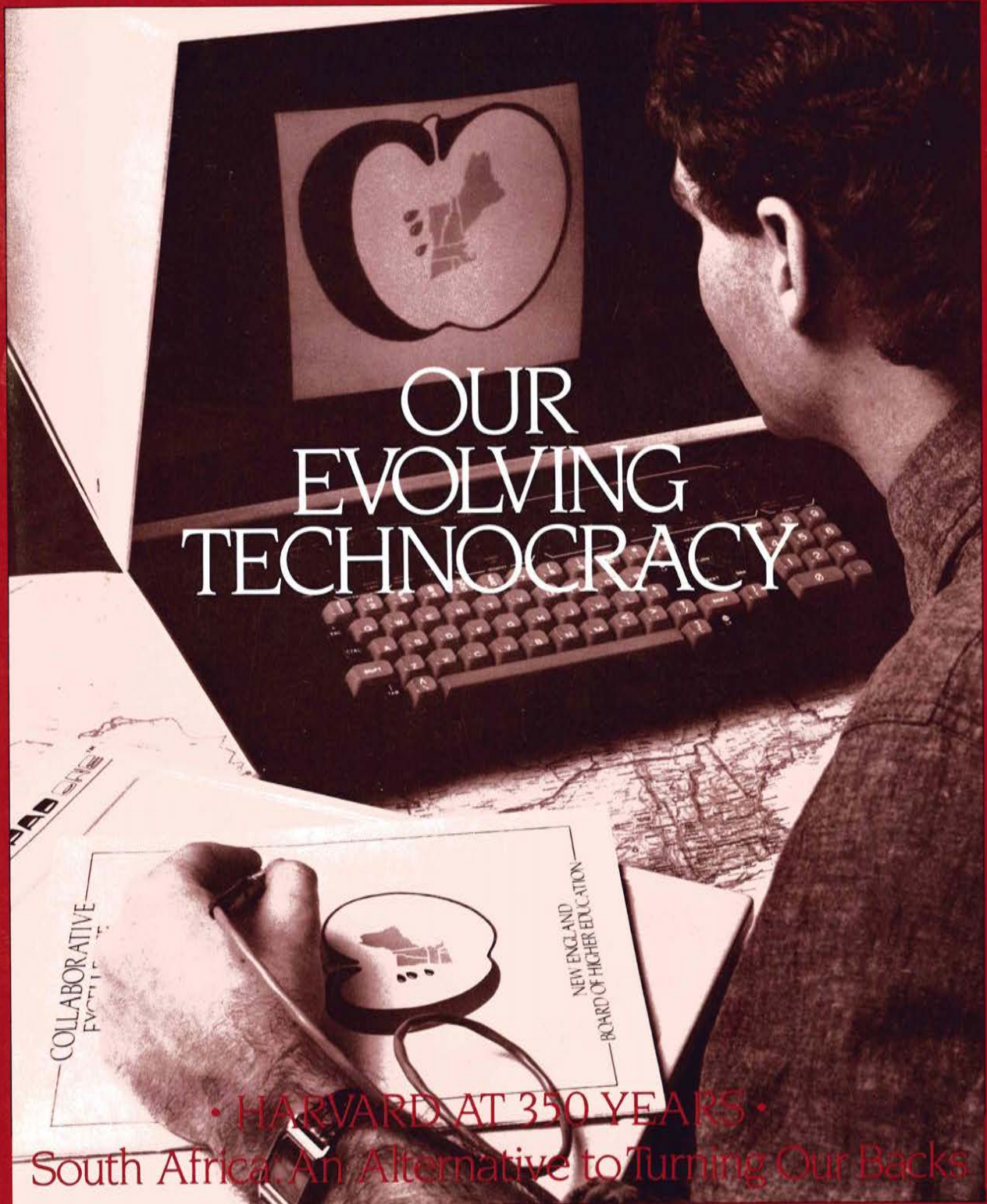


VOLUME I, ISSUE I • SPRING 1986

# CONNECTION

NEW ENGLAND'S JOURNAL OF HIGHER EDUCATION



## OUR EVOLVING TECHNOCRACY

• HARVARD AT 350 YEARS •  
South Africa: An Alternative to Turning Our Backs



# At Massachusetts, the sky is no longer the limit.

## It's the threshold.

*"... that higher education be more widely disseminated . . ."*

The dream of Senator Justin S. Morrill, father of the 1862 Land Grant Act, continues to be realized at the University of Massachusetts at Amherst, where 1986 saw new technology again expand the horizons of learning and strengthen the ties linking public higher education and private enterprise.

Through the National Technological University, a new consortium joining Massachusetts and nineteen other U.S. universities, the University of Massachusetts at Amherst is now broadcasting graduate engineering courses by satellite to working

engineers at subscribing companies across the nation.

Massachusetts and five other universities are originating the satellite transmissions, which can be seen live in an interactive mode or taped by the company for later viewing.

Support for the NTU program is by federal grant and by the personal commitment of resident faculty at the participating universities. Planned are expanded transmissions of courses in business and other disciplines.

At Massachusetts, the sky is no longer the limit. It's the threshold.

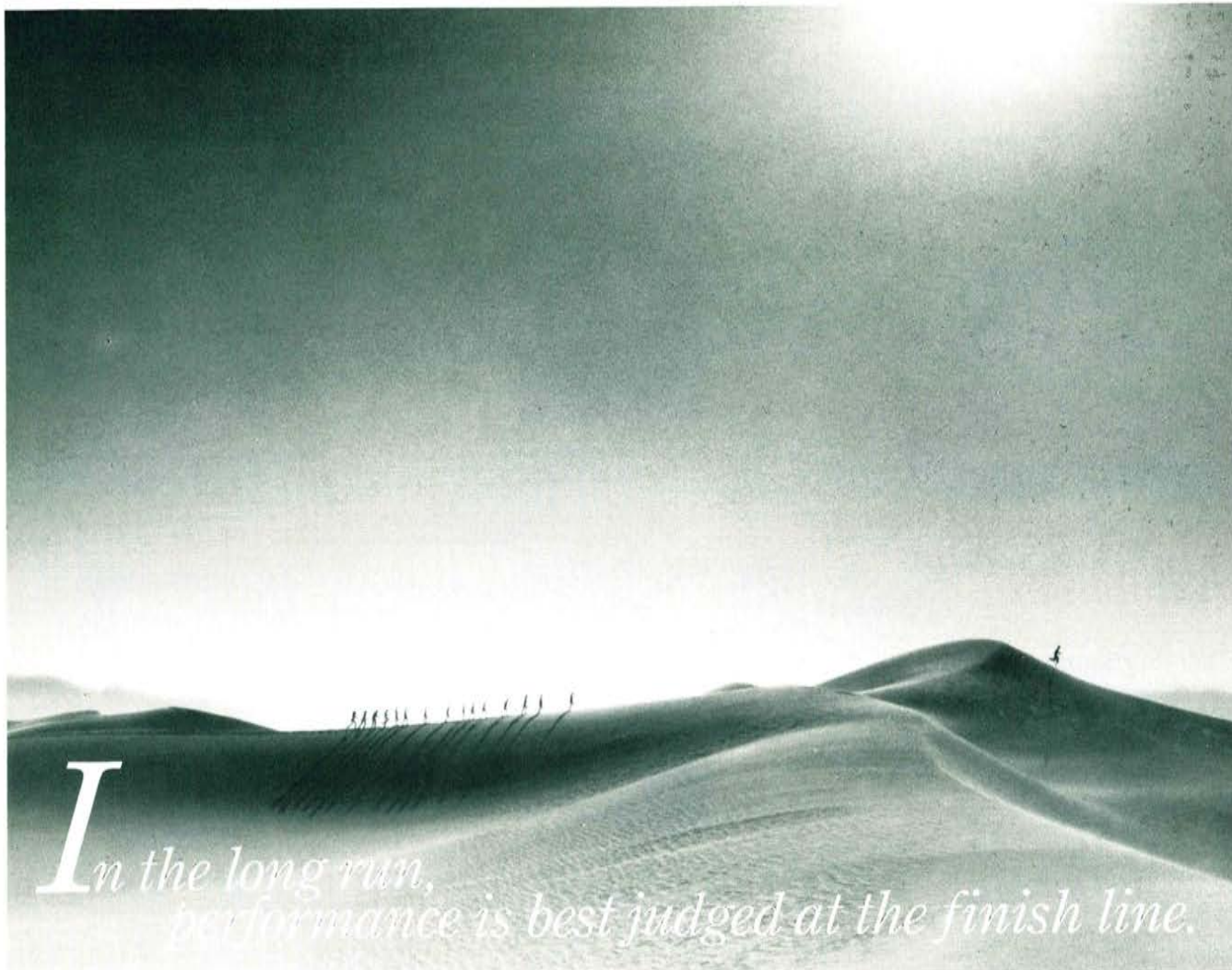


# The University of Massachusetts at Amherst

Joseph Duffey, Chancellor

David Knapp, President, University of Massachusetts





*In the long run,  
performance is best judged at the finish line.*

**T**he strategy for running the marathon is vastly different than for the 100-yard dash. A successful pension fund has a different investment strategy, too. Far different than the quick return, end-of-quarter performance goals of many investment funds.

While many financial service companies are racing to offer higher risk investments with the hope of higher returns, TIAA and CREF continue to achieve steady growth with broadly diversified portfolios of retirement-oriented investments.

This balanced, long-term investment philosophy is the foundation for building lifetime retirement incomes.

Maintaining the highest yields over 40 years would be comparable to maintaining the speed of the 100-yard dash over the 26-plus miles of the marathon. Highly unlikely.

The key to successful retirement funding is consistency over long time periods, because the investments must provide annuity payments throughout a staff member's entire retired life. A very real reason why over 100,000 retired educators enjoy the rewards of having participated in a TIAA-CREF retirement plan.

When the results are in at retirement, you will find that TIAA-CREF retirees are far ahead.

Send for a free copy of our recent survey among staff members retired from educational institutions. Simply write on your letterhead.

***TIAA-CREF. You can count on us today...  
and for tomorrow.***



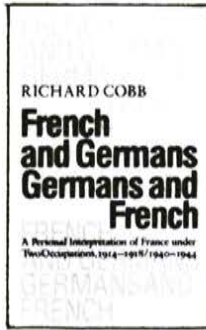
**Teachers Insurance and Annuity Association  
College Retirement Equities Fund**

730 Third Avenue, New York, NY 10017



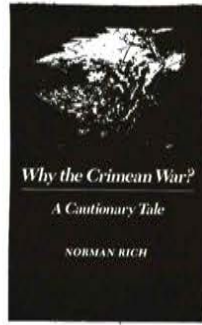
# UNIVERSITY PRESS OF NEW ENGLAND

Brandeis University



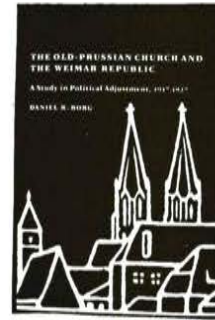
"A splendid book for comprehending humankind"—*The Economist*

Brown University



"Diplomatic history of a wholly superior sort"—George Kennan

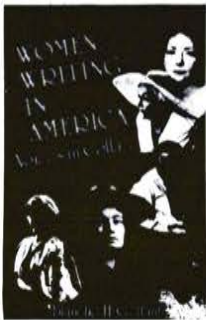
Clark University



"A fine contribution to the historiography on Weimar"—*Canadian Journal of History*

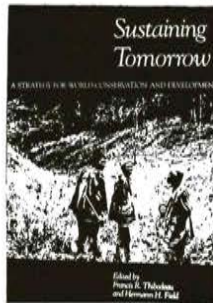
## A consortium of nine institutions combining resources

Dartmouth College



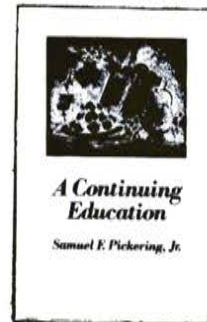
"Feminist criticism at its unpolemical and illuminating best"—*Publishers Weekly*

Tufts University



"I highly recommend it"—Russell Peterson, President, National Audubon Society

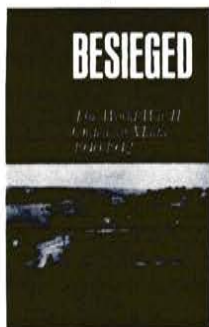
University of Connecticut



"Witty, wise, perceptive, and humane . . . not to be missed"—*Booklist*

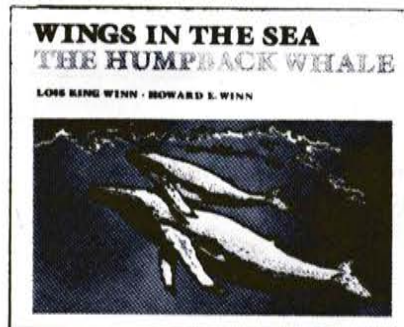
## to translate faculty research into fine published books

University of New Hampshire



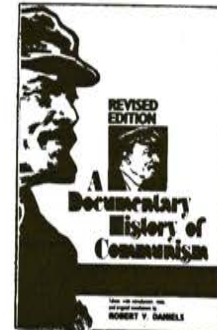
"Deserves a wide audience"—*Islands*

University of Rhode Island



"A true gem"—*Whalewatcher*  
A Dolphin Book Club selection

University of Vermont



"A very useful and much appreciated work"—Adam Ulam



For a complete catalogue of our publications write to

University Press of New England • 3 Lebanon Street • Hanover, NH 03755





## DIRECTLY SPEAKING

by John C. Hoy,  
President, New England Board of Higher Education

This charter issue marks the first publication of *Connection*—*New England's Journal of Higher Education* as a magazine. We have retained the name *Connection* because it is our link to NEBHE's widely recognized newsletter of the same name. We trust that you will find even more enjoyment in the pages of the expanded journal, which will maintain our news orientation. *Connection* will focus on the diverse interactions of higher education and economic development in New England during a period of significant cultural and economic resurgence.

I am delighted to report that we have had a generous and gratifying response to the value of advertising in *Connection* from the region's business, academic and publishing industries. We appreciate their support and confidence, and only regret that the charter issue could not accept all the advertising contracts received. We will accommodate our colleagues in the next issue.

You'll find some new features in our news columns. In addition to the stories you might expect on people and appointments, we'll be running a "City Spotlight," focusing in this issue on Portland and its remarkable economic miracle, an "outstanding New Englander" column; and a calendar of significant academic events in the region and across the U.S. We'll continue to draw our coverage primarily from among New England's academic, business and legislative leaders. Three of those contributors appear in this issue: David Beaubien, chairman of the Massachusetts Board of Regents and senior vice president of EG&G Corporation; Kent Halstead, resident economist with the United States Department of Education; and Lawrence O'Toole, president of the New England Education Loan Marketing Association (NELLIE MAE). NEBHE senior fellow Melvin Bernstein, who heads his own strategic financial planning group, writes on higher education and the state, and explores new linkages being forged among state legislatures, corporations, and the universities to further economic development partnerships.

We are still shaping the mandate to our Commission on Legal Education and Legal Practice and the Economy of New England. Our project director, Thomas C. Fischer, former dean and now professor of Law at New England School of Law, reveals the underlying issues the Commission will explore in behalf of the region's law schools.

Our ongoing Commission on Academic Health Centers and the Economy of New England, chaired by James M. Howell, senior vice president and chief economist of the Bank of Boston, has developed an agenda unmatched in the nation. The Commission seeks to assess the complex issues related to the financing, competitive strength, and future development of academic health centers and biomedical enterprises in the region. Dr. Howell says the Commission will explore the economic health of the health-science industry in New England and report on its findings, which we hope will suggest where we ought to be in the year 2000.

Americans, especially New Englanders, complain about rising college costs, yet increasing numbers hope to complete additional schooling, as is revealed in the poll taken for us by the Opinion Research Corporation of Princeton, New Jersey. The poll shows that New Englanders take the lead in supporting federal assistance for higher education, medical research and needy college students.

We are very pleased and gratified by the response to our NEBHE South African Scholarship initiative. Twenty-nine New England colleges have contributed 38 scholarships, amounting to \$320,000, to help defray room and board expenses for non-white students at South African universities. The media have been giving this story good coverage, and we bring it to you in this issue.

In our "Washington and Beyond" column, NEBHE columnist and former *Boston Herald and Record American* reporter Michael J. Bennett looks at the "Big Chill" effect on higher education as Gramm-Rudman, the Higher Education Reauthorization Act, and tax reform interact in a confusing political climate.

*Connection* is a major undertaking for the New England Board of Higher Education. Our staff writers and contributors are going after the tough issues facing higher education and the economy of New England in the eighties and nineties. And we intend to shape a major part of the agenda with your counsel. To help us do that, we must hear from you. Use our "Correspondence" section to tell us what pleases you and what doesn't. *Connection* should become a lively forum for the exchange of stimulating ideas. That's the only way we can keep our connection with you productive. We seek your support and commitment to making the scope of New England's knowledge-intensive future more fully understood at home and abroad. ■





# At Your Service



A newspaper is many things to many people. For some, it's the headlines, commentary, or sports pages; for others, it's the comics, feature stories, or book reviews. For most people, though, it's a daily companion, a primary source of news and information, which keeps them in close touch with the world around them. The Boston Globe is that kind of newspaper.

For more than a century, the Globe has been informing and entertaining the people of New England. But a good newspaper should do more than just compile a daily record of world, national, and local events. A good newspaper should be an active leader in its community. The Globe is that kind of newspaper, too.

In its role as a responsible corporate citizen, the Globe goes far beyond its daily pages of newsprint. It tries to be a positive force in the community – a teacher and leader – by sponsoring many public affairs programs, particularly for young people who will be our leaders of tomorrow. The Globe is proud to originate and sponsor these programs, with the hope they will help to improve the quality of life for all New Englanders.

- 
- THE BOSTON GLOBE BOOK FESTIVAL • THE BOSTON GLOBE JAZZ AND HERITAGE FESTIVAL • NEWSPAPER IN THE CLASSROOM • THE BOSTON GLOBE JOURNALISM INSTITUTE • THE BOSTON GLOBE ALL-SCHOLASTIC SPORTS AWARDS • THE BOSTON GLOBE SOCCER CLINICS • THE BOSTON GLOBE/JOHN SMITH SIX-ON-SIX SOCCER TOURNAMENT • THE BOSTON GLOBE PRE-SEASON SKI SHOWS AND ON-THE-SNOW SKI CLINICS • THE BOSTON GLOBE-HORN BOOK AWARDS (CHILDREN'S LITERATURE) • THE L. L. WINSHIP BOOK AWARD • THE DALTON/BARRY/NASON SPORTS TROPHIES • THE BOSTON GLOBE SPEAKERS BUREAU • THE MEN'S AND WOMEN'S GOLF TOURNAMENTS OF CLUB CHAMPIONS • THE CYO YOUTH GOLF TOURNAMENT • THE BOSTON GLOBE ANNUAL PHOTOGRAPHY CONTEST • THE MASSACHUSETTS HIGH SCHOOL DRAMA FESTIVAL • THE MASSACHUSETTS STATE SCIENCE FAIR • THE BOSTON GLOBE SCHOLASTIC ART AWARDS • BOSTON GLOBE PLANT TOURS • THE J. EDWARD FITZGERALD AWARD FOR PHOTOJOURNALISM •

## The Boston Globe

For information on any of these programs, please write to  
The Boston Globe, Public Affairs Department, Boston, MA 02107.  
Or call the Globe at (617) 929-2637.



# CONNECTION

NEW ENGLAND'S JOURNAL OF HIGHER EDUCATION

## TABLE OF CONTENTS

### FEATURES

Higher Education in an Evolving Technocracy .....	6
<i>David J. Beaubien, chairman, Massachusetts Board of Regents of Higher Education, and senior vice president, EG&amp;G Co., Wellesley, MA.</i>	
An Opportunity Unfulfilled: The Condition of New England Public Higher Education Enrollment .....	12
<i>Kent Halstead, Senior Associate (Resident Economist), U.S. Department of Education, Office of Educational Research and Improvement, Washington, D.C.</i>	
New England Enrollment—The Dangerous Years, 1988-92 .....	14
An Alternative to Turning Our Backs: Scholarships for Non-White Students at South African Universities .....	17
<i>John MacLean</i>	
Harvard at 350 .....	20
<i>David H. Sanders, Coordinator, Harvard 350th Anniversary Celebration.</i>	
Financing the Future of Higher Education .....	24
<i>Lawrence W. O'Toole, President, New England Education Loan Marketing Corporation.</i>	
Commission on Law and the Economy Appointed .....	28
<i>Thomas C. Fischer, Project Director, Commission on Law and the Economy of New England</i>	
Hatching New Technology-Based Corporations .....	30
<i>JoAnn Moody, Director, Administration and Contracts, NEBHE</i>	
Update: NEBHE Commission on Biomedicine .....	33
<i>John Page</i>	
Higher Education and the State: New Linkages for Economic Development .....	34
<i>Dr. Melvin H. Bernstein, Senior Fellow</i>	
College Costs Alarm Americans: Too Expensive, But They Still Want It .....	39
<i>John MacLean</i>	



*On our cover: Whose apple? New York City's Big Apple? Apple Computer's Macintosh? The apple, long associated with academia, is also the symbol of the New England Board of Higher Education and its Regional Student Program. The six New England states, while fiercely proud of their own unique products, find that their interests converge when it comes to growing the fine and varied apples for which the region is world-renowned. The rich variety of apples grown in New England's fertile soil parallels the quality and diversity of the institutions of higher education that flourish here. Photo by Dennis Stierer, in cooperation with Boston University's Computer Graphics Laboratory.*



page 20



page 12

### COLUMNS

Directly Speaking .....	3
<i>John C. Hoy</i>	
Outstanding New Englander: Rob Trowbridge .....	40
<i>Ellin Anderson</i>	
Washington and Beyond: Adding Up Gramm-Rudman .....	43
<i>Michael J. Bennett, Washington correspondent, Connection</i>	
Correspondence .....	47
City Spotlight—Portland .....	48
<i>Ellin Anderson</i>	
RSP Update .....	51
<i>Charlotte Stratton, Director, NEBHE Regional Student Program</i>	
People .....	53
Campus .....	61
Calendar .....	79

Connection—New England's Journal of Higher Education is published by the New England Board of Higher Education  
45 Temple Place  
Boston, Massachusetts 02111  
(617) 357-9620

The New England Board of Higher Education was established by the New England Higher Education Compact, a formal agreement among the six states ratified by the United States Congress in 1955. It is the purpose of the Board to advance, develop and direct programs and activities that increase educational opportunities and that improve efficiency in the use of resources among New England's academic institutions.

**Chairman:** Jean Mayer  
**President:** John C. Hoy  
**Editor:** John C. MacLean  
**Associate Editor:** Ellin Anderson  
**Art Director/Production Manager:** Ian Reynolds  
**Advertising Director:** William J. Wegman  
**Photography Consultant:** I.D. Sloan  
**Contributing Editors:** Michael J. Bennett  
Melvin J. Bernstein  
JoAnn Moody

Subscription information: *Connection* is published quarterly. Rate is \$12 per year, \$3.00 per issue. Printed by the Nimrod Press, Inc., Boston, Massachusetts. Advertising rates available upon request.





J.D. Sloan / Lowell University Photo



# HIGHER EDUCATION IN AN EVOLVING TECHNOCRACY

by David J. Beaubien

Chairman, Board of Regents of Higher Education, Commonwealth of Massachusetts

*The opinions expressed are those of the author and not the Board of Regents*

T

he New England economy, compared to that of the rest of the United States and much of the world, is in pretty good shape. Our unemployment is in check, and over the past decade our tax situation has improved. Our economy is being driven by high tech industry, which is not capital intensive, not belching smoke, not producing unmanageable toxic wastes, and, despite the present downturn in market conditions for computers, is growing steadily.

We have our problems. But for the first time in recent memory, New England has a sustainable economy. And this economy is based on a resource that few parts of the world can boast of: a superb system of higher education. It is higher education more than any other factor which gives us our unique competitive advantage in the marketplace. We are the most knowledge-intensive region in the world; our educational institutions, 250-plus at last count, attract world-class teachers and students.

If we're really smart we'll ask ourselves what makes this new high-tech economy run so well, and where we should apply the grease to keep it running. What can we do to make people more aware of the critical linkage between New England's higher education and New England's industry, so that we can fortify what we have and keep it from going the way of whale oil, shoes, textiles and paper?

Corporate strategists know that for any business to survive it must maintain a competitive advantage in the marketplace, either through product differentiation or cost advantage. There is no other way. You must offer the customer either better performance or a lower price than your competitors. Offer both, and you're a real winner. New England is not noted for its cost advantage; the region's labor and energy are expensive and will remain so. We have to deliver better

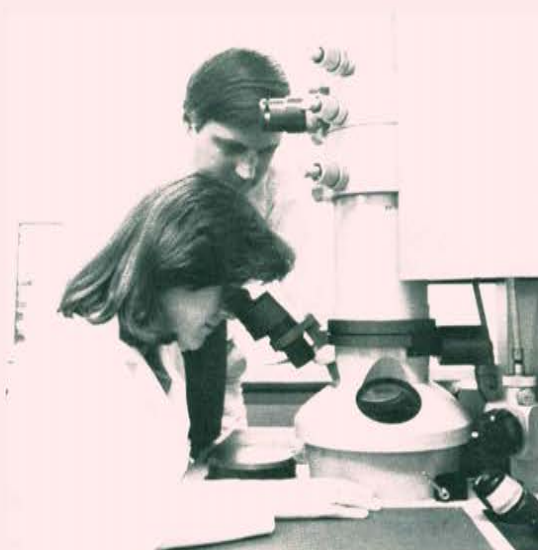
performance. Our products must be different; and the product differentiation we deliver must be based on continued innovation. That's the key to our success.

There are three things to keep in mind about our high-tech economy:

1. We compete in a global market.
2. Change is characteristic of science-and-technology-driven markets, and the rate of change has increased dramatically in the past decade. Typical product life, whether for a new monoclonal antibody-based pharmaceutical or a computer, is three to five years. And we're not talking about a product wearing out like a pair of shoes. We're talking about obsolescence.
3. What drives the New England economy is our ability to innovate, our primary competitive advantage.

Given these characteristics—a world market, rapid technological change, and a clear, present advantage in innovation—what should our system of higher education do to sustain New England's economic resurgence?

If you're going to compete in a world market, you have to realize that significant portions of manufacturing are likely to be forced overseas. Take your pick: Mexico, Ireland, Singapore, Taiwan, Korea, and now even the People's Republic of China. Production jobs are being shipped out, reducing the availability of blue-collar jobs. With fewer production jobs in sight, the trend favors higher and higher skill levels in our workforce, making education and retraining a way of life.



J.D. Sloan / Lowell University Photo



*Nothing ends here.  
Our hopes, our journeys continue.*



IN MEMORIAM  
Sharon Christa McAuliffe  
1948 - 1986



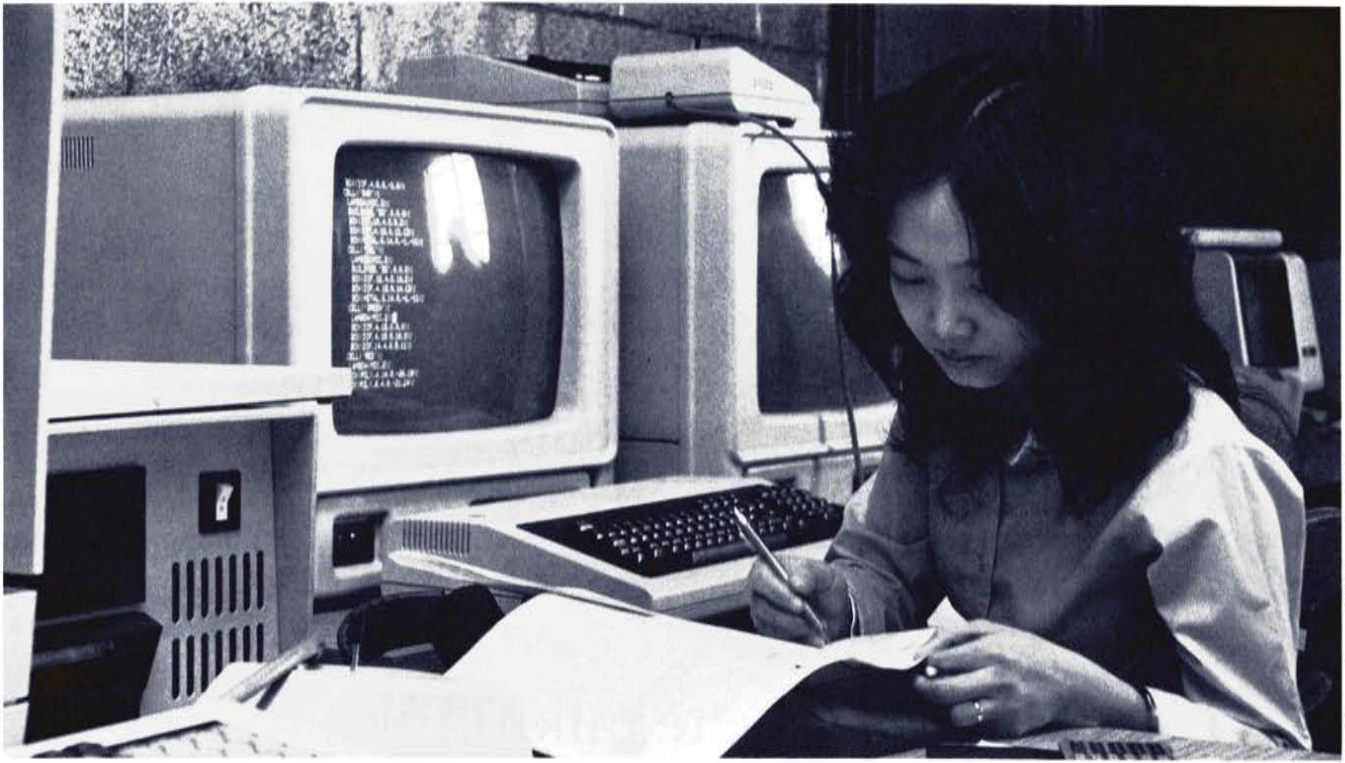
“At a time when we are working so hard to make education and teaching a commitment now and in the future, Christa McAuliffe was the embodiment of what we were talking about.”

Gov. Michael Dukakis  
Framingham State College  
Friday, January 31, 1986



**BANK OF NEW ENGLAND®**





J.D. Sloan / Lowell University Photo

---

*What can we do to make people more aware of the critical linkage between New England's higher education and New England's industry, so that we can fortify what we have and keep it from going the way of whale oil, shoes, textiles and paper?*

---

This is a plus for our largest "basic industry." High tech? No, education. If we know what we're doing, we'll increase our investment in this "industry" and focus on skill development and continuing education.

Most of our New England-based high-tech companies now have manufacturing operations and marketing offices overseas. Yet how many of our technologists can speak or read a second language? China, knowing what it must do to catch up with the rest of the world, mandates fluency in English. Our technologists and our general public know little or nothing about the other cultures competing in the world marketplace. As Meredith Wilson said, "Ya gotta know the territory." We've got to know the cultures of our marketplaces. But only a few of our top universities insist on competency in a second language. What are we waiting for?

World markets imply a host of other issues—the need to remove trade barriers, the impact of currency exchange rates, the risks associated with doing busi-

ness with any one of those 70 countries in debt to the tune of \$750 billion to the rest of the world. We cannot, of course, educate all our graduates in international banking, trade restraints, tax havens, and currency exchanges. But they should know the difference between a central bank and a savings bank, and most of them don't. With our current haphazard definition of a "liberal education," we do a miserable job in teaching our young people the fundamentals of economics and business, with the exception of those who major in these subjects.

In rapidly changing technological markets, we can't expect a single dose of education for young adults to last them the rest of their lives. Since it is hopeless to try to keep pace with the state-of-the-art in most branches of science and technology, it is critical for us to get the basics down solid. Not only can't we afford, especially at the undergraduate level, the costs associated with maintaining state-of-the-art teaching staffs and laboratories, but industry would be better off if our students received solid foundations in their chosen fields. We can't predict the exact course their careers will take or the problems emerging technologies will confront them with. But we can ground them in the fundamentals and give them a general basis for coping with rapid technological change. It is far less expensive for industry to bring the entry-level graduate to the edge of the art than to reconstruct the foundation.

Let me give you an example. A great deal of attention is being paid to the subject of computer literacy. But since more and more "user-friendly" computers (those which are intrinsically easy to use) are being introduced, our students and industries would be better served if we could limit our emphasis on computer literacy to keyboard skills and concentrate on literacy in mathematics and problem-solving.



**F**inally, our greatest competitive advantage—and this is internationally acknowledged—is our ability to innovate. I am not sure how one teaches innovative skills. I suspect the reason we're such prolific innovators is because, since New England was settled, we've always known relative political and economic freedom. Certainly a university should develop intellectual curiosity and energetic instinct. I suspect that students acquire these habits of mind long before college, so perhaps the correct word is "enhance" rather than "develop." But the assignment of "real world" projects and problems should be encouraged as part of the learning process, especially the social problems that can only be solved boldly and creatively.

The disturbing part of this story is that New England's world-class system of higher education is threatened by escalating expenses. The cost of education, especially high-tech education, has increased dramatically. The independent colleges can only raise tuitions and pursue aggressive development activities. The public fare better, with at least indirect access to the taxpayer. But, unfortunately, public higher education continues to be looked upon as a taxpayer's expense rather than a taxpayer's investment. I have yet to find a consensus among taxpayers questioning our appropriations for public higher education. But I find few taxpayers willing to tell their legislators they care about the future of higher education and will support it. Unless we get more realistic backing for public and independent higher education from both the public and private sectors, we will find our system of education and the economy that depends upon it in grave difficulty.

Educators must recognize that the focus of education is, of necessity, tied to the needs of our economy. I know this irritates the "purists." Too bad. We'd all like to be scholars and poets, but someone has to pay the piper.

And in defense of the purists (we do need scholars and poets), industrialists must recognize, for their own good, that our educational institutions are not professional schools producing ready-made electrical design engineers, genetic engineers, economists or whatever.

Fortunately, most educators and industrialists recognize the need for a common ground and know where it lies. They both extol the liberally educated citizen, and know that it's more important for our university graduates to know how to read and what to read rather than to be just well-read. It takes a lifetime to become well-read. Our educators and industrialists are aware that we are working with a society that, from a technological standpoint, is still largely illiterate. But that is changing: literacy in mathematics and science is gradually becoming part of the mental landscape of a liberally-educated person in America. Let us hope that we are not too late with too little. We are ahead, and we must stay ahead. ■

## BUSINESS AND EDUCATION:

### PARTNERS IN EXPLORING THE FUTURE.



National Life has joined forces with the University of Vermont School of Business Administration.

The goal: To present "**Contemporary Business Issues**," a yearly symposium focusing on topics of mutual interest to leaders in business and education.

National Life has always recognized the critical role of higher education in shaping our country's future. This is one more way we're lending our support.

## National Life of Vermont

National Life Insurance Co., Home Office: Montpelier, VT 05604





Richard Chase photo

## New England Public Higher Education Enrollment— An Opportunity Unfulfilled

by Kent Halstead

**T**he primary responsibility of state public higher education systems is to provide post-secondary education opportunities to state residents. The demand for this service is most immediately measured by the number of recent high school graduates.

New England exceeds any other region of the country in high school graduates (per year) per capita. Connecticut, ranking first in the nation with 14.8 graduates per year per 1,000 population, has a 68 percent greater potential collegiate enrollment from this source than does Florida, ranked 51st. New Hampshire is ranked third, Massachusetts fifth, Maine eighth and Vermont ninth.

The large number of high school graduates in New England must be attributed to the exceptional success of the states' public and private elementary and secondary schools in attracting and retaining youth through graduation. High school graduates as a percentage of the 15-to-24-year-old population substantially exceed the national average in five New England states and equal the national average in Rhode Island. Contributing to this success is the lower need in the area for the special educational requirements of minorities, the generally high edu-

cational attainment of the parent population, and the traditional emphasis and encouragement given school attendance in New England.

And what has been the response of the New England higher education community to the largest enrollment potential in the country? Allowing the opportunity to remain unfulfilled.

Only Massachusetts has state residents' attending college *somewhere* (41 students per 1,000 population) in greater numbers than the national average (34 students). Connecticut and Rhode Island measure up to the national average, while the three northern states have substantially less than average overall attendance rates.

Consider that 43 residents per 1,000 population in Arizona and 40 in California attend college either in-state or out-of-state. In Maine, Vermont and New Hampshire, however, the attendance figures are 26, 28 and 25, respectively. And the three New England states have a greater number of high school graduates compared with their population.

Based on California as a standard, about 64,000 residents of five New England states (Massachusetts exceeds the standard) fail to attend college who might otherwise do so. If 60 percent of that number, the current New England rate, attended



in-state public institutions, this would mean an increase of 38,000 public FTE (full-time equivalent) students. This comparison may not now be "realistic" for New England, but it should provide perspective on achievement and potential.

The private sector has more than done its share. Except in Maine, which has few private colleges, residents of New England attend in-state independent colleges and universities in far greater numbers than anywhere else. Massachusetts has almost as many residents attending in-state private institutions as attend the state's public institutions. Also, residents of New England attend out-of-state institutions in far greater numbers than elsewhere. Yet, as successful as the private sector has been, it has not offset the low attendance rates in the public sector.

Each of the New England states operates relatively small public higher education systems that have failed to be as competitively attractive as they could be or make entrance as accessible as possible to state residents. The Connecticut public higher education system, with the smallest relative enrollment in public higher education of the group (19.4 FTE students per 1,000 population), has less than half (43 percent) the public attendance rate of North Dakota, with 43.9 students per 1,000 population. Vermont, with 27.2 FTE students per 1,000 population, is still below the national average.

With such small systems, resident attendance is far below average. The range is from a high of 84 percent of the national average in Rhode Island to only 59 percent in New Hampshire. Consider a more challenging comparison: New Hampshire has 15 residents per 1,000 attending in-state public institutions; Arizona has 39 and California 34.

Entrance rates of high school graduates to in-state public institutions are predictably below average except in Rhode Island, which exceeds the national rate. Well over half (62.5 percent) of the recent high school graduates in the United States enter public institutions in their home state. For the New England states this rate is: Rhode Island, 70.4 percent, Connecticut, 51.6 percent, Massachusetts, 46.3 percent, Maine, 33.3 percent, New Hampshire, 27.0 percent, and Vermont, 21.7 percent.

The consequence of low public enrollments is serious to New England in terms of both the responsibility to educate citizens and possible long-term effects on growth of the college-educated population. The two-year college programs in Vermont, Maine and New Hampshire are very small, possibly not harvesting the full enrollment potential of associate degree and occupational students. Massachusetts' performance, with low public tuition and a sizeable number of two-year colleges, is best explained by the attractiveness of the private sector.

Could the New England states do better in financing higher education? Let us first consider three fiscal conditions: *tax capacity*—the potential of

state and local governments to obtain revenues through various kinds of taxes; *tax effort*—the *tax revenue* collected as a percentage of state and local government tax capacity; and *tax revenue*—the actual amount of taxes collected. (Data are estimated for 1983 except tax losses which are for 1982.<sup>2</sup>)

The six states exhibit a near-national range of capacity and fiscal behavior. Each state must be discussed separately. The potentially richest state, Connecticut, has a strong, broad tax base and taxes above national rates except for an \$857 million "loss" in potential taxes (based on application of the national average rate) because it does not have a personal income tax. Connecticut still ranks 10th in the nation in tax revenues per capita (\$1,396). Massachusetts, with a much lower tax potential, achieves an even higher rank, 8th (\$1,416 per capita), by heavily taxing personal income at a rate 65.7 percent above the national average. However, the effect of Proposition 2½ during the last three years is bringing Massachusetts more in line with national income tax norms. It is still unusual that two adjacent—and competing—states should have such dissimilar taxes on personal income.

New Hampshire has a relatively high tax potential similar to Massachusetts, but has no general sales tax (losing \$282 million based on the national average rate). Nor does it have a personal income tax, resulting in reduction of tax revenues by another \$181 million. New Hampshire consequently collects only \$891 in tax revenues per capita, 76 percent of the national average and 63 percent of that collected by Massachusetts (\$1,416).

Vermont has a tax capacity 11 percent below average due to low personal income and property values. State tax rates are near average, with collected revenues of \$1,069 per capita, 9 percent below the national average.

Maine and Rhode Island have exceptionally low tax capacities, similar to Kentucky, North Carolina and Arkansas. Maine taxes 11 percent above national averages to equal Vermont in per capita collected revenues. Rhode Island has the highest taxes in New England, 4th in the nation at 135 percent above the national average. Rhode Island tax revenues of \$1,288 per capita approach those of Connecticut and Massachusetts.

How have these tax revenues been used to fund education? No region in the country has better overall funding of public higher education for those that *do* attend than New England, and the region can be justifiably proud of this outstanding support. Vermont leads with an 8th place national ranking, receiving \$5,450 in appropriations and tuition per FTE student for educational purposes (excluding support for medical services and schools, agriculture extension, and research). The least well-funded of the six states, Connecticut, is still ranked 27th in the nation with support of \$4,512 per FTE student,<sup>3</sup> equal to the national average.

The states exhibit somewhat different patterns in



the manner in which this high level of funding is achieved. Singular in its approach is Rhode Island, which relies heavily on *both* appropriations and tuition revenues to be ranked 11th nationally in total funding of student education. The other states show an inverse relationship between appropriated support and tuition, i.e., states with the highest level of appropriations rely least on tuition revenues and vice versa. Thus, Massachusetts, with the highest appropriations, has by far the lowest average per-student tuition revenues. Connecticut and Maine, with slightly below-average appropriations, have above-average tuition revenues. Vermont and New Hampshire represent the national extremes, ranking 50th and 51st, respectively, in appropriations and first and second in tuition revenues.

It is important to recognize that the high tuition revenues in Vermont, New Hampshire and Maine

are primarily paid by a large proportion of out-of-state students paying high non-resident fees. State residents pay one half to one third the non-resident rates at public four-year institutions.

So far, relative funding adequacy has been measured on a full-time-equivalent student basis. The appropriations reported fund instruction and supporting academic services, excluding amounts for medical services (medical schools, hospitals and public service patient care), agricultural experiment stations and cooperative extension services, and all separately budgeted organized research. Thus, both appropriations as defined and tuition are "student-related." Per-student amounts indicate the average resources from these two sources available to provide educational services to *individual students* without accounting for the type of institution attended.

But some public institutions require greater fund-

## New England Enrollment— The Dangerous Years: 1988-1992

The region's colleges and universities reported remarkably stable enrollment patterns for the fall of 1985, having weathered the first six years of decline in the national and regional birth rates with considerable creativity and administrative skill.

But in a series of seminars and briefings throughout the fall and summer, John C. Hoy, NEBHE president, has persisted in warning of severe difficulties in managing the enrollment patterns anticipated between 1988 and 1992. Hoy, who earlier in his career oversaw admissions and enrollment planning at Wesleyan University in Connecticut, Swarthmore College in Pennsylvania, and the University of California, Irvine, said those years will be "the five bleakest years New England campuses will have to

confront since the virtual demise of collegiate enrollment during World War II.

"The question is whether or not strategic planning for the inevitable declines we must anticipate will occur in time to sustain enrollment on a carefully determined downward slope between 1988 and 1992," he said. "Planning must be completed during the academic year 1985-86 at the latest in order to assure successful implementation."

Hoy indicated that increased enrollment of adults and part-time students is now approaching the limits of return because of new degree programs on campuses throughout the six-state region, which have been "remarkably successful" since 1980.

**New England Enrollment—the Dangerous Years 1988-1992**  
(Projected Decline in High School Graduates 1979-1994)

State	Yr	# H.S. Grads	Yr	# H.S. Grads	1979-94 Total Decline	1988-92 Decline	1988-92 as % of Total Decline
CT*	1979	45,913	1994	27,351	18,562	8,961	48.3
	1988	36,899	1992	27,938			
ME	1979	15,402	1994	10,918	4,484	2,085	46.5
	1988	13,377	1992	11,292			
MA	1979	76,630	1994	44,130	32,500	15,848	48.8
	1988	61,926	1992	46,078			
NH	1979	11,833	1994	8,105	3,728	1,924	51.6
	1988	11,054	1992	9,130			
RI	1979	11,243	1994	6,390	4,853	2,065	42.6
	1988	8,702	1992	6,637			
VT	1979	6,721	1994	5,214	1,507	1,208	80.2
	1988	6,309	1992	5,101			

Source: Western Interstate Commission for Higher Education: *High School Graduates: Projections for the Fifty States, 1982-2000*. (Boulder, CO, January, 1984).

New England Board of Higher Education Analysis, January, 1986.

\*Connecticut figures reflect combined public and private enrollment; others reflect public enrollment only.





ing than others; i.e., because of graduate programs, faculty quality requirements, small class sizes, etc., universities are "more expensive" to operate than two-year colleges. State systems with proportionately larger enrollments at universities consequently require greater funding than systems emphasizing two-year programs. How well do the New England states compare in funding their respective public higher education *systems*?

Connecticut, Maine and Massachusetts have enrollment patterns that nearly match the national average. Vermont, New Hampshire and Rhode Island, however, have proportionately more students enrolled at universities and four-year colleges, with system support requirements consequently 20, 15 and 11 percent higher, than the national average. When this added requirement is factored in, the combined appropriation and tuition funding of the higher education systems of New England relative to a national index of 100 is: Massachusetts, 113; Rhode Island, 109; Maine, 105; Vermont and Connecticut, 100; and New Hampshire, 92.

This record of system funding is not as impressive as that of funding per student. Faculty and administrators are concerned with system funding because they seek support consistent with the special responsibilities of the various types of institutions. Simply put, the graduate faculty of a large research university expects salaries larger than those of the undergraduate faculty of a two-year college. Stu-

dents also expect the institution they attend to be distinctively supported consistent with its program and responsibilities. In this arena, Massachusetts (ranked 9th nationally) is the clear leader.

In conclusion, it is fairly obvious that the competitiveness of New England's private institutions and the region's traditional reliance on them are the main reasons for low enrollments at public institutions. Also, unrestricted state student financial aid lets more residents attend both private and out-of-state institutions. For their part, the higher-than-average tuition charged at public institutions has a negative effect on attendance. New England supports its enrolled students relatively well. It seems clear, however, that with increased state support and lower relative tuition and fees, a substantially larger number could be accommodated. ■

#### Notes:

<sup>1</sup> All statements relative to *resident* student enrollments are derived from *Residence and Migration of College Students, Fall 1979*, by the National Center for Education Statistics and reported in *Financing Higher Education in the Fifty States, FY82*, McCoy and Halstead, NCHEMS. The age of these data and reported reporting variances make the data detail questionable. However, because of the general stability of migration patterns, the observations made are considered reasonable.

<sup>2</sup> Definitions and tax data are derived from *Tax Capacity of the Fifty States, 1982*, Advisory Commission on Intergovernmental Relations, Washington, D.C., 20575.

<sup>3</sup> System as opposed to student funding is discussed in the last section of this article.

## *John J. McGrath and Son*

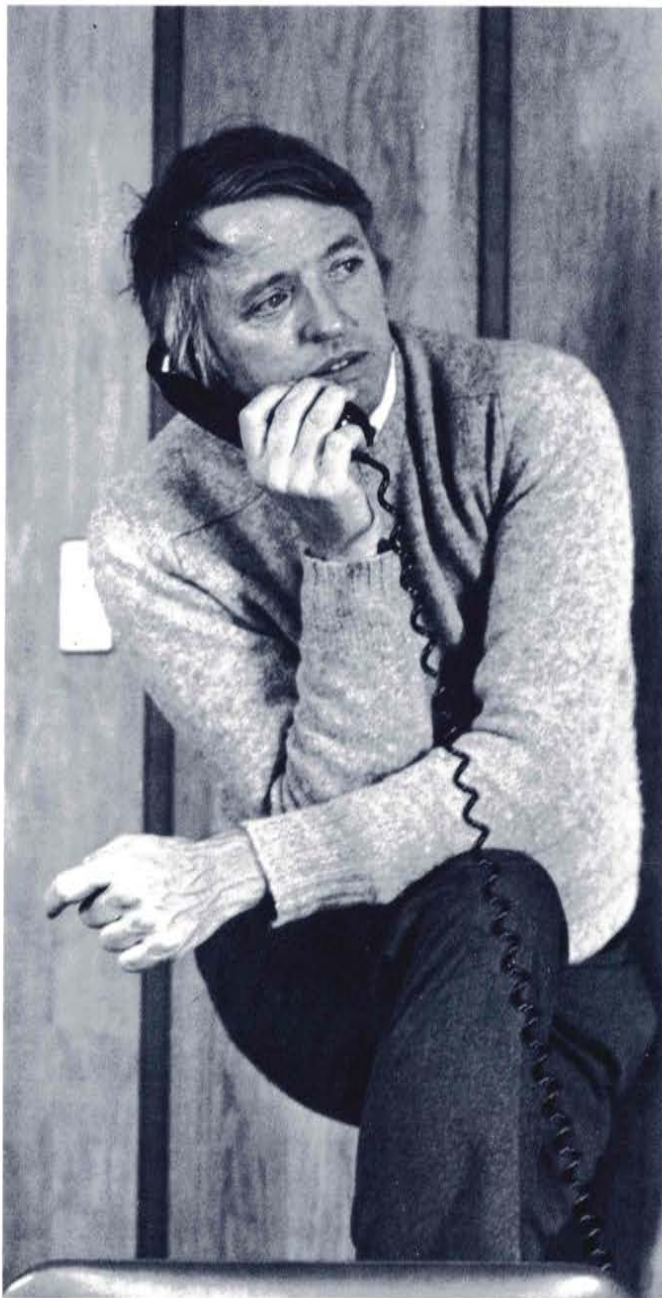
Incorporated  
1917-1986

Serving New England as Advisors and Appraisers to Colleges and Universities, Corporations and Institutional Clients since 1917 on Real Estate and Strategic Planning.

One Devonshire Place • Boston, Massachusetts  
(617) 227-1125



# “The Christian Science Monitor has a self-evident anxiety to be fair.”



William F. Buckley, Jr., author, editor, lecturer, host of "Firing Line."

Not many people are aware that William F. Buckley, Jr. has more varied diversions than grilling politicians and public figures on TV's *Firing Line*. This dry-witted intellectual has sailed across the Atlantic twice in his sailboat, the *Pacific* once, ran for mayor of New York City in 1965, has created a series of spy novels featuring a hero he calls "Blackford Oakes," and has published 23 books.

He received his early schooling in England and France, and in his teens he studied at the Millbrook School and later at the University of Mexico before entering the army as an infantryman. He received his B.A. with honors (in Political Science, Economics and History) at Yale University in 1950.

William F. Buckley, Jr. has read *The Christian Science Monitor* on and off since he was a teenager, and he can appreciate a paper that reflects the stimulating yet impartial outlook the *Monitor* offers to those who have many pursuits.

His high regard for the paper doesn't mean that he always agrees with it. "I'm a conservative and often the editorial opinions of the editors are different from my own," he admits; "when that happens, I simply assume that you're incorrect."

"The *Christian Science Monitor* has a self-evident anxiety to be fair.... That's something that seems to be built into the position of the *Monitor* so that you don't find that it's a quality that depends on who happens to be the publisher or the editor; it just always exhibits that characteristic."

"I would describe it as a paper with a cosmopolitan sense of comprehensiveness, one that unlike many American newspapers always acknowledges that we are living in a world with lots of other countries in it. When I read the *Monitor* I *always* find an article or two that I find unusually well-written, well-researched."

It doesn't matter if your political leanings are to the left or to the right, if you're looking for an impartial, fair newspaper, subscribe to *The Christian Science Monitor*.

---

To subscribe, simply call toll-free 1-800-225-7090.

---

## THE CHRISTIAN SCIENCE MONITOR®

TAD



# An Alternative to Turning Our Backs

## Scholarships for Non-White Students at South African Universities: New England Colleges Respond

**N**ew England colleges have found a *constructive* way to strike a blow against apartheid in South Africa, and to help blacks participate in their nation's educational, political and economic life.

They have created three-year scholarships totalling more than \$320,000 to defray room, board and living expenses for nonwhites in South Africa's integrated universities. Some scholarships, especially from financially constrained community colleges, are funded by contributions from faculty and students.

Jean Mayer, chairman of the New England Board of Higher Education (NEBHE) and president of Tufts University, and NEBHE President John C. Hoy announced the scholarships during a conference call and press conference with Stuart J. Saunders, vice-chancellor and rector of the University of Cape Town.

The University of Cape Town, South Africa's oldest university, is one of six "completely nonracial and fully integrated" universities in South Africa, Saunders said. Of its 12,000 students, 1,350 are of mixed race and 350 are black. The universities will absorb tuition costs for the New England-sponsored students they select.

"This is a much more constructive way to break down apartheid than to have South African students come here to study," Mayer said. "Many exchange students never return home. And we have found that it is 13 times more expensive to educate students in the United States than to provide access for them to an integrated college in their own country."

"The response of New England colleges and universities to the South African Scholarship Fund initiative and the national interest in the program have

been encouraging," said Hoy. "We anticipate that faculty members and students, campus ministries, friends and alumni(ae) of the colleges will also contribute to the scholarship fund, and that additional New England campuses will participate."

Each scholarship is worth \$2,800 per year and is named for the contributing college or university. The scholarship donations will be allocated through the Open Scholars Program of New York. The University of Cape Town Fund, Inc., which will distribute the funds to nonwhites in South African integrated universities.

Hoy said that the South African Scholarship Fund and the strong college response to it were set in motion by the initiative the NEBHE delegates approