th>
<th>1991</th>
<th>1996</th>
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<tbody>
<tr>
<td>Housatonic Community-Technical College, Conn.</td>
<td>16%</td>
<td>23%</td>
</tr>
<tr>
<td>Capital Community-Technical College, Conn.</td>
<td>13%</td>
<td>20%</td>
</tr>
<tr>
<td>Roxbury Community College, Mass.</td>
<td>14%</td>
<td>19%</td>
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<tr>
<td>Atlantic Union College, Mass.</td>
<td>18%</td>
<td>19%</td>
</tr>
<tr>
<td>Northern Essex Community College, Mass.</td>
<td>9%</td>
<td>14%</td>
</tr>
<tr>
<td>Holyoke Community College, Mass.</td>
<td>6%</td>
<td>11%</td>
</tr>
<tr>
<td>North Shore Community College, Mass.</td>
<td>8%</td>
<td>11%</td>
</tr>
<tr>
<td>Norwalk Community-Technical College, Conn.</td>
<td>9%</td>
<td>11%</td>
</tr>
<tr>
<td>Bunker Hill Community College, Mass.</td>
<td>7%</td>
<td>10%</td>
</tr>
<tr>
<td>Springfield Technical Community College, Mass.</td>
<td>7%</td>
<td>10%</td>
</tr>
</tbody>
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William Cotter, who retired. ... Robert G. Clarke, who served as president of Vermont Technical College for 15 years, was named interim chancellor of the five-campus Vermont State Colleges system, replacing Charles I. Bunting, who will join the Chicago-based consulting firm of A.T. Kearney in the spring. ... Bristol Community College President Eileen Farley announced she would retire in June 2000 after more than two decades on the job. ... Ted Sanders, former president of Southern Illinois University and deputy secretary of education in the Bush administration, was named president of the Denver-based Education Commission of the States, succeeding Kay McIlven, who has served as interim president since Frank Newman retired last summer. Newman, meanwhile, has joined Brown University’s Taubman Public Policy Center. ... Hector Garza, vice president of access and equity programs at the American Council on Education, took a two-year leave of absence to start and preside over a new National Council for Community and Education Partnerships. The independent, nonprofit will develop K-16 partnerships to foster educational access and opportunity for students in economically distressed communities. ... University of Rhode Island President Robert L. Carothers was elected chair of the Council of Presidents, a consortium of New England’s six public land-grant universities.

Snippets
“They can curse at the umpire, get personal with the players and even throw things. I’m sitting there thinking: This is now part of our New England culture? This is something we find charming?”

—José Massó, senior associate director of Northeastern University’s Center for the Study of Sport in Society, quoted in the Boston Globe after Boston Red Sox fans pelted Fenway Park with debris, causing an eight-minute delay near the end of Game 5 of the 1999 American League Championship Series.

“I wouldn’t sit anywhere near Section 8 again with my kids.”

—Chris Cakebread, Boston University assistant professor of communication, quoted in a B.U. Bridge newspaper piece on rowdy behavior by hockey fans at the university’s Walter Brown Arena.

“‘It has taken some educators and parents a while to realize that the rhetoric of ‘standards’ is turning schools into giant test-prep centers, effectively closing off intellectual inquiry and undermining enthusiasm for learning (and teaching).’”

—Introduction to author Alfie Kohn’s Web site.

“One less place for women to turn. One opportunity less for our daughters and granddaughters to learn what women can do. One opportunity less for our sons and grandsons to learn what women can teach. One more door that was just opening, slammed shut.”

—Author and 1951 Radcliffe College graduate Ursula K. Le Guin in a letter to the editor of Radcliffe Quarterly about the September 1999 merger of Radcliffe and Harvard.

Comings and Goings
William D. Adams, president of Bucknell University in Pennsylvania will become president of Colby College in July 2000, succeeding...
■ Estimated total college enrollment in communities along and within Interstate 495 in eastern Massachusetts: 299,500
■ Employment in “knowledge-based” industries as a share of all jobs within Interstate 495: 79%
■ Number of months from October 1998 through September 1999 when New England’s unemployment rate exceeded the U.S. rate: 0
■ Chance that the monthly unemployment rate in any New England state exceeded the U.S. rate during that period: 1 in 14
■ Percentage of Connecticut residents who “telecommute” or work from home one or more days a week: 24%
■ Percentage who say they would if given the opportunity: 67%
■ Average starting salary offered to 1998-99 college graduates with bachelor’s degrees in chemical engineering: $46,929
■ Offered to 1999 college graduates with bachelor’s degrees in history: $28,378
■ Ratio of faculty members in women’s studies to faculty members in physics at Amherst, Hampshire, Mount Holyoke and Smith colleges and the University of Massachusetts Amherst: 7-to-1
■ Percentage of white college students nationally who are age 30 or older: 28%
■ Percentage of American Indian college students who are age 30 or older: 41%
■ Percentage of Latino high school graduates who met the post-Affirmative Action admissions requirements of the University of California system in 1998-99: 4%
■ Percentage of African-Americans who did: 3%
■ Women as a percentage of 1998 recipients of doctorates in life sciences: 45%
■ As a percentage of 1998 recipients of doctorates in business and management: 67%
■ Number of the 25 largest hospitals in eastern Massachusetts that are headed by women: 2
■ Average salary for U.S. governors: $102,258
■ Number of New England states whose governors earn the average or above: 0
■ Percentage of U.S. states that provide governors with an executive residence: 92%
■ Percentage of New England states that do: 50%
■ Percentage of Americans who think U.S. public schools “are doing pretty well and need little change”: 19%
■ Percentage who think schools “have so much wrong with them that we need to create a whole new system altogether”: 16%
■ Percentage of children living with two parents in 1980: 77%
■ In 1996: 68%

Sources: 1 NEBHE analysis; 2,3 Massachusetts Taxpayers Foundation; 4,5 Bureau of Labor Statistics; 6,7 University of Connecticut; 8,9 NEBHE analysis; 10,11 National Association of Colleges and Employers; 12 NEBHE analysis of Five Colleges Inc. data; 13,14,15,16 American Council on Education; 17,18 University of Chicago’s National Opinion Research Center; 19,20,21 NEBHE analysis of Boston Business Journal data; 22,23 Economist Intelligence Unit; 24,25,26,27 Massachusetts Institute for a New Commonwealth; 28,29 Public Agenda; 30,31 U.S. Department of Education
MARK YOUR CALENDAR!

New England Board of Higher Education

Conference Schedule for Spring 2000

EXPANDING MINORITY ACCESS AND OPPORTUNITY
(Cosponsored by the Nellie Mae Foundation and the College Board)
Federal Reserve Bank of Boston, Boston, Mass., March 6, 2000

PARTNERS IN DEVELOPMENT: THE UNIVERSITY AND THE COMMUNITY
Federal Reserve Bank of Boston, Boston, Mass., March 31, 2000

FORGING AN ALLIANCE: THE PERFORMING ARTS, THE CAMPUS AND THE COMMUNITY
Location and date to be announced, April 2000

CONFRONTING NEW ENGLAND’S WORKFORCE CHALLENGE
Federal Reserve Bank of Boston, Boston, Mass., April 18, 2000

NEW ENGLAND TELECOMMUNICATIONS AND DISTANCE LEARNING CONFERENCE
Federal Reserve Bank of Boston, Boston, Mass., May 25, 2000

For further information, visit NEBHE on the Internet at www.nebhe.org or contact:

Jan Queenan
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Boston, MA 02111

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At various times during the past two decades, the issue of increasing access to a college education for both youth and adults has come to the forefront in the debate about the role of higher education in America. Discussion of access often touches upon issues such as racial diversity, gender equity and class equity. Yet ultimately, most of the recent concerns about access to higher education are centered on two key economic developments: the increased economic opportunity and upward mobility provided by a college degree on the one hand, and the perception that college is increasingly unaffordable on the other.

Since the mid-1970s, the economic rewards of earning a college degree have increased dramatically. Changes in the industrial and occupational job content of the U.S. economy have resulted in a sharp increase in the earnings advantages of college graduates. During the mid-1970s, men under age 30 with fresh bachelor’s degrees earned just 15 percent to 20 percent more per year than their high school graduate counterparts. Twenty years later, young men who are recent college graduates can expect to earn 50 percent to 60 percent more per year than their counterparts with only high school diplomas. The gains in annual earnings for women with college degrees are even greater.

Earnings advantages have been especially large for graduates with degrees in high-demand professional fields such as science, engineering, computer technology, business and health. As employers demand that new hires bring more specific knowledge and skills to the workplace, college graduates—particularly those with degrees in professional fields—have found increasing opportunity in the labor market. The same changes in labor demand that have improved the relative job-market position of college graduates have resulted in a commensurate reduction in real earnings for many of those without college degrees. As a consequence, college education has become the primary pathway to a middle-class lifestyle.

Recent economic research debunks the notion that access to higher education is solely a matter of affordability. The key predictor is proficiency in basic skills such as reading and math.
Family income does not act as a substitute for academic preparedness. Higher family income simply cannot overcome large basic skill deficits in determining who will enroll in and graduate from college.

As higher education has become an increasingly important gateway to economic success, college presidents, trustees and elected officials fret over what appears to be a substantial decline in the affordability of college. Between 1978 and 1998, the cost of attending college—including tuition, fees, room and board—increased by 63 percent in inflation-adjusted terms. Yet, over the same period, real median family income increased by less than 10 percent. With college costs growing more than six times faster than family income, many observers have concluded that college has become less affordable. For example, in 1978, the out-of-pocket costs of one year of college equaled about 13 percent of the average American family’s pre-tax income. By 1998, this proportion had jumped to 20 percent.

For families of modest economic means, the affordability problem is more severe now than it was 20 years ago. In 1998 as in 1978, roughly one-quarter of U.S. families had incomes below $25,000 in constant dollar terms. The median income for those families in the bottom quartile of the income distribution was about $15,000 in both years. But in 1978, college costs equaled about 38 percent of average family income for those in the bottom quartile. By 1998, this burden rose to about 64 percent of family income. Growing inequality in income distribution among families throughout most of the 1990s has made this problem even worse.

Given these developments, it is not surprising that much of the discussion about improving access to higher education has centered around making college more affordable by improving financial aid and limiting tuition growth. And indeed, most of the response to declining college affordability has come in the form of increased student financial aid. By 1996, 68 percent of all full-time undergraduates received some kind of financial assistance to attend college, up from 57 percent in 1993. Three-quarters of students with aid received direct grants with no repayment obligations. But is financial aid enough? Can we solve the problems of access to and retention in higher education simply by improving the affordability of college?

Part of the answer depends on what is meant by access. If access is measured in terms of the fraction of young people who go on to college in the fall immediately after graduating high school, then access is at an all-time high. In 1978, just 50 percent of high school seniors went on to a postsecondary program the fall after graduation. By 1997, this proportion had increased to 67 percent, and about two-thirds of them were attending four-year colleges.

If access is measured in terms of the percentage of high school graduates who obtain four-year college degrees, however, the evidence is more mixed. Fewer than one-half of those who enroll in four-year colleges or universities graduate from college within six years—and the graduation rates are even lower for students at two-year colleges.

A variety of national databases can be used to examine the post-high school educational experiences of young adults over time, including: the 1978 National Longitudinal Survey (NLS) of Youth; the High School and Beyond Longitudinal Survey of 1980 high school sophomores and seniors; and the Beginning Postsecondary Student Longitudinal Survey begun by the U.S. Department of Education in 1989. A key element of these surveys is that they contain measures of students’ literacy skills and academic achievement along with the more standard demographic and socioeconomic data included in such studies.

These three databases, as well as the National Adult Literacy Survey of 1993, reveal that the likelihood of young adults earning a bachelor’s degree is strongly related to their basic skills proficiencies.

The basic skills measured by the NLS are based on student scores on the Armed Forces Qualification Test covering knowledge in four areas: reading comprehension, vocabulary, mathematical reasoning and numerical problem-solving.

The NLS findings reveal that 12 years after the initial interview, only about 1 percent of those in the bottom one-fifth of the basic skills distribution had graduated from college. (See Chart 1.) In contrast, 60 percent of those high school students who scored in the top one-fifth of the basic skills distribution had completed four or more years of college. Clearly, basic academic skills play an important role in influencing the likelihood that a high school graduate will enroll in college and persist through graduation.

But what role does family income play in the context of these findings on basic skills? Are low-income and lower middle-income students with strong basic skill proficiencies able to overcome their financial disadvantages and complete college?

The data reveal that once basic skills are taken into account, family income has only a modest influence on whether a high school graduate will complete college. (See Chart 2.) Students in the bottom quintile of the basic skills distribution have very low probability of completing college regardless of family income. Only 1 percent of low-income, low-skill students earn a college degree, while just 3 percent of the highest-income, lowest-skill students earn a degree. These data imply that money alone simply does not overcome low levels of academic preparedness. In contrast, low-income students have a relatively high likelihood of completing college if they
also score in the top one-fifth of the basic skills distribution. In fact, nearly 36 percent of high school students who live in low-income households but have strong basic skills complete college by the time they reach their late 20s.

These results, complemented by other findings from the National Adult Literacy Survey and the High School and Beyond data, clearly indicate that strong basic skills proficiencies are an extraordinarily powerful—though not the sole determinant—of college success.

Family income level does contribute to the likelihood that a student will enroll in and complete college—especially when complemented by solid basic skills proficiencies. As Chart 2 reveals, high-income students with strong basic skills are nearly twice as likely to complete college as low-income students with similarly strong basic skills. The evidence is equally clear, however, that family income does not act as a substitute for academic preparedness. Higher family income simply cannot overcome large basic skill deficits in determining who will enroll in and graduate from college.

Recent research has begun to debunk the idea that access to higher education is solely an issue of affordability. Economist Yolanda Kodrzycki of the Federal Reserve Bank of Boston, for example, recently found that rising tuition costs have a relatively modest impact on college enrollment and completion. In their book, *Consequences of Growing Up Poor,* Greg Duncan of Northwestern University and Jeanne Brooks-Gunn of Columbia, find only a loose connection between the family income of teens and the likelihood that they will attend college. (Indeed, the family income of children when they are very young is a stronger indicator of later college enrollment, according to Duncan and Brooks-Gunn.)

Meanwhile, college enrollment rates among recent U.S. high school graduates are at an all-time high—despite sharp increases in college costs and sluggish growth in real family income. Thus, the nation has been successful in more widely opening the gates to a college education. But the evidence also suggests that we have been less successful in preparing students for the intellectual rigors that colleges demand. As educational leaders ponder strategies for increasing access to higher education, the discussion should not focus primarily upon affordability and financial aid. Instead, we need to redirect our efforts to ensure that more high school students possess the literacy, quantitative and critical thinking skills required to succeed at the postsecondary level.

Paul E. Harrington is associate director of the Center for Labor Market Studies at Northeastern University. Andrew M. Sum is director of the center.
Making Change:
Careers for a Community Service Generation

Steven K. Katona

How will today's college students direct their considerable spirit of community service into actions that will help society and the environment? The most obvious way is through the careers they pursue—and, in many cases, invent.

Students beginning college today differ in a fundamental way from those of a generation ago. In the late 1960s and early '70s, students—responding to Rachel Carson's Silent Spring, the Vietnam War, lingering threats of nuclear holocaust and dire predictions of "ecocatastrophe"—seriously considered the possibility that human life might vanish. And some thought that might be a good thing for the planet.

Today's student knows that while pesticides probably will not eliminate life on earth, they may protect him from mosquito-borne encephalitis. Today's student also realizes such chemicals may cause cancer.

In these situations, the probability of both beneficial and harmful effects can be estimated; individuals may improve their own odds, for example, by eating organic foods. But they may also be able to improve the odds to everyone's advantage. There is considerable evidence that today's students are highly motivated toward that end. Community service, service learning and other altruistic endeavors have never been more popular. These activities are taking place not only because today's students are more aware of social and environmental problems, but also because students believe those problems can be solved. Their optimism has helped promote the growth of community service on many campuses.

Choosing Careers

Because American high schools are not particularly career-oriented, most first-year college students, as well as many of their older classmates, don't know which careers they will pursue or, for that matter, what career options will exist when they graduate. At the same time, today's students will likely change careers more often than their parents due to longer life expectancy and rapid technological change. Globalization, as well as the increasing connectedness and complexity of nearly all aspects of life, bring further confusion to the process of choosing a career.

Aware of the difficulties faced by so many students as well as their desire to be of service, I have used the College of the Atlantic convocation ceremony and other occasions to outline some broad career choices and skills for the 21st century. I don't include well-known but narrowly defined types of careers and skills, though these can be turned to social, as well as personal, advantage by the right individuals. In contrast, the careers on my list may not even exist yet as explicit choices (even though some people have moved into them by chance) but they should and someday probably will.

Decision-Making, Consensus-Building and Arbitration. Any student who learns to do these things better will help individuals, families, corporations, governments and nations to function more peacefully and productively. To be effective, the student will need to learn techniques for effective oral and written communication, as well as skills for understanding and facilitating group dynamics. Students will also need substantial understanding of the mechanisms, strengths and weaknesses of the democratic process, as well as other forms of governance employed by nations, states, towns and smaller units of organization. Since the process of making decisions is one of the most fundamental and widespread activities that humans undertake, a person with skills in this area will always be in demand and will be able to make important contributions to society.

Managing Megaprojects. People have undertaken grand-scale projects for centuries, sometimes through slavery, as with the Egyptian pyramids or Southern plantations; sometimes...
through forced labor or feudalism, as in the construction of lakes and imperial cities in China; and sometimes more or less voluntarily, as in the systems of roads and cities built by the Incas or Anasazi. Among more recent examples of collective achievements: the system of reservoirs created during the Depression by the Tennessee Valley Authority, the interstate highway system, the national power grid, the Internet and the exploration of space. Whether the goal is to manage the flow of electrons, water, people, automobiles or money, our world has enormous need for visionary people skilled in conceiving, organizing and managing very large and complex projects.

It will take at least as long to solve some problems as it took to create them. So, future progress may require projects that last considerably longer than political terms or lifetimes. Some may span several human generations. Imagine, for example, a generations-long commitment to consolidate and “de-sprawl” a city—an effort in which mass transport could replace automobiles; energy and materials flows could be accomplished more cleanly and safely; and spaces could be redesigned to facilitate learning, human and ecological health and recreation. Without people equipped to propose, plan and manage such projects, they will never happen.

Ethics and Law. Advocates with a broad, multicultural understanding of ethical and legal systems are needed to solve many of today’s problems. These quandaries include inequities in the distribution of land, wealth and resources; human impacts of industrial or military activities, past and present; appropriate uses of shared resources, including the air and sea; new threats to privacy produced by the electronic revolution; and implications of new scientific advances and medical procedures. The globalization of commerce and information will only make these issues more complex. The need for people with the skills to help develop equitable solutions seems boundless.

Communication. Reasoned, effective and civil communication will be necessary to engage and educate the populace to participate thoughtfully in the issues of coming decades. The power of written and spoken words has never been greater; nor has the need for people who can apply them with care. Consider how presidential elections, ethnic conflicts or debates on abortion, biotechnology and censorship would benefit from more insightful, less “inciteful,” communication.

Education. Throughout the world, talented, effective teachers and mentors are urgently needed at all levels—in the home, in elementary and secondary schools, in colleges and universities and in professional schools. The need is particularly critical in public elementary and secondary schools, which have been called to task for failing to prepare students sufficiently for skilled jobs or for entry into higher education. Nothing is more important to the next generation of citizens than the quality of the teachers who will guide their mental development and, in the process, help to reform the schools.

Business and Sustainability. Businesses may be the most effective models that humans have created for getting things done. Continuing to point corporations in the right directions for increasing social benefits and developing economic and environmental sustainability will be challenging, but potentially fruitful. Graduates who possess the entrepreneurial and managerial skills needed to help companies make money combined with the ability to persuade them to do the right thing socially and environmentally will become hot property.

Restoration Biology. Learning strategies and skills for restoring damaged lands and waters to full diversity and productivity will become increasingly important as nations seek to clean up industrial and military sites, streams and rivers, marshes, harbors, forests and the marine environment. Studies in hydrology will be critical, as water, particularly fresh water, becomes an ever more threatened and precious resource. The world will need more people with the skills to help conserve and remediate lakes, rivers, aquifers and other sources of water.

Design, Art and Music. A steadily increasing proportion of our learning and experience comes not through the intellect but instead through the senses—the images, structures, textures, sounds, smells and tastes that bathe our everyday existence. Having been a rich and central part of human experience throughout history, the arts need no further justification for their existence. Nevertheless, just as the power of art, music and design was effectively harnessed for evil purposes in Nazi Germany, their power can be directed in support of beneficial social purposes such as education, public health and environmental conservation. The business community has already harnessed the enormous persuasive powers of the arts to make more effective commercials and more attractive products. Now, we need more filmmakers, composers, eco-artists and environmental designers to help move us personally and collectively toward more harmonious and socially meaningful lives.

It’s too soon to tell whether these suggestions have significantly influenced anyone. Ultimately, the important thing is not whether students pursue the careers on my list, but rather, whether these ideas help them create their own lists.

Steven K. Katona is president of College of the Atlantic.
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ea borah Meier is the principal of the Mission Hill School in Boston’s Roxbury neighborhood and the founder of Central Park East, a network of public schools in New York City’s East Harlem neighborhood. Meier is the author of the book, “The Power of Their Ideas, Lessons from a Small School in Harlem.” She recently shared her views on key issues with CONNECTION.

On Schools and the Economy
When the nation’s competitiveness was in question, public schools were routinely blamed. Now, despite the economic boom, schools get no congratulations. In fact, they are subjected to merciless attack. It’s hard to get to the nub of the criticism since it presents itself in different guises. If it’s not the economy, then it’s equity. And if not equity, it’s toughness or character. The schools are attacked for not providing programs for the gifted even as they are under fire for having different expectations of different folks. It’s puzzling.

On the Democratization of Education
The impact of the G.I. Bill, the Brown v. Board of Education decision and the general postwar growth in citizens’ aspirations for the good things in life sparked a revolution in expectations. At the turn of the last century, our great grandparents took it on faith that only a very small elite—perhaps 3 percent of their generation—had the capacity for high-level reasoning. Few went to high school; fewer still stayed through graduation. As late as 1960, it was thought that maybe 20 percent should aspire to a liberal arts (as opposed to vocational) college education.

By the 1970s, we largely accepted the idea that all students should aspire to college. But we undertook these revolutionary changes in expectations with barely a nod to their implications, as though a change in rhetoric were the same as a change of mind and heart. We expected to undo the prejudiced assumptions underlying past elitism overnight. Then we seemed surprised and irritated by the difficulty in translating these expectations into reality.

On the Blame Game
Raising standardized test scores and closing testing gaps between high and low achievers began to replace all other objectives on the way to a more egalitarian system. Reformers attached ever higher stakes to test scores and threatened dire consequences for kids and teachers who failed to show progress. In the process, they made “teaching to the test” a legitimate pedagogical technique.

Anyone who noted that the emperor was wearing no clothes—that the solutions being offered were missing the point—was labeled racist or elitist. Critics affiliated with public institutions were judged to be whiners. Editorial writers and governors dismissed the skeptics as defensive members of some self-interested education establishment.

The blame game undermines the accomplishments that have been achieved in K-12 and postsecondary education alike. U.S. colleges were no better prepared for the revolution in expectations than were public schools. Stung by criticism from legislators, corporate CEOs and the media for not
immediately achieving egalitarian outcomes at the postsecondary level, many academics joined the search for someone to blame, preferably someone predisposed to accept blame. College professors blamed high schools. High schools blamed elementary schools. And elementary schools blamed mother. Or television.

No one noticed that, for all our failings, the United States was still doing comparatively well. We taught students how to read at an unprecedented rate—second only to Finland in reading test scores by fourth grade and not far behind in math and science among students in elementary grades. It turned out that both phonics and whole language approaches worked. But by the 1980s, celebrating public schools had become politically incorrect—a refuge for folks resisting change. The media ignored the successes and instead reported a flurry of half-truths about the decline of schools.

Considering the length and depth of the assault, support for local schools—the ones folks know best—has remained surprisingly high. About half the general public gave local public schools an A or B in a recent Phi Delta Kappan poll, while only 20 percent gave public schools nationally an A or B. Notably, three-quarters of those polled also favored working within the existing system to improve schools rather than finding an alternative.

On Reform Efforts

By the 1980s, many of the critics thought the time was ripe to engage in some radical experiments in curriculum and pedagogy. The Coalition of Essential Schools, founded in 1984, was deemed by many to be unrealistic and utopian for suggesting that America abandon large, comprehensive high schools for more intimate, focused academies. Yet, the coalition attracted more than 1,000 schools to its banner in fairly short order. Other radical innovations designed to raise the intellectual level of high schools—for example the Padaeia proposal, Harvard’s Project Zero or other break-the-mold high school redesigns sponsored by New American Schools—also attracted widespread interest and high hopes.

These reformers, however, discovered powerful obstacles to substantial reform. Neither practitioners, parents nor school committees jumped on board. On the whole, both K-12 and postsecondary educators dabbled with real change, postponing larger steps while their constituents got accustomed to the new ideas. Only a few were able to take the big steps, although when and where they did, the results were impressive. But opposition from many fronts remained powerful through the ’80s and early ’90s.

These delays met with frustration. “Can we afford to wait?” people wondered. Having stirred up talk of crisis in the classroom, those farthest from the action—legislators, CEOs and think tank pundits—hammered out their own solutions.

On Raising Standards

Even hardnosed businessmen know better than to try to establish standards in the way we have proceeded lately in schools. They know that when those on the frontlines feel no moral responsibility for their work and view ever shifting policies and practices as silly or offensive to their dignity, the result is resistance, sabotage and cheating. This applies to teachers and students as well. The best innovations and the worst get treated alike—as educators try to avoid swinging from one top-down fad to another.

There’s nothing wrong with introducing external ideas, nor with...
requiring schools and communities to make public their standards, nor with monitoring them in public ways—if it’s done right. Even standardized test scores can be useful as one source of evidence. But better still would be the oversight of insiders who know the kids and their work—the teachers and students’ families, for example—and outsiders of all sorts prepared to ask difficult questions, to play the role of provocateur. *Is this really what you call quality work? How about comparing it to what the school down the street calls quality? How come the girls are always doing better than the boys? How come students who have been with you the longest do the worst?*

Armed with evidence gathered and presented by the school itself and through observation and interviews with different constituents, these outsiders can provide a healthy antidote to the self-interest and parochialism that insiders might bring to the task. That’s how we did it at the public high school I was principal of in East Harlem. It was the toughest and most enlightening system of all: strongminded teachers answering to strongminded critics. That’s also what Boston’s pilot schools—like the Mission Hill School—undergo every four to five years. Next year, it’s our turn. Does it make us nervous? Of course. Nothing is as powerful as the opinion of one’s peers, especially when made public to the community. But it’s also a learning experience that raises our consciousness of our own work and improves our capacity to make sound judgments.

**On Haves and Have-Not**

Of course, advantaged families give their kids every opportunity they can to keep up, get ahead or simply live a good life. So do disadvantaged families. But the more advantages one brings to this central task of parenting, the more successful one’s offspring are likely to be. This is hardly rocket science. In the less than one-fifth of a youngster’s waking hours that are spent in school, not all these differences can be overcome—even if schools offer an equal chance to all. Public schools cannot and should not be expected to close all the gaps between the haves and have-nots that the larger society seems bent on widening. But schools can, and should, use their limited time to prevent the disadvantages that kids come to school with from becoming more serious lifetime handicaps.

We must make sure that pressure to cover more and more material does not reduce opportunities for students and teachers to get to know each other well.

**On a Successful Model**

At Central Park East, a network of East Harlem public schools I was involved in founding 25 years ago, the success rate of sixth-grade graduates 10 years later far surpassed the demographic odds. These results were replicated in the Central Park East Secondary School organized a decade later. In terms of high school graduation, college attendance and college graduation rates, as well as other life-success indicators, Bruner Foundation researchers concluded that the schools were not only a cheap solution, but a taxpayers’ bonanza.

When interviewed many years later, both students and their families described the differences between their experiences and those of their less successful East Harlem neighbors. The students attributed their success to the fact that at Central Park East, they had close relationships with interesting, empowered teachers. No teacher in the high school, for example, was responsible for more than 50 students. At other nearby schools, teachers worked with as many as 170 students per semester. And with only 500 students in all, Central Park East was small enough for everyone to know everyone.

Students were engaged by indepth studies in a few focused areas rather than a smorgasbord a mile wide and an inch deep. They still remembered each school year in detail. They were convinced that their survival over the many tough years that lay ahead depended upon the strong personal passions and relationships that the school had honored and nurtured. The school also had helped them weave a host of adults into a support network, aided by community service and school-to-work programs, as well as music classes, drama clubs and extended lab work.

Many also noted that Central Park East was a school where families and teachers were partners and where students felt respected as individuals with different styles and concerns. Ongoing teacher-family ties helped make allies out of otherwise edgy rivals. Every family had at least one full-time staff member designated as its special ally for two years or more. Kids and their parents said they felt they had belonged to a powerful little community that stood for something. And its strength added to their own personal staying power. The students described the intervening years as difficult. But they attributed their perseverance to the kind of schooling we had offered so many years earlier. Studies of other successful schools point to similar effects. They are not miracles. They are distinctly “replicable” if we take them seriously.
At the same time, we must make sure that pressure to cover more and more material does not reduce opportunities for students and teachers to get to know each other well. Furthermore, as teachers have less say in what and how they teach, their knowledge of their students and their subject matter seems more and more superfluous. When teachers are seen as mere conduits of other people’s expertise, the alienation between student and teacher grows apace.

At Central Park East, we insisted that it was our job to model what it was like to be responsible citizens of our school. Unfortunately, few of the colleges that served the least-advantaged and weakest of our students operated as we did. The students who attended the city and state colleges were often unknown to faculty members. Few were the faculty who saw students as partners in an intellectual pursuit—belonging to an intergenerational community.

In fact, America’s non-elite public institutions display much of the madness that Ted Sizer finds in the nation’s comprehensive high schools, where the faculty are in much the same situation as Sizer’s fictional high school teacher Horace, who “knew some of his students well, but most of them only as semi-strangers passing through.” Many of our colleges are also too big, too impersonal and too anonymous. They too cater to every variety of real or presumed need as they process students in pursuit of a magic credential. Sure, they do more good than harm, but less good than they could.

Graduates of Central Park East used to say that we prepared them well for small private colleges, but less well for large, impersonal public colleges where the least successful ended up. The best-prepared and most socially able kids at large colleges find a niche that sustains them, but the most fragile do not. If small schools are good for young people, maybe they’re good for older ones too—even folks as old as us, their teachers.

Shouldn’t all educators join together to bring the advantages of a powerful school composed of powerful adults to all children regardless of where they start from? Shouldn’t this be a common task for all educators ranging from kindergarten teachers to college professors? The impulse that makes us teachers—love for our subject matter, love for our students and high regard for the intellectual demands of democracy—are not so different. We have more in common than we usually imagine.

On Teachers and Professors

College professors complain about what high school teachers forgot to teach. Many are happy to distance themselves from both their own colleagues in schools of education and from K-12 educators—to our mutual harm. Postsecondary educators and their K-12 counterparts are part of a single, larger public education enterprise. Our challenges as educators are almost identical.

Yet we’ve allowed mischief-makers in high places—and our natural desire to avoid being blamed—to divide us by implying that the school’s focus on “the child” is a disservice to the university’s focus on “the disciplines.” But the intellectual power we all seek for children requires a combination of the two: abiding personal relationships between generations and a focus on powerful subject matter.

Meanwhile, the notion of academic freedom, which buttresses the independence of college professors, has rarely been espoused with fervor for high school faculty. And now both are under attack and likely to lose some of the independence they need more than ever in the face of unprecedented demands for intellectual rigor and high standards.
Targeting Technology
Maine’s New Investment in Research and Development
Carol Kontos

New England’s largest state geographically is the region’s second smallest economically. Maine’s gross state product barely topped $30 billion in 1997, accounting for just 6.5 percent of New England’s economy and ranking the state’s economy fifth among the six New England states, ahead of only Vermont, according to the Maine Economic Growth Council, a quasi-independent agency that monitors and sets long-term goals for Maine’s economy. Perhaps the most telling indicator of Maine’s economic weakness is personal income. In 1998, the state ranked 36th nationally by this measure, down from 26th as recently as 1989, according to the Growth Council.

Naturally, Maine lawmakers attempt to make the most of the state’s modest resources. When the state Legislature’s Joint Select Committee on Research and Development convened in January 1999, the challenge was to find ways for state government to make a difference in the expansion of applied research and technology-based businesses in Maine. Legislators had demanded increased spending on R&D for several years. In 1999, Gov. Angus King finally agreed, earmarking more than $30 million for support of R&D over two years. Most of the details, however, had yet to be worked out.

The Committee on Research and Development identified three areas for state investment.
First, it called for increased support for R&D within the University of Maine System. This included $20 million over two years for R&D in targeted industries and additional funding for expanded research facilities and library resources. Second, the committee approved the creation of a new Maine Technology Institute (MTI) to help companies in the state bring their products to market. And third, the committee called for investments in Maine public schools and the Maine Technical Colleges System to develop a more skilled workforce. The committee’s plan received nearly unanimous support from the Legislature and was approved by the governor.

A Manufacturing Past
A cursory review of the data on Maine’s economy and workforce clearly demonstrates the need for this expanded investment. Despite modest success in a few knowledge-based industries such as biotechnology, Maine’s economy remains dependent upon natural resource-based industries and defense spending. Pulp and paper is the state’s single largest industry, worth $4.1 billion in 1996, according to the Maine Pulp and Paper Association. Meanwhile, Bath Iron Works, with its heavy dependence on military contracts, is the state’s single largest private employer, accounting for 7,800 jobs.

But Maine’s industrial profile is changing. The state has been losing manufacturing jobs steadily—shedding more than 3 percent of all manufacturing jobs annually in recent years, according to the Maine Science and Technology Foundation (MSTF), a state-chartered, nonprofit organization created to stimulate economic growth through science and technology. By contrast, employment in Maine’s technology-intensive sector grew by an average of 10 percent annually between 1993 and 1997, even as overall employment grew by less than 7 percent per year.

In addition, technology jobs provide incomes well above the state average. In 1997, average annual pay in Maine’s technology-intensive businesses was $37,839. The average for all workers was only $24,144, according to the foundation. To diversify Maine’s economy and bolster incomes, Maine must develop and expand research-based enterprises.

To avoid falling further behind the rest of the nation in per-capita income, Maine must aggressively expand high-wage, high-technology industries and prepare the educated workforce that these industries need to grow.

The university system conducts research in a wide variety of academic disciplines, but until recently had not been asked to consciously devote a portion of its resources to those subjects likely to offer economic returns.

The state's elementary and secondary school students perform at among the highest levels in national tests. But too few Maine residents continue their education beyond high school. In 1998, only 19 percent of Maine residents age 25 or older held bachelor’s degrees, compared with 29 percent in all of New England and 24 percent nationally, according to the Growth Council. Studies show that Maine students have lower aspirations toward higher education than most students in the United States. To inspire these students to continue beyond high school, the committee provided for additional investments in science and technology education for K-12 students.

Maine’s current failure to invest in high-wage, high-technology industries is underscored by the annual Development Report Card of the States compiled by the Corporation for Enterprise Development (CFED). Maine universities spent a dismal $25.76 per capita in R&D in 1996, placing the state dead last nationally by this measure. The other New England states are among the nation’s leaders: Massachusetts ranks second; Connecticut, third; Rhode Island, seventh; Vermont, 15th; and New Hampshire, 23rd.

Unlike other states in the region, Maine does not have a large private research university on the order of the Massachusetts Institute of Technology or Yale University. Therefore, state government must support the University of Maine System’s efforts to compete in selected areas.

Maine does have a base to build upon as indicated by recent growth in the high-technology sector. Research by various groups consistently identifies a number of world-class, research-based industries in Maine, notably: biotechnology, aquaculture and marine sciences, composite materials technology, environmental technology, advanced technologies for forestry and agriculture, information technology and precision manufacturing technology. Indeed, the Legislature’s Committee on Research and Development identified these seven as target areas.

In early 1999, when I accepted the chairmanship of the R&D Committee, officials in the targeted industries, MSTF and the State Planning Office developed the MIT proposal to support the development side of R&D by investing seed capital in new products and services.

Collaborative Effort
Maine’s own “research triangle” is a combination of the university system, industry and government. We must bring together each part of the triangle in those industry sectors that offer the greatest return. But how?

The university system conducts research in a wide variety of academic disciplines, but until recently had not been asked to consciously devote a portion of its resources to those subjects likely to offer economic returns.
University research had not been viewed as instrumental to the economic future of the state. And the university’s limited ability to support economic development was weakened during the early 1990s when New England’s deep recession forced significant cuts in state support to the university system.

Since its inception in 1987, the Maine Science and Technology Foundation has worked to develop and expand technology-based industries by identifying available resources and developing partnerships between researchers, businesses and investors. But the foundation had a modest budget and did not directly invest in research or product development.

In the mid-1990s, university advocates and business people found common ground over the issue of R&D in high-technology industries. Their efforts and those of a few like-minded legislators paid off in 1997 when the first R&D Committee was formed. Legislative study committees on R&D then developed a bipartisan consensus that more action was needed. In fiscal year 1998, $500,000 was provided to the university system for investment in the targeted industries. That was increased to $4 million the next year. In 1998, the Legislature approved a $20 million bond issue with the bulk of the funds providing facilities improvements for the university system. The bond was approved with 63 percent of the vote.

The university system has developed an impressive track record over the past two years. The half-million dollars that the system received for R&D in 1998 was used to leverage more than $3.3 million in federal and other matching funds. In 1999, the system landed more than $15 million in return on the state’s $4 million investment. We foresee similar returns on the $10 million allocated this year. This spending and the matching funds translate into improved facilities, more and better trained staff, improved educational opportunities for students and greater capabilities to assist Maine business.

Maine needs more residents trained in high-technology disciplines to conduct research and develop new products. It also needs additional skilled workers to produce these new products. To make this a reality, the R&D Committee approved investing $4 million in the Maine Technical College System and several smaller programs.

**Institute Change**

The key part of this year’s education and R&D initiatives is the creation of the public-private MTI. The institute will provide more than $9 million in seed capital for private-sector R&D over the next two years.

The committee carefully defined the MTI’s purpose, charging the institute with encouraging, stimulating and supporting R&D activity that is likely to lead to the commercialization of new products and services by Maine companies. The broader goal: to enhance the competitive position of those sectors and encourage “clusters” of job-producing industrial activity.

Researchers and business leaders told the committee that Maine’s current investment in university research was not sufficient to grow high-technology industries. Maine’s private and public sectors alike often lacked the means to develop a good idea—to take research and fashion it into a product or service. Some private capital is available in Maine, but given the state economy’s limited size, its distance from major capital markets and the small size of most Maine startups, access to capital is a major roadblock for emerging companies or those developing new products.

The MTI was developed out of a cooperative effort that included the MSTF, the State Planning Office, the university system and representatives of the business community. It will be operated by a board, with representatives from each of the seven targeted industries, and managed by an executive director who will report to the state’s Department of Economic and Community Development.

The MTI has been structured to ensure that Maine taxpayers reap the greatest possible return on their invest-

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**Maine’s New Investments in Research & Development**

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<th>Program</th>
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ment. First, companies must pay royalties to the state from the successful commercialization of a product or process. Second, the resulting new jobs and expanded economic activity will generate additional revenue through income, sales and property taxes.

MTI has been given a budget of approximately $10 million over the next two years. It will build upon Maine’s existing Centers for Innovation, which currently provide business assistance and serve as clearinghouses of information for two of the seven target industries, namely aquaculture and biotechnology. Industry leaders credit the centers with helping make these two of Maine’s technology success stories. The next few years will be critical as MTI defines its role in developing new products and expanding businesses within the target industries.

The R&D Committee also increased the state’s investment in two other areas essential to high-tech industries. The first is the university system. The committee increased funding for the Maine Economic Improvement Fund, a dedicated account that provides for research in the target areas, from $4 million to $10 million a year. It also provided $25 million in bonding toward the construction of additional research facilities. Second, the committee supported successful efforts to increase the student population of the Maine Technical College System by 750 a year. Additional skilled workers are needed now, and demand will only intensify as the R&D effort bears fruit in the form of growing businesses.

Maine cannot claim the world-renowned research institutions or established high-tech economies of, say, Massachusetts, North Carolina or California. Maine is a small state with limited resources. To succeed, Maine must do more with less and maximize its investments. The more than $30 million committed to R&D is a major investment—one that cannot be sustained without real results. The Committee on Research and Development will closely monitor these investments to ensure that the people of Maine receive a productive return.

To be a player in the national and world economy, Maine must create an educated workforce, world-class research facilities and maintain its unequaled quality of life. Maine’s own research triangle (industry, government and the University of Maine System) will provide opportunities to expand businesses and increase incomes. Maine will then be known as a place where innovation, collaboration and productivity merge.

Carol Kontos is a state senator from Maine. She is co-chair of the Maine Legislature’s Joint Select Committee on Research and Development. This article was prepared with assistance from Richmond K. McCarthy who is special assistant to Maine Senate President Mark W. Lawrence.
e-Colleges: New England Institutions Marry Traditional Strengths to Cybertools

Alan R. Earls

Distance learning technology may not make the traditional campus obsolete, but an institution without an appropriate plan of action could get left behind.

Led by former Massachusetts Education Commissioner Robert Antonucci, Cambridge, Mass.-based Harcourt Higher Education, a subsidiary of a major publishing company, announces plans to enroll 100,000 to 200,000 students over five years in an on-line, degree-granting institution.

Roger Williams University introduces Rhode Island’s first online degree program—a bachelor’s in public administration. The program will be coordinated through eCollege.com, one of the nation’s largest online education providers.

Maine’s supplemental loan authority, Maine Education Services, prepares to launch Portland College, an online college that bills itself as “The University of Where You Are.”

At Lesley College, a pioneering class completes an online master’s degree program in instructional technology. With funds from the U.S. Department of Education, Lesley also develops an online science education course to help teachers learn about science in a hands-on, investigative method which they, in turn, can offer in their classrooms.

Jenzabar.com is one of many “dot com” firms rushing to help education institutions become Web-savvy. The Massachusetts-based company, formed in 1998 to create a virtual community for professors and students, offers Internet tools allowing educators to develop and publish syllabi and other course materials online, while promoting interactive discussions among students.
The World Wide Web and other new technologies are on the verge of imposing a new order on the way we learn—restructuring or replacing many of the day-to-day elements of higher education. Whether institutions survive and prosper in this new world may depend upon how quickly and effectively they adapt.

The upstart University of Phoenix, a private, for-profit institution—and a hot item on Wall Street—now enrolls more than 61,000 students, making it America’s largest private accredited university. Some UpPhoenix students receive all their instruction via the Internet. The more than 20-year-old institution also has established itself as a purveyor of professional certification for the computer industry, promising a steady stream of repeat customers for whom lifelong learning is a necessity.

In June 1995, the Western Governors’ Association (WGA), an organization consisting of the governors of 18 western states, two territories and one commonwealth, met to discuss ways that states could use information technologies to collaborate in education, industry and government. A year later, they adopted a plan for a new virtual university. And in 1998, the newly formed Western Governors’ University began offering its first three degree and certificate programs.

Closer to home, an arrangement between the Massachusetts Institute of Technology and Britain’s Cambridge University gives MIT students an unprecedented opportunity to study overseas. Historically, MIT undergraduates, and science majors elsewhere, have found it particularly difficult to study abroad because of stringent course requirements. By transmitting certain required courses through distance learning, the new Cambridge-MIT Institute program enables up to 50 undergraduates to spend their junior year at the other campus without disrupting their academic progress.

Another MIT distance learning program, a joint effort with the National University of Singapore, makes it possible to earn an MIT degree while living 10,000 miles from Massachusetts.

The impact of distance learning is by no means restricted to science and technology fields. At Tufts, Web technology allows art history students to examine pieces of fine art on their personal computers. “The only way to see the work before the Web was to book time to view the slides in the library,” says Tufts project manager Ranjani Saigal. “But now the students can view it from their rooms.”

Technology is also being applied to overcome geographical and time constraints that make it difficult for students and professors to meet face to face. Tufts, for example, has enlisted Blackboard.com, a commercial service, to bring classmates and others together online.

Distance learning technology may not make the traditional campus obsolete, but an institution without an appropriate plan of action could get left behind. At a minimum, a new generation of “Web-ready” students may show little patience for the old ways of doing business. Students have begun to expect teaching and student services via the Internet.

Disconnected Region?
Different U.S. regions have embraced distance learning with varying degrees of enthusiasm. Because of New England’s relatively high population density (except portions of northern New England) and the abundance of local colleges and universities, there has been little impetus to develop distance learning programs and tools in the region, according to Edmund Cranch, director of the New England Board of Higher Education’s five-year-old Program in Telecommunications and Distance Learning. “In New England, distance learning hasn’t had the urgency that it has had in other regions” says Cranch.

Furthermore, despite the fact that some prestigious New England institutions would seem positioned to
thrive in the distance learning environment, “few have made the necessary institutional commitments,” says Cranch.

But such commitments are now taking hold from Hartford, where Charter Oak State College’s transfer credit registry has begun keeping record of distance learning credits, to Down East, where century-old Husson College has begun offering an online bachelor’s degree program in nursing.

**Effectiveness**

Despite questions about the value, effectiveness and quality of distance learning programs, new evidence tends to support the new programs. Former Connecticut Commissioner of Higher Education Andrew De Rocco cites the effectiveness of a Rensselaer Polytechnic Institute program that uses CD-ROM to teach science while encouraging students to study in small teams. “They actually did much better than those taught in a more traditional fashion,” says De Rocco.

Cranch adds that no real difference between traditional face-to-face learning and distance learning has shown up in most anecdotal reviews, though comprehensive studies have yet to be done.

Meanwhile, research by Sunnyvale, Calif., technology consultant Brandon Hall shows that commercial technology-based training speeds up the learning process from 20 percent to 80 percent, freeing learners to put their knowledge into practice sooner, and may cost as much as 50 percent less than traditional, instructor-led training, pleasing the corporations that foot the bill and undoubtedly threatening providers of traditional education and training programs.

“This has the potential to revolutionize the way people learn, particularly in the area of self-actualized and self-motivated learning from high school through higher education,” says Hampshire College instructional technology Professor Tom Murray.

A lot of professors aren’t so sanguine. Steven R. Lerman, director of MIT’s Center for Educational Computing, sees an enormous range of attitudes toward distance learning among MIT faculty. “Some don’t want it or it simply doesn’t fit their style of teaching while others are deeply involved and enthusiastic,” he says.

“I can see using the Web to distribute notes but in terms of teaching that way, I would hate it,” says Dartmouth College computer science Professor Thomas Cormen. “I dispense advice and encouragement to my students and I really like being able to see them face to face.”

**Accreditation, Costs**

Distance learning presents profound questions about accreditation and costs.

As long as the quality and effectiveness of distance learning is in question, accreditation will be a sticking point. The American Association of University Professors has strongly criticized the accreditation of the Web-based Jones International University, using its own Web site to declare: “The development of distance-education technologies has created conditions seldom, if ever, seen in academic life—conditions which raise basic questions about standards for teaching and scholarship.”

But the major U.S. accrediting organizations have already begun to update their quality standards to accommodate electronic learning systems, according to education consultant and former Bentley College President Joseph Cronin.

Although distance learning has the potential to provide cost savings for students and institutions, NEBHE’s Cranch warns that startup costs are significant, and so far, tuition for distance learning programs has not been much lower than for in-the-flesh programs.

Says MIT’s Lerman: “You need to spend to create special classrooms and acquire special equipment and people to run and maintain it. However, if you are already teaching to a resident group, then the extra cost of a larger audience lowers the cost per student—and the costs of adding more students are not proportional” as they might be in a purely bricks and mortar equation.

Distance learning also adds complexity to the cost equation. “We used to have an academic advisor, a teacher and so on in one person,” says Husson President William Beardsley. “When you operate online, it invites and even demands that you unbundle those functions.”

Then there is the question of paying for high-tech investments that may have a limited shelf life given the pace of technological change. “We already have a huge overhead in bricks and mortar,” notes Beardsley. “At the moment, this kind of new undertaking is a tremendous drain on capital and these high-tech investments generally last only three years.”

In an effort to attract students and stay current in technology, colleges are expected to spend nearly $5 billion on information technology by 2003, up from $3.1 billion in 1998, according to International Data Group (IDG) of Framingham, Mass.

IDG predicts spending will rise as colleges and universities move more information to the Internet and expand their distance learning programs. Spending on communications products is projected to grow fastest, rising 15 percent annually to $693 million by 2003, while computer hardware spending should reach nearly $2 billion, according to IDG.

**Market positioning**

Yet the opportunity to reach new, underserved markets and achieve strong positioning with current students may make the investment worthwhile. Beardsley believes Web-based programs can be a marketing tool and an incremental add-on that enriches a school’s existing brand identity.

“The public institutions—the University of Massachusetts Lowell for example—have recognized this new
opportunity and have been quite aggressive,” says Cranch. By contrast, he admits, many independent schools have been less active. “Their forte has been bringing high-quality students to their campus rather than exporting a product.”

Public systems across New England are indeed pacing the distance learning revolution. The Connecticut State University System’s year-old technology education program offers full- or part-time undergraduate and graduate students the opportunity to pursue a variety of degrees over the Internet. Enrollment in the program, dubbed OnlineCSU, grew from 71 students in 1998 to 377 students in 1999, and the number of course offerings is expected to double to more than 50 by the year 2000.

At the University of New Hampshire, a pilot program called the UNH Blackboard Project helps faculty members use the Internet to deliver course information, announcements, assignments, tests and supplementary materials to their students on-line, 24 hours a day, seven days a week. New Hampshire’s College for Lifelong Learning, which has provided adults with flexible, nontraditional programs since 1972, has also added a large number of Web-based courses to its offerings.

Massachusetts Board of Higher Education Vice Chancellor Jack Warner boasts of the Massachusetts Information Turnpike Initiative, a joint effort between UMass and the state Department of Information Technology. The initiative eventually will link campuses and perhaps students at home through a high-bandwidth, fiber-optic link being built along the right-of-way of the Massachusetts Turnpike. Meanwhile, the Massachusetts College of Liberal Arts and Greenfield and Berkshire community colleges have launched distance learning programs in the northwestern part of the state, while UMass-Dartmouth has teamed up with Bristol and Cape Cod community colleges in the southeast.

In the Ocean State, the University of Rhode Island has expanded its central server to accommodate a URI Virtual Courses server that stores and delivers URI course materials to Internet users.

The Community College of Vermont launched its first experimental online course in the spring of 1996. By spring 1999, the number of courses had risen to 25 in fields ranging from accounting principles to American detective fiction—and nearly all of them were fully enrolled.

Lerman warns that each institution must tailor its distance education initiatives to its own strengths and capabilities. The good news, he says, is that there is a potential student base that has only just begun to be served by organizations like community colleges. “They [underserved groups] want more and they really need the ability to take courses asynchronously, which the Web enables. Figuring out how to use this to serve these nontraditional students would help a lot of people.”

For nearly a decade, as the Internet transformed commerce, most colleges and universities trailed behind. True, institutions invested to varying degrees in connecting faculty, staff and students to the Internet and wiring their campuses. But the fundamentals of campus life—the annual admissions decisions, the classroom rituals, the periodic testing—changed very little at most places. No longer.

Says Cronin: “I’ve been in education for 42 years and this is exhilarating. The Internet is going to revolutionize education. The question is whether educators will design distance learning or be overrun by marketeers.”

Alan R. Earls is a freelance writer and frequent contributor to CONNECTION.

In an effort to attract students and stay current in technology, colleges are expected to spend nearly $5 billion on information technology by 2003, up from $3.1 billion in 1998.
In December 1997, a major gifts officer at a leading university in the Boston area told me, in response to the first edition of the Massachusetts Catalogue for Philanthropy and its Generosity Index, "There isn't a college or university development officer in the country who doesn't know that New Englanders are cheap. Anywhere else, you make your pitch and you either get a major gift or you don't. Here in New England, if you're lucky, they'll give you a thousand bucks and think they've done their job. So you're onto something big, but it isn't going to change overnight; and I urge you to stick with it and not give up."

The Catalogue is a collaborative project of Massachusetts grantmakers, donors, fundraisers and charities established to promote charitable giving. The Generosity Index was conceived to help clarify the significance of annual federal data on itemized charitable deductions. Alone, the deductions, even when averaged, are meaningless, because levels of giving for an entire state or income group may vary for many different reasons—such as available income, investment assets, distribution of wealth and cost of living. Nor does it help to compare average deductions directly with average adjusted gross incomes, because only one in four taxpayers itemizes charitable deductions, and we don't know the incomes of either itemizers or non-itemizers. These gaps and fallacies have impeded strategizing in philanthropy.

Lacking any alternative, we decided to compare each state’s and each income group’s national rank in average adjusted gross income, or having, with its national rank in average deductions, or giving. This yields a plus or minus number—plus if the group is ranked higher in giving than having, minus if it is ranked lower in giving than having. The Generosity Index, in turn, is a ranking of those plus or minus numbers.

Named with a bit of irony and intended more for education than science, the Generosity Index has acquired a life of its own nationwide. But what does it tell us?

First, it suggests that we have no national culture of charitable giving. If all Americans were equally generous in giving in relation to having, they would have equal scores on the Index; if they gave consistently in relation primarily to their incomes, that equal score would be zero—that is, there would be no difference between their ranks in having and in giving. But in fact, there is a wide variation—an 85-point spread—between the highest and lowest scores.

Second, our charitable giving evidently is not related to income at all. The average state has a 20-point disparity between its ranks in having and giving.

Third, the relation between giving and income levels is strongly regional as illustrated by a map published in the August 1999 issue of Governing magazine. Using the 1997 generosity data, the national magazine color-coded 10-state groups: the top 10, second 10, third and so on. The map reveals clearly that contiguous states tend to share similar levels of generosity. Most generous are the Bible Belt and Utah, where generally low ranks in income combine with very high ranks in giving, encouraged by evangelical Protestant tithing and a strong sense of community. Next comes the great internal mass of the country—strongly Protestant, warmly communitarian and generous. Then comes the relatively wealthy northern Pacific Coast. And finally at the very bottom are the relatively wealthy, urban, secular, sophisticated states including New England, two Midwestern states (Minnesota and Wisconsin), two Middle-Atlantic states (Maryland and New Jersey) and Colorado.

The charts on page 33 profile each New England state’s generosity for the state as a whole and among the top three income groups.
(which give the most) for the years 1991 through 1997. One purpose of the Generosity Index was to let lower-income states off the hook, so Vermont and Maine, which rank low in giving but also have low incomes, rise into line with the rest of the country. The other four states—Rhode Island, Connecticut, New Hampshire and Massachusetts—have consistently high average incomes and low average deductions, and therefore, low generosity. For the period as a whole, they ranked 47th, 48th, 49th and 50th, respectively. These numbers suggest a strongly distinctive New England regional identity in charitable giving as it relates to income.

Though more clearly documented than before, the story of New England’s lagging generosity was not really news even when the Catalogue first published the Index in 1997. A year earlier, Tufts historian John Schneider wrote in CONNECTION of New England’s “elusive philanthropic dollar.” Schneider cited three previous articles in the Chronicle of Philanthropy, the sector’s national newspaper, showing that New Englanders, and Bostonians in particular, give less of their relatively high incomes to charity. The New England Nonprofit Quarterly had also analyzed the Chronicle data and asked: “Just how much is it coincidence that basically every state in New England hit the bottom rung on donations? Is there a regional factor? A regional component to the solution?”

That article caught the attention of the Ellis L. Phillips Foundation, a small family foundation established in New York in 1930, now headquartered in Boston. The foundation’s trustees asked what they might do to help ameliorate this situation, and came up with the Catalogue for Philanthropy, now in its third year. In 1997, during prime fundraising season, the Catalogue was mailed to more than 300,000 affluent households and professional offices in Massachusetts, to publicize the region’s low levels of charitable giving and to showcase the philanthropic sector by profiling 100 of the best small-to-mid-size charities that the public never hears about.

Predictably, the Internal Revenue Service (IRS) data and attendant state rankings at first were greeted with denial: They are misleading. Even if true, they are insignificant—we give in other ways, such as by volunteering. We pay taxes instead. Cost of living forces us to give less. We have a disproportionate number of Catholics (the lowest-giving religious group). We are better-educated and therefore do not respond so gullibly to the telemarketing and direct-mail appeals that drive charitable giving elsewhere. We Yankees are thrifty and individualistic, and what’s wrong with that?

Gradually, however, the weight of evidence (more than 821 million tax returns from 1991 to 1997) has produced consensus on two points: 1) New England and Massachusetts lag behind the rest of the country in

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**Generosity Index**

PROFILES OF NEW ENGLAND STATES, 1991-1997

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**Connecticut**

**Maine**

**Massachusetts**

**Rhode Island**

**New Hampshire**

**Vermont**
charitable giving in relation to income, and 2) we can well afford to give more.

**National Scene**

But we needn’t think the rest of the country is doing so well. Giving USA reports that U.S. charitable giving has stood below 2 percent of gross domestic product and well below 2 percent of personal income for decades. The Newtithing Group in San Francisco has estimated that Americans could triple their giving without noticeably affecting their lifestyles. Why should we be satisfied that only one in four taxpayers itemizes charitable deductions or that only one in five estates worth over $1 million makes any charitable bequests at all? Philanthropy aside, this is not even good money management. The truth is that not only do we lack a national culture of philanthropy, but most Americans give at unjustifiably low levels and too often in response to superficial—and not infrequently fraudulent—manipulations by direct mail and telemarketing. There is plenty of room for improvement.

The major responsibility for this anemia in giving belongs to the philanthropic community itself. While it is true that the sector has been professionalized during these decades—and that internally perhaps has never worked better—we have done a poor job of teaching philanthropy.

One symptom of this is that almost no one knows what “philanthropy” means, and when it is explained, the general impression is negative. While preparing the first *Catalogue*, we asked people how they might respond to receiving such a publication in the mail. Everyone we asked said they would wonder if it was legitimate.

*But this is philanthropy, I said. Exactly. What do we know about philanthropy? Junk mail, junk telephone calls, annual editorials advising readers to ‘Give, but give wisely’ and stories of prosecutors chasing scoundrels.*

Why the disconnect? First, a structural reason: more than 92 percent of charities have budgets below $2 million, and so are virtually invisible to the public. They cannot afford junk mail and telemarketing, and only a few of them can even afford professional fundraisers. The media pay them little attention. Second, a pedagogical reason: you can’t teach or promote anything using negative and imprecise vocabulary, which is what we have tried to do in the case of philanthropy. If we describe philanthropy as giving to others in need through “nonprofit” organizations, is it any wonder people don’t find it compelling?

**Philanthropy Reconsidered**

The truth is much more persuasive than that. The word *philanthropy* (from the Latin and Greek *philanthropia*—love of humankind, benevolence; combining *philos*, friendly, kind, and *anthropos*, human) entered common English usage in the 17th century as a synonym for “humanity” and “beneficence.” Philanthropy became a characteristic ideal of the 18th-century Enlightenment and naturally took hold in America where a new nation was being built based on “private initiatives for public good, focusing on quality of life”—the *Catalogue’s* location, combining the two most conventional definitions used today.

Perhaps because historians of philanthropy have focused on its products as conventionally conceived—primarily social services—they have established that philanthropy flourished in early America, but missed the point of its importance to the nation’s development. By focusing instead on the fundamental impulse behind philanthropy—*voluntary civic responsibility*—we can see it in a new light that not only explains the historic flowering but suggests a more significant future.

When the early settlers in America discovered that here, as nowhere else in the world, people could freely build whatever kind of society they wanted, they felt a tremendous exhilaration and set themselves enthusiastically to work. Voluntary associations for civic purposes endlessly multiplied, as de Tocqueville famously noticed. American philanthropy was a new way of life and an essential component of the developing American character.

In fact, most local problem-solving in America has been philanthropic. The essence of philanthropy may be summed up in the phrase: if something needs doing, do it. This applied to everything from barn-raising to the creation in 1636 of the first American private corporation—Harvard College—to train clergy for the Massachusetts Bay Colony. The American Revolution itself was essentially philanthropic. Sam Adams’ appeal that “associations and combinations be everywhere set up,” Paul Revere’s ride, the Minutemen, the Revolutionary Army—all involved volunteers whose activities were funded by private donations. The Declaration of Independence was supremely philanthropic—purporting to do good for all humankind in a cause to which the founding fathers pledged as volunteers “our lives, our fortunes, and our sacred honor.” The flowering of American literature in New England in the early 19th century—with Emerson, Hawthorne, Thoreau, Melville, Poe and Whitman—was philanthropic in the sense that it addressed public issues for the greater good of the nation. All of American religion, private education and secular reform movements—from anti-slavery through environmentalism—have been philanthropic. In short, America’s quality of life is owed to philanthropy, which is why the low level of philanthropic giving is a serious public issue.

**National Remedies**

Today, America’s global, high-tech economy, its unprecedented bull market, its concentration of great wealth in a few hands, and the allegedly unprecedented intergenerational
transfer of wealth (estimated near $20 trillion over the next several decades) have combined to arouse a new interest in “promoting philanthropy.”

In 1998, a National Initiative to Promote Philanthropy was launched by a group of leading foundations (Ford, Kellogg, Packard, Kauffman and others) investing up to $10 million over three years in national, regional, state and municipal projects to increase “organized philanthropy.”

A critically important initiative in the donor education movement is the Newtithing Group, which has proposed that for high net-worth individuals and families, total investment assets—not annual income—should be the reference point in calculating how much one can afford to give each year to philanthropy. Claude Rosenberg, the retired investment manager who heads the Newtithing Group, calculates that an average taxpayer with income over $1 million has $21 million in investment assets and could easily afford to contribute that entire income to philanthropy with no sacrifice in lifestyle. The Newtithing Website (newtithing.org) features a “Calculator” into which people can plug their own numbers and come out with their affordable contributions under the Newtithing strategy. Newtithing estimates that Americans can afford to give roughly three times as much as they do currently, and that a $1.2 million annual contribution would actually cost only $760,000 if the donor took full advantage of the tax laws—in particular, transfer of appreciated securities, allowable up to 30 percent of adjusted gross income with full deductibility at the appreciated price and no capital gains tax.

Other national initiatives are being discussed. Both the Catalogue and a panelist at the White House Conference on Philanthropy have proposed designating Thanksgiving or the day after as National Philanthropy Day. Just as in the 20th century, almost everyone telephoned their mother on Mothers Day, in the 21st century, families might log onto the Internet on Thanksgiving weekend to make their annual charitable contributions. Others have recommended the regular inclusion of a brief overview of the state of philanthropy and the philanthropic sector nationally in the President’s State of the Union Message and similar inclusions in every governor’s state of the state address.

To teach what philanthropy is about, the Catalogue has proposed creating an annual publication, prospectively entitled The Statistics of Income for Philanthropy, which would feature relevant IRS data and present various analyses of those numbers such as the Generosity Index and Newtithing’s Affordability Index.

**New England Remedies**

Many aspects of philanthropy are alive and well in New England. The region’s well-developed “benefit sector” regularly generates models that are adapted nationwide. New England has unusually high percentages of volunteers and itemizers of charitable deductions, and the region’s economy is strong.

But top income groups in the four lowest-ranking New England states can well afford to give more. This represents a great opportunity for the six-state region—indeed, one might simply invert the Generosity Index and call it the “Opportunity Index,” indicating relative capacity to increase investment in quality of life through philanthropy.

How should we promote philanthropy? New England’s philanthropic infrastructure is mainly organized along state lines, rather than regionally. Four of our six states have large statewide community foundations (Massachusetts has 13, Connecticut 19). Private foundations have statewide associations in Massachusetts, Connecticut and Maine. Five states have associations of charities (Massachusetts has several local groups). Fundraisers have statewide organizations in Massachusetts, Connecticut and Rhode Island. There are no donor associations. There are active state associations of attorneys, accountants, investment managers and other financial advisors, but no such regional groups.

Regionally, several institutions do or can provide significant support for promoting philanthropy. The New England Nonprofit Quarterly could be a powerful voice for the cause, but has yet to make that commitment. The New England Governors’ Conference has been alert and hospitable to the philanthropic challenges and opportu-

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**Affordability Index**

NEW ENGLAND STATES, 1997 (FOR TAXPAYERS WITH ADJUSTED GROSS INCOME OVER $200,000)

<table>
<thead>
<tr>
<th>State</th>
<th>Number of Tax Returns</th>
<th>Itemized Charitable Deductions</th>
<th>Total $ Difference</th>
<th>% of Affordable</th>
<th>U.S. Rank of Fulfillment %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maine</td>
<td>5,059</td>
<td>$18,600</td>
<td>$0.23 billion</td>
<td>29.1</td>
<td>15th</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>5,754</td>
<td>$17,703</td>
<td>$0.28 billion</td>
<td>26.5</td>
<td>22nd</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>61,926</td>
<td>$18,374</td>
<td>$3.26 billion</td>
<td>25.9</td>
<td>25th</td>
</tr>
<tr>
<td>Connecticut</td>
<td>47,192</td>
<td>$17,103</td>
<td>$3.29 billion</td>
<td>19.7</td>
<td>39th</td>
</tr>
<tr>
<td>Vermont</td>
<td>2,893</td>
<td>$16,331</td>
<td>$0.23 billion</td>
<td>17.0</td>
<td>44th</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>8,373</td>
<td>$12,458</td>
<td>$0.57 billion</td>
<td>5.4</td>
<td>47th</td>
</tr>
</tbody>
</table>

Source: Newtithing Group.
An average taxpayer with income over $1 million has $21 million in investment assets and could easily afford to contribute that entire income to philanthropy with no sacrifice in lifestyle.

nities, and at their meeting next year will consider the role of public officials and governmental instruments in promoting “private initiatives for the public good focusing on quality of life.” The New England Board of Higher Education, through Connection and its strategically significant readership, has played a vital role in raising these issues for public discussion. Two national institutions successfully promoting philanthropy originated in New England: The Philanthropic Initiative, launched in Boston by Peter Karoff in 1989 to counsel potential donors of high net worth, and the Fidelity Charitable Gift Fund, which has in a short time become a major conduit of philanthropic funds. In addition, the Catalogue for Philanthropy is being replicated across the country.

The National Initiative directed two of its first 13 grants to New England—$300,000 to the Connecticut Giving Project and $300,000 to Giving New England (GNE), which serves the other five states. Both grants are being supplemented by local funders.

The goal of Giving New England is nothing less than to change the regional culture of philanthropy—to raise giving to levels that correspond to the region’s relative wealth. GNE over the next three years will help establish systems in each of the five states to promote philanthropy in perpetuity. Each state will have a task force to support collaborations among the various constituencies in philanthropy—donors, advisors, foundations, corporations, charities, fundraisers, journalists, scholars and even people needing help.

A GNE Website (givingnewengland.org) will provide regional support to the state-based programs as a toolkit of philanthropic information and resources.

We already see evidence that philanthropy can indeed be promoted. After six years in which Massachusetts placed 50th four times and 49th twice on the Generosity Index, the Commonwealth moved up to 48th place in 1997. This is largely attributable to the top income group of 60,000 taxpayers, whose income rose by 5.5 percent and whose charitable giving rose by 19 percent. If we ask what happened in Massachusetts in 1997 that did not happen in New Jersey (49th) or New Hampshire (50th), one factor has to be that from September on, there was media discussion of Massachusetts giving, generated by the publication of the Catalogue’s Generosity Index. It is possible that the difference was made by about 11,000 taxpayers who moved into the top group that year, having been leading donors in the second group (whose numbers stayed the same or declined slightly). If so, then these young, newly affluent people—many of them, high-tech entrepreneurs—are more generous than their predecessors in that top group, in which case New England philanthropy has a very bright future.

Make a Difference

Given that private investment in civil society is an American tradition, today’s interest in “making the difference” through voluntary investments in quality of life signifies the rebirth of an impulse that helped mold this country. New England once exercised national leadership through philanthropy. We have the capacity to do it again.

Our fellow Americans annually prove that New Englanders, who have more to give, can well afford to give more—because those others, with less, do regularly give more and do not suffer from it. If New England were to raise its level of giving to the U.S. averages for our income groups, we would invest an additional $1.3 billion annually in quality of life. That would amount to having a new $26 billion foundation—the largest in the country—in New England.

New England’s task is to use philanthropy to translate its economic gains into quality of life gains. Foundations can help by dedicating a small percentage of their annual grantmaking to support for “enlarging the pie” through Giving New England and related efforts in each state. It is in the interest of all educational institutions—universities, colleges and schools, libraries, arts councils, public forums of any kind and the media—to add the teaching of philanthropy to their various programs. Fundraisers can reposition themselves as advisors in philanthropy generally and not just advocates for their own institutions. A rising tide lifts all boats; we want to raise the tide.

New England may be entering another great period in its history. The region now enjoys unprecedented prosperity and a nationally distinguished philanthropic community. If we invest our surplus wealth in quality of life, we could create a “New England Renaissance,” restoring this region to the kind of national leadership for which our ancestors are famous. Maybe then others would take interest in what we are doing today, rather than only in what our predecessors did—philanthropically, in fact—centuries ago.

George McCully is a trustee of the Ellis L. Phillips Foundation and project coordinator for The Catalogue for Philanthropy.
Governance of higher education in New England has been relatively stable. With the exception of Massachusetts, which restructured major components of its higher education system in the early 1990s, and Maine, which more recently reorganized its management and governance practices, the region’s system structures date back at least 10 years. In light of restructuring initiatives across the country, some review of governance in all New England states is likely. If so, the New Jersey experience may be enlightening.

In 1994, New Jersey Gov. Christine Todd Whitman used the occasion of her first budget message to call for the abolition of the state’s board of higher education. She then appointed a special advisory panel of educators and lay people to formulate recommendations on how New Jersey colleges and universities should be governed and coordinated.

The basic thrust of the recommendations was to reconstitute the state higher education board but reduce its size, scope and regulatory authority, while expanding institutional autonomy and institutional system accountability. This reflected the fact that American higher education has long been recognized as the best in the world, largely because of its traditionally strong independent sector and a public sector which incorporates the central features of that independent sector—namely, institutional authority and limited centralization.

The restructured New Jersey system included a new Commission on Higher Education made up of independent lay leaders charged with developing a vision for the future of New Jersey postsecondary education and related measurable objectives to meet the statutory goals of accessibly, affordability and quality. The boards of trustees for each college and university were given expanded responsibility, including authority to set tuition and introduce new programs with accountability to the general public and to students. More specifically, a public hearing was required before a board could raise tuition. And a Presidents’ Council was formed of chief executives of the state’s public and independent colleges and universities [Connection, Spring 1997].

The Presidents’ Council was charged with seeking creative ways to share resources and technology, reach out to underserved populations and regions, and encourage cooperation to avoid unnecessary duplication. The council was further charged with the responsibility to review and make recommendations to the Commission on Higher Education on any proposal for new programs that exceeded or changed the programmatic mission of an institution, demanded excessive new resources or raised significant issues of duplication. This process clearly expanded the authority of institutional governing boards while putting in place a collaborative interinstitutional review process.

The restructuring legislation signed by Whitman retained the emphasis on decentralization and increased responsibility for college and university boards that had been recommended by the advisory committee, but added an independent entity to administer student aid programs. The New Jersey Legislature also introduced provisions to require evaluation of the restructuring initiative two and five years after its enactment.

In response to the legislative requirement of a five-year review, the Commission on Higher Education in 1998-99 conducted a survey on the quality and effectiveness of the higher education operation.

The following items were positively evaluated and attributed to restructuring:

- Timeliness in addressing issues and making decisions;
- Cooperation with the various higher education entities through the Presidents’ Council;
- Availability of higher education information;
- Institutional governing board decision-making;
- Institutional governing board accountability;
- Institutional flexibility in establishing new academic programs; and
- Final decisions on disputes and appeals.

A few negative evaluations were attributed to restructuring as well, including:

- Poor systemwide coordination of higher education and academic programming;
- Inadequate statewide master planning;
- An inadequate budget development process; and
- Lack of coordinated systemwide advocacy.

As part of the requirement that the restructuring initiative be evaluated, the New Jersey Commission on Higher Education scheduled a conference last January. The conference, sponsored by the national Association of Governing Boards of Universities and Colleges (AGB), brought together members of the commission, as well as more than 150 legislators and college presidents, three national experts on higher education.
who had been involved in the original New Jersey reorganization and a fourth who had not. Whitman opened the conference and delivered a progress report as well as a projection of the fiscal 2000 higher education budget. The governor noted that while it was too early to draw conclusions about the bottom-line effects of New Jersey’s restructuring, the reforms have improved coordination and collaboration within the higher education system and made it more responsive to students and to the business community. Presidents are working together in an unprecedented way, she said, adding that increased autonomy has unleashed institutional creativity while maintaining a commitment to quality, access and affordability.

Whitman’s report was followed by a panel discussion featuring sponsors of the original restructuring legislation and a summary by Martine Hammond Paludan, the recently retired first executive director of the restructured New Jersey Commission. Paludan summarized the activities of the past four years and presented a brief overview of constituents’ perceptions of those activities. This was followed by a discussion of New Jersey’s revised governance structure in the context of other state structures and recommendations for future action. Panelists noted that many of the issues identified as needing improvement—such as master planning and program coordination—reflect broad national trends and not necessarily problems stemming from New Jersey’s new governance structure.

The conference closed with reports from breakout groups. The participants generally agreed that no further restructuring of the New Jersey higher education system was required. They also agreed, however, that there had been a lack of coordinated and effective advocacy for system support. Some suggested that the executive director hold the new title of commissioner and be a permanent participant in the activities of the governor’s cabinet, although not a cabinet member per se.

The breakout groups recommended much more extensive and coordinated engagement of members of the Presidents’ Council with state legislators, particularly in the process of budget development, and more extensive institutional involvement in strategic planning.

They recommended the addition of quality standards to the program review process conducted by the Presidents’ Council. They also expressed concern that the Presidents’ Council’s current staff is supported only by the council chair’s institution.

The participants expressed strong support for expanding transfer-articulation standards between New Jersey’s two- and four-year institutions. Because of the relatively low enrollment of state residents in New Jersey institutions, participants strongly supported expanding public information about colleges and universities in New Jersey. And they voiced concern about the extent of appropriate institutional accountability standards such as cyclical program review (including, for purposes of objectivity, a third party from an institution other than the one being evaluated) and about the lack of interinstitutional cooperation and effective partnerships between colleges and universities.

The group strongly suggested that state incentive funds be established to support institutional initiatives in areas such as collaboration, partnerships and technology as well as to address future priorities. Finally, they strongly suggested that the higher education commission expand the currently required but limited institutional accountability reports to track progress in addressing state and institutional priorities.

In a 1998 publication entitled Seeking Excellence Through Independence, University of Maine System Chancellor Terrence MacTaggart and associates presented the case for deregulation given the challenges and opportunities presented by technology and distance learning along with a sense that public institutions should follow in the footsteps of the private ones on which most had been originally modeled.

In the same publication, Patrick M. Callan, president of the National Center for Public Policy and Higher Education, joined his colleagues in offering examples of how deregulation can work in a context of increased demand for higher education, growing public concern about educational responsibility and quality, severe constraints on resources and rapidly changing technologies. Callan and his associates recommend that higher education pursue a federalist model that is at once centralized and decentralized. The federated system they recommend would be characterized by a strong center devoted to serving its components while avoiding centralized decisions that could be made at lower levels.

There is a remarkable convergence between MacTaggart’s conclusions and those of a recent AGB report entitled Bridging the Gap. The report concludes that state legislatures and governing boards must “establish relationships that allow for more flexibility, less regulation and greater respect of broad policy authority.”

MacTaggart and his associates present Virginia and Illinois as effective models of federalism, offering a structure of checks and balances and “the promise of management autonomy within a context that promotes cooperation, economies of scale and flexibility.” New Jersey may well serve as a third model of evolving institutional autonomy and public accountability—indeed, a model of federalism and effective deregulation.

Eleanor M. McMahon is distinguished professor of public policy at Brown University’s Taubman Center for Public Policy and American Institutions.
Best Practices
Carol Angus


The impulse for colleges to cooperate through consortia dates back to at least the 1950s and '60s, when campuses were drawn together by a range of pressing challenges: first, a boom in the college-bound population brought about by the G.I. Bill, then, the need to reshape the curriculum to reflect a changing world order, and later, the pressures of student unrest.

In the 1960s, Franklin Patterson, who had worked with Amherst, Mount Holyoke and Smith colleges and the University of Massachusetts to establish Hampshire College, visited nearly half of the 65 consortia that had sprung up during that era. In 1974, Patterson published Colleges in Consort, which became required reading for anyone involved in a consortium.

Now, college consortia are hot again as evidenced by the heavy turnout of U.S. college presidents and other education leaders at a recent Five Colleges Inc. conference on the future of college collaboration. Roughly 1,000 colleges and universities nationally belong to about 80 such formal partnerships. And now this next generation of consortia has a new guidebook. Best Practices in Higher Education Consortia: How Institutions Can Work Together, has been so popular, in fact, that a second print run was needed.

Editors Lawrence G. Dotolo and Jean T. Strandness, themselves directors of higher education consortia, note in the opening to their volume of essays that a new wave of consortia are being formed as colleges face pressures to be more competitive and efficient. “While college costs have spiraled upward over the last decade, so have complaints about higher education and demands that educational institutions be accountable to an increasing number of constituencies,” write Dotolo and Strandness. “As they have looked for ways to save money and to become more efficient while sustaining program quality, colleges and universities have shown an increasing interest in consortial enterprises.”

Even among administrators and faculties, the very term “consortium” conjures up vague associations ranging from a loose partnership to a tightly controlled central structure with all the legal trappings of a contractual relationship.

Best Practices does a great deal to shed light on the too often shadowy life of consortia. With its useful case-study format, the collection provides an updated, practical and wise guide to the art of consorting. The essays cover the six most common activities engaged in by over 25 percent of all existing consortia: cross-registration of students, faculty exchange, library cooperation, student recruitment, workshops and conferences, and professional development (especially faculty development). The book, which includes an annotated bibliography and index of topics, appears at a time when current information about consorting is relatively scarce.

The essayists include some of the most experienced voices in the world of higher education consortia today. (Dotolo is president of the Virginia Tidewater Consortium for Higher Education and executive director of the national Association for Consortium Leadership. Strandness is provost of the Tri-College University consortium in Moorhead, Minn., and Fargo, N.D.) They and the other contributors offer encouragement and concrete examples laced with valuable
cautions about some of the pitfalls of embarking on and sustaining a consortium.

That kind of grounding in reality constitutes a valuable service to colleges and universities that come to the table of collaboration with vague or preconceived notions of why and how schools work together. Saving money, as this collection illustrates, is only a small part of the formula and only one of many potential benefits to be gained from collaboration. Others include expanding opportunities for students through cross-registration and an enhanced position with grantmaking agencies that favor cooperative projects.

In addition to exploring vital issues such as technology, economic development, fundraising and international education, the book offers sound advice on one of the most obvious forms of joint activity in a chapter titled, “Cooperation for Cost Effectiveness in Purchasing,” written by Mitch Dorger, executive vice president of the central coordinating agency for the Claremont Colleges in California.

In a particularly engaging chapter entitled “Starting and Sustaining a Consortium,” Claire Ramsbottom, coordinator of the newly formed Colleges of the Fenway in Boston, and Frederick Baus, executive director of the Colleges of Worcester Consortium in Massachusetts, combine the perspectives of a three-year-old consortium “which is still being created” and a 30-year-old consortium “in the midst of being re-created.”

This chapter and others emphasize the importance of a commitment from the top. Whether beginning a consortium or sustaining it over the long term, an executive-level commitment, Ramsbottom and Baus argue, is crucial to the success of the enterprise. So are clearly articulated and understood missions and goals, balance mechanisms for creating parity among otherwise unequal parties, flexibility, sound decision-making processes and tangible benefits.

Ramsbottom and Baus’s cautions are well-founded in their own experiences: “The enthusiasm and expectations that accompany new cooperative ventures frequently do not endure over time, and neither do the organizational forms that embody them,” they warn.

In a chapter analyzing “The Consortium Director’s Role,” Thomas R. Horgan, executive director of the New Hampshire College and University Council, asserts that the consortium director must be prepared to be both “a leader and a servant,” capable of “discerning the proper balance between institutional self-interest and collaborative cooperation.” One of the director’s chief tasks, writes Horgan, is “easing the burden on the member institutions [while] enhancing their collective efforts.”

Each essay offers anecdotal evidence of the important role consortia play in helping institutions respond to new pressures. In a chapter entitled “Faculty Development: Working Together to Improve Teaching and Learning,” Dotolo notes that 20 years ago, the institutions that today make up the Virginia Tidewater Consortium for Higher Education were not unusual in having no formal program to help their faculties develop teaching skills. In those days, he notes wryly, “Most administrators thought that sending [college] faculty to conferences was sufficient.” Once administrators began to require that faculties be evaluated by students, however, “and once department chairs and division chairs began to keep records of student evaluations, everyone realized that a more systematic approach to improving teaching and learning was needed.” Because the faculty were resistant to being involved with a program designed and offered by their own institutions, “the consortium became a clear alternative.”

**Rising Like UPhoenix**

*Edmund T. Cranch*


John Sperling’s personal account of his efforts to initiate change in higher education provides both instructive history and perceptive insight for the forces at play in the present ferment in higher education.

*Rebel with a Cause* offers an engaging account of the roots of resistance to education reform that led to the creation of large, for-profit education institutions, including contemporary efforts employing extensive use of information technologies for distance learning.

To understand the background that shaped his life, Sperling describes his childhood in a dysfunctional, Missouri Ozarks family that experienced the vicissitudes of the Great Depression. Born in 1921, he was swept up in events associated with World War II. As with many others, service in the armed forces gave him exposure to quality higher education which motivated him to pursue further education through the G.I. Bill. For Sperling, this process led to an undergraduate degree at Reed College, graduate study at the University of California-Berkeley and ultimately a doctorate from Cambridge.

Restless in early academic appointments, Sperling returned to California and in 1960 began a 12-year association with San Jose State College (now University) as an academician. There, he took on a series of assignments—team-teaching in a humanities program, preparing material to teach economics to high school students, improving access for disadvantaged Hispanic students, and developing a system of higher education for working adults—that forged the pedagogical and entrepreneurial skills which would lead to his eventual break with traditional academics.
Though San Jose State included a community outreach/economic development component in its mission, the college was unable to embrace some of Sperling’s academic initiatives. He turned to other regional institutions in the hope they would accept his adult education program called the Institute for Professional Development. In this, he ran square into the constraints of departmental control and academic infighting.

In 1972, with $26,000 in savings, the merchant marine-turned-professor launched a company dedicated to providing working adults with the opportunity to earn academic degrees in the same time it takes full-time students to do so. Today, his Apollo Group, with its University of Phoenix subsidiary, is a $500 million public company.

Rebel with a Cause is Sperling’s exciting account of how far accrediting agencies and other entrenched organizations will go to suppress innovation and reform in higher education. High drama unfolds in the collision between reform and tradition, as regional accreditation and state regulatory agencies move to eliminate Sperling’s new venture. Only his understanding of academic politics and his experiences as a social activist enable him to fend off the vicious attacks and collusion of educational bureaucracies.

The account is directly pertinent to the current tendency of some state commissions to impede the introduction of for-profit programs and to the attack by the American Association of University Professors on initiatives that utilize technology-based means of delivering educational programming.

Sperling’s experience illustrates the irony of accreditation and regulatory agencies that for decades have approved the for-profit continuing education divisions of traditional nonprofit colleges. Thus, a for-profit component is legitimate as long as it subsidizes a “pure academic” endeavor. But if the for-profit undertaking stands on its own base, as in the case of the University of Phoenix, it is viewed as undermining the perceived public affairs office’s pitch of more than 600 pictures that initially attracted me to The College on the Hill—and it is the rich images that help make David Haward Bain’s 464-page history accessible to people who have no connection with Middlebury.

Following the format of “a print version of a documentary movie,” Bain skillfully juxtaposes archival materials from the college’s original charter through colorful 1920s covers of The Blue Baboon magazine to the oddly penetrating, black and white full-page photo of former President Olin Robison.

The only visual disappointment comes in the sections on the 1990s which settle for college catalog-style fall foliage shots and mortarboards flying heavenward.

Still, The College on the Hill, tracing Middlebury’s evolution from its founding in 1800 to its upcoming bicentennial year, is more than a handsomely illustrated coffee table book.

This is the history of a campus as quirky and independent as Vermont itself. Here in 1879, President Calvin B. Hulbert forbade students to kick a football among the college buildings and issued 25 demerits to C.G. Leavenworth when he violated the rule. Here in the later 1950s, frat brothers accepted national expulsion to ensure the participation of future U.S. Commerce Secretary Ron Brown, an African-American, in the white-only Sigma Phi Epsilon, then voted overwhelmingly for Richard Nixon over John F. Kennedy in a 1960 mock presidential election.

Bain, who has taught at Middlebury for nearly 15 years, writes for a variety of magazines and is the author of several books including the new Empire Express: Building the First Transcontinental Railroad and 1993’s Whose Woods These Are: A History of the Bread Loaf Writers’ Conference.

John O. Harney is executive editor of CONNECTION.
A Break from Pork

In many ways, Washington appears to have lost connection with the values and commitments that were the underpinnings of the nation’s substantial investment in higher education at midcentury. Reestablishing that connection will require that higher education understand the environment that any interest group accepts as the current playing field in contemporary Washington. A cynical view of this field might suggest that any astute institution should immediately retain the services of a K Street firm to make sure it wins its own share of pork. To the extent that traditional higher education institutions remain content that intensive lobbying in pursuit of their individual interests is the answer, however, they become part of the problem, and they contribute to the perception that higher education is, after all, no more highly principled than any other industry seeking to advance its fortunes.

A fundamental challenge to higher education institutions will be to explain their values and purposes in terms that resonate in today’s society and among its political leadership. Any effort to reacquaint the public with the values that underlie traditional colleges and universities is necessarily an act of education; as such, it calls upon the members of academic communities to apply the very skills they have developed as teachers of students. As one faculty member has observed, “Working with those who lobby for universities, I’m struck by the fact that what they say to us is almost identical to what I tell beginning graduate students about how to teach. The basics are the same: determining what different individuals know about a subject initially, explaining things at a level that they can understand, and presenting ideas in terms of issues that are important to them.” Universities and colleges must realize the extent to which their scrambling to feed at the trough of Congressional pork compromises the very premises on which the nation’s commitment to higher education has been fulfilled. What is needed is a “lobbying” effort on behalf of all higher education institutions to renew the national awareness of their important contributions to society as not-for-profit institutions concerned with both education and the creation of new knowledge. Higher education institutions do far more to advance their cause in the public arena when they work collectively than they accomplish through the individual appeals; our hope is that higher education’s associations will play an increasingly important role in forging that unified voice and appeal.

Books

Continued from page 41

integrity of higher education.

John Sperling has been vindicated by the marketplace success of the University of Phoenix and the Apollo Group, of which he is CEO. The university now claims operations in 35 states, including a growing online learning division, and serves more than 120,000 adult students. With financial resources now at his disposal, Sperling remains a reformer. He is committed to “giving back” to society through his support of initiatives to tackle other “impossible” problems such as reforming America’s War on Drugs, redirecting health care to emphasize wellness and longevity, and increasing the world’s food supply through saltwater agriculture.

Through his spirited memoirs, Sperling has given back in another way: by encouraging education reformers to persist in their efforts to effect change.

Edmund T. Cranch is director of the New England Board of Higher Education’s Telecommunications and Distance Learning Program and former president of Worcester Polytechnic Institute.
AMHERST, MASS. — A University of Massachusetts Amherst professor was awarded $168,614 by the National Science Foundation to study how unpaid workers in western Massachusetts contribute to the economic well-being of their communities. Julie Graham of the UMass Department of Geosciences will produce an audit of informal economic practices in Pioneer Valley, highlighting activities such as caregiving and voluntarism that do not show up in mainstream economic statistics or figure prominently in policymaking.

BURLINGTON, VT. — The University of Vermont’s John Dewey Project on Progressive Education received $220,000 from the Paul Foundation and the Vermont Department of Education to study service learning across the state. Researchers will investigate how community service-based curricula affect school-community relations, school culture and student learning. The project, undertaken in collaboration with the Foundation for Excellent Schools and several other Vermont nonprofits, will also provide training to teachers who want to include service learning in their classrooms.

STORRS, CONN. — The University of Connecticut dedicated a new $2 million research vessel to be used for undergraduate and graduate education as well as commercial fishing and deep-sea diving expeditions. The 76-foot Connecticut will enable UConn marine scientists to stay at sea for up to seven days and deploy and retrieve gear, including a subsensible. The vessel was partly funded by a $1.5 million grant from the Connecticut Department of Economic Development.

DURHAM, N.H. — The University of New Hampshire was awarded a three-year, $900,000 grant by the U.S. Office of Special Education Rehabilitation Services to prepare students to work with preschool and kindergarten children with pervasive developmental disorder or autism. The program provides education and training for 40 undergraduate and graduate students and provides annual stipends of $15,000 in exchange for a commitment to work with disabled children for two years after graduation.

FAIRFIELD, CONN. — Fairfield University was awarded $166,599 by the U.S. Department of Education to support a local literacy initiative offered in partnership with the nonprofit Action for Bridgeport Community Development. The goal is to establish satellite computer stations in area schools and institute computer tutorials for children and their parents.

SALEM, MASS. — Salem State College was awarded a five-year, $1.3 million grant to address a severe shortage of teachers serving non-English-speaking students in communities north of Boston. Salem State will prepare 25 teachers aides, or “para-educators,” and 15 first-year teachers for certification as bilingual teachers.

PROVIDENCE, R.I. — Brown University and MCI WorldCom launched a $5 million program to support technology learning projects linking schools and community organizations with local colleges. The national program, funded by the telecommunications firm and administered by Brown, will provide underserved schools and communities with multiyear grants worth up to $40,000 annually.

AMHERST, MASS. — The University of Massachusetts Amherst received a five-year, $2.5 million grant from the Minority Graduate Education initiative of the National Science Foundation to increase the number of minority students enrolled in doctoral programs in science, math and engineering. The grant helps UMass recruit minority undergraduates from members of the Five Colleges Inc. consortium and selected U.S. institutions with large minority enrollments.

FALL RIVER, MASS. — A Bristol Community College English professor became the first Massachusetts faculty member to be named Outstanding Community College Professor of the Year by the Carnegie Foundation for the Advancement of Teaching and the council for Advancement and Support of Education. The foundations cited Assistant Professor Ellen Olmstead’s efforts to use literature to reach minority students in south-eastern Massachusetts.

WENHAM, MASS. — Gordon College was awarded two grants to work with the school system in nearby Georgetown, Mass. A $23,000 Eisenhower grant from the Massachusetts Department of Education gives Georgetown teachers the opportunity to take graduate education courses at Gordon. A $25,000 grant from the Massachusetts Campus Compact program funds an afterschool program where up to 30 Gordon students will be trained to tutor needy schoolchildren and involve Georgetown senior citizens in education projects.
CAMBRIDGE, MASS. — Harvard University launched a $21 million affordable housing initiative, including a $20 million, low-interest loan program and a $1 million grant program for Boston and Cambridge nonprofits that create or preserve affordable housing in the nation’s hottest housing market. Though median home prices in Massachusetts are twice the U.S. average, residential vacancy rates stand below 2 percent. The initiative also establishes a faculty-led research and advisory panel charged with helping local nonprofits with their affordable housing efforts.

SPRINGFIELD, MASS. — Springfield Technical Community College was awarded a two-year, $49,500 grant from the U.S. Agency for International Development to create a comprehensive telecommunications curriculum for Athlone Technical College in Cape Town, South Africa. The project, launched in cooperation with the American Association of Community Colleges, will also bring South African faculty to Springfield.

AMHERST, MASS. — The University of Massachusetts Amherst was awarded a three-year, $300,000 grant from the U.S. Information Agency to create interdisciplinary land and property management courses at three universities in northwest Russia. Under the program, a team of 10 UMass faculty members, administrators and graduate students will work with counterparts from Novgorod State University, Pskov Polytechnic Institute and St. Petersburg State Technical University to develop new land-use courses, create instructional materials and improve existing degree programs.

KINGSTON, R.I. — A University of Rhode Island health promotion partnership was awarded a four-year, $2.8 million grant from the National Institute on Aging to study new and more effective ways to improve the health of people over age 65. An interdisciplinary team of URI professors and students and a Brown University professor will research health promotion and disease prevention programs with the city of East Providence, which has Rhode Island’s greatest concentration of elderly people.

SPRINGFIELD, MASS. — Springfield Technical Community College was awarded a three-year, $850,000 grant by the U.S. Department of Health and Human Services to encourage disadvantaged Springfield youths to pursue health careers. The program will include a citywide Health Career Outreach curriculum for disadvantaged students in grades 4 through 12. Working in conjunction with the Springfield Public Schools and Baystate Health Systems, the college will contribute $600,000 in services, scholarships and tuition waivers for students interested in pursuing health careers.

WORCESTER, MASS. — Worcester Polytechnic Institute was awarded $500,000 from the W.M. Keck Foundation of Los Angeles to support WPI research centers on highway and environmental infrastructure. Researchers with the Highway Infrastructure Program focus on development of materials for highway construction and restoration as well as roadside safety technology. The Environmental Infrastructure Program, meanwhile, focuses on water protection and pollution prevention.

NEW HAVEN, CONN. — Two Yale University electrical engineers were awarded $2.6 million by the National Science Foundation to study how schools of fish, herds of deer and flocks of birds maintain their spacing and move flawlessly as groups without apparent leaders. The research by electrical engineers A. Stephen Morse and Peter Belhumeur and a team of marine biologists and experts in computer vision, control systems and robotics, may help engineers design vehicles that move in tandem perfectly with one another.

WALTHAM, MASS. — Brandeis University was awarded a five-year, $2.7 million grant from the National Science Foundation to support neuroscientists and computational theorists doing interdisciplinary work in computational biology. The collaboration is based on the idea that computational scientists can help neuroscientists map the network of neurons whose electrical signals drive human actions and behaviors. The grant will advance the studies of 11 graduate students annually and a smaller number of undergraduates and postdoctoral researchers in the field.
LOWELL, MASS. — A University of Massachusetts Lowell assistant professor of civil and environmental engineering was awarded a $210,000 “Career” award from the National Science Foundation to develop technology to measure soil contamination in real time. Pradeep Kurup’s work integrates recently developed electronic nose technology with cone penetration technology to detect hazardous materials at a site, rather than boring test holes and transporting samples to labs. The prestigious “Career” awards are made to young faculty who combine innovative research with education and outreach; Kurup’s research includes a summer program for Lowell high school students.

WORCESTER, MASS. — A University of Massachusetts Medical School researcher was awarded a two-year, $200,000 grant by the Sidney Kimmel Foundation for Cancer Research to study how certain cellular substances control the growth of cells. Kai Lin, a UMass assistant professor of pharmacology and molecular toxicology, is one of 10 scientists nationally to win the Kimmel startup grants for outstanding cancer reasearchers.

STORRS, CONN. — A University of Connecticut psychology professor was awarded a $3.5 million grant from the National Institute of Mental Health to teach clinicians to encourage safer sex practices among patients with HIV. Jeffrey Fisher will work on the project in conjunction with researchers from the University of Western Ontario, Yale University and Hartford Hospital.

LONGMEADOW, MASS. — Bay Path College received a $180,000 grant from the Davis Educational Foundation to begin building two state-of-the-art presentation classrooms, fund a new faculty position and support faculty development. The project will enable faculty from all disciplines to integrate leadership, communications skills and technology skills into Bay Path’s core curriculum.

BOSTON, MASS. — Three Boston University physicists received a $1.1 million grant from the National Science Foundation to search for the yet-unobserved subatomic particle known as the Higgs boson and to study the “top quark,” the subatomic particles that make up protons and neutrons. John Butler, Meenakshi Narain and Ulrich Heintz are among the group of scientists who discovered the top quark in 1995.

WALTHAM, MASS. — Bentley College received a $15 million gift from 1967 graduate Elkin McCallum, who attended the college while working on the loading dock at Lowell-based Joan Fabrics Corp., and later rose to be CEO of the textile company. The gift is the largest in Bentley’s history.

HARTFORD, CONN. — Trinity College appointed former U.S. Congresswoman Barbara Kennelly of Hartford to be a presidential fellow. Kennelly, who retired from Congress in January 1999 to run for governor, will teach a seminar in government affairs, give a faculty lecture and be available for consultations with students and faculty. Kennelly will also continue to serve as counselor to the U.S. commissioner of Social Security.

KINGSTON, R.I. — The University of Rhode Island received a two-year, $500,000 grant from the Feinstein Foundation to create a URI Center for a Hunger-Free America and establish an academic minor in hunger studies. After the first two years, the foundation plans to endow the center with up to $3 million.

MARLBORO, VT. — Marlboro College announced it will freeze tuition and room and board charges at their current levels for the upcoming 2000-01 academic year. This marks the second year in a row that the college has resisted a price hike. In 1999, Marlboro reduced tuition by $1,500, bucking a national trend that saw tuition rise by an average of 5 percent at private four-year colleges. In announcing the freeze, Marlboro cited a recent anonymous $12 million gift, the largest ever made to a Vermont college. Marlboro tuition and room and board stand at $25,550.

FARMINGTON, CONN. — Tunxis Community College began offering a comprehensive training program to prepare technicians for high-demand jobs in telecommunications cabling. The Tunxis program, one of only two structured cabling programs in the nation, was launched in partnership with the Dallas-based Cabling Business Institute and Connecticut’s College of Technology, a statewide initiative linking students to degree programs. Connecticut’s public colleges, meanwhile, announced plans to be the first in the United States to offer degree credit courses in cabling installation, testing and design.

WORCESTER, MASS. — Becker College is making good on Worcester’s designation as the “Heart of the Commonwealth.” On a fall evening, two Worcester firefighters entered a burning warehouse in an effort to save the lives of homeless people said to be living in the old building. When the firefighters became disoriented, four of their brethren went in to help. A wall collapsed and the six never came out.

The tragedy moved Becker President Franklin M. Loew to extend full-tuition scholarships to the 17 children left fatherless by the tragedy, three of whom are now in high school.

“The families of those firefighters, who sacrificed their lives in the effort to save others, need and deserve our utmost support,” Loew noted in a missive to Worcester Mayor Raymond Mariano.

Becker’s Worcester campus opened in 1887. The college also operates a campus in nearby Leicester, Mass.
The New England Board of Higher Education is pleased to present New England Online, the gateway to New England on the Internet.

- **About New England** features general information on the six-state region;
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- **Government** provides vital information on New England state governments and provides links to key agencies and legislative resources;
- **Business and Economy** features access to updated workforce data and links to trade groups and economic development organizations;
- **Civil Society** connects the region’s rich array of community service organizations; and
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“We must use the Internet to create the virtual region (metropolitan or multistate) that politics denies us—a home for all the reports, analyses, updates, benchmarks, citizen goals, commentaries and debates that a healthy and competitive society must have.”

— Neal Peirce, syndicated columnist and chair of the Citistates Group