CONNECTION

NEW ENGLAND'S JOURNAL
OF HIGHER EDUCATION AND ECONOMIC DEVELOPMENT
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ROADS TO RECOVERY

Essays on New England's Economic Resurgence

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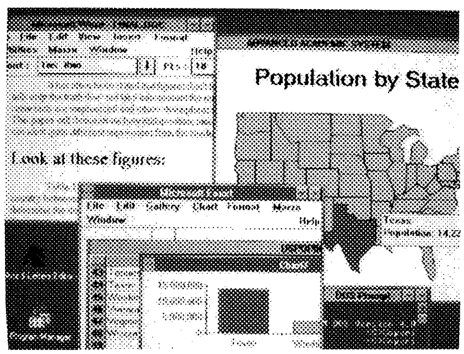

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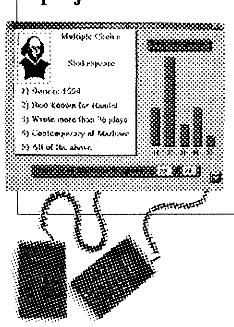

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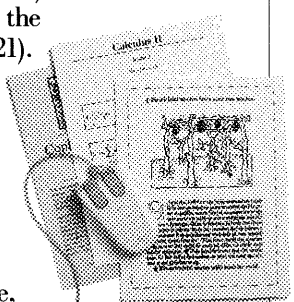

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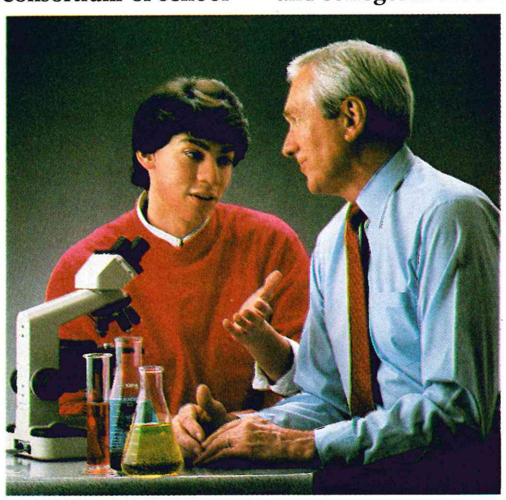

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The New England Board of Higher Education was established as a nonprofit agency by the New England Higher Education Compact, a 1955 agreement among the six states that was ratified by the U.S. Congress. It is the purpose of the Board to advance and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

The "cover stories" in this issue of *Connection* focus on New England's economy — its downturn and its possible resurgence.

As *Connection* went to press, American warplanes were bombarding Iraq and Israeli citizens were taking gas masks to bed with them. Many American families faced the prospect of a father or a mother or a son or a daughter being killed in the fighting.

Back in New England, people went to work as usual — but there was less work to go to. Unemployment had risen sharply over the past year.

Buses, trains and taxis were running on schedule — but they were running on gasoline, coughing soot into the air and adding to our dependence on imported oil.

Airplanes were flying too — but airports were gridlocked. A report by The New England Council found that the region's businesses would have trouble competing in international markets unless another major airport were built.

People took time to do their normal banking business — but many banks were on the verge of collapse. Several in Rhode Island were shut for lack of trustworthy deposit insurance.

Teachers were helping students cope with the war — but some of the discussions took place in "portable classrooms," led by underpaid teachers and aimed at underfed, underloved kids.

Television was carrying reports of the combat success of New England-made high-tech weaponry — but many New England high-tech firms were using euphemisms worthy of the Pentagon to say they were cutting their workforces.

Academics were being tapped for their expert opinions on all angles of the war — but every New England state government was considering cuts in public funding of higher education and student scholarships. Many talented faculty members had already fled the region for states where public higher education commanded more fiscal respect.

Older people offered thoughts on wars past — but care for the elderly, like public safety and programs for the disadvantaged, were targeted for "downsizing" as the six states tried to address a cumulative budget shortfall in excess of $2 billion. Congressional budget specialists said the war could cost between 14 and 50 times that much, depending on how long it lasts.

In most places, people observed Martin Luther King's birthday — but 22 years after King preached peace and racial justice, data showed that Black Americans were over-represented in the fighting force and under-represented among recipients of advanced degrees at New England colleges and universities.

Boston apartment-dwellers were presumably safe from missile attacks — but not from evictions, which reportedly increased 70 percent during the past year largely because of the economic downturn.

It is true that all the bad economic news imaginable doesn't inspire the nausea brought on by live television coverage of an air raid; nor is a prescription for economic resurgence as compelling as a plan for peace.

But there is indeed an urgency to the collection of essays that appears in the "Roads to Recovery" section of this issue of *Connection.* For New England, by many accounts, is in the depths of a protracted recession whose casualties are jobs, homes, living standards and technological progress. We are grateful to our contributors for so eloquently defining the problem and offering solutions. ❑

John O. Harney is editor of Connection.

Grateful Alumn

It would be a good catch for any college development office, but Tim Joukowsky's $1 million gift to Hampshire College in Massachusetts stands out. Reason: Hampshire has just turned 20 years old, and that means the oldest alumni are under age 40 — hardly prime candidates for major donations.

Joukowsky, who chairs the Cambridge-based Highland Financial Group, an investment and management-training firm that specializes in environmentally sound companies, credits Hampshire with the skills and social concerns vital to Highland's success. That, the 1986 graduate and his family decided, is worth $1 million over 10 years for the college's endowment and operating fund.

Hampshire development officials — generally more dependent on parents and friends than their counterparts at older colleges — are hoping other young alumns will follow Joukowsky's example. "We don't have the distinguished elderly gentleman whose family went to Hampshire for eight generations," says college spokeswoman Ellen LaFleche.

What Fat?

During the past two years, blaming Massachusetts' fiscal problems on anything other than government waste seemed a surefire way to win classification as a political "hack." That was before the independent and authoritative Federal Reserve Bank of Boston added its voice to the debate.

The Fed's 360-page report, *Massachusetts in the 1990s: The Role of State Government,* released in December, concludes that Massachusetts "has been spending revenues on activities that many, if not most, voters would consider worthwhile."

The predicament facing the state, according to the Fed, is that "while strong revenue growth during the prosperous 1980s permitted the state to spend liberally while taxing conservatively, the economy has slowed and these divergent policies toward spending and taxes can no longer persist."

On the subject of public higher education, however, the report sends a mixed message. "Some inefficiencies do exist in state government and they should definitely be eliminated ... The number of institutions of higher education could be consolidated and administrative staff eliminated," the Fed says in its overview.

But in one of the few other references to public higher ed, the report notes, "Of all the categories [of state and local government employees], only higher-education salaries were below the national average ... Over the past two years, Massachusetts appropriations for higher education have fallen off by 20 percent, resulting in the most precipitous rate of decline among the [50] states."

A Fed official says consolidation of campuses "is an example of something that might be investigated, but not something we spent time" exploring.

Still, the reference to consolidation irks some higher-ed officials. "I have no complaints with finding more efficiencies," says Holyoke Community College President David Bartley. "But [as] Harry Truman said, 'I'm from Missouri. Show me.' State where the consolidation should be. Which schools do you want to close?"

NEW ENGLAND LAND GRANTS
Tuition and Fees

Land Grant	1990-91 In-State	Increase Over 1989-90	1990-91 Out-of-State	Increase Over 1989-90
UConn	$2,975	13%	$ 7,775	14%
UMaine	$2,397	14%	$ 6,177	14%
UMass	$3,877	30%	$ 8,730	18%
UNH	$3,573	18%	$ 9,653	10%
URI	$2,719	8%	$ 7,223	9%
UVT	$4,590	15%	$13,190	10%
N.E. Average	$3,355	16%	$ 8,791	13%

Land Grants: Going Up

The average 5-percent to 8-percent rise in U.S. college costs that grabbed headlines last fall pales in comparison with 1990-91 tuition and fee hikes at New England's land-grant universities.

On average, the region's land grants raised tuition and fees by 16 percent for state residents and 13 percent for out-of-state students over academic year 1989-90. While the University of Massachusetts at Amherst's whopping 30-percent increase for state residents skews the average, the hikes are raising concerns across the region.

University of New Hampshire President Dale F. Nitzschke says an 18-percent increase in tuition and fees is partly to blame for the university's first enrollment drop in several years.

"I suspect we're getting close to the point where access is going to be a real problem," says Nitzschke. "We are pricing ourselves slowly but surely out of the competitive marketplace."

Even before the 1990-91 hikes, New England's land-grants charged higher tuition and fees — $2,870 on average in 1989-90 — than their counterparts nationally, which charged an average of $1,826.

But from a competitive standpoint, the threat to New England land grants is not other land grants, but private colleges. "When you look at the out-of-state tuitions for some of these institutions, they're beginning to get into the range of some of the real quality independent institutions in the area and nationally," says Neil R. Wylie, executive officer of the New England land grants' Council of Presidents.

Higher-education officials in several New England states are pondering tuition hikes in the range of 7 percent for next year, but actual increases are likely to be higher if the states continue to bleed red ink.

Mass. Independents Ready

Last year's 24-percent cut in Massachusetts scholarship funds for students at independent institutions gave the state's private colleges and universities a taste of the bitter budget medicine mostly reserved for public higher education.

To avoid a repeat, the independents — which receive more than half of state scholarship money — are turning to a seemingly unassuming brochure that portrays the state's private higher-ed enterprise as an economic giant, creating jobs and offering minorities the key to advancement.

Fact File 1990-91, published by the Association of Independent Colleges and Universities in Massachusetts (AICUM), says Massachusetts independents employ 118,400 full- and part-time workers, including employed students; create 77,500 jobs in other economic sectors; spend as much as $345 million on new plant and equipment; and spread more than $8 billion in direct and indirect economic benefits throughout the Commmonwealth.

AICUM hopes the *Fact File* will be a powerful letter of introduction to the Bay State's new governor, House speaker, House Ways and Means Committee chair and House and Senate chairs of the Legislature's Joint Committee on Education. "It's not just that we have the general appropriations problem to contend with," says AICUM President Clare Cotton. "There's a brand new cast of characters."

Defying Enrollment Odds

Freshman enrollment is down on most New England campuses this year, thanks to New England's shrinking college-age population — 12 percent fewer high-school graduates in 1990 than two years before. But the baby bust hasn't prevented an enrollment boom for some admissions offices.

Among the success stories, Colby-Sawyer College in New Hampshire, in its first fall admitting male students, received a record-breaking 1,035 applications for its entering class — a 115-percent increase over the previous fall. Total fall enrollment reached 520, up 21 percent from last year.

At Quinnipiac College in Connecticut, applications rose 28 percent over fall 1989; enrollment was up 5 percent.

The University of Hartford recorded its largest-ever full-time undergraduate enrollment in the fall, with 4,430 students, including a record-high entering class of freshmen and transfer students. Total enrollment was up 5 percent from last fall.

Bad Press

As if a decline in college-age students weren't enough, admissions officers at some New England colleges are also fighting a battle against bad press.

At Wesleyan University, local media coverage of a campus firebombing and the murder of a student activist is partly to blame for a dip in the percentage of Connecticut residents who accepted Wesleyan's offer of admission, campus officials say. Last fall, Wesleyan's yield of students from Connecticut fell to 35 percent, down from 55 percent a year earlier.

In Boston, meanwhile, Northeastern University officials say a surge in the city's murder rate contributed to the university's 28-percent drop in freshman enrollment last fall.

Dartmouth College may be the latest victim of negative publicity. Last fall, the off-campus *Dartmouth Review* earned the college a flood of bad press nationally when a quote from Hitler's *Mein Kampf* was inserted into the paper's masthead.

More than 300 Dartmouth students visited high schools in their communities during the Thanksgiving and Christmas breaks in an effort to dispel the perception that the *Review* is a college paper.

BU in Chelsea

Boston University has received mixed reviews for its management of the Chelsea (Mass.) Public Schools.

While the first year of the 10-year management contract saw major changes in school administration and curriculum as well as the introduction of health and child-care programs, BU's top-down management style and inability to reach a $3 million fundraising goal have drawn criticism from a school committee and parents who feel left out of the process.

In November, the state panel formed to oversee the partnership acknowledged the university's accomplishments but branded BU's attitude toward Chelsea parents and minority groups "arrogant and devaluing."

Up in Arms

College officials remain in an uproar over the U.S. Department of Education's ever-changing policy limiting minority scholarships at schools receiving federal funds.

The first policy change — which prohibited such scholarships — came after organizers of Arizona's Fiesta Bowl were informed their plans to contribute $100,000 for minority scholarships to the colleges participating in this year's Bowl would be illegal. Michael L. Williams, the department's assistant secretary for civil rights, called scholarships earmarked specifically for minority students "race-exclusive" and therefore illegal under the Civil Rights Act of 1964.

That announcement was assailed by educators, students and even the White House, which appeared caught off guard by the policy change. After several days of White House review, Williams "clarified" the new policy, saying that while colleges could still use money from private sources for minority scholarships, they could not use funds from their general operating budgets for that purpose. In addition, only those scholarships based solely on race would be prohibited under the new policy, which would not go into effect until 1994.

The clarification has done little to dispel the confusion. While few scholarships are based on race with no consideration of need or academic merit, some campuses provide such aid as part of their efforts to increase minority enrollment and ethnic diversity.

"I think this will have a negative impact on those private, more expensive colleges that are proactively trying to recruit more minority students," says Wilson Luna, director of financial aid at Greater New Haven State Technical College.

Also uncertain is the effect the ruling will have on middle-class minority students, whose enrollment rates have plummeted in the past 15 years. "They'll probably be affected the most," Luna says. "The higher the income level, the less chance there is of getting federal financial assistance."

The Short Course

Especially for Parents

Do You Need It? Chapter 1

With the cost of higher education on the rise, and the availability of federal aid increasingly restrictive, many middle and upper income parents are concerned about their ability to fund their child's college education.

Over the last few years supplemental education loan programs have been introduced as an alternative for students and families whose income bracket or assets disqualify them from using federally supported loans. In the case of parents who have more than one child going to college, it is often difficult to pull together the necessary funds from savings or monthly income to cover education expenses. This is where supplemental loan programs can help greatly in financing college costs.

There are currently several supplemental education loan programs available throughout the country, sponsored by various groups including state agencies, nonprofit corporations, lending institutions, and colleges and universities.

What To Look For Chapter 2

Supplemental loans vary in many ways, but generally they include the following elements:

1. **Eligibility** is based on creditworthiness, not financial need; in other words, there are no upper restrictions on income;
2. **Loan limits** are generally higher than federal student loan programs. Many supplemental loans allow applicants to borrow up to $15,000 or $20,000 a year;
3. **Repayment periods** are also generally longer than federal loan terms. Many supplemental loans offer repayment periods up to 15 or 20 years, depending on the amount borrowed;
4. **Interest rates,** although higher than federal student loans, are usually lower than many consumer loans;
5. Although some supplemental loan programs have limited availability in certain states, many of these loans are **available nationwide** and can be used at any accredited degree-granting college or university;
6. Some supplemental loans also give borrowers the option to **defer principal payments** while the student is enrolled in college, and pay interest only;
7. Like most consumer loans, borrowers can make **fixed monthly payments** on supplemental loans. This is a more manageable alternative for parents who have a difficult time paying two or three large tuition bills every year. Most supplemental loans use bond issues or other private funding sources to finance their programs rather than using any federal monies.

Where To Look Chapter 3

There are many different sources that a parent or student can use to find out about supplemental loan programs. One of the best resources is the **college or university** at which the student has been accepted or may be enrolled at some future date. Most colleges and universities have publications available on the types of student financial aid programs that they offer, including federal, state, private supplemental, and institutional aid (aid that the college or university offers apart from other programs).

Another source of information on supplemental loans may be your **public library.** Many libraries have established extensive resources on the different types of financial aid available, including supplemental loans. Libraries will also have financial aid resource books that list sources of aid by geographic area, institution type and other factors.

Your state **Board of Higher Education or Department of Education** are other resources to contact for supplemental loan information. They will be able to tell you if there are any state or privately sponsored loan programs that offer non-need based aid for higher education in your area.

Finally, your **high school guidance counselors** may be another resource to contact for supplemental loan and other financial aid information. More and more high schools are beginning to sponsor financial aid awareness nights for parents. If your child's high school offers such an awareness presentation in the future, it's a good idea to attend for more information concerning state or region specific supplemental loan programs that will fulfill your college financing requirements.

In College Financing

From Nellie Mae

Supplemental Education Loans 101

How To Compare
Chapter 4

After you have gathered information on various supplemental loan programs, how do you decide which one is both the best and the least expensive option for you? Here are some of the factors which you can compare when looking at supplemental education loans:

1. **Interest rates** should be compared. Find out what the interest rates are based on. Most programs base their rates on the prime lending rate, Treasury Bill rate, or commercial paper or bond issue rates. Also be sure to look at what kind of interest rate the supplemental loans offer, which will be either a variable rate or a fixed rate (some programs offer both variable and fixed rate options).

2. Look at the **repayment terms** on the loan and choose a program that will fit in best with your monthly budget. Check if the supplemental loan programs offer any principal deferment options which may help ease cash flow during the student's in-school period.

3. Most supplemental loans have **upfront fees** such as an application fee, guarantee fee, insurance fee or origination fee. When making your comparisons, look at the fees that each charge and add these into your loan cost calculation. An application fee is usually paid at the time the application is sent in and isn't refunded if the loan is denied. Application fees usually run between $30 and $50. Guarantee, insurance and origination fees are charged on a percentage basis on the total amount borrowed, and are usually from 1 to 8 percent. These fees are paid only on approved loans and can sometimes be borrowed in addition to the approved annual loan amount.

4. Another factor you can use to compare supplemental loans is the set of **credit guidelines** that each program has established. Eligibility for supplemental loans is usually based on the creditworthiness of the potential borrower, which is judged on the applicant's debt to income ratio. It's always a good idea to contact the loan program's customer service representatives if you're not sure what types of monthly expenses the program considers when calculating the debt to income ratio.

5. Lastly, look at any **special options** that supplemental loan programs might offer. For example, some programs have options like a line of credit; the ability to secure the loan with a home mortgage and benefit from tax savings; or use of a tuition prepayment plan, whereby a parent can pay a college or university upfront for several years' costs and avoid year to year tuition increases. If any of the special options fit your needs better than a regular annual loan, you may want to consider this when making your decision on the best supplemental loan program for you.

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Connections

Reviewing Reauthorization

TERRY W. HARTLE

A quarter-century ago, Congress enacted the landmark Higher Education Act. Among its many programs, this legislation authorized grants, loans and work-assistance programs to help students and their families meet college costs. In the years since its enactment, millions of students have benefited from the programs created by this legislation.

Periodically, Congress must review the operation of the Higher Education Act and "reauthorize" the law. This process is designed to ensure that the programs are systematically examined on a regular basis, evaluated for their effectiveness and modified to meet changing circumstances.

Since the Higher Education Act was first enacted, there have been five separate reauthorizations. The next reauthorization will take place in the new Congress. This will be a long, complicated process that will, in all likelihood, take almost two years.

It will be a vitally important process. Federal student-aid programs make $10 billion in funds available to students. Nationwide, almost half the nation's college students benefit from federal student aid. At some institutions — especially private colleges, historically Black colleges and some community colleges — a much higher percentage of students depend on this assistance.

As with any legislative effort of this size and importance, political considerations will play a central role. One key question is what the executive branch will do. In 1986, when the Higher Education Act was last reauthorized, the Reagan administration made almost no substantive contribution to the deliberations. Congress — fearing administration hostility towards student-aid programs — enacted a bill that made minimal change in the status quo. This time, the Bush administration is sympathetic toward federal initiatives in this area, and Congress and the higher-education associations are optimistic that this will be a collaborative venture. It remains to be seen whether the Bush administration will make this a major priority.

In addition, the federal budget deficit will limit the ability to increase funding for existing or new initiatives. Even more ominous, last year's Omnibus Budget Reconciliation Act restricts legislative options to expand higher-education programs.

Regardless of the political considerations and budgetary uncertainty, at the heart of the reauthorization debate will be changes in the student-aid programs authorized under Title IV of the Act. At the present time, there are five major student-aid programs: Pell Grants (named for Rhode Island Sen. Claiborne Pell, the primary congressional sponsor of the program); Stafford Student Loans (named for former Vermont Sen. Robert Stafford as a tribute to his commitment to student-aid programs); National Direct Student Loans; College Work Study; and Supplemental Educational Opportunity Grants.

In 1986, when the Higher Education Act was last reauthorized, the Reagan administration made almost no substantive contribution to the deliberations. Congress — fearing administration hostility towards student-aid programs — enacted a bill that made minimal change in the status quo.

Pell Grants go directly to students, who decide where to spend the money. Stafford Loans are obtained through private lenders with a federal loan guarantee in case the borrower defaults. The other three programs are campus-based: Federal funds are given to institutions and distributed by the schools to the students.

It is impossible to predict at this time how Congress will revise the 450-page law. But several themes already have attracted attention and certainly must be addressed. These include: the imbalance between grants and loans, the integrity of the student-loan program and the incredible complexity of the student-aid process.

Shift toward loans

The growing imbalance between grants and loans has troubled policymakers and educators for at least a decade. In 1975, grants accounted for 80 percent of all student aid; loans accounted for 17 percent. By 1989, grants accounted for only 49 percent, while loans had increased to 48 percent.

There is widespread fear that the shift toward loans discourages some students from pursuing a postsecondary education and forces others to study financially rewarding subjects so they will be able to pay off loans. Increased reliance on loans may also encourage defaults — because some borrowers do not make enough money to repay their debts — and distort or delay personal decisions about having a family and making major consumer purchases.

Higher-education lobbyists and most members of Congress believe we should increase federal grant support and reduce reliance on loans. One possible way to do this is to increase the maximum Pell Grant from its current level of $2,300 to perhaps $3,000. While this would clearly help economically disadvantaged students, it would also be expensive — requiring roughly $2.5 billion in additional funds or a 50-percent increase in the current Pell funding level. Also popular are proposals to make Pell Grants an entitlement. If this approach were adopted, disadvantaged students would have much greater certainty about receiving student aid, because funds would not depend on annual congressional appropriations.

Because policymakers are especially concerned that the shift from grants to loans has had a pronounced effect on the educational aspirations of the most economically disadvantaged students, another possible option is to sharply increase grants for the financially neediest students. Still another suggestion is the proposal to increase grants and reduce loans for students in their first two years of college, while reducing the availability of grants for third- and fourth-year students. Known as "front-loading," this plan could have a negative impact on four-year colleges and universities and will be studied very carefully.

Program integrity

A second major theme that will attract the attention of congressional committees is the need to restore integrity and accountability to the student-loan program. In the past three years, the media has focused on the default problem in the Stafford Student Loan program. The problems are usually illustrated by pointing to the increase in the amount of federal funds needed to pay off student-loan defaults. In 1980, the federal government spent $200 million on student-loan defaults. In 1991, the bill is likely to be $2.6 billion.

Some of the increase in default costs comes from increased lending in the student-loan program and reduced availability of grants. The increase is also attributable to the growth in the number of schools in the program and the decrease in the oversight of the program by the federal government in the early and mid-1980s.

Still another problem is the small number of schools that are more interested in making a profit than providing high-quality education. Congress and the executive branch have taken several steps to address the problem. The most notable of these is the imposition of default-rate triggers, approved as part of last year's Omnibus Budget Reconciliation Act. Schools with student-loan default rates above the trigger (35 percent in 1991 and 1992) will be ineligible to participate in the program. In addition, the Department of Education has recently begun to strengthen its regulation and oversight of schools in the program.

While these steps are important, Congress is likely to look at this problem more closely during reauthorization. Several events of the past two years — the near collapse of the Higher Education Assistance Foundation, the nation's largest guarantor of student loans; the massive loan collection problems involving the Bank of America; and the fraudulent student-loan activity of the First Investors Trust Co. — suggest the problems surrounding the student-loan program are much more systemic than simply a few bad schools and too many defaults. An extensive set of congressional hearings held by Sen. Sam Nunn of Georgia and the Senate Governmental Affairs Committee raises a more basic question: Does the Department of Education have the administrative capabilities to administer the program?

The Stafford Loan Program is huge. Six million students borrow every year. Roughly 14,000 lenders make the loans. Students can attend more than 8,000 schools. There are more than 50 guarantee agencies and numerous servicers, processors and other intermediaries. The Education Department relies on almost 100 accrediting associations to approve schools to participate in the program.

Running a program of this size and complexity would be a tall order for any agency. But the Department of Education has always been a thinly staffed, low-prestige agency. It does not have the technical expertise to address the manifold financial issues that arise in the program. Its data-processing capabilities are obsolete. Moreover, in the 1980s, as the program expanded, the department actually reduced its oversight activities. Although the number of institutions participating remained stable between 1980 and 1987, the number of school reviews conducted by the Education Department fell from 1,058 to 372.

In the past two years, the Education Department has moved to address these administrative shortcomings and the agency expected to conduct about 1,100 institution reviews in 1990. But much remains to be done. It is likely Congress will take a long and careful look at the administrative arrangements surrounding the student-aid program.

Streamlining process

As the reauthorization moves forward, Congress also may try to streamline and simplify the student-aid application process. For students and their families, getting student aid is time-consuming, complicated and often incomprehensible. Indeed, the complexity of the process may actually discourage participation.

A recent General Accounting Office (GAO) report analyzed what students and their families knew about the availability of student aid. The answer: not much. The GAO concluded that few families know that federal student-aid programs are available far enough in advance to permit them to make thoughtful plans about postsecondary education opportunities. While a majority of high-school seniors know student aid is available, most have only rudimentary information about federal programs, including those for which they might be eligible. Minority and low-income families — whose need for the assistance is likely to be the greatest — know the least about the programs.

A second GAO study analyzed the private sector's tuition-guarantee programs such as Eugene Lang's "I Have a Dream" initiative and Boston's ACCESS program. While the report did not say definitely that such efforts would work on a nationwide basis, it did conclude that these programs kept students in school and appear to have the potential "to markedly increase motivation and achievement."

The implications of these reports are important. If students and their families learn about student aid at an early age — and the information is supplemented by counseling, intensive academic help and support services — we should be able to increase the postsecondary participation of the economically disadvantaged.

Increasing the postsecondary attendance of students from disadvantaged backgrounds was, of course, the primary goal of the Pell Grant. Its sponsors believed the program would provide financially needy students with a "foundation" that would permit them to begin planning for college at an early age. Supplemental services and additional aid from the campus-based programs were supposed to complete the picture and ensure that no qualified student was denied an education for lack of funds.

Unfortunately, it has not worked as planned. Regular proposals to cut student-aid spending over the last decade, the failure of the Pell Grant maximum award to keep pace with inflation, the increased reliance on student loans and the complexity of the aid process have undermined the initial goals.

But the central goal of federal student aid is, if anything, even more important today than it was a decade ago. America's economic growth and social progress in the next century will depend on the knowledge, skills and talents of its citizenry. If our colleges are to meet the nation's needs, we must have a carefully designed, effective and well-administered set of student-aid programs. The task of the Higher Education Act reauthorization will be to address the shortcomings of current policies in a way that meets the needs of students, institutions and our society. ❑

Terry W. Hartle is education staff director of the U.S. Senate Committee on Labor and Human Resources, chaired by Sen. Edward Kennedy of Massachusetts.

Pride of Institution and New England's Resurgence

❖ ❖ ❖ ❖ ❖

John C. Hoy

Economic prognostication is among New England's few remaining growth industries. In the debut issue of the Federal Reserve Bank of Boston's *Regional Review*, the Fed's editorial staff suggested the current recession will prove deeper and decidedly more complex than we yet understand. Other economic accounts of this complexity followed almost weekly.

The reason for this elaborate series of analyses: The most institutionally disruptive recession to hit New England since the 1950s. Year-end unemployment in the region leaped to 7 percent in 1990 — and joblessness continues to rise. Between 1990 and 1992, New England employment growth could fall to last place among all regions in the United States. Business bankruptcy petitions for 1990 were up an estimated 100 percent over 1989.

As 1991 began, dead and mortally wounded financial institutions littered the region's landscape. Our improvident flagship, the Bank of New England, was declared dead, then generously resuscitated by the Federal Deposit Insurance Corp. Insurance companies, savings and loans and lowly credit unions became impoverished — all victims of a fever of speculation and pride in their individual and providential wisdom. U.S. Sen. John Kerry of Massachusetts put it more bluntly: "We have been through the greatest greed binge since the 1920s."

What do we have to show for it? The global reputation — and pride — of New England's public and private sectors are in tatters. Stockbrokers, accountants and lawyers find themselves caught up in consolidation politics or in the hands of out-placement counselors who have little to offer but the suggestion that Texas is on a roll again. Job prospects in New England for 1991 college graduates and new M.B.A.'s, J.D.'s and graduate engineers are grim. College faculty, deans and presidents are moving elsewhere.

Though the prognosticators' messages vary widely, one luminous jewel in New England's crown is cited over and over again: the region's unparalleled higher-education institutions and attendant research prominence.

The authors of a Bank of Boston report on the state of the region's economy find "ample grounds for optimism," and cite the number of corporations that choose New England for their headquarters because of the region's higher-education resources and internationally prominent research base.

PER-CAPITA FEDERAL OBLIGATIONS FOR R&D TO ALL ORGANIZATIONS DURING THE 1980s

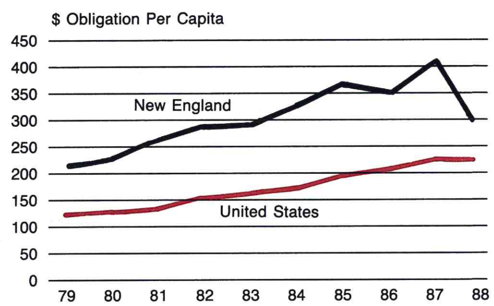


CHART 1

In the Boston Redevelopment Authority report, *The Boston and Regional Economy into the 1990s: Prospects for Economic Recovery*, economist James M. Howell asserts that higher-education resources, world-class research facilities, venture capital and highly-skilled workers will drive industries to significant levels of innovation and productivity growth in the '90s despite the rapid increase in the region's wages, housing prices and cost of doing business during the '80s.

As Ada Focer concluded in a recent *New England Business* article: "For four or five years, economists project that New England's economic growth will be slower than the nation's as a whole. New England universities and venture capitalists have always nurtured innovators, however, and there is no reason to think this will change."

Unfortunately, there is reason to think this formula, too, will change. It is simply not true that the dynamics of economic transformation and increased competition have left New England's academic quality and research powers unscathed.

From 1979 to 1987, per-capita federal research and development obligations to all New England organizations rose by 90 percent from $215 to $409. But in 1988, these obligations fell 26 percent to $292 per capita — much of the decrease reflecting declining Department of Defense R&D contracts to the corporate sector. In 1982, New England received 10.1 percent of the federal R&D budget. In 1988, that share dropped to 6.9 percent. (See Chart 1.)

Federal per capita R&D obligations to the region's *colleges and universities* rose by 90 percent from $34.03 in 1979 to $64.79 in 1988. New England higher education's share of total federal R&D, however, *dropped* from 12.2 percent in 1984 to 10.9 percent in 1988. (See Chart 2.)

◆◆◆◆ Massachusetts state investment in R&D declined 10 percent in 1989 while the 50-state average rose 10 percent. Maryland increased R&D investment by 14 percent; Virginia, by 17 percent.

In the past decade, states that do not have first-rank universities and are far less richly supported by federal research and development grants have demonstrated a stronger commitment to R&D than New England has. Such states have devoted hundreds of millions of dollars to strengthening higher education-corporate partnerships aimed at expanding their R&D capacity.

New England institutions, on the other hand, have consistently relied upon federal funds.

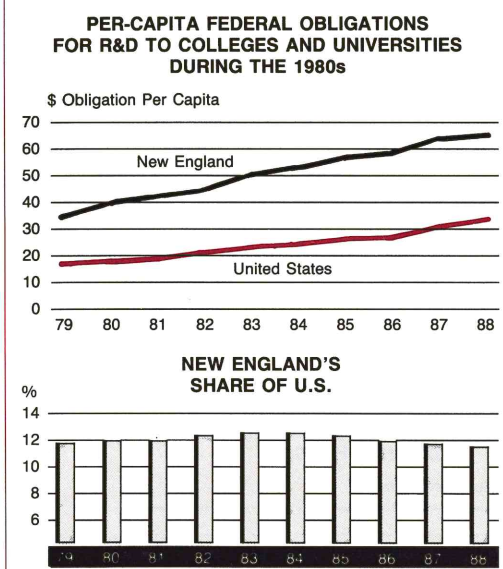


CHART 2

Minor-league state investment

Today, several undernourished state programs in New England are struggling to make headway with severely limited resources. No New England state has successfully funded a technology center of national stature. In addition, the New England states have neither funded nor established working interstate initiatives to target basic or applied research or tech-transfer as a regional priority.

One notable exception is the New England Biotechnology Cooperative. This cooperative has been formally encouraged by the New England Governors' Conference, but no funding has been made available — this, despite clear consensus that the region holds a commanding lead in biomedical research and biotech start-ups.

In an exceptionally candid transition report to Massachusetts Gov. William Weld, the frequently emulated but consistently underfunded Massachusetts Centers of Excellence Corp. (MCEC) cited the state's recent failure to compete successfully for any large-scale, long duration science and technology center projects funded by the National Science Foundation and other federal agencies. The MCEC could just as well have been speaking for all New England.

> ◆◆◆◆ Per-capita state investment in New England higher education declined 7 percent between 1989 and 1991 to wind up at $127 per capita. The U.S. average rose 12 percent to $165 per capita. New England allocations will be further reduced as a result of recisions in fiscal 1991 and proposed cuts in fiscal 1992 appropriations.

The chief reason for this failure: Such federal awards ranging from $1 million to $4 million a year frequently require a significant state match. No New England state has provided an impressive level of state resources to match federal R&D requirements. Result: 25 recent federal "megaprojects" have been awarded elsewhere. Prospects for state support of such programs in the next two years appear dim as all six states try to contain rising deficits.

If state governments are incapable of shouldering a contribution — and federal technology development funds do not become available — Yankee ingenuity will become an artifact.

But New England can retain its recent prominence by increasing its investment in innovation and keeping in check its historical pride of institution.

Investment needed

As former Massachusetts Institute of Technology President Jerome Weisner pointed out a decade ago, "The one thing MIT has never been able to discover is how to mount a program without money."

New England academic scientists and engineers can network with business and government to exhaustion, but if hard dollar investment is not available, the region's historic international prominence in creating cutting-edge science and technology will inevitably decline.

Make no mistake: Research and development in basic and applied science, technology transfer and product development cost money. Perhaps the most compelling concept to surface in the six gubernatorial campaigns was Boston University President John Silber's pledge to support a $500 million fund for technology development in Massachusetts. If the six New England states were to raise that figure to $1 billion, this growing New England-wide problem could be addressed during the next five years. A six-state New England Technology Development Corporation with bonding authority would reach both U.S. and international investors. Such a body — designed to strategically pursue promising discoveries and processes — would gain the support of the region's members of Congress, including 12 well-placed U.S. senators.

In addition, an ironclad commitment to support R&D in both basic and applied sciences by providing a generous but carefully defined Research and Development Investment Tax Credit is essential. An R&D tax credit — along with regional matching funds for R&D — will create a nationally prominent and industrially attractive base to put New England science and technology back to work.

With emergency economic "summits" taking place weekly throughout the six states, a two-day session with the entire congressional delegation on intermediate-term investment is overdue.

Call for collaboration

Interstate — certainly interinstitutional — collaboration could be the key wedge in prying loose megaprojects for New England. Indeed, in the face of a worsening regional recession, calls for networking and joint enterprise abound.

Unfortunately, institutional collaboration — working jointly with other sectors especially in an intellectual endeavor — is not a New England strongsuit. Several years ago, the late Charles E. Wyzanski Jr., chief justice of the Federal District Court in Boston, warned the Harvard University Board of Overseers: "What will sink New England is the pride of institutions."

Tufts University President Jean Mayer recalls that Wyzanksi consistently reminded us that the excellence of separate institutions did not translate into effective cooperation in times of difficulty. Wyzanski prodded and lectured the trial bar and seldom hesitated to scold New England leaders to look beyond narrow institutional self-interest.

◆◆◆◆ In three years, 1988-1990, New England fell from first to last place among U.S. regions in rate of improvement in state funding of higher education. Massachusetts fell to 50th among all states.

Today, there is some evidence that our states, at least, will heed that warning. During his campaign, Gov. Bruce Sundlun of Rhode Island noted the pressing importance of regional collaboration. "New England states are not competitors in all arenas," he wrote.

Sundlun continued: "It would make sense for the New England states to do several things together: Pool their resources when lobbying in Washington for help in industries which the states have in common; create an information base about the performance of all of our industries; embark on trade missions abroad; and increase the number of trade offices in key foreign nations."

Furthermore, there is evidence the six governors have vigorously cooperated on the bank crisis and that the feud between Massachusetts and New Hampshire has been ironed out by governors William Weld and Judd Gregg. There is a renewed sense that each state is confronting remarkably similar issues.

PER-CAPITA STATE APPROPRIATIONS FOR HIGHER EDUCATION IN NEW ENGLAND AND THE UNITED STATES
1982-1991

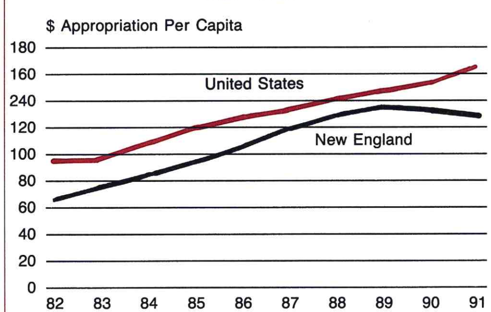


CHART 3

Disinvestment

The recent economic history of New England reveals the region's deep dependence on academic resources for new ideas, innovative methods and human skill in producing useful products of high value. Yet states are groping their way to a more stable economic climate by contemplating disinvestment in higher education. (See Chart 3.)

Higher education in New England represents an estimated $12 billion industry with a powerful $30 billion indirect impact on the regional economy. Recognition of the need to invest in the expansion of knowledge, however, is dangerously absent from the region's recovery agenda.

The extraordinary concentration of R&D excellence in New England has been the basis for attracting able students and retaining superb faculty since World War II. Investment in higher education and academic R&D provided real long-term return in New England. In this recession, protecting what's left of our states' commitment to knowledge is essential.

A prescient study

In 1987, the NEBHE *Future of New England Survey* of 1,000 business, government and academic executives found "improvement of the public schools" to be the No. 1 public policy priority in each New England state. The No. 2 priority was maintaining a strong economy. Throughout New England, leaders viewed reducing the high-school dropout rate as the region's most serious education and training problem. These executives ranked "enhancing the problem-solving and analytical skills of the workforce" as the second most important education issue confronting the region.

The survey clearly captured the mood in 1987 and reflected the confidence leaders throughout New England felt about addressing future priorities. Issues such as providing students with global economic knowledge, educating more scientists and engineers, expanding basic research collaboration, improving technology transfer, and expanding university-industrial liaison programs were seen as areas where higher education would have the leading role in improving America's international competitiveness.

Massachusetts respondents in particular expressed confidence in the ability of higher education to provide the educated workers required by the state's high-growth, low-unemployment economy. While almost 80 percent of Bay State leaders cited the high cost of housing as the foremost impediment to continued economic expansion, 80 percent also expressed a high level of confidence that finance, insurance and real estate would remain growth industries. Biotechnology, communications and computer-electronics were also targeted for major growth.

At the time of the survey, the year 1992 seemed a manageable timetable for eliminating obstacles and pursuing stated goals, but we did not act.

New England's current lack of confidence in the economy as well as our stalled capacity to establish public priorities is a reminder that while survey instruments may turn out to be valid, the need to keep in touch with public attitudes and the opinion of leadership groups remains in periods of economic stress as well as prosperity. A new effort to assess the leading priorities of the public will inevitably prove more accurate than the muddled and often conflicting evidence suggested by economic indicators or special interests.

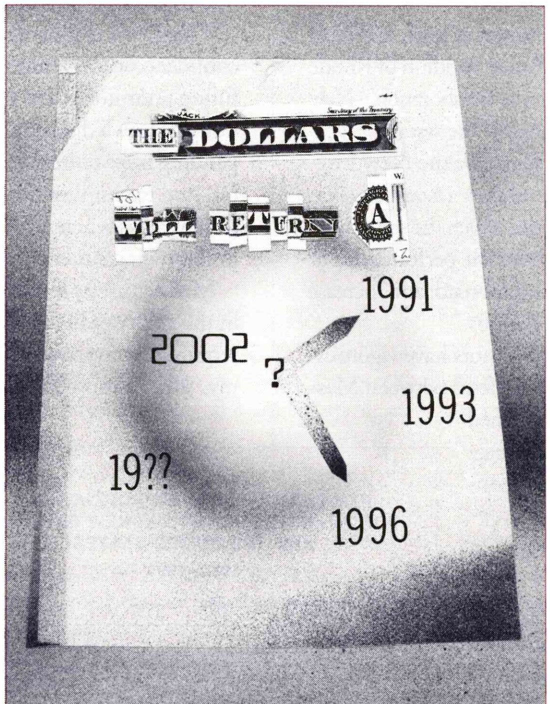
In fact, the education policy priorities revealed as singularly important in the 1987 survey are, if anything, far more valid today. But they too may be victims of speculative excess and prideful self-interest. Humbled and alarmed, it is time to get about the painful business of investing in those things which did merit our prior attention and to do so with a shared sense of pride in knowing what comes first. ❑

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

New England's Research Economy

Time for a New Model?

Judith A. Beachler



University-based research and development — supported primarily by the federal government — has been credited with laying much of the foundation for New England's high-tech development and 1980s prosperity. That's why the most recent R&D figures from the federal government are so disturbing.

Total federal R&D obligations to New England for 1988 — funds to be awarded over three years — dropped 27 percent from 1987. At the same time, Massachusetts, New England's research powerhouse, dropped to fifth among the states in federal R&D obligations, down from the third-place rank the Bay State held throughout the 1980s.

By the fall of 1990, New England's R&D leadership position seemed especially precarious. In August, the National Science Foundation (NSF) had bypassed the Massachusetts Institute of Technology as the site of a new National High Magnetic Field Laboratory, instead handing the $60 million project to Florida State University.

But if the facts seem to argue that New England's university-based research economy is eroding, it's not — at least not yet.

The 1988 decline in R&D obligations to New England reflects a decrease in Department of Defense R&D support for New England industry. Federal obligations to universities, meanwhile, *increased* by 3 percent. The region's major research universities remain among the world's best, their federal R&D support still sturdy.

Nonetheless, the research capacity of other regions has begun to expand more rapidly than New England's. And now New Englanders may find themselves looking to other areas as models.

Research economy's beginnings

After academic science demonstrated its usefulness to national causes during World War II, the federal government became the major player in R&D support. In the years following the war, federal R&D awards flowed primarily toward two states: California and Massachusetts.

MIT and the University of California at Berkeley — which led the pack in federal R&D support — formed quasi-permanent relationships with mission-oriented agencies of the federal government. These relationships, in turn, spawned large research laboratories in the two institutions. By the mid-1950s, prior to the Soviet Union's launching of Sputnik, the NSF had begun to broaden the R&D base. But the expanding research capacity of universities in Massachusetts and California helped to generate a critical mass of entrepreneurs, sparking high-tech industrial development in both places during the 1970s.

In the early 1980s, as much of the country was reeling from a national recession, New England and California went virtually unscathed, thanks largely to their sophisticated research economies. Hard-hit states such as Pennsylvania, Texas, Illinois and Ohio began to nurture university R&D to reverse economic decline. Other states such as Florida were also taking steps to attract research dollars. Upon which states did these newcomers base their models? California and Massachusetts, where university-based R&D had played a key role in high-tech development.

Yet, there was a subtle — though powerful — difference in the models developed by the newcomers. While much of New England's high-tech development resulted from informal relationships between business, government and higher education, the low-tech states were crafting formal policies to nurture R&D and promote high-tech. Leaders of business, government and higher education and industrial developers in these states realized economic well-being was a shared responsibility. The economic health of each sector would improve or stagnate in unison.

By the late 1980s, unemployment was rising in New England and dropping in many of the states that had responded to the recession of the early 1980s with formal efforts to encourage high-tech growth.

Industrial competitiveness

During the same period, "industrial competitiveness" had become a national priority. The NSF began to change the way it awards funds in an effort to further expand and diversify the R&D economy — to the benefit of the high-tech newcomers.

NSF further dispersed its awards beyond the top research universities. The agency also emphasized long-term applied research by creating new engineering and science and technology centers. And as a criteria for receiving awards, NSF required universities to leverage funds from private or state sources.

The newcomers — with their formal R&D policies — were ready to meet the match. In 1984, $138 million in NSF funds leveraged just $56 million in private funds. By 1990, NSF's $538 million leveraged $510 million.

Other federal agencies also began to encourage collaboration to bolster industrial competitiveness in the 1980s. The Commerce Department initiated an Advanced Technology Program to encourage cooperative industrial-related research, while the Department of Energy established a cooperative research initiative based at national laboratories.

The Defense Department established a University Research Initiative program and, for the first time in more than 20 years, created a new Federally Financed Research and Development Center — the kind of permanent research center used by the federal government in the 1950s and '60s primarily to solve national security problems.

All these projects encouraged state and local governments, private industries and universities to organize their lobbying efforts as well as raise matching funds to enhance their chances of winning federal awards.

Consider the Defense Department's Software Engineering Institute, established in 1984 at Carnegie Mellon University (CMU) in Pittsburgh. While CMU concentrated on fostering technical support for its proposal, business leaders secured political support from local and state officials, area congressmen and the University of Pittsburgh, a public research university.

The final proposal won the endorsement of the entire Pennsylvania congressional delegation (rarely a united front); university and congressional support from Arizona, New York, California and West Virginia; and technical support from world-reknowned software engineers at Stanford and MIT. The state committed approximately $4.5 million toward construction of the Institute.

The reason for the intense support: More than 100,000 jobs had been lost in Greater Pittsburgh, and the whole state had been stung by economic decline. A logical argument was made that not only was CMU's proposal the best, but Pittsburgh needed this project the most.

The activity did not stop with the software institute. In 1986, a partnership among the University of Pittsburgh, CMU and Pittsburgh-based Westinghouse Electric Corp. won a $40 million NSF grant to establish one of five national university-based supercomputer centers. To leverage this award, the state and supercomputer builder Cray Research Inc. pledged $10 million.

Meanwhile, the state's Ben Franklin Partnership Challenge Grant Program for Technological Innovation — started during the recession of the early 1980s — was growing. This program created four advanced technology centers at both public and independent universities in Pennsylvania, requiring that business team up with the universities and match state funds dollar for dollar. The partnership generated seed funds to support entrepreneurial spinoff activity and provided incubators for fledgling industries, technical assistance to small businesses and help with venture-capital formation.

> The fiscal situation in New England may require new off-budget solutions to the pressing problems confronting the research economy.

Pennsylvania recognized that both independent and public research universities were integral to economic well-being, and adopted a role in nurturing their research capacity. As a result, the state may be well-positioned to maintain and expand its R&D economy in the 1990s.

Florida also saw the 1980s as a time to beef up research — and now it's paying off.

The choice of Florida State over MIT for the site of a National High Magnetic Field Laboratory in the summer of 1990 was met with shock in New England. But the choice was consistent with NSF policy to broaden the research base.

The NSF peer review team stated that the country would be equally well-served by either proposal, albeit within a shorter time if MIT were chosen. But the team also noted Florida's "remarkable state and local support" — $58 million over five years for construction and equipment, as well as continuing support of more than 50 positions for faculty, researchers and visiting scientists.

Florida's qualifications had been in the making since the early 1980s, when the state began a long-term effort to make its higher-education system "second to none." During the 1980s, the state pumped more than $140 million into engineering facilities and science and technology initiatives. The irony is that if any state needed a major federal award to bolster a stagnant economy in 1990, Massachusetts did. But no one argued the case sufficiently.

Facilities in disrepair

The supermagnet snafu notwithstanding, New England's R&D strengths are envied around the world. The region has all the major elements required for successful industrial development — strong, scientifically oriented universities; a critical mass of high-tech scientists and engineers; a strong venture-capital community; and a quality of life that has attracted risk-taking entrepreneurs.

But New England's concentration of *private* research institutions — while a strength in itself — also presents an important weakness. Many research facilities are in disrepair, and for independent institutions, it is especially difficult to secure capital funding for the necessary improvements.

A recent study conducted by the Association of Physical Plant Administrators of Universities and Colleges estimated that the backlog of deferred maintenance at universities exceeds $70 billion nationally. Moreover, the median age of university scientific equipment has been estimated to be twice that which is used in industrial laboratories.

Federal government support for capital projects is relatively small and state government support — though a major source for public institutions — is extremely low for private institutions. Of the top 30 private institutions in R&D expenditures, 19 had reached the $150 million limit on tax-exempt bonds in 1990, and three others are expected to hit the limit by 1992. Private universities are increasingly dependent upon costly taxable bonds and other debt to finance facilities construction, according to a 1990 NSF survey of funding sources for university research facilities .

Indeed, in the case of the National High Magnetic Field Laboratory proposal, the NSF peer review committee noted that MIT's commitment to upgrade an aging facility was largely dependent upon the level of NSF funding. If the NSF award were too low, MIT may not have been able to modernize the facility. It is here that state and local economic development leaders might have aided MIT most effectively. Public support of private research university proposals is not without precedence, as illustrated by Pittsburgh's Software Engineering Institute. If the magnet center award teaches a lesson, it is that New England must find ways to upgrade the facilities of both its public and independent research institutions — even during a time of budget constraint.

The fiscal situation in the New England states may require new off-budget solutions to these pressing problems facing the research economy. Possible solutions include tax incentives to encourage: industrial funding of academic research facilities; contributions of equipment and instrumentation; and maintenance and servicing of donated research equipment. The Michigan Legislature showed innovative leadership during a period of economic stagnation by authorizing the use of a portion of a public employee pension fund to rebuild declining manufacturing facilities into factories of the future. Similar authorizations could support the university-based research infrastructure in New England.

This kind of creativity is needed now. New England's R&D base is the foundation for the region's future economic well-being. ❑

Judith A. Beachler is NEBHE director of research services.

Behind New England's Decline: The Bleak Numbers

(New England and the United States)

	1985	1986	1987	1988	1989	1990
Unemployment Rate*	4.2 7.1	3.7 6.9	3.1 5.9	3.3 5.3	4.3 5.3	6.1[a] 5.6[a]
Total Non-Agricultural Employment* (in thousands)	6,119 98,668	6,280 101,072	6,440 103,267	6,560 107,344	6,572 109,398	6,409 110,561
Total Manufacturing Employment* (in thousands)	1,433 19,261	1,395 19,153	1,382 19,320	1,344 19,701	1,278 19,514	1,228 19,017
Durable Goods Employment* (in thousands)	974 11,454	949 11,279	943 11,362	911 11,628	862 11,435	826 11,067
Nondurables Employment* (in thousands)	459 7,808	447 7,874	439 7,958	433 8,073	416 8,079	403 7,950
Total Nonmanufacturing Employment* (in thousands)	4,686 79,407	4,885 81,919	5,058 83,947	5,256 87,644	5,293 89,883	5,180 91,544
Construction Employment* (in thousands)	267 4,769	287 4,997	302 5,083	333 5,403	295 5,331	255 5,183
Transportation and Public Utilities Employment* (in thousands)	253 5,270	254 5,342	264 5,454	272 5,653	259 5,772	268 5,868
Trade Employment* (in thousands)	1,417 23,385	1,466 24,039	1,516 24,280	1,549 25,660	1,575 26,010	1,521 26,199
Finance, Insurance and Real Estate Employment* (in thousands)	409 6,068	441 6,436	458 6,658	480 6,725	469 6,869	463 6,852
Services Employment* (in thousands)	1,518 22,410	1,599 23,459	1,665 24,507	1,738 25,948	1,809 27,317	1,800 28,407
Government Employment* (in thousands)	819 16,599	835 16,895	847 17,225	880 17,532	884 17,848	877 18,299
Per-Capita Personal Income	$15,939 $13,907	17,166 14,641	18,579 15,481	20,191 16,489	21,504 17,596	N.A. N.A.
New Business Incorporations*	3,703 57,560	3,499 60,577	3,410 55,732	3,250 55,269	2,766 55,166	2,244[b] 51,440[b]
Total Business Bankruptcy Petitions	6,009 364,536	6,987 477,856	7,431 561,278	8,210 594,567	10,660 642,993	17,502[c] 725,484[c]
Total Construction Contracts Index (indexed, 1980 = 100)	234 170	255 170	299 177	263 158	202 160	195 156
Total Housing Permits Authorized*	9,228 150,499	9,062 143,944	8,224 119,073	5,917 127,667	4,163 113,333	2,509[d] 84,000[d]
Total Existing Housing Sales (in thousands)	229 3,800	256 4,370	232 3,780	208 4,090	203 3,850	172[d] 3,680[d]
Consumer Confidence Index (indexed, 1985 = 100)	135.9 100	143.4 94.7	152 102.6	150.2 115.2	122.6 116.8	50.9 91.5

*Seasonally adjusted fourth quarter monthly averages, except 1990 where seasonally adjusted third quarter averages are given, unless otherwise noted.

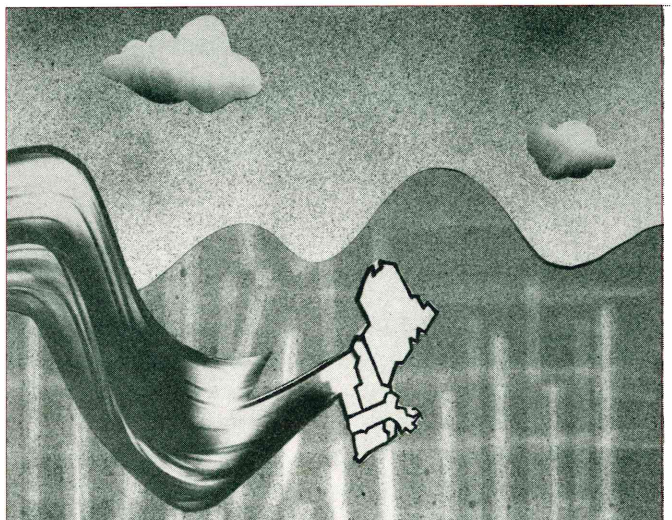
[a] Seasonally adjusted 8/90 figure. [b] Seasonally adjusted 7/90 figure. [c] Cumulative through 9/90. [d] Seasonally adjusted second quarter figure. N.A. = Not available.

Sources: Federal Reserve Bank of Boston, *Economic Indicators;* U.S. Bureau of Economic Analysis; F.W. Dodge Division, McGraw Hill Information System; Analysis & Reports Branch Division, Administrative Office of U.S. Courts; and the Conference Board, *Consumer Confidence Index.*

The Post-Miracle '90s

Imperatives for Interstate Cooperation

Gary L. Ciminero



The past two years have seen our "miracle" economy slow to a halt, then sink into recession. In stark contrast to the miracle years of the mid-1980s, New England now exhibits the worst economic performance among the nation's regions. Rapidly rising unemployment, slumping real-estate markets, lagging income growth and soaring oil prices have replaced the earlier boom. Unbalanced state budgets, troubled loans and lenders, and sunken consumer confidence now follow.

The miracle period, roughly 1983 to 1988, was characterized by rapidly falling unemployment, increasing consumer and business prosperity, a residential and commercial real-estate boom and superior growth in employment and income as compared with the rest of the country.

Now, with employment declining since early 1989, the downward trend is expected to continue into early 1991. The level of employment likely will stabilize by midyear and grow very modestly during 1992. The stanching of the decline this year results from a moderation of the six-year plunge in manufacturing employment combined with resumed modest increases in retail trade and service-sector jobs. But the hard-hit finance, insurance, real-estate and construction sectors are not expected to pick up before 1992.

Slower total job growth will keep New England's unemployment rate slightly above the national average until 1992. And while New England's per-capita income will grow more slowly than the nation's in the near term, it will maintain levels well above the national average.

More "underperformance"

Having outperformed the nation during most of the last decade, New England will likely underperform the nation even after the current recessionary phase ends this year. The underperformance will include lackluster job growth, continuing real-estate "adjustments," and the aftermath of a likely 1990-91 spate of business and personal debt difficulties.

Adding to our underperformance in the early 1990s will be:

- Labor cost/quality problems. The labor force will grow very slowly between 1990 and 2000, hindered by the 1965-to-1985 "baby bust" and disproportional retirements from the aging workforce.
- Unaffordable housing in many of the region's markets.
- Inadequate supplies/excess costs of energy. As higher oil prices take hold, the region's outsized appetite for oil-based energy will again prove a significant impediment to growth.
- Higher state and local taxes to cope with ongoing budget shortfalls.
- The defense "build-down" and related high-tech industry adjustments.
- Downsizing in overbuilt/overexpanded retail, financial and real-estate sectors.

The aging of the population, generally high wages from the chronic labor shortage and accelerating retirements will keep incomes from underperforming in the early 1990s. This is a distinctive bright spot in our economy's longer-term prospects.

A slow-growth environment

A looming national recession poses further economic risks into 1991. The ensuing recovery will be a slow process. Among the factors impeding growth: federal budget and tax austerity, the defense "build-down," adverse demographic shifts, and de-leveraging the debt excesses which over-geared growth during the '80s. The prolonged weak recovery implies the national economic pie will be growing, but growing quite slowly, through 1994-1995. This means geographic divisiveness will intensify as states compete for a bigger slice, engaging the federal political process to foist defense, federal budget and other austerities onto other regions.

Given New England's already compromised post-miracle economy, we are particularly vulnerable in this period of zero-sum economics, even more so since our defense exposure and energy dependence significantly exceeds that of other regions. Besides, much of our beleaguered computer/high-tech sector is well into a downward adjustment with no successor-apparent industry in sight.

Even our outstanding higher-education sector finds itself caught in a serious cost and funding squeeze. Meanwhile, universities from other regions intensify their competition in this period of falling enrollments, tightening student loans and shrinking grants. The daily newspapers report an alarming number of their successes in winning students, research grants and even entire research laboratories in head-on competition with our best educational institutions.

Accordingly, while the long-term economic environment will not be kind to any region, it could be particularly harsh on New England. A slower growing economy, even after the recessionary period ends, would alone suggest images of regions scrapping with each other for a larger slice of the more slowly growing pie. Unfortunately, the pie will be shrinking in a sector of vital importance to New England — defense spending — at a time when our clout in key congressional committees is diminished.

Adding to our problems will be the penchant for these six states to compete with each other with as much determination as they compete with states thousands of miles away ...

Adding to our problems will be the penchant for these six states to compete with each other with as much determination as they compete with states thousands of miles away, diluting each other's efforts while undercutting regional advantages. Too often, this process has worked to the advantage of states outside our region that win the business, grant or funding because the New England states "divided and conquered" — and thereby defeated — themselves.

Given the daunting economic challenges we face and the opportunities we must develop, New England can no longer afford freewheeling, intraregional competition without first investigating where we can cooperate to one another's advantage.

As Terrence Murray, chairman and CEO of Fleet/Norstar Financial Group, put it: "If Columbus had discovered America on the West Coast instead of the East, and if the nation had then developed from west to east, New England today very well might be a single state instead of six small ones. ... From an economic development standpoint, the state of California is able to act with a singleness of purpose that New England has never been able to achieve. Whether a company settles or expands in southern, central or northern California makes no difference — the entire state, larger than our whole region, benefits. The New England states, on the other hand, compete against each other as they work to develop their separate economies."

In late 1990, Murray called for a regionwide "New England Economic Summit" to investigate coordinated economic development policies. His visionary Economic Summit would convene New England's leadership in all fields of endeavor and tackle an agenda including the following goals:

- Thoroughly assess New England's economic strengths and weaknesses;
- Develop mechanisms to initiate and continue high-level discussions on how to leverage our collective strengths — and alleviate our weaknesses — to help the region weather the current period of economic stress;
- Develop common strategies to move New England forward when economic conditions improve;
- Examine the feasibility of creating regional, as well as state-by-state, investment tax credits for out-of-state companies that locate, or existing companies that expand, in any one of the New England states; and
- Develop a cooperative regional lobbying effort aimed at getting the U.S. Congress to consider business development tax incentives, including special tax breaks, encouraging buyers to invest in the billions of dollars of foreclosed properties now being held by the government's Resolution Trust Corporation and by the nation's banks.

In a similar spirit, the New England Governors' Conference commissioned an Economic Task Force, on which I serve, to develop a series of recommendations where interstate cooperation and concerted actions among the states may enhance the economic development objectives of the entire region. These recommendations — to be considered during an economic forum early this year — include:

Connecticut: Economic Indicators

	1985	1986	1987	1988	1989	1990*
Unemployment Rate	4.5	3.5	3.3	3.4	3.8	5.1
Total Manufacturing Employment (in thousands)	400.1	393.7	388.0	371.3	356.3	347.7
Total Nonmanufacturing Employment (in thousands)	1,170.6	1,222.5	1,270.1	1,308.0	1,322.7	1,321.6
Per-Capita Personal Income	$18,229	$19,600	$21,266	$23,059	$24,683	N.A.
New Business Incorporations	1,345	896	964	1,027	871	464
Total Business Bankruptcy Petitions Filed	1,842	2,201	2,218	2,384	2,967	4,364
Total Construction Contracts Index (indexed, 1980 = 100)	215.8	314.1	314.2	274.9	241.6	184.4
Total Housing Permits Authorized	2,230	2,051	1,937	1,333	970	555
Total Existing Housing Sales (in thousands)	64.6	70.7	50.8	60.5	51.7	46.7

*Reflects most recent data available at press time. See p. 20 for explanation.

- expediting the regulatory review process for public infrastructure projects;
- facilitating conversions for companies affected by cuts in defense spending;
- protecting and augmenting New England's share of federal research and development funds;
- preparing a New England agriculture and food system plan;
- instituting New England investment and R&D tax credits;
- drafting an investor incentive package to stimulate the venture capital market; and
- increasing regional linkages between the New England states and the private sector.

Given an economic environment in the '90s that will hardly bequeath another miracle to our region, we must explore all the ways we can pull together to meet the considerable challenges ahead and make our own miracle happen. ❑

Gary L. Ciminero is chief economist at Fleet/Norstar Financial Group in Providence.

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Crafting a Blueprint for Economic Recovery

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Thomas P. Salmon

As New England addresses economic crisis, it is useful to remind ourselves that the word *crisis* in Chinese is comprised of symbols for two other words: problem and opportunity.

Recently, The New England Council launched a special Economic Commission — populated by a wholesome and diverse combination of former public servants, academics, economists and senior managers drawn from the six states — in an effort to define both the problem and the opportunity.

What we do know is this: During the halcyon years of the 1980s, the four horsemen of the New England economy were high-technology manufacturing, defense spending, financial services and construction and real estate. All of these economic generators are in serious decline.

New England lacks indigenous energy sources and raw materials. Our cost of living and our cost of doing business, together with our standard of living, are accordingly heavily influenced by fuel and material prices. With our reliance on oil, recent events in the Middle East obviously affect us more adversely than they do any other part of the country.

The fiscal problems in our six states are significant. The fiscal problems in Massachusetts have bordered on chaotic. New England's infrastructure is deteriorating. A significant lack of population growth raises concerns over the availability of labor to fuel economic growth. We also must keep an eye on the projected decline in college enrollments. In addition to training tomorrow's highly skilled workers, higher education is an important component of the New England economy in its own right. And at least some of our schools are going to be under siege as they face a smaller pool of college-age students and try to keep tuitions at reasonable levels.

> We have to look at niche industries that make sense for us. Telecommunications clearly is one ... Biotechnology may be another. Energy management may be a third.
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As I talk to businessmen throughout the region, I note a sense of urgency. The notion is that the economy is still falling, and no one knows when the bottom will be in sight. There is also a pervasive belief that the cost of doing business has escalated, and our business climate has deteriorated severely.

We must now get about the business of attempting to identify an engine or engines of growth that might drive our economy in the 1990s. If we intend to become major players in the global marketplace by the year 2000, we must find ways to broaden our markets, create new products and restore entrepreneurial vitality.

Our capacity to export goods and services, especially to Europe, will be central to any strategic plan. We have to look at niche industries that make sense for us. Telecommunications clearly is such an industry. Biotechnology may be another. Energy management may be a third.

Our mission and our strategic plan must craft a quality blueprint for recovery as the base for summit gatherings with congressional leaders and a largely new crop of governors. As Lawrence Franko, a professor at the University of Massachusetts-Boston College of Management noted recently, the media also must become better educated and so better able to inform readers, viewers and listeners about issues such as international trade. How can we expand our export trade when politicians who seriously undertake overseas trade missions are blasted by the press for merely going on "junkets"?

The death of New England — like the death of Mark Twain — is greatly exaggerated. We can get to the economic promised land if we have the will to get there and the good fortune to develop a core of leaders in the public and private sectors with the courage, the intelligence and the skill to educate us about available options. These must be leaders who can forge public and private collaborative policies and agendas, who can resolve inherent conflicts, who have vision and perspective and the ability to inspire their countrymen to take action. ❑

Thomas P. Salmon is the former governor of Vermont. He is now chairman of The New England Council and chairman of the board of Green Mountain Power Corp.

A Scientific Snub for New England

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Ian Menzies

MIT loses to Florida State.

If the above had been from a box score, it would have been grudgingly accepted. New England college athletic teams, like Bulgarian wines, travel poorly. But such was not the case.

Florida State had been chosen over the Massachusetts Institute of Technology as the site for a new multimillion-dollar National High-Magnetic Field Laboratory. This defeat was cerebral.

And it had been executed despite the fact that MIT's existing Francis Bitter National Magnet Laboratory is considered the most advanced of its kind in the world, attracting scientists and research groups from many countries.

This scientific slap in the face, delivered in August 1990 by the National Science Foundation (NSF), the government's chief agency for financing basic research, is not only a humiliation for MIT and New England, but a significant indicator that this region's scientific preeminence could be compromised, its leaders lured away.

To put MIT's loss in perspective, one must remember that New England's only hope of resuscitation and future survival depends on the quality of its people, its brainpower, financial resources and entrepreneurship — its ability to generate spinoff industries.

> Florida State was chosen over the Massachusetts Institute of Technology as the site for a new multimillion-dollar national high magnetic field laboratory. This defeat was cerebral.
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For this to happen requires a strong formal liaison between the region's universities, public and private; its legislators, state and national; and private industry. That liaison has collapsed.

And it was the loss of the magnet lab to Florida that publicly revealed that collapse, although the mortar had been loosening for years without the media realizing it.

There is a lesson to be learned from the bitter pill MIT has had to swallow, which included NSF's criticism that MIT's level of commitment to its lab was not on a comparable level to that demonstrated by Florida State and that the MIT lab was more a magnet manufacturer than a center of excellence. Tough words. Embarrassing words.

But on the basis that history repeats itself, it's worth glancing back some 30 years. In 1960, the newly formed National Aeronautics and Space Administration (NASA) was beginning to dole out its goodies at the rate of $10 million a day — rising to $20 million a day by 1965.

New England was among the regions that applied to be the site of NASA's Apollo Manned Space Center. It lost out to Houston, Texas.

That turndown came as a shock to New Englanders. But as a *Boston Globe* article at the time pointed out, "Boston tried to crash the Washington big-time with a pop-gun. That's why it lost the multimillion-dollar Apollo project."

The resultant self-examination showed that New England business had next to no representation in Washington and next to no liaison with its congressional delegation.

Other regions of the country that had put their act together were beating the pants off New England when it came to NASA contracts. The *Globe* ran a series of articles to this effect, with data show-

Maine: Economic Indicators

	1985	1986	1987	1988	1989	1990*
Unemployment Rate	5.3	4.8	3.8	3.3	4.5	5.9
Total Manufacturing Employment (in thousands)	104.5	104.1	104.0	107.8	105.7	104.5
Total Nonmanufacturing Employment (in thousands)	360.9	381.3	404.1	432.5	442.1	421.0
Per-Capita Personal Income	$11,857	$12,790	$13,954	$15,106	$16,248	N.A.
New Business Incorporations	243	289	280	270	205	166
Total Business Bankruptcy Petitions Filed	623	801	818	930	1,053	1,453
Total Construction Contracts Index (indexed, 1980 = 100)	152.0	202.3	180.2	175.5	180.4	164.0
Total Housing Permits Authorized	814	665	893	610	437	334
Total Existing Housing Sales (in thousands)	28.6	36.4	33.4	31.8	27.7	26.5

*Reflects most recent data available at press time. See p. 20 for explanation.

ing how the region was being shortchanged, economically and politically.

President Kennedy read the *Globe* series, summoned NASA Administrator James E. Webb and handed him the *Globe* clips. Kenny O'Donnell, who controlled entrance to the presidential office, relayed the gist of the conversation to the newspaper's Washington correspondent Wilfred C. Rogers, as follows:

Kennedy: "Are the *Globe's* facts right?

Webb: "I'm not sure."

Kennedy: "Well, let's find out exactly, and if New England is being shortchanged, I want it corrected."

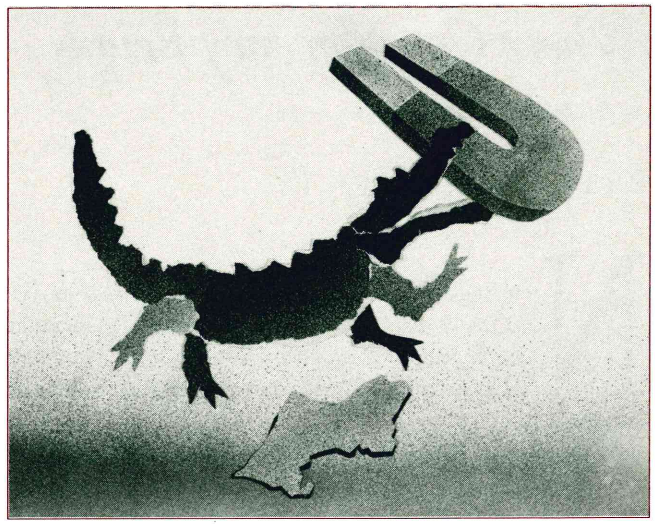
Massachusetts Sen. Leverett Saltonstall at one point wrote Webb: "In Massachusetts, our future lies in electronics and new industries, so we are very sensitive to any efforts to take away from Massachusetts the people who can be of most benefit to employing people and helping give jobs to our citizens."

From that point on, things began to happen. The Greater Boston Chamber of Commerce headed by Earl Stevenson, retired chairman of Arthur D. Little, formed its own Space Committee, representing the area's businesses.

Members included General James McCormack, vice president of MIT; Charles A. Coolidge, a partner in Ropes and Gray and promoter of "The New Boston" (the city's renaissance that began with urban renewal in the early 1960s); Henry Harding, president of Laboratory for Electronics; Ephron Catlin and Lloyd Brace of the then First National Bank; Charles Adams of Raytheon Co.; John I. Taylor of the *Globe*; and others, plus an advisory committee headed by Dr. Guyford Stever, former chief scientist of the U.S. Air Force.

The Space Committee, with its impressive lineup of members and advisers, put together a brochure to promote New England high-tech firms and universities and their ability to contribute to the man-in-space program. Members of the committee, armed with this and other data, descended on Washington and unabashedly lobbied for NASA contracts. Few lobbies are as effective in Washington as those that unite business, government and a region's prestigious universities.

The outcome of this full-court press was that Webb set up a NASA Northeast Regional Operations office in Cambridge to for-



malize ties between university researchers and New England industry, and facilitate and process subcontracts.

In January 1963 came news that Cambridge would be the site of a $50 million NASA Electronics Research Center, a facility that would coordinate all electronic research findings across the country.

The research center was built and staffed. And so, of course, was the regional office. But President Nixon nixed them. The research center is now occupied by federal transit offices.

New England is right back to square one. The liaison, the excitement and the interest of the media have all faded.

Our congressional delegation wasn't primed by MIT on the magnet lab any more than it was 30 years ago, when the region sought the manned space center.

Boston and New England did get their act together back in the '60s. It's time to do so again, but this time, let's be sure the liaison is formal and permanent. ❑

Ian Menzies is a senior fellow at the John W. McCormack Institute of Public Affairs at the University of Massachusetts at Boston, and a former managing editor and columnist with the Boston Globe.

Massachusetts: Economic Indicators

	1985	1986	1987	1988	1989	1990*
Unemployment Rate	3.9	3.7	2.8	3.4	4.5	6.3
Total Manufacturing Employment (in thousands)	638.2	612.2	602.6	578.6	551.3	522.1
Total Nonmanufacturing Employment (in thousands)	2,305.2	2,390.5	2,466.8	2,560.7	2,550.9	2,482.5
Per-Capita Personal Income	$16,393	$17,722	$19,142	$20,816	$22,174	N.A.
New Business Incorporations	1,368	1,550	1,379	1,246	1,085	990
Total Business Bankruptcy Petitions Filed	2,030	2,314	2,649	2,977	4,229	7,560
Total Construction Contracts Index (indexed, 1980 = 100)	$244.3	$215.1	$283.6	$248.8	$173.4	$208.9
Total Housing Permits Authorized	3,826	4,023	3,388	2,457	1,670	955
Total Existing Housing Sales (in thousands)	90.4	98.5	100.4	74.5	85.2	66.3

*Reflects most recent data available at press time. See p. 20 for explanation.

Where Complacency Reigns

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Paul Choquette Jr.

New England is in a full-blown economic recession. After many years of economic prosperity, the region is experiencing growing unemployment, unbalanced state budgets, escalating inflation and negative economic growth.

While our educational institutions continue to rank among the top in the country, we have failed to forge the partnerships with these institutions that could lead to the research and development needed to diversify our manufacturing base and permit it to compete in an international environment.

New England ranks first among the nine regions of the United States in per-capita federal dollars spent on R&D for universities. However, New England ranks last among the regions in per-capita state investment in R&D in the basic and applied sciences.

We have been complacent. Even when we have enjoyed economic prosperity, we have continued to do business as usual, while other areas have been reaching deep into state and private pockets to contribute money toward R&D at their educational institutions.

Certainly, MIT's recent loss of a $60 million grant for the National High Magnetic Field Laboratory to Florida State University is a dramatic example of the region's complacency. In a peer review competition, MIT's proposal was judged No. 1 on technical merit. But Florida out-hustled Massachusetts, forming a consortium that included Florida State, the University of Florida and New Mexico's Los Alamos University, and committing $58 million in state funds to the project. MIT proposed alone, and Massachusetts committed no money.

In marked contrast, we see prime examples in other regions of states investing in R&D at their universities and of universities and private industry forming partnerships for R&D. Inevitably, these research centers spin off new industries and fuel growth in existing high-tech industries.

The Center for Innovative Technology (CIT) in Herndon, Va., is a state-funded, nonprofit organization that works on behalf of Virginia and its industries through a statewide network of colleges, universities, state agencies and businesses. The goal is to promote economic growth throughout Virginia by marshalling scientific and technical resources both inside and outside the state.

Recognizing that universities have developed a great variety of technologies with market potential, CIT supports research through projects and technology-development centers at state universities, where faculty conduct research of interest to industry in Virginia. For every $1 CIT invests in R&D at state universities, it attracts $2 in corporate and other matching funds.

Research Triangle Park in North Carolina originated in 1954 through the efforts of business, state government and area universities to promote the resources of Duke University, the University of North Carolina at Chapel Hill and North Carolina State University in Raleigh. The creative synergy between the academic and corporate communities has been beneficial to both industry and

New England's Industrial Diaspora

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David Warsh

To think seriously about the future of the New England economy, it's necessary to remember something about the past. For the 75 years or so before, say 1965, New England was a habitually depressed region of the United States. It was famous for its poor and rockbound soil, for its stingy landlordism to the rest of the nation, for its intolerant blue laws, for decline generally — and for its good old colleges, which taught lessons in character amid the empty buildings.

The steel industry had started here and gone west. The shipbuilding industry had started here and gone south. The rum and candy business had started here and gone west. The textile mills had started here and gone south. The shoe business had started here and gone abroad. The insurance business had started here and gone to New York.

The experience of loss and diminishing expectations was in the air.

Between the end of the 1920s and 1960, when the Prudential Building was begun, no new commercial building of any size was erected in Boston. When John F. Kennedy was elected president, the waterfronts of New England seaports were marked mainly by rotting piers. Farms near the up-country colleges sold commonly for a few thousand dollars. New England wages were typically 15 percent or so below the national average.

The "Massachusetts Miracle" — the New England miracle really — should be understood against this backdrop of decline. Starting in the 1950s with the Cold War and the Space Race, the electronics industries along Route 128 came to be recognized as a new element in the regional economy. Universities suddenly were academic institutions. Each year, these institutions conduct more than $400 million in sponsored research.

The University of Illinois at Urbana-Champaign, which since 1980 has built 2.3 million square feet of new buildings — 12 percent of which is R&D space — is a classic example of an academic institution turning itself around by cultivating state and private relationships to create funding sources.

Early in the 1980s, the university's college of engineering had absorbed a huge surge in enrollment with no new state resources to accommodate that growth. The engineering college had a serious faculty shortage and its facilities were in short supply and urgent need of repair. A plan to enlarge, strengthen and consolidate the engineering disciplines was fueled by an infusion of almost $8 million in state operating funds, which have leveraged three times that number of operating dollars from private and federal sources.

In its plans for the physical restructuring of disciplines, the college has included a provision for "research condominiums" to provide office, research laboratory and personal residential space for companies interested in participating actively in the college of engineering's research programs.

To compete for R&D money on a statewide basis, Illinois formed a coalition of academic institutions, government, industry and labor which ultimately resulted in the successful award of two major research grants from the National Science Foundation.

New England has a lot to learn from these examples of successful coalitions of state government, academic institutions and private industry in Virginia, North Carolina and Illinois. Public institutions, state government and private industry must have mutual respect for one another and the enthusiasm to develop successful working relationships.

No one will pretend these kinds of partnerships will solve all of New England's economic problems. We need to solve the problems of an economy that is strangled by bureaucracy and over-regulation. We need to address workforce issues such as job training. What we cannot do at this time is continue complacently on the same track.

Certainly, the New England region has had some successful public-private partnerships. But we need projects of greater magnitude and staying power. And we need investment from our state governments. Forging closer partnerships between local businesses and our state governments with our institutions of higher education, and using these partnerships to invest in a stronger research commitment, can lead us to a more complete economic recovery. ❑

Paul J. Choquette Jr. is president of Providence-based Gilbane Building Co. and former chairman of The New England Council.

seen to be engines of regional growth, turning out scientists, doctors, engineers and businessmen. But with each recession, there were stories in the newspapers of engineers driving taxicabs.

It was only in the late 1970s, when the minicomputer industry exploded, and the early 1980s — when the military buildup propelled the region through what was for the rest of the nation a deep recession — that pundits began to hail the "miracle" of a dozen years of pretty much uninterrupted growth.

Home prices, which had been at bargain levels for most of 100 years, went through the roof. Wages soared to 20 percent above the national average.

And the minicomputer industry and the mutual fund industry, which started here, began to go west and south and overseas.

No one can forecast the future of the New England economy with utter confidence. The best estimates are that growth will continue, but at a much slower rate — perhaps 1 percent a year for most of the next decade, as the region slowly falls back into line with wages and prices in the rest of the country.

But the fact is New England has long known it could thrive only by continually inventing new goods to sell, knowing that the manufacturers of old goods eventually would move on to cheaper climes. This is the region, after all, that made a good living for 50 years selling ice in the summer to cities around the world — and became famous for the clipper ships it invented to carry the ice — only to see its celebrated industries superceded by refrigeration and steam.

There is no new "miracle" around the corner. But it's a safe bet that something new will turn up. Biotech and software are promising industries, but they are truly in their infancy — about where minicomputers were in the mid-1960s. Will they be enough to maintain the sheen of prosperity New England enjoyed during the 1960s, 1970s and 1980s? In my view, that's very much an open question. ❑

David Warsh is a columnist with the Boston Globe.

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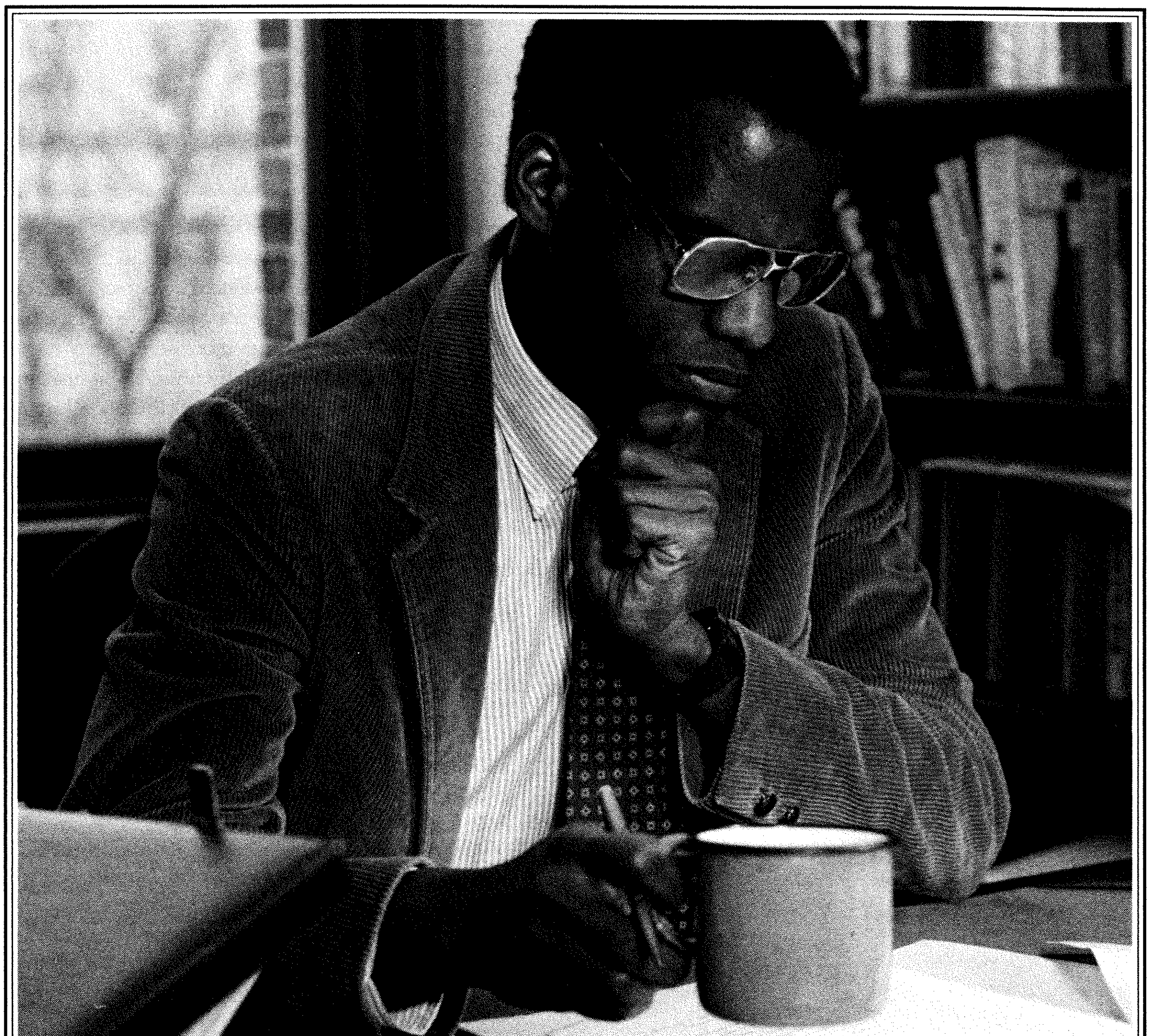

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PAY ATTENTION TO PERFORMANCE

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The CREF Stock Account has beaten the mutual fund industry average for the past one-, five- and ten-year periods.[2] Though the market has turned down during the last two quarters, CREF's long-term record continues to be strong. And it's no wonder. CREF was among the first in the industry to enter international markets, divide its portfolio into active and indexed segments, and develop sophisticated investment research methods.

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1. American Council of Life Insurance. 2. Lipper Analytical Services, Inc., Mutual Fund Performance Analysis Reports. Growth Funds Index and General Equities Funds Averages, ending 9/30/90.

For more complete information, including charges and expenses, call 1 800 842-2733, ext. 5509 for a prospectus. Read the prospectus carefully before you invest or send money.

Small High-Tech Companies

Still creating New England Jobs

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Diane Fulman

While a number of the region's high-tech superstars of the 1980s are announcing disappointing earnings and layoffs, many smaller high-tech companies remain profitable and are creating — not eliminating — jobs. These firms are developing and exploiting new technologies, reminding us of the fledgling minicomputer industry of 20 years ago.

The encouraging performance of these companies is reflected in the results of a recent survey undertaken by CorpTech, a Woburn, Mass. company that monitors U.S. high-technology firms. CorpTech regularly conducts nationwide surveys of technology manufacturers with fewer than 1,000 employees. Although New England has just over 5 percent of the nation's population, the region accounts for more than 15 percent of the nation's 22,000 small, high-tech manufacturers. The CorpTech findings show that these smaller technology companies are outperforming the rest of the region's economy.

The New England companies in the CorpTech survey increased their combined total employment by an average of 2.2 percent from October/November 1989 to the same period for 1990. While small high-tech firms performed better nationally — creating jobs at an annual rate of 3.8 percent — the New England results look very good when compared with what has been happening to other sectors in the region. Moreover, in three New England states — Rhode Island, New Hampshire and Massachusetts — small high-tech firms in the survey had job growth of at least 3 percent. Job growth was especially strong in pharmaceuticals, lasers and optics, telecommunications and computer software.

The strong job-generation performance of high-tech firms reflected in the CorpTech findings are confirmed by Bank of Boston's tracking of job growth for a number of high-tech manufacturing companies. The bank's research indicates the job-increase rate is particularly strong in the early growth stages of firms in a rapidly expanding, technology-based industry. Seven to 10 years after companies are founded, some show a tremendous job-growth spurt, but after that, job growth often levels off or even falls as the companies mature.

The critical point is that a number of young high-tech companies created in the 1980s are likely to have their highest rates of job creation during their "growing up" years in the 1990s. Their growth rates should be a positive force in the New England economy as the job-creation pace of older companies slows down and some continue to shed jobs.

Financing young companies

Will there be adequate financing for the young high-tech companies that are just getting underway? According to Venture Economics Inc., seed and start-up financing combined slipped in the first quarter of 1990 to 11.7 percent of all venture-capital financings, down from 12.9 percent a year earlier.

At the same time, some venture-capital data are encouraging. Medical/health-care-related investments showed strong growth during the first quarter of 1990 — and this is an industry in which New England companies excel, especially as optics, lasers and other advanced technologies find medical applications. New England also has a comparative advantage in software and related services, the on-

New Hampshire: Economic Indicators

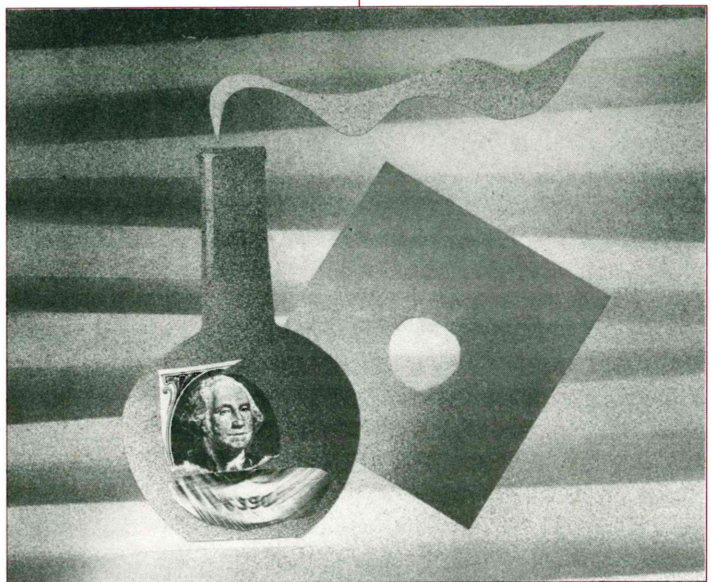
	1985	1986	1987	1988	1989	1990*
Unemployment Rate	3.4	2.8	2.5	3.0	4.4	6.0
Total Manufacturing Employment (in thousands)	121.2	116.8	120.4	117.7	111.8	106.8
Total Nonmanufacturing Employment (in thousands)	354.8	378.3	395.8	417.4	411.3	400.9
Per-Capita Personal Income	$14,860	$15,911	$17,529	$19,434	$20,267	N.A.
New Business Incorporations	324	323	306	265	224	229
Total Business Bankruptcy Petitions Filed	535	548	562	705	1,027	1,837
Total Construction Contracts Index (indexed, 1980 = 100)	293.5	373.9	428.6	388.9	246.3	243.5
Total Housing Permits Authorized	1,369	1,414	1,128	757	480	303
Total Existing Housing Sales (in thousands)	20.0	20.6	22.5	16.6	13.0	11.3

*Reflects most recent data available at press time. See p. 20 for explanation.

ly major industry segment of 12 tracked by Venture Economics which showed an increase for the first quarter of 1990 over the first quarter of 1989. In fact, software accounted for almost 23 percent of the companies backed by venture capitalists, up from 11.6 percent a year earlier.

Promising technologies

There is also good news for new technologies in the pipeline. In 1989, the Massachusetts Institute of Technology received 101 U.S. patents — the first time any university exceeded 100 patents in a single year. In addition to biotech, a number of promising technologies are showing up in these patents, as well as in start-ups by MIT alumni. Advanced technologies (such as lasers), environmental systems and materials science (such as superconductivity and ceramics) are prime examples.



But MIT is by no means the only educational institution in the region that is successful in commercializing research. Companies such as Analytical Biosystems and Cellular Transplants in Rhode Island have commercialized technology from research carried out at Brown University, while Bio-Tek Instruments is based on research conducted at the University of Vermont. There are numerous examples of university research leading to the creation of new companies. And university technology-licensing offices in the region are reporting that despite the weak economy, the stream of business start-ups with promising new technologies remains steady.

Still, can success stories like Cognex in Massachusetts, Idexx in Maine, American Power Conversion in Rhode Island and Cabletron in New Hampshire continue to do well in a slowing economy? The answer depends largely on two factors. The first is whether there is continuing growth in overseas markets; small high-tech firms frequently export early in the life of their companies, and many become dependent on international sales. The second is whether New England policymakers are able to control the costs of doing business in the region. Small firms need a hospitable and predictable business environment. Here, the magnitude of change may not be as important as the *direction* of change.

Looking ahead to the next several years, it is the promise of emerging technologies — and the consistency with which small firms in the region successfully translate these technologies into new products and services — that provide some real grounds for optimism. ❑

Diane Fulman is the senior economics editor at Bank of Boston.

Higher Education Must Manage Change

Paul C. O'Brien

There seems to be no shortage of opinions on the state of education in New England and its potential impact on the future of the region.

Over the past few years, educators, politicians, community activists and business leaders have spoken eloquently about the failings of our region's schools to prepare students for higher education and life beyond the classroom.

The many voices that have spoken out about education have raised awareness and focused the debate on the serious implications that accepting the status quo will have for all of us. This debate has reaffirmed that preparing our students for a lifetime of education and opportunity must be our highest priority. An educated and inspired workforce has long fueled New England's economic health.

Today, with the local economy already seriously slumping, concerns about education extend beyond the classroom and are truly everyone's business. Now, it's important that we move beyond the discussion and start the difficult task of doing something about education in New England.

That demands new leadership. I believe that higher education is uniquely positioned to provide this new leadership to students at the K-12 level, to the teachers who are charged with preparing young people for the challenges of advanced learning, and to New England's businesses that depend upon an educated and educable workforce for continued economic growth.

New England colleges and universities enjoy worldwide reputations for excellence. Each year, they attract many of the region's —as well as the nation's and the world's — best and brightest students. Many of these young people stay in New England to pursue their careers, infusing the region's businesses and other organizations with energy and new ideas.

But today, this vibrant pool of talent is in danger of drying up as our nation's preschool, elementary, secondary and postsecondary administrators are forced to balance pressing fiscal considerations against the new demands presented by changing demographics. Although budgetary considerations create pressure across the spectrum, the system and society must never lose sight of the fact that our future will only be as strong as our resolve to educate our young men and women.

Business playing a role

Leadership begins with knowing the needs and aspirations of both the students being educated and the society that relies on their contributions for future success. I'm encouraged that those of us in business are increasingly recognized as having a valuable, legitimate role to play in education policy.

For example, the University of Massachusetts, along with many of the area's high-tech companies such as New England Telephone, Digital and Hewlett-Packard, are involved in an effort called MESTEP (the Math English Science Technology Education Project). The program allows potential teachers to take part in corporate training procedures to give them a better understanding of industry's needs and prepare them for their teaching careers.

> Many of today's students will man positions in fields that don't even exist today ... preparing solely for a specific job could result in no job at all.

In return, we enjoy the benefit of their insight and suggestions on how to improve the way we train our people. MESTEP's corporate internships let us play a role in preparing the best possible schoolteachers, and provide those teachers with a better understanding of the changing business world their students will enter upon graduation.

The types of jobs these students will hold in the future have changed greatly since their parents entered the workforce. In the past, future employees prepared themselves for a particular occupation with the expectation that their entire careers would be spent working at a single job. Today, technology and changes in the workplace are rapidly altering those basic assumptions. In the course of a career, most workers will discover that they are required to work in several different occupations, even within the same company.

Many of today's students will man positions in fields that don't even exist today. They will require flexibility and broad vision. Preparing solely for a specific job could result in no job at all.

Higher-education professionals must understand the complexities of preparing a student for success in an ever-changing society. Education must provide students with the ability to master a subject through study, research and determination. Yet a total education experience can also be a source of economic well-being if it lets students develop the learning skills, thinking skills and technological skills they'll need to take advantage of tomorrow's opportunities. Those who are ready will have the chance to do work that is more challenging and more rewarding than their mothers and fathers ever enjoyed.

Higher education must seize the opportunity to develop the more demanding and meaningful curricula that future college students and employees require. By becoming more involved in establishing challenging standards for success, colleges and universities can ensure that incoming students will be grounded in the basics they'll need to excel at advanced levels.

Tempting to hunker down

During times of economic uncertainty and trouble, the temptation is to scale back investment, resist change, and hunker down for the short-term concerns of the moment. That inclination, however, is as wrong in education as it is in business. It is a prescription for long-term failure, plain and simple. But that doesn't mean we shouldn't take a strategic look at what the education system is offering today and ask ourselves if there are better ways to improve the overall quality of the education experience.

The business community has learned in recent years that the drive for quality requires a comprehensive review of the various disciplines involved in an effort to maximize all available resources. Likewise,

Rhode Island: Economic Indicators

	1985	1986	1987	1988	1989	1990*
Unemployment Rate	4.6	3.8	3.5	3.3	4.7	6.4
Total Manufacturing Employment (in thousands)	119.2	118.5	118.1	111.4	106.4	103.2
Total Nonmanufacturing Employment (in thousands)	316.6	326.1	330.0	350.2	351.3	343.8
Per-Capita Personal Income	$13,682	$14,579	$15,555	$16,892	$17,950	N.A.
New Business Incorporations	270	293	314	283	252	232
Total Business Bankruptcy Petitions Filed	750	878	887	904	1,037	1,742
Total Construction Contracts Index (indexed, 1980 = 100)	323.7	275.7	430.8	310.1	258.5	122.5
Total Housing Permits Authorized	572	516	462	387	317	172
Total Existing Housing Sales (in thousands)	14.3	15.5	12.6	14.1	11.6	11.6

*Reflects most recent data available at press time. See p. 20 for explanation.

higher education should take a more holistic approach to educating New England's citizens and improving communications among all levels of education.

We can no longer afford the luxury of just talking about education. All of us who care about the quality of education and the region's economic outlook should expect and demand that leaders in higher education manage change in the way we educate students and prepare citizens for a rewarding future. ❑

Paul C. O'Brien is president and chief executive officer of New England Telephone.

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New England Could Take a Lesson from Wichita

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Ralph Whitehead Jr.

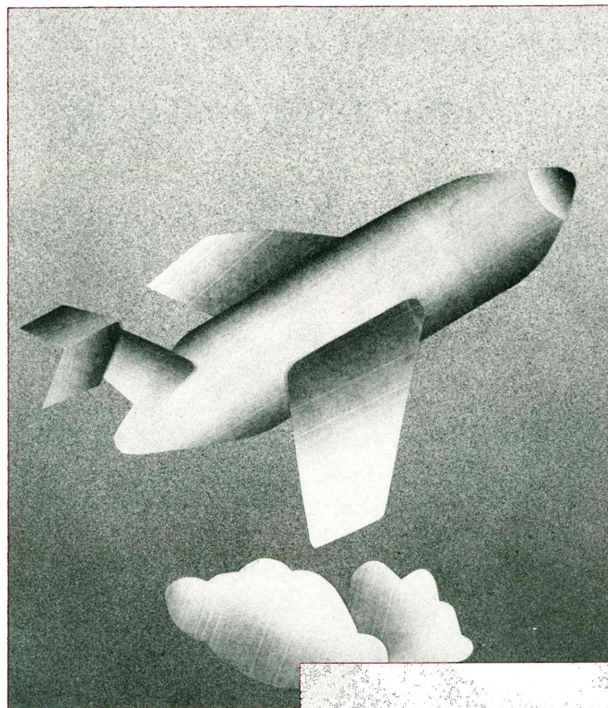
The economic success of the Wichita area — recently described by *Newsweek* as one of the nation's boomtowns — has not been lost on Wichita State University (WSU). The three aircraft companies that have operations in Wichita — Boeing, Cessna and Beech — have formed ties to the public university's engineering school and Institute for Aviation Research. A number of local entrepreneurs, who've built such businesses as Pizza Hut, Rent-a-Center and Residence Inn, now support WSU's business school and its Center for Entrepreneurship.

WSU is running a $300 million fundraising campaign and has already secured the first $100 million. And just as Wichita's economic growth brought economic benefit to the university, the university's expansion presumably will work to the further economic advantage of Wichita.

The lesson for New England, as it's taught by this case and dozens of parallel cases, is simple. As recently as the early 1980s, the ties between New England's economy and its universities gave the region a distinctive competitive advantage vis-a-vis other regions of the United States. By the mid-'90s — after our region will have weathered the current recession and after our colleges and universities will have begun to shake off the damaging effects of the current retrenchment — it's likely those ties will no longer give New England a clear advantage. For other regions will have done enough by then to build similar and possibly stronger ties.

To a degree, of course, this is a tribute to New England's example. As changes in the economy placed a new emphasis on the role of higher education, New England was able to cite the number and quality of its colleges and universities as a significant economic asset. As its economy outperformed the nation's during the recession of the early '80s, the citation rang true. Other regions accepted the New England model as the industry standard, so to speak, and adapted it.

This isn't to say schools in other regions are necessarily achieving full academic parity with those in New England. It's just to say schools elsewhere are developing enough to stimulate the economies of their regions today as New England's colleges and universities stimulated the economy of their region through much of the '70s and '80s.



Schools elsewhere are developing enough to stimulate the economies of their regions today as New England's colleges and universities stimulated the economy of their region through much of the '70s and '80s.

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For example, the Georgia Institute of Technology can strengthen its contributions to the regional economy of the Southeast — as it's doing in manufacturing, quality improvement and new business development — without necessarily surpassing the Massachusetts Institute of Technology. But if the Southeastern economy gets stronger, some of its added strength will work to the advantage of Georgia Tech, and so equip it to contribute still more to the region.

This obviously challenges the alliance between higher education and the economy in New England to find ways even in these hard times to strengthen itself strategically and quickly enough to avoid losing its advantage. ❑

Ralph Whitehead Jr. teaches journalism at the University of Massachusetts at Amherst. He has been studying the changing shape of the American middle class.

University-Based Public Service Centers Could Rescue Manufacturing

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Robert McMahon

As American manufacturing firms continue to fall behind foreign competitors, university-based public service centers are well-suited to serve as links between appropriate technologies and manufacturing companies. These centers have an interest in regional economic development. Their faculty have experience introducing new ideas and may have experience with particular industries.

Consider the case of America's machine-tool industry, which produces manufacturing tools and is at the core of the goods-producing sector of the economy. According to the report *Made in America: Regaining the Productive Edge*, U.S. firms fell from representing 25 percent of the world's machine-tool production in the 1960s to less than 10 percent in 1986. Furthermore, American manufacturers are shifting their reliance to foreign-made machine tools.

Reasons for the decline of this vital industry include the ownership patterns of firms, business cycles and the failure to engage in long-term research efforts. But perhaps most of the decline can be attributed to a failure to take advantage of currently available technologies that would enhance the capabilities and operations of machine tools.

The University of Southern Maine's Center for Business and Economic Research (CBER) — currently studying Maine's metal-products manufacturers — has found these characteristics of decline to be applicable to some firms in that industry.

The CBER study has found that firms fall into three levels of sophistication. First are relatively large companies that can take advantage of state-of-the-art technologies. Second are companies that are willing to use modern technologies, but do not have the technical expertise to implement changes that would allow them to compete fully in the contemporary environment. Third are firms, most often small, which are complacent. Unconcerned with or unaware of the changing environment, they conduct business the way they always have. Eventually, these dinosaurs will fade away.

One of the purposes of the CBER study is to suggest appropriate assistance for firms. One initial conclusion of the study is to target small companies that are willing to change. Larger businesses are able to help themselves; complacent ones are not interested in help. Another conclusion is that most companies are aware of current manufacturing technology thanks to trade journals and machine-tool vendors. But a fruitful area for assistance is *management* technology and the introduction of decision-support systems. These systems would focus on management functions such as forecasting, scheduling, plant layout and material tracking.

Firms are not well aware of advances in manufacturing-management technologies. Small- and medium-sized shops are often more attuned to production than to management. Trade journals do not adequately explain these technologies, and vendors are less likely to provide information, because the cost of such technology is relatively low.

University-based assistance can go beyond the study stage. The University of Maine System's Center for Technology Transfer (CTT) is currently considering a proposal to assist a number of Maine's metal-product manufacturing firms in adopting decision-support systems. After identifying companies where success is likely, CTT will evaluate their operations and help improve their manufacturing-management technology. After an initial period, CTT will evaluate the results of its intervention.

If the adoption of new management technologies is successful at the demonstration sites, it will encourage other companies to improve their management styles, and ultimately enable the industry and region to become more competitive in a changing environment. ❑

Robert C. McMahon is an associate professor of economics at the University of Southern Maine and senior economist at the university's Center for Business and Economic Research.

Vermont: Economic Indicators

	1985	1986	1987	1988	1989	1990*
Unemployment Rate	4.7	4.7	3.8	2.9	4.1	5.4
Total Manufacturing Employment (in thousands)	49.4	50.0	49.1	49.2	46.9	44.2
Total Nonmanufacturing Employment (in thousands)	178.2	186.5	191.3	209.7	214.9	210.6
Per-Capita Personal Income	$12,415	$13,348	$14,302	$15,302	$16,371	N.A.
New Business Incorporations	153	148	167	160	130	162
Total Business Bankruptcy Petitions Filed	229	245	297	310	347	546
Total Construction Contracts Index (indexed, 1980 = 100)	172.7	204.6	216.8	233.3	161.5	172.7
Total Housing Permits Authorized	379	393	416	373	290	189
Total Existing Housing Sales (in thousands)	11.1	14.4	11.9	10.8	13.7	9.8

*Reflects most recent data available at press time. See p. 20 for explanation.

A Formula for Re-emergence

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Nicholas P. Koskores

A collapsing real-estate market, bank failures, major cutbacks in defense spending, a competitive global marketplace and spiraling energy prices brought on by the Persian Gulf crisis present New England with a formidable challenge. But there's reason for optimism as we enter the 1990s. From the region's early days as an agriculture-based economy to the gizmo-laden present, economic ups and downs are as much a New England tradition as town meetings and disappointing Red Sox seasons.

This time, New England's re-emergence likely will require a somewhat different formula. It's not so certain that new industries alone can bail us out as they have in the past. New enterprises such as biotechnology are promising. But they simply are not the big job-producers that past engines of growth were — industries like textiles, heavy manufacturing and high technology.

Better chances for economic recovery today will result from fostering a climate in which New England business will be properly cared for. This means nurturing the people who start up businesses and make them run, as well as those who are responsible for technological innovation. It also means making New England attractive to business.

I see three basic steps needed to create healthy economic conditions in this region:

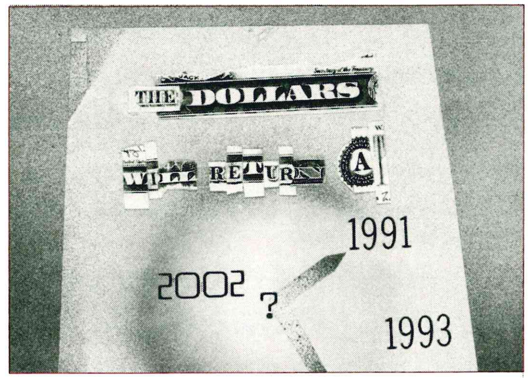
❑ **New England has to take the welcome mat out of the attic, dust it off and invite business in.** Wage and health-care costs and the exacting price of regulation are some of the factors that prompt business to stay in an area, move out or move in. A recent Bank of Boston study indicates that such costs are much higher in New England than in other regions.

A solid public infrastructure — sewerage systems, roads, bridges, airports and the like — is also an attractive come-on for business. For its part, The New England Council is taking a hard look at the region's airport capacity. By the year 2010, a significant gap will have developed between air-service demand and airport capacity, according to the council's recently released study, *Keeping New England's Economy Growing: Observations on the Emerging Crisis in Regional Air Service.*

Recognizing that this gap would pose a direct threat to New England's long-term economic stability and global competitiveness, the council calls for a second major regional airport to service the economy and provide a bridge to marketplaces outside the region.

❑ **New England must seize the moment offered by the promise of a united European Economic Community marketplace and even newer opportunities in Eastern Europe.** These markets beckon to New England's high-technology industry — still our major manufacturing sector, employer and exporter. New trade opportunities warrant collective action from businessmen, entrepreneurs, educators and public officials alike.

Liberalized export-licensing procedures and trade-reform measures of the kind U.S. Sen. John F. Kerry of Massachusetts and Rep. Sam Gejdenson of Connecticut have championed are important



steps to take in keeping New England in the front ranks of first-class global competitors. But more work must be done to assure that trade laws safeguard U.S. intellectual property rights and help businesses pry open overseas markets.

❑ **New England must invest significantly in today's and tomorrow's workforce.** Keeping workers' skills sharp and kids' minds bright is New England's and the nation's paramount challenge. Paraphrasing Harvard University's Robert Reich, what's most important to the economy is what people bring to their work — more skills equal a higher standard of living.

How do we make the necessary investment in human capital? Washington could provide some answers. The new Congress will consider reauthorization of the Higher Education Act, which contains all the major federal education-financing programs. It is imperative that the reauthorization at least ensures that the next generation of American doctors, engineers, teachers and scientists has access to affordable financing options, and that due consideration be given to increasing the overall federal student-loan limits to reflect the higher costs students confront.

In addition, vocational training programs provide excellent, innovative and reasonably inexpensive training and retraining programs for the corporate community. Many vocational-education programs encourage collaboration between businesses and schools. For example, Middlesex Community College collaborates with Wang to upgrade workers' technical skills. These kinds of programs must be further developed.

Not enough can ever be said about the importance of collaboration. Partnerships among business, government and educational institutions build upon an awareness that tomorrow's economic gains hinge upon the reorganization of the workplace away from "no-think" mass production to the creative flexibility only "smart" workers can provide.

New Englanders have always enjoyed a reputation for "working smart" — using their Yankee ingenuity to make ends meet. It's time to put that reputation to the test. We cannot arbitrarily choose an industry and dub it our next engine of growth. But if we can guarantee that New England will retain a well-educated, highly skilled workforce, that engine will evolve naturally, pick up steam in a climate conducive to economic growth and business expansion and drive us to overseas exporting opportunities and economic prosperity. ❑

Nicholas P. Koskores is president and chief executive officer of The New England Council Inc., the oldest regional business group in the United States.

DATA CONNECTION

- Average 1990-91 tuition and fees at Massachusetts independent colleges and universities: $10,792
- Average a decade earlier: $4,221
- Two-year gain in state tax funds for operating expenses of higher education in Maine, fiscal 1989 to fiscal 1991: 21%
- In Massachusetts: — 20%
- Rank of Massachusetts among the 50 states and the District of Columbia in library expenditures per student in public higher education: 51st
- In instructional expenditures per student in public higher education: 51st
- Number of bankruptcy petitions filed in Massachusetts in 1985: 2,017
- Number filed in 1990: 10,142
- Increase in full-time enrollment at U.S. higher-education institutions, 1970 to 1989: 32%
- In part-time enrollment: 109%
- Percentage of full-time students who receive state-based student aid: 71
- Percentage of part-time students who do: 29
- Percentage of full-time students who receive employer-provided tuition assistance: 19
- Percentage of part-time students who do: 81
- Average difference in monthly earnings between an associate's degree holder and a high-school graduate in 1984: $307
- Average difference three years later: $537
- Percentage of employers who list educational background among the three most important traits in employees: 40
- Percentage who list interpersonal skills, including good manners, among the top three: 84
- Estimated percentage of male bachelor's degree recipients who receive course credit for playing varsity football or basketball: 2.2
- Estimated percentage of female bachelor's degree recipients who do: 0.5
- Percentage of 1975 college presidents who were women: 5
- Percentage of 1989 college presidents: 11
- Minimum point difference in combined SAT scores needed to reflect a likely difference in abilities among two test-takers: 142
- Estimated number of points an SAT-taker could gain with good coaching: 100+
- "Ideal" ratio of precollege guidance counselors to students: 1-to-100
- Ratio in Boston Public Schools: 1-305
- Estimated number of *yearly* openings for registered nurses in New England through 1995: 6,343
- Estimated number of registered nurses graduated from New England institutions in 1989: 3,587
- Increase in U.S. manufacturing wages, 1984 to 1989: 15%
- Increase in New Hampshire manufacturing wages: 32%
- U.S. high-school dropout rate in 1988: 27%
- Connecticut high-school dropout rate: 18%
- Connecticut residents as a percentage of freshmen enrolled at all Connecticut colleges and universities in 1988: 78
- Vermont residents as a percentage of freshmen enrolled at all Vermont colleges and universities in 1988: 43

Sources:
1,2 Association of Independent Colleges and Universities in Massachusetts; 3,4 Center for Higher Education, Illinois State University; 5,6 Institute for Economic Studies, University of Massachusetts; 7,8 U.S. Bankruptcy Court, District of Massachusetts; 9,10,11,12,13,14 National University Continuing Education Association; 15,16 American Association of Community and Junior Colleges; 17,18 *Communication Briefings*; 19,20 *A College Course Map*, U.S. Department of Education; 21,22; American Council on Education; 23 The College Board; 24 FairTest; 25 National Association of College Admission Counselors; 26 Boston School Department; 27,28 New England Health Occupations Training Coalition; 29,30 Grant Thornton; 31,32,33,44 U.S. Department of Education

New Competition on Campus

The Opening of the College Retirement System

JENNIFER McCAULEY

"It used to be that you retired to a rocking chair at 65 and died at 72," the speaker said wistfully. "Things were simple back then."

The speaker — Radcliffe Financial Vice President and Treasurer Louis R. Morrell — was only half joking. For as his audience of 150 New England college and university administrators already knew, planning for retirement these days is anything but simple.

The administrators — attendees at a New England Board of Higher Education fall conference on "New Choices Facing College and University Pension Funds" — met in Boston with officials from some of the major investment firms in the country to discuss recent changes in the college pension fund market. Since last March — when an SEC ruling opened the $84 billion college retirement plan of TIAA-CREF to increased competition — colleges and universities have been faced with a myriad of new pension options to offer their faculty and staff.

But the large selection of investment options now available to academia is not the only issue now facing college and university pension plan administrators. The new choices come at a time when new government regulations governing retirement funds as well as the elimination of mandatory retirement of tenured faculty — effective in 1994 — are changing the way colleges and their employees must plan for retirement.

Economic and societal changes, moreover, are also affecting retirement planning. "People are retiring earlier and living longer," said Morrell, the conference's keynote speaker. "And if you're going to retire earlier, you're going to have to support yourself [in retirement] longer."

The longer you live, he continued, the more inflation your retirement fund will be exposed to, making it worth less and less.

Finally, add the uncertainty of investing in the 1990s. The new decade has yet to show signs of repeating the investment success of the '80s, making it increasingly difficult for colleges and their employees to plan for retirement.

As Morrell noted, retirement isn't what it used to be.

Away from the status quo

TIAA-CREF's numbers are impressive — $84 billion in assets; 1.4 million participants; 4,400 educational institutions throughout the country. It is the largest pension fund in the world — and for the majority of its 72 years in business, the only game in town.

Since its beginning in 1905 — when Andrew Carnegie promised free pensions for every faculty member at non-religiously affiliated colleges in the country — to its transformation into a defined contribution plan in 1918, TIAA-CREF (Teachers Insurance Annuity Association and College Retirement Equities Fund) maintained a lock on the college retirement fund market. It was a hold that endured even after a change in the tax laws in the 1970s allowed mutual funds to compete in the campus market, for TIAA-CREF had an unusual policy: Once you were in, you couldn't get out.

Participants in CREF, the equity fund, were allowed to transfer their money only to TIAA, the fixed-income fund that invests in mortgages and bonds. Once in TIAA, the money stayed there until retirement, at which time participants received an annuity for life. So, while colleges began offering other investment alternatives, employees who already had money in TIAA-CREF couldn't transfer it to the alternate provider even if they wanted to.

"If you're a monopoly ... you get used to doing things a certain way without answering a lot of questions," says *Barron's* financial writer Maggie Mahar, whose articles on the market changes have drawn fire from TIAA-CREF management. "Competition raises questions."

Competition raises questions.

Attendees at NEBHE's conference on "New Choices Facing College and University Pension Funds." The conference was underwritten by Fidelity Investments, Lincoln Investment Planning, TIAA-CREF and The Vanguard Group.

One question raised was why participants in TIAA-CREF had only two investment options — namely, TIAA and CREF. To respond to the growing calls for more options, TIAA-CREF decided to offer a money market account. Doing so, however, meant registering with the Securities and Exchange Commission.

The SEC was not in existence when TIAA was founded, and the pension fund had been set up as an insurance company, to be regulated by the New York State Insurance Department. Thus, SEC rules that regulated other pension providers regarding fund transfers and participants' voting rights did not apply to TIAA-CREF.

When it registered with the SEC in 1985, TIAA-CREF applied for exemptions from these regulations, sparking protests from, among others, Stanford University, the American Association of University Professors and competing investment companies. Public hearings were requested and negotiations between TIAA-CREF and the SEC continued until December 1989.

The agreement reached at that time not only gave CREF participants three new funds to choose from (a money market account, a bond fund and a "social choice" fund), but also gave shareholders voting rights and the right to transfer their funds to competing investment companies if their colleges consented.

In addition, CREF policyholders would also be allowed to receive lump-sum disbursements of their accounts (a right known as cashability) upon retirement or changing jobs, an option that would also require approval by a college's governing board. As for TIAA, policyholders can begin transferring funds in August 1991, but must do so over a 10-year period.

The result of these changes? Basically, more choices.

"Freedom of choice is an important factor," says Morrell. "There are massive investment alternatives for employees to choose from — and competition makes everyone better."

Retirement fund vs. Investment fund

But competition does raise more questions. One point of dispute is whether a retirement fund should be looked upon as

continued on page 41.

Luring Faculty

Increased competition in the college pension fund market bears special significance for New England and the nation at a time when colleges and universities predict increasing difficulty in filling vacant faculty positions.

More than half of America's colleges and universities are already having trouble filling vacant faculty slots, according to *Campus Trends 1990*, a recent survey conducted by the American Council on Education.

In addition, 59 percent of college administrators ranked the hiring and retention of faculty among the top three challenges facing their institutions in the next five years.

To lure qualified faculty from a shrinking pool of applicants, colleges are enhancing their benefits packages. College administrators say a variety of retirement plan options may prove to be an especially important draw for high-caliber faculty.

"As more employees become aware of the [pension] choices that are available elsewhere ... having choices may become a hiring advantage in the marketplace," says Marcia Selz, president of Marketing Matrix, a research organization that has surveyed universities on their retirement plans.

New England — with 263 colleges and universities and an estimated 150,000 college employees — has a major stake in the new market conditions. The region's dismal economic climate and cuts in higher-education funding already have deterred highly sought-after applicants from accepting teaching positions in the area.

Massachusetts Bay Community College's search for nursing faculty last summer attracted about a dozen local applicants, down from nearly 50 three years ago. Massachusetts Bay President Roger Van Winkle blames the decline on the region's economy and constant budget cutbacks that have resulted in layoffs at the college. "People aren't interested in coming to work for a public college in that kind of atmosphere," he says.

ORP needed?

College administrators say Massachusetts public institutions may face a special disadvantage because — unlike those of the other New England states — they offer no optional retirement plan (ORP), such as TIAA-CREF.

ORP contributions are directed to individual accounts rather than to a state's own pension system. The ORP's main advantage is portability: the ability to take retirement savings from one job to another. For academics, who commonly change jobs several times during their careers, an ORP allows them to continue building one retirement fund during their career, rather than starting over every time they change jobs.

> For academics, who commonly change jobs several times during their careers, an ORP allows them to continue building one retirement fund during their career, rather than starting over every time they change jobs.

Virtually all independent colleges and universities and all but nine states offer portable retirement plans for their faculty. In Massachusetts, however, public college employees who come from out of state must leave behind their previous retirement plans and enroll in the state's retirement system, which requires 10 years of participation before employees can receive any benefits.

"The state pension plan is fine for people who spend a career in Massachusetts and retire at age 65," says Thomas M. Jones, vice president for administration and finance at North Adams State College [no relation to TIAA-CREF Chief Financial Officer Thomas W. Jones]. "But I believe we need to offer new hires from out of state the same kind of pension they've got already."

Let the competition begin!

John C. Bogle, chairman of the board of the Vanguard Group of Investment Companies, kept his advice to college administrators at NEBHE's October conference short and sweet: "Save you must!" Bogle cautioned conference attendees to maintain a balanced, diversified investment program — while keeping an eye on costs — and to choose carefully from the many investment options before them. "There were 365 equity mutual funds a decade ago," he said. "Today there are 1,043. Not all of them are desirable ... but educational institutions and educators should have the right to make their own choices — even their own mistakes — as do other investors."

Jones had to stop participating in his TIAA-CREF retirement plan when he came to North Adams from Roger Williams College in the mid-1970s.

Without an ORP, educators may find accepting new teaching positions becomes a costly proposition. According to a recent study published in *Benefits Quarterly*, a faculty member starting a career at $30,000 per year and expecting to work 35 years with 3-percent annual salary growth could lose up to one third of his expected retirement benefits from a single mid-career move.

"If we are to compete regionally and nationwide for top faculty, an ORP is sorely needed," says Randolph Bromery, chancellor of the Massachusetts Board of Regents of Higher Education.

A bill allowing Massachusetts public higher-education employees to enroll in an ORP is in its third year in the state Legislature. Rep. Kevin Blanchette, House chairman of the Joint Public Services Committee and an opponent of the bill, says that allowing current state college employees — who tend to be among the highest-paid state workers — to switch to an alternate plan would draw money out of an already-weak Massachusetts pension system.

"It doesn't make sense to skim the higher-paid state [college] employees out of the pool," he says. "It doesn't make sense to isolate one group of public employees from the rest and offer them a separate pension plan."

Blanchette also believes academics will always be drawn to the Bay State, regardless of the pension benefits offered. "We've always been able to recruit people here. I think we've got enough going for us that that's not a problem at all," he says.

But supporters from business and education associations point to higher education's role in New England's economy, a role that could be compromised if the best talent is deterred by the lack of benefit choices.

"A strong public university system educates and employs our labor pool and infuses much-needed dollars into our struggling state economy," says Gordon N. Oakes, chair of the University of Massachusetts Board of Trustees.

Rep. Kenneth Lemanski, a cosponsor of the ORP bill, agrees. "We have to support our public college system," he says. "We should be able to offer an ORP, and put Massachusetts' higher-education pension benefits on a par with other systems in the Northeast." ❑

Bringing Faculty Home

Think employee benefits and you think health insurance, retirement plans, maybe tuition reimbursement. Now add mortgage assistance to the list.

In their quest for talent, two-thirds of colleges and universities — most of them in high-cost housing markets — offer faculty some kind of housing assistance, according to a survey of 66 higher-education institutions conducted by Cambridge Associates, a Boston research firm.

Dartmouth College — which since 1981 has offered faculty and administrators loans up to $25,000 for home purchases and renovations — recently upped the ante with a $5 million program that allows certain faculty members and administrators to borrow up to $75,000 and defer a portion of the interest until they leave Dartmouth, resell or refinance their homes.

True, a decline in New England real-estate values itself provides some relief for immigrating faculty, but not enough, according to Dartmouth Real Estate Officer Paul Olsen. "Housing prices still are well beyond the reach of the average college faculty member," he says.

BOOK REVIEW

It's My Retirement Money Take Good Care of It

The TIAA-CREF Story

By William C. Greenough
Richard D. Irwin Inc., 1990. 396 pp. $29.95

MELVIN H. BERNSTEIN

If any man deserved to be called "Mr. TIAA-CREF," it was William Greenough.

A Harvard-trained economist who went on to become TIAA-CREF's president, chairman and chief executive officer, Greenough served the company for 38 years before retiring in 1979. He died of a heart attack in late 1989, shortly after finishing his memoir of the company he helped build into a pension industry giant.

It's My Money tells the story of how a small fund, started by philanthropist Andrew Carnegie to provide economic security in retirement for college professors, became the nation's largest pension system. Believing college teaching to be one of the highest but most underpaid professions in our society, Carnegie, in a sense, became the father of higher education's retirement system in 1905, when he contributed $10 million to start a free pension fund for professors.

Yet it was Greenough who, in the early 1950s, pioneered the then-radical innovation of balancing the fixed-income investments of the Teachers Insurance Annuity Association with the advantages of a growth portfolio of common stocks to blunt the effects of inflation. His idea was accepted only after a two-year campaign to win over TIAA's management, who favored the low-risk, steady income approach and New York state regulators, who had jurisdiction over the insurance company. The outcome was the incorporation by special legislative act of the College Retirement Equities Fund in 1952, destined to become the biggest common stock fund in the United States. From that point on, TIAA's low-risk and CREF's growth funds were to be managed by separate but coordinated boards of trustees.

Greenough's story of TIAA-CREF was published just a few months after his death. His well-written history is packed with revealing discussions of economic trends, financial facts and investment insights. *It's My Money* is a most eloquent and straightforward account of how this mega-pension system started and grew to become the premier fund of the entire pension industry. The novel retirement benefits it introduced — such as portability and early vesting — have given colleges and universities valuable bargaining chips to keep talented faculty from the lure of higher salaries in the private sector.

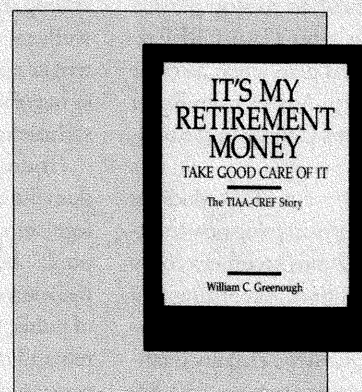
TIAA began in 1918 as a fixed-income pension fund designed for college and university employees. Starting with $1 million in seed money from the Carnegie Corporation, TIAA's assets stood at $44 billion in 1989. Incorporated as an insurance company, the nonprofit TIAA has consistently outperformed top life insurance companies, generating higher earnings at lower costs.

CREF, though started nearly 35 years later, added a dimension to TIAA's retirement system that surpassed all expectations for growth. As Greenough describes it, "never in our wildest dreams did we imagine that, by the end of 1989, CREF would have become a $35 billion common stock fund," serving more than 1 million participants and 4,400 educational institutions. A professor who invested $1,000 in CREF in 1952 saw his investment grow to $47,000 by 1989.

Still, TIAA-CREF's impact goes far beyond campuses. America's colleges and universities not only supply the economy with brainpower and scientific research, but also generate a steady stream of pension savings, in good times and bad, that helps to finance capital formation and corporate growth. Nowhere is this more true than in New England, home of an extraordinary array of private universities participating in the TIAA-CREF retirement system. TIAA-CREF has pumped capital into the New England economy.

Following World War II, TIAA began making real-estate development loans to a young ex-Navy Seabee named Edward DeBartolo, who later went on to become the nation's biggest developer of shopping centers. TIAA also financed many of the 45 shopping centers designed and created by James Rouse, including such prominent architectural sites as the new town of Columbia, Md., and Boston's Quincy Market-Faneuil Hall complex. Industrial parks — housing some of the nations's leading technology companies in areas such as routes 128 and 495 in Massachusetts, King of Prussia in Pennsylvania and California's Silicon Valley — have also benefited from TIAA financing.

By the early 1980s, however, TIAA-CREF's amiable working partnership with higher education had begun to show signs of wear and tear. Critics from the campuses and national education groups began demanding greater flexibility and freedom of



choice in deciding who should manage their retirement funds.

TIAA-CREF's top management, heady with its own success, dug in its heels and became reactive instead of proactive to change. Even Greenough, in retirement, had to admit: "By failing to anticipate or to react effectively to the early requests for change, the stage was set for later dramatic action."

That action came on Aug. 22, 1989, when a Securities and Exchange Commission order resolved the debate, allowing participants to transfer their CREF monies to other retirement companies beginning in 1990. Anyone who is interested in the world of retirement finance or has money invested in TIAA-CREF will profit from reading this book. ❑

Melvin H. Bernstein is a senior fellow with the New England Board of Higher Education and president of The Bernstein Group, a Boston consulting firm.

NEW COMPETITION...
continued from page 38.

just that — a long-term plan used exclusively for retirement — or as an investment fund to be used as the employee sees fit.

According to TIAA-CREF's Executive Vice President John J. McCormack, the answer is simple. "At TIAA-CREF, we know what our answer would be ... it is a retirement fund first and foremost and a retirement fund for the long term."

But others aren't so sure. If the option of cashability allows the employee to receive his retirement savings in one lump sum, then that employee could conceivably do whatever he wants with the money when he receives it. Some institutions contend, however, that if the university is making contributions to an employee's retirement savings, that money should be used exclusively for retirement.

"As far as I'm concerned," says Radcliffe's Morrell, "[the pension fund] belongs to the employee entirely. But if you take the premise that there is a tacit agreement between the employee, the Internal Revenue Service and the employer that that money is set aside for retirement purposes, then I think it is consistent to say to the employee, 'That's how it's going to be used.'

"I personally would oppose lump-sum distributions," he adds.

David J. Rights, president of Rightime Econometrics-Lincoln Investment Planning, disagrees. "The issue is ownership and control," he says. "If you annuitize [as opposed to taking a lump-sum payment], then in essence the insurance company owns your principle and merely doles out the crumbs to you over time."

Squarely on the institution's side of the fence is TIAA-CREF's McCormack. "Institutions have a very real stake in their retirement programs," he says.

It is a sentiment echoed by those college administrators who fear that if employees are allowed to cash out their retirement funds every time they change jobs, they will have spent their pensions long before they reach retirement.

"If you think it's a jungle out there now, wait until those [retired] staff, not just faculty, start pounding on your door after they've lost their money," cautions Ernst Benjamin, general secretary of the American Association of University Professors. "They're absolutely sure it's your fault for letting them do it."

Benjamin says that while a university would bear no legal obligation to support a former faculty member who had squandered his retirement savings, pressure from current faculty and former students would put the university in a difficult position. And with no mandatory retirement, he adds, universities could be faced with a 90-year-old faculty member who is still teaching because he or she never managed to accumulate a sufficient retirement income.

Such ominous predictions, however, are not supported by the experiences of those institutions that already offer transferability and cashability. Johns Hopkins University, for example, has offered cashability to its pension fund participants since 1983 and to date, no one has exercised the option of a full lump-sum payment.

Tufts University began offering alternatives to TIAA-CREF and cashability in 1984 and, according to Executive Vice President and Treasurer Steven Manos, things have gone smoothly. "People tend to be very conservative in what they do with their pension and investments," he says. "We have not seen irrational behavior."

Moreover, colleges and universities do not have to allow 100-percent cashability under the new agreement; instead, they may offer lump-sum payments of a specified percentage of an employee's account, thereby reducing the risk of an employee frittering away a career's savings.

Manos believes that, given the cashout option, most employees would manage their funds responsibly. And while acknowledging that there may be the occasional employee who uses the lump-sum payment to take a trip around the world or buy a summer home, he doesn't think universities should prohibit cashouts to prevent those possibilities.

"These desires might not be wise," he says, "but are we truly in the business of forcing wise decisions?"

Looking ahead: the 1990s

While there's general agreement in academia on what the coming decade will bring — rising tuition, belt-tightening, more faculty retirements and fewer qualified applicants to replace them — the view on Wall Street is much less certain and much harder to predict.

"In the '80s, if you had money it was easy to make more," *Barron's* Mahar says. "In the '90s, it looks like it will be much harder to keep your retirement fund ahead of inflation."

Particularly, Mahar claims, if TIAA-CREF continues to follow the strategies that served it so well in the 1980s. In TIAA, that strategy relied heavily on investing in real estate and mortgages; as for bonds, the strategy was buy and hold to maturity.

"No longer is a retirement plan a nice thing to have. The state of our economy makes it an absolute necessity."

— Fidelity Senior Vice President Thomas T. Bieniek.

But the real estate market of the '90s is not the boom market of the '80s. And while TIAA-CREF puts its mortgage default rate at only 4 percent, real estate may not be the solid-gold guarantee it was 10 years ago.

TIAA's bond portfolio, meanwhile, has been estimated by outside sources to be 15-percent junk. And holding junk to maturity, Mahar says, could backfire. "In the '90s," she says, "sitting on junk could be a painful proposition."

TIAA-CREF denies the 15-percent figure, claiming its percentage of junk bonds is closer to 10 percent. And as for the 'buy and hold' strategy, Chief Financial Officer Thomas W. Jones says that's part of the plan. "For retirement purposes, what one is trying to do is to achieve the superior returns in the market over time while minimizing transaction costs.

"Do we buy and hold? We tend to," Jones says. "Do we sell assets? Yes, we do."

As for keeping a pension fund ahead of inflation, Jones says, "That's precisely the reason why we keep a significant percentage of TIAA's assets in mortgages and real estate — because they're inflation-sensitive."

CREF, meanwhile, is 70-percent indexed, or invested by computer to match the movement of an index, such as Standard & Poor's 500-Stock Index.

Even TIAA-CREF's critics acknowledge that the size of TIAA-CREF made indexing a wise move. Because of the sheer enormity of the fund, every time it tried to buy or sell something, it would make an impact on the market, driving the price up on something it wanted to buy or driving the price down on something it wanted to sell.

"TIAA-CREF is like a big ship," Mahar says. "It's very hard to turn a big ship quickly without making waves that splash all over you."

So CREF was indexed to the S&P; as long as the S&P did well, so did CREF. And in the 1980s, the S&P shot up nine years straight. But unfortunately, those nine years appear to be something of a financial aberration.

"It's never happened before in financial history and this doesn't look like it's shaping up to be the decade where it's going to happen again," says Mahar. "In fact, since January of 1990, the S&P has lost 11 percent and CREF has lost over 13 percent."

To avoid bearing such a heavy impact on the market, Mahar suggests, TIAA-CREF could break up the $36 billion in CREF and lease it out to smaller companies that would actively manage it.

"In the 1990s, it might indeed be greatly preferable to try picking stocks rather than sitting and sinking with the S&P," she says.

What does TIAA-CREF have to say about all this?

"We as managers don't unilaterally decide what investment policy will be," Jones says. "In the case of CREF, [the] finance committee is dominated by outside directors ... and so far, we are very satisfied with the investment results that are being achieved.

"We're not asleep at the switch."

Financial education: a new priority

One of the few things everyone in the college pension fund market agrees on, it seems, is the need to educate employees on the various options now confronting them. Of the 4,400 educational and research institutions that offer TIAA-CREF, about 600 currently offer alternative pension options. And with transfers and cashability now available to TIAA-CREF participants, that number is likely to grow.

"Bringing in alternatives without training (employees) is equivalent to giving them a loaded shotgun," Morrell says.

Adds Robert M. Wilson, Johns Hopkins' vice president for personnel programs, "We learned very early-on the importance of education and communication.

"This education and communication program is, in our judgment, not a burden but a basic responsibility."

But how should colleges go about educating their employees?

Pension providers recommend financial workshops, seminars, brochures and individual counseling from investment experts to ease the transition for campuses planning to offer alternatives to TIAA-CREF.

Marcia Selz, president of Marketing Matrix Inc., says that as a group, college faculty want to know more about their pension options.

"Academicians, by nature, study things carefully," she says. "Employees are interested in what is going on concerning their retirement plans, [but] there is a great deal of reliance on the institution to provide the information they want."

By educating employees on their options, it is hoped that the fiscal imprudence feared by some administrators will be avoided. But education programs may have another benefit as well — better administration and employee relations.

"The education program has been really like magic," says Johns Hopkins' Wilson. "We have discovered that our relationships to our faculty have improved very dramatically." ❑

Jennifer McCauley is a staff writer for Connection.

After the Elections:

New England's winners may face their toughest campaign yet

JOHN O. HARNEY

Now that they've had time to survey New England's balance sheets, winners of last November's elections may long for the rigors of the campaign trail.

Take the case of Bruce Sundlun, Rhode Island attorney, businessman, "outsider" and thanks to 74 percent of the vote, the region's only Democratic governor. While victory was sweet, Sundlun faces many of the problems that doomed Edward DiPrete, the Republican incumbent he trounced at the polls.

Most notably, the Ocean State's fiscal 1991 budget shortfall is pegged at $200 million — 13 percent of the state's relatively small budget. By some estimates, the gap will widen to at least $300 million in fiscal 1992, which begins in July. Standard & Poor's has the state's AA credit rating on "watch."

Sundlun during his campaign advocated a range of innovative educational programs, from modernized vocational education to stepped-up financial aid for adult workers. The new governor's proposed 21st Century College Guarantee — a still-sketchy tuition prepayment plan — even found a place in his inaugural address. But while observers say Sundlun's commitment to improving education remains, his priorities had to change quickly.

"The first thing Bruce wants to do is solve the worst budget crisis in Rhode Island history and the largest budget crisis, by percentage, in the United States," says the governor's communications director David Preston.

Symbolic of the economic and fiscal crisis consuming the region, Sundlun's first major act was to order the temporary closing of 45 Rhode Island banks, credit unions and investment companies whose private deposit insurer appeared headed toward failure.

If misery loves company, Sundlun can look in any direction. In Connecticut, former U.S. Sen. Lowell P. Weicker Jr., a liberal Republican who ran as an independent, captured a governor's seat held by Democrats for 32 of the previous 36 years. Now Weicker and a Democratic Legislature are grappling with a $600 million shortfall for fiscal 1991 — about 9 percent of the state's budget. If the imbalance is carried into fiscal 1992, the shortfall could mushroom to $2.2 billion.

In Massachusetts, antipolitician sentiment was strong enough that gubernatorial candidates endorsed by both major parties were knocked out of the race in the primaries by outsiders who never held elective office: former U.S. Attorney and Assistant U.S. Attorney General William Weld, a Republican, and Boston University President John Silber, a Democrat.

The budget shortfalls — and the election results — are largely the products of a New England economic boom gone bust.

When Weld won, Bay State Republicans had their first statewide victory since Ed Brooke was re-elected to the U.S. Senate in 1972. Though Republicans account for only 14 percent of the state's registered voters, an appeal to the large bloc of independent Massachusetts voters also helped the GOP win several seats in a Legislature that is one-quarter new — enough in the Senate to sustain a Weld veto.

But alas Weld inherits a state with heavy debt and the lowest credit rating in the country. A week into the job, Weld's Secretary of Administration and Finance Peter Nessen warned that the state's 1991 budget shortfall had reached $850 million — and would rise to $1.6 billion next year absent strong fiscal medicine.

Moreover, Weld is presiding over a state government as short on credibility as it is on revenue. It took the new governor about five weeks to appoint his first cabinet member partly because, as the *Boston Globe* lamented, "While politicians and public employees have been subject to derision for decades, this year, in Massachusetts, the poisonous public mood has reduced their standing to the lowest level ever."

In Vermont, Republican Richard Snelling defeated former state Senate President Pro Tem Peter Welch, a Democrat, to reclaim the governor's office he held for four terms ending in 1985. The seasoned public manager is expected to work well with a legislature split nearly evenly between Republicans and Democrats. But the small state faces a big task: eliminating a fiscal 1991 shortfall estimated as high as $70 million. Snelling warns that the shortfall could reach $350 million over the next two fiscal years unless action is taken.

Recession-proof?

The budget shortfalls — and the election results — are largely the products of a New England economic boom gone bust. By the summer of 1990, consumer confidence in the region had dipped to the lowest level ever recorded, based on how consumers (read voters) perceive changes in business conditions, job availability and family income. And for good reason. From Bath Iron Works in Maine to General Dynamics in Connecticut, major New England employers spent much of the year churning out pink slips.

While three miracle-era governors — William O'Neill of Connecticut, Michael Dukakis of Massachusetts and Madeleine Kunin of Vermont — thought better of facing the voters, two incumbents showed recession-proof qualities in November.

In Maine, John McKernan Jr. beat back a challenge from U.S. Rep. Joseph Brennan, the man he replaced in 1987 to become the state's first Republican governor in two decades. But less than two months after his re-election, McKernan was wrestling with a $110 million shortfall and a special session of a feisty Legislature, in which Democrats enjoy their largest-ever majority. After lawmakers soundly defeated McKernan's plan to pluck $83 million from a state retirement fund as part of a budget-balancing package, the governor ordered $40 million in cuts. But soon afterwards, new estimates put the shortfall at $160 million.

In New Hampshire — where voters haven't backed a Democrat for president since Lyndon Johnson — Republican incumbent Judd Gregg defeated former state

Democratic Chairman Joseph Grandmaison. But Gregg began his second term staring down an estimated $110 million shortfall. The state budget has already been cut by 3 percent across the board, with a 9-percent reduction in personnel. Just how bad are things in New Hampshire? In December, four lawmakers called for a state income tax — and they weren't laughed out of Concord.

For Gregg, Snelling and Sundlun, speed counts. Their states are the only ones in the country that limit governors to two-year terms — and 24 months is a short time to reverse rising unemployment, declining income growth and voter anger.

Changed political landscape

Before the elections, New England's six governorships were split evenly between Republicans and Democrats. Now, there are four Republicans, one Democrat and an independent. And while party control of state legislatures was mostly unchanged, the GOP's margin in the New Hampshire Senate shrunk, as did the Democratic lead in the Massachusetts Senate. (See chart.)

November's winners will shape New England's political landscape for a long time. Besides tackling the fiscal challenge, this year they begin the decennial exercise of carving up new congressional districts based on the census. In Massachusetts — which will lose a House seat due to low population growth — Weld immediately urged that redistricting give more power to minority neighborhoods in Boston, which are now split among three gerrymandered districts represented by White congressmen.

Already, New England voters have shaken up their congressional delegation. Vermont's only U.S. House seat — long dominated by Republicans — is now occupied by former Burlington Mayor Bernard Sanders, the first Socialist elected to the House in six decades. Connecticut's Fifth District House seat belongs to former Waterbury Alderman Gary Franks, the first Black Republican elected to the House in about as long. Richard Swett became the first Democrat since 1912 to win New Hampshire's Second District House seat.

"As voters turned away from familiar faces, they were willing to experiment," says political observer Ralph Whitehead Jr., a journalism professor at the University of Massachusetts in Amherst. "They were impatient with the cast of characters that seemed to personify the status quo."

The experimentation had limits. The region's weightiest ballot question would have rolled back two years of Massachusetts tax and fee hikes and cost the state more than $2 billion a year in revenue.

Question 3 sponsors described the initiative as a club to slam over the head of government — and for a while, a majority of Bay Staters agreed. But by November, voters — reveling in the primary defeats of many Beacon Hill "insiders" and fearing Question 3 would have a devastating impact on social services, public higher education, local aid and road and bridge projects — crushed the initiative by a 60-to-40 margin. "The initiative's opponents developed a media campaign that spoke to the minds of the voters, rather than to the viscera," says Whitehead.

> Almost all the region's public campuses have asked for double-digit increases in state funding for fiscal 1992. Fat chance.

Some observers similarly interpreted Weicker's victory in Connecticut as a message not to dismantle state government. "Voters didn't want to go with the extreme tax-cutting mentality ... if they wanted to, Rowland gave them the chance," says David Walsh, political science professor at Southern Connecticut State University. "Instead, they went with somebody who really did have some leadership ability." Former U.S. Rep. John Rowland, a Republican, placed second in the three-way Connecticut governor's race.

That's not to say taxes are in vogue; though Snelling and Weicker kept the door open to tax increases, all the new and returning governors expressed a campaign preference for spending cuts. Expect higher education to take some of those cuts.

Higher ed on a shoestring

Almost all the region's public campuses have asked for double-digit increases in state funding for fiscal 1992. Fat chance.

It's not that the six governors are hostile toward higher education; for the most part, they are supportive. Says former Rhode Island Commissioner of Higher Education Eleanor McMahon, "Sundlun's disposition toward higher education is very positive. But the context in which he is operating is going to make it difficult to translate even vague commitments into positive action in the near future."

Rhode Island already is among only three states that posted a two-year drop in state appropriations for higher education from fiscal 1989 to fiscal 1991. Massachusetts and New Jersey are the others.

Sundlun during the summer said he would try to avoid midyear cuts in campus funding. But his administration does plan to "make sure we get the most for our money in higher education, specifically from the standpoint of eliminating overhead [including] upper-level management," says Preston, the governor's aide.

One popular strategy will be to maximize existing resources. During the campaign, for example, Sundlun proposed that either the University of Rhode Island or Rhode Island College open an "export school" for small businesses. Given budget constraints, the governor now will try to forge a partnership with the existing export center at Bryant College, a private institution.

Even before Snelling's inauguration, all Vermont agencies were asked to consider as a worst-case scenario a 21-percent cut for fiscal 1992. Higher education is likely to fare better. But University of Vermont officials expect Snelling to propose a 1992 appropriation about 5 percent below this year's.

"I think Snelling is very supportive of higher education — as much as the previous administration was, and I hope, more so," says Vermont's Senate Education Committee Chairman Jeb Spaulding. "But no matter who's in there, I think we're going to have some pretty tight times across the board, and I don't think higher education is going to be able to escape untouched."

The problem in Vermont: If historically low state appropriations to public campuses continue to shrink, the state's highest-in-the-nation tuitions will rise further. And though Vermont traditionally directs a relatively large share of its higher-education support to financial aid, spring semester was expected to bring cuts in state grants. "The accessibility and affordability issues are going to become more severe," says Spaulding.

Connecticut officials have weighed cuts in some agencies between 7 percent and 20 percent. Public campuses, however, see reason for optimism. During the campaign, Weicker aides reportedly assured higher-ed lobbyists that the new governor would not make deep cuts in higher education.

The Statehouses: *A Look at Turnover and Party Balance*


Weicker


McKernan


Weld


Gregg


Sundlun


Snelling

GOVERNOR	HOUSE BY PARTY	SENATE BY PARTY	NEW TO HOUSE	NEW TO SENATE	LEGISLATIVE TURNOVER
Connecticut Weicker (I)	89 D 62 R	20 D 16 R	24	9	18%
Maine McKernan (R)	97D 54 R	22 D 13 R	36	8	24%
Massachusetts Weld (R)	121 D 38 R 1 I	24 D 16 R	43	14	28%
New Hampshire Gregg (R)	271 R 127 D 2 I	13 R 11 D	118	10	30%
Rhode Island Sundlun (D)	86 D 24 R	45 D 5 R	18	13	21%
Vermont Snelling (R)	75 R 73 D 2 I	15 R 15 D	34	6	22%

D = Democrat; R = Republican; I = Independent

And educators are impressed by Weicker's appointment of former state Rep. William Cibes Jr. as secretary of the Office of Policy and Management. "Cibes is somebody who understands the value of education services ... and I don't think he'll be out to destroy the public system," says Walsh.

Democrats in the Connecticut Legislature — who have already assailed a special commission's plan to merge public institutions — also are expected to defend higher education.

Maine's McKernan has been lauded as one of the nation's leading governors on education. He is chairman-elect of the Education Commission of the States and chairman of Jobs for America's Graduates, a national job-training group. Under his leadership, Maine improved its funding of higher education faster than any other state in New England. But that kind of growth is on hold.

The University of Maine System has already lost $9.6 million to cuts in the current two-year budget cycle. And in January, the governor and the Legislature proposed slashing $1.6 million more from the System for the six months left in the fiscal year.

It could have been worse. An earlier proposal to cut 15 percent from virtually every state program between January and June would have cost the System $11 million in the current fiscal year and prompted layoffs and midyear tuition hikes. "One campus said it would be easier to shut down for the spring semester than deal with the 15-percent cut," says state Rep. Nathanial J. Crowley, House chair of the state Legislature's Joint Committee on Education.

Still, further belt-tightening could put the System's fiscal 1992 appropriation $13 million below the current level.

In New Hampshire, the fiscal 1991 higher-education appropriation is up a mere 1 percent from fiscal 1989. The damage caused by funding cutbacks, including midyear cuts in 1990, was clear to Senate Education Committee Chairman George Disnard as he toured the state's technical schools. Says Disnard, "In the health fields, students are using equipment that is 25 years old."

While Granite State educators say the new state Senate will support higher education, competition for scarce state dollars is heating up. "Education ought to be viewed as part of the answer to other problems, but it's often viewed as just one more voice at the table trying to get money," says former New Hampshire Gov. Walter Peterson, now president of Franklin Pierce College.

Mass. confusion

Despite the defeat of Question 3 — which the Massachusetts Board of Regents of Higher Education estimated would cost state colleges and universities more than $100 million — Bay State campuses have little to celebrate.

Weld campaigned on a plan to cut $1 billion in state spending. In January, the *Boston Herald* — which broke with its Republican leanings to endorse Silber — offered the new governor a familiar target. In an expanded editorial, the *Herald* asked: "With such a lush variety of private choices available to any student who wants to go to college, do Massachusetts taxpayers really need to maintain the costly glut of state-supported schools?"

The *Herald* editorial writers said proposals to eliminate or consolidate campuses "take on added urgency, of course, in a time when freshman enrollment is plummeting in state colleges." The paper neglected to mention that enrollments have been kept down deliberately as the result of a 20-percent decline in state appropriations for higher education between fiscal 1989 and fiscal 1991 — the steepest two-year drop in any state.

Former U.S. Sen. Paul Tsongas, the Regents chairman, says educators have begun to recognize that the $170 million cut from Massachusetts higher education over the past three years is not going to be recouped. The decline in higher-education funding as a percentage of the Massachusetts budget — from 7.3 percent in 1988 to 4.8 percent in 1991 — is another story.

"Dropping the funding is one thing," says Tsongas. "But dropping the percentage allocated to education is really inexcusable and indefensible. You cannot say education is a

We bought Robbie Silver's student loan.
He's glad we did it, we're glad we did it,
and you should be glad we did it.

Just as Robbie was about to receive his degree in music, an opportunity presented itself that seemed too good to be true. A chance to be an understudy with one of the world's premier symphonies. Robbie knew that it was a great career opportunity, but that it wouldn't pay much.

That was the first chance Robbie had to be glad that his bank had sold his student loan to Sallie Mae. Because Sallie Mae gave him choices, and with those choices the freedom to follow his dreams.

Sallie Mae offered him graduated repayment schedules which lowered his initial monthly payments to fit his understudy's wages.

That choice made all the difference.

When one of your students gets the chance of a lifetime, they'll be glad they chose a bank that sells its student loans to Sallie Mae.

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priority and then cut it as a percentage of the state budget."

The Regents asked Weld for a promise of stable funding in exchange for steps to make campuses more financially self-sufficient. Among them: Let institutions keep all tuition revenue, rather than sending more than two-thirds to the state as the current system dictates. Upgrade campus fundraising efforts. Regionalize institutions, so state universities, colleges and community colleges are able to share resources. Perhaps remove public higher education from daily politics by treating it as an independent authority.

Meanwhile, a transition team memo to Weld recommended closing several state colleges and eliminating $33 million in state scholarships.

Weld's remedy is unclear. Reflecting his opposition to entitlements that serve the middle class, the governor told a Boston television reporter, "Somebody who has all the money in the world should not be receiving a subsidy for public higher education."

But some champions of public higher education are heartened by the former prosecutor's diligence in sounding out educators and business leaders before offering concrete education policies. "Anything done very quickly would have been more ideological than analytical," says Tsongas.

Tsongas also likes Weld's call for broader business representation on the Bay State's education governing boards. Says the Regents chairman, "I think you really have to have a marriage between public higher education and the business community — more businessmen and businesswomen sitting on our boards, more of our presidents and professors sitting on corporate boards."

John Gould, president of the Associated Industries of Massachusetts and member of the Board of Education, says he is optimistic. "I think education generally is going to be recognized. It has to be, because it is crucial to the resurgence we need in this economy," he says.

Business leaders agree, however, that if education is to be a priority, Weld will have to tackle a serious fiscal problem without resorting to the kind of across-the-board cuts ordered in the last year of the Dukakis administration. Says New England Telephone Vice President and Board of Education Chairman James Crain, "In administering cuts across the board, we reordered our priorities without public debate." ◻

John O. Harney is editor of Connection.

The Small College Entrepreneur

Intuition and Innovation in a Fragile Marketplace

JAMES MARTIN AND JAMES E. SAMELS

New England's small independent colleges are facing new demands from diverse constituencies such as international and nontraditional students; competitive, highly mobile faculty members; a new wave of institutional administrators with little or no training in academic management; and alumni who are increasingly reluctant to contribute unless they have leverage in policy decisions.

Presidents of these colleges are acknowledging that without new thinking and opportunistic planning, their campuses risk closing and conversion to condominium complexes or office parks.

If that scenario appears overly dramatic, it already seems too real to colleges suffering enrollment declines for the fourth or fifth straight year and to those facing acquisition by a distant university different in mission and governance.

Nationally, the proportion of students enrolled in independent colleges has dropped from 50 percent in 1950 to 22 percent today. A recent article in the *American Association for Higher Education Bulletin* indicated there are only 200 authentic liberal arts institutions left to serve the American student population.

Independent two-year colleges are particularly fragile. In 1945, there were 333 institutions in this category. By 1988, there were only 89.

Independent two-year colleges are particularly fragile. In 1945, there were 333 institutions in this category. By 1988, there were only 89, according to a recent study reported in *The Community, Technical and Junior College Times.*

As the remaining independent junior colleges struggle to counter declining philanthropy and the shifting preferences of consumer-oriented students and parents, many are turning to a new group of "academic entrepreneurs" who are achieving unconventional results.

Whether chief executive officers, deans or department chairs, these academic entrepreneurs share some important characteristics. More intuitive than data-driven, they view strategic planning as a tool to achieve institutional consensus and to move the institution forward tactically. As one president recently wrote, the academic entrepreneur's job is "not to wish eloquently but to maneuver precisely."

By constantly exposing their colleagues to the realities of the marketplace, entrepreneurs create significant opportunities for the entire institution to achieve a greater wholeness of vision and coherence of purpose.

A few of their strategies follow:

❑ **Image and market niche adjustment:** This option involves an internal reassessment of institutional strengths and weaknesses and a decision to deploy personnel and resources in new, market-sensitive directions. For example, Lasell College recently announced plans to enhance its academic breadth through an intergenerational project in which a campus-based later life-care community will serve an aging, residential population, while providing an additional resource for curriculum development.

Endicott College has extended the strengths of its fine arts and art-education majors to develop new bachelor's degree programs in commercial art, retailing and design. Since 1985, Endicott — which has remained a single-sex college in the highly competitive Eastern Massachusetts market — has seen its enrollment rise from 525 to 805 students.

The Katharine Gibbs School, meanwhile, has undertaken plans to revise its charter and seek junior college status. The school already has authority to grant associate's degrees; its decision is as much an academic image enhancement as a degree-elevation strategy.

❑ **Revenue diversification:** If carefully created, prudently managed and skillfully tax-planned, there is almost no limit to the scope of "educationally related for-profit businesses" that independent colleges may operate.

Just a few of the revenue-diversification strategies recently developed by two-year private colleges throughout New England include: Champlain College's software-development company; Newbury College's banquet and catering service; Lasell's laboratory preschool and on-campus bed and breakfast; Dean Junior College's conference and student center facility; and Mount Ida College's summer camp, laboratory preschool and Naples Institute Academic Conference Facility in Florida. Mount Ida also now operates the National Resource Center for Death Education, which provides seminars and library resources for a national network of health-care and funeral service professionals and for students who will pursue a planned baccalaureate degree in Bereavement Education.

Emerson College recently expanded its educational and cultural presence in California and Europe by opening satellite campuses in Los Angeles and Holland dedicated to communications and the performing arts.

In the coming decade, greater numbers of small independents will also explore options such as operating health-care facilities, office parks and health clubs, as well as pooling assets in tax-exempt bonds or marketing trademark name licenses.

❑ **Degree elevation:** Several New England two-year colleges have sought bachelor's degree-granting status, including Bradford, Colby-Sawyer, Pine Manor and Westbrook in the traditional four-year model; and Bay Path, Champlain, Endicott, Lasell and Mount Ida in the new Two-Plus-Two academic structure, whereby students earn an associate's degree and have the option to proceed through one of several bachelor's degree programs.

In addition, Dean Junior, Hesser and Newbury colleges have recently undertaken serious examinations of their missions by considering an array of options including but not limited to Two-Plus-Two bachelor's degrees. Both forms of degree elevation have been studied as methods to enhance mission, develop faculty, increase alumni support and raise institutional profiles and reputations. In September 1990, the first Compact of New England Private Two-Plus-Two Colleges was formed.

❑ **School-college partnerships:** The New England Association of Schools and Colleges is the only regional accrediting agency in the United States to staff a full-time Office of School-College Relations. A growing number of small independent colleges are developing partnerships with local school systems. These dynamic institutional combinations provide both student and faculty development opportunities beyond the abilities of the individual partners, while serving as vehicles to encourage the matriculation of participating high-school graduates at member colleges.

Recent effective partnerships have been forged between the New Haven public schools and Albertus Magnus College, and among the Newton Public Schools, Aquinas College and five other Newton-area institutions.

❑ **Institutional merger:** Moving beyond the traditional stereotype of the bankruptcy-bailout merger model — characterized by two weakened institutions joining forces — Mount Ida College has employed a mission-complementary, mutual-growth approach to academic development in the past four years by merging with Chamberlayne Junior College, the Coyne School of Technical Electricity and the New England Institute of Funeral Service Education. From the outset, all four institutions believed merging would enhance their individual missions beyond that which would have been possible as freestanding colleges. In each case, Mount Ida's Two-Plus-Two academic structure accommodated the new associate's degree-granting institution which moved to its campus. The combined institution has more than doubled the size of its faculty and student populations and tripled its alumni pool.

Becker College recently merged with the former Leicester Junior College, permitting both institutions to continue their liberal arts and vocational-education traditions under a consolidated board of trustees and executive leadership team. In another innovative model, Teikyo University of Tokyo affiliated with Post College in New London in 1990 to form Teikyo Post University.

❑ **Coeducation** During the past three years, Colby-Sawyer, Marian Court and Wheaton have accepted males into their first-year classes. Only 30 years ago, there were 300 women's colleges nationally; today, there are 94, with 21 in New England. Choosing to end a long and proud history of single-sex education is not advisable for all institutions. Bay Path, Endicott, Lasell and Pine Manor all considered the option and decided to retain their original missions; however, a steadily increasing number of colleges appear to be realizing the benefits of, as Wheaton states it, "educating women and men together for partnership." ❑

James Martin and James E. Samels are founders of the Samels Group, a Massachusetts higher-education consulting firm. Martin is vice president for academic affairs at Mount Ida College. Samels is assistant professor at the University of Lowell's College of Management Science.

International Internships: The Babson Experience

ROBERT J. CUNNINGHAM

The center of gravity has shifted in the world, and it is no longer possible to find the fulcrum. The Pax Americana has given way to a tri-regional dynamism focused in Central Europe and the South China Sea, with North America perhaps lagging behind in the late 1990s as the potential cheap labor, cultural colony of its trading partners.

Americans, meanwhile, are dimly aware of the changing world around them. At very fundamental levels of education, business, aesthetics, governance and day-to-day life, Americans know less about the world than their socioeconomic peers in other countries. We have always been too parochial, and now it has begun to hurt. We are competing badly in the world, because we do not understand the world as well as our competitors, who for so long have been more outward looking.

Just as other countries looked to us as they matured, we now need to look to them, not to be charmed, but to be informed and enriched. It is we Americans who now run the risk of becoming quaint and irrelevant.

We need to work more on global awareness in all its components, not only in the classroom but also in the field. A mentor of mine, Rufus Miles, is the acknowledged author of the maxim: "Where you stand depends on where you sit." At Babson College, an increasing number of MBA graduate students have the opportunity to "sit" overseas and execute professional assignments through the college's International Management Internship Program (IMIP). The experience does indeed alter their "stands."

Mini-consultancies

Under the IMIP, Babson sends 40 to 50 of its mid-program MBA students abroad each year to complete specific, structured "mini-consultancies" with regional and multinational companies.

In 1990, Babson interns worked in Australia, England, France, Germany, Hong Kong, Northern Ireland, Japan, Scotland, Spain, Switzerland, the Netherlands and Venezuela. They worked in a variety of industries, from banking to pharmaceuticals, from economic development to utilities management.

The program works this way: Preparing under faculty supervision during the spring semester, the interns work on their projects over the summer, submit both written and oral presentations to their corporate sponsors and return to Babson. Interns are graded on their performance, and obtain six semester hours of academic credit. Interns receive no compensation. Instead, corporate sponsors provide a modest contribution to Babson to defray a portion of the program's costs. The college, in turn, provides round-trip transportation and lodging and meals with a host country family for each intern.

In the fall, students apply for the IMIP and are interviewed by the staff of Babson's Office of International Programs and faculty members. The interview team seeks the qualities required by any consulting organization: intelligence, energy, flexibility, creativity and maturity. But international projects also require language skills and cross-cultural sensitivity — an ability to see other business approaches as different, not necessarily superior or inferior to the "American way." The interview filter is a real one; not every graduate student passes muster.

Successful applicants are assigned to the "consultant pool" and await notice of their match against the portfolio of corporate projects assembled by the Office of International Programs during the fall.

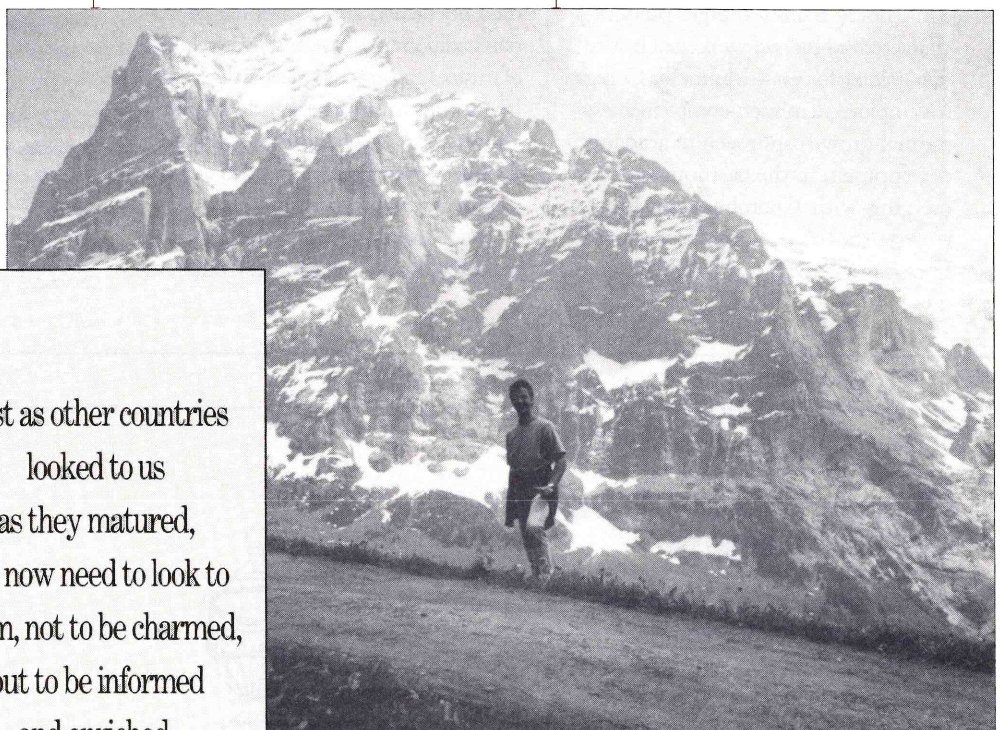


Photo courtesy of Babson College.

Kevin Fox was a Babson intern with Hoffmann LaRoche in Basel, Switzerland in the summer of 1989. After Fox earned his MBA, the major pharmaceutical firm offered him a full-time job — and he took it.

Just as other countries looked to us as they matured, we now need to look to them, not to be charmed, but to be informed and enriched.

In late winter, MBA students are assigned specific projects and provided with a Babson faculty "project mentor." The project mentor assists the intern in sharpening an approach to the project and suggests specific background information and research. The mentor also assigns the intern a preparation paper to provide a focused headstart on the assignment, and assists in initiating contact with the intern's corporate supervisor to start the consulting relationship on a professional basis.

Faculty mentors also monitor the quality of internship projects. This "quality control" role is important both to the long-term success of Babson's relationships with its sponsors and to the academic process. Indeed, the IMIP accounts for 10 percent of the MBA academic experience of students who complete the program.

To support the faculty's role, workshops in both oral and written expression are made available to the students at their discretion. It's not that the students need remedial assistance. More to the point, all executives must hone their presentation skills to make sure what they communicate is not obscured by the manner in which they present it. In addition, Babson's Center for Language and Culture provides cross-cultural orientations and language instruction to all interns.

The internships are not just for American students joining European or Asian companies. Babson's graduate student body includes citizens of 30 foreign countries. The IMIP builds upon this international resource to produce an interesting mix of intern origin and consulting assignment.

In the past two years, for example, a Dutch citizen developed the marketing plan for an important parcel of prime beachfront in the Dominican Republic; an Indian graduate student created cash-flow models for a large international consulting house in England; and a British student performed a market analysis of new therapeutic agents for a pharmaceutical firm in Milan.

History of the IMIP

The IMIP — now in its 13th year — began in 1979 with 15 interns in Switzerland. The 1989-90 program involved 42 interns in 12 countries — eight European countries, Australia, Hong Kong, Japan and Venezuela. In the past 12 years, 307 Babson graduate students have completed professional projects for 118 companies in 20 countries. For 1990-91, 84 MBA students have applied to the program.

Given a perennial scarcity of travel funds, time and professional resources, a tight geographic coverage of the world is the most efficient approach to an international internship program. But a highly concentrated program limits interns' area opportunities, fails to address the specific linguistic and cultural skills of the MBA student base and does not reflect the diverse business world in which the interns will operate after graduation. The tendency then has been to expand geographic coverage, moving from a very strong European base to a more balanced distribution of interns among Europe, Australasia and South America. One IMIP objective for 1991 is to expand to more countries in the Far East and South America.

Corporate sponsors

IMIP corporate sponsors are central to the program's success. They identify challenging projects, find managers to address the supervisory requirements of a "short-term consultant," and compensate Babson for some expenses of the program.

While a company sponsoring multiple internships in a given year may be more skilled organizationally in developing and overseeing the most productive projects for both the company and the interns, the program is generally healthier when internships are distributed over the broadest possible number of sponsors. Our largest corporate sponsorship pool was 35 sponsors in 1989. The 1991 pool should be somewhat larger.

The number of corporations who renew their sponsorship each year is both an indicator of the esteem in which they hold the program and a key determinant of the level of internships attainable in the following year. The "transaction costs" of cultivating new IMIP clients are high (in terms of client education, travel costs and staff time), and a substantial obstacle to program expansion. Equally important, repeat sponsors have a good understanding of the program cycle and the level of supervision required, and a strong degree of confidence in the "Babson product" as represented by the interns with whom they have worked.

The increase in the repeat client base over the past four years (from eight sponsors in 1986 to 18 in 1990) is a measure of the program's arrival as an effort with institutional continuity. More importantly, it documents the successful contributions of Babson interns to their sponsoring organizations.

The immediate "products" of every IMIP project are written and oral presentations to corporate management. The report is the most tangible manifestation of the intern's work, and the measuring rod, along with the sponsor's evaluation, of the intern's performance. The typical report is a high-quality professional volume, often exceeding 70 pages. But the report is secondary to the intern's impact on the company. The key question: Has the intern made a difference?

Recently, one student completed a portfolio analysis that was immediately published by the intern's host bank; another installed a spreadsheet cashflow model and trained a staff of 20 senior consultants to use the model in their consulting practice; a third developed a highly innovative debt-swap technique for assisting a Third World brokerage firm in financing new business start-ups. One nationwide retailer asked its intern to prepare a financial model to guide corporate investment decisions regarding new branch investments. The model has been implemented, somewhat to the consternation of formerly independent managers, but to the delight of headquarters.

Many Babson interns have been offered full-time positions with their corporate sponsors, including nine of the 42 interns among the class of 1990. Many more receive international job offers stimulated primarily by their IMIP track records.

A variety of benefits

The IMIP's affiliations abroad have introduced Babson to new clientele for all of the college's education programs, from undergraduate and MBA programs to executive education services. In effect, the IMIP has been a flagship for Babson's international mission and position. The program builds faculty exposure internationally and introduces Babson to companies, executives and academic institutions abroad. It reinforces Babson's strategic mission in the training of international managers for the global challenges intrinsic to any manager's future success.

For interns and sponsors, the IMIP is a "win-win" operation: Sponsors gain energetic professionals with tangible skills to apply to urgent problems. The interns convey current management technique and skills to the company, and during preparation work, uncover information bearing on their project that either could not be ferreted out easily by the company itself, or simply required the dedicated attention of an intelligent and energetic consultant.

The women among the interns (of 1990's 42 interns, 17 were women) provide an additional benefit for the companies. Much of the world lags behind the United States in the advancement of women into professional ranks. Babson's female interns provide important "role models" for European, Asian, South American and Australian companies, demonstrating by their on-the-job professional performance the positive outcomes of workforce equity.

For those interns without strong previous work experience, the consultancies provide an escape from the familiar conundrum: To get experience, one must have already had experience. The internships provide solid and persuasive evidence to future employers: a complete, independent professional assignment with a tangible product and outcome.

Beyond the direct benefits to one's resume, however, are the more substantial values of an international work experience. One summer does not make Babson interns cosmopolitan aficionados of international commerce, but they do more closely approach that posture than the majority of their MBA peers. They learn to become relatively comfortable international business professionals, a positioning still all too scarce in global commerce. They also become more confident travelers and better world citizens.

Once a nice "extra," global business knowledge and experience today is essential to corporate survival. The new manager must not just learn different skills — he or she must learn more and become more worldly. ❑

Robert J. Cunningham is director of international programs at Babson College.

"Nothing is going to stop me." Repeating that mantra is a key to surviving and succeeding on predominantly White campuses, according to Keynote speaker Charles Desmond, vice chancellor of student affairs at the University of Massachusetts-Boston.

New England Student Forum

A Day for Information and Inspiration

More than 300 Black and Hispanic student leaders from throughout New England converged on the Massachusetts Institute of Technology in October to meet with 30 of the region's distinguished Black and Hispanic faculty members and college administrators.

The New England Student Forum — sponsored by the New England Board of Higher Education — aimed to encourage the region's students of color to complete advanced studies and consider teaching careers.

Student participants at the forum ranged from high-school juniors to Ph.D. candidates. College students — undergraduate and graduate — were nominated by their academic deans. Participating high-school students — most of them Upward Bound students — were chosen by the New England Association of Educational Opportunity Program Personnel (NEAEOPP).

The forum came as efforts to make New England higher education more responsive to minorities appear to be moving at an excruciatingly slow place. Black and Hispanic college enrollment has risen primarily at public campuses — and only modestly. The number of degrees actually granted to Blacks and Hispanics — particularly at the graduate level — remains distressingly low. For example, in 1988-89, New England public and independent universities awarded 372 doctorates in engineering. But of the U.S. citizens or permanent residents who received the degrees, only one was Black and one was Hispanic.

New England college faculties also remain disproportionately White; just three of the 60 tenured faculty members at Harvard Law School are Black. And several campuses have been stung by reports of racial harassment.

"For Blacks and Hispanics, the campus experience in New England can be one of isolation and frustration. Working together in forums like this, we begin to create a more hospitable climate in which students of color can succeed," said Edgar Smith, an associate professor of biochemistry at the University of Massachusetts Medical School.

Sponsors say they believe students left the forum prepared to build wider networks with peers and community leaders when they returned home.

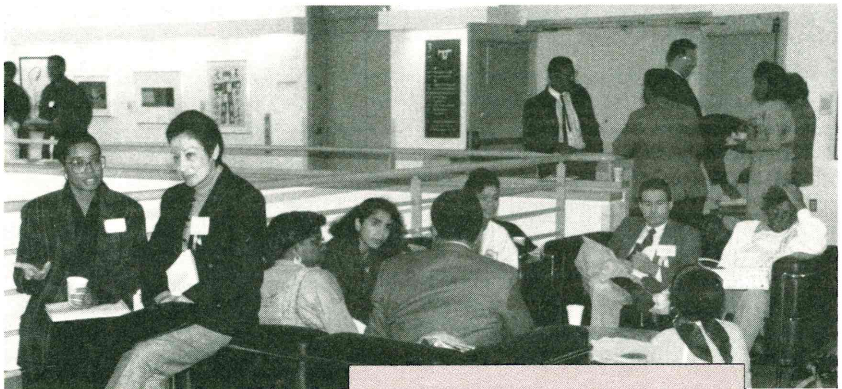
"The forum provided students with a much-needed regional support system as they pursue their studies on New England's predominantly White campuses," said Smith. "As role models, we can serve as sources of inspiration and information. And the students, chosen for their leadership abilities, bring what they learn about network-building back to their communities."

Panel discussions focused on key issues for the region's Black and Hispanic students, such as moving from a community college to a four-year institution; preparing for careers in math, science and engineering; and securing "mentors" in undergraduate and graduate school.

A high-school student's comment suggests the level of energy and commitment felt throughout the forum: "I've never been in a room with so many folks getting their doctorates. I didn't know they existed. I'm proud of my people."

NEBHE cosponsored the forum as part of its Equity and Pluralism Action Program. *Equity and Pluralism* is the 1989 benchmark NEBHE report that revealed major barriers for Blacks and Hispanics on New England campuses, and offered recommendations to ensure greater participation and success among Blacks and Hispanics at the region's colleges and universities and in the educated workforce.

Other forum co-sponsors included NEAEOPP and the Greater Boston Inter-University Council. The forum was underwritten by a variety of New England corporations and foundations. □



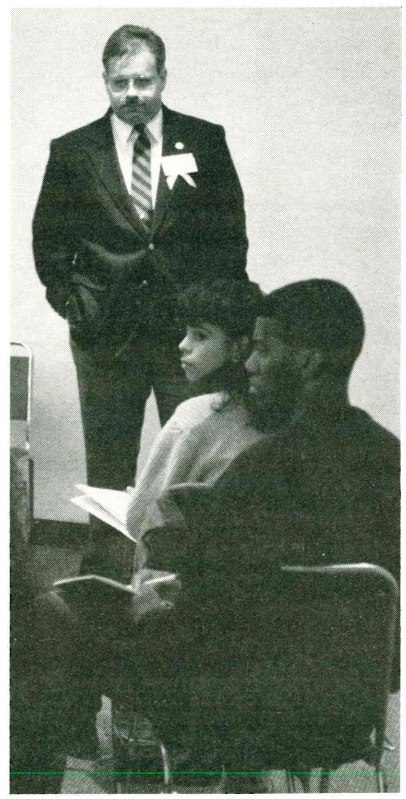
Building Networks *Forum role models Kyrsis Rodriguez (second from left), professor and science department chair at Roxbury Community College and Eduardo Bejar (seated second from right), assistant professor of Spanish at Middlebury College, urge students to build wider networks with peers and community leaders when they return home.*

Teach! *Dr. Joan Reede (center) of Harvard Medical School and Children's Hospital in Boston urges students to consider teaching. Front row from left: Annye Nichols, associate professor of nursing at Rivier College and St. Joseph's Hospital in New Hampshire; Lela Morgan, chair of allied health at the Community College of Rhode Island; and Reede.*

Purposes of the Forum

- Begin building a regionwide supportive network for Black and Hispanic students in New England, so students at various educational levels can befriend and inspire one another — and so New England will become a more appealing and hospitable place to study, settle and work.
- Provide distinguished Black and Hispanic faculty role models who will encourage students to complete graduate/professional studies and consider teaching at the collegiate or pre-collegiate level.
- Lay the groundwork for local and statewide student support networks in the six New England states, so students — working with local and state education, business and government leaders — can reach out to a greater number of Black and Hispanic students and faculty.

Role reversal? *Brenda Domingo, a recent graduate of the Mass. Pre-Engineering Program — an enrichment program for minority students in grades 7 through 12 — describes her award-winning project to forum role model Reginald Amory, professor of civil engineering at Northeastern University. Domingo is now a first-year engineering student at Boston University.*



Good teachers listen carefully *Proving it is Peter Rosa, co-chair of NEBHE's Advisory Task Force on Equity and Pluralism and a founder of the Connecticut Association of Latin Americans in Higher Education.*

Photos by Barry Hetherington.

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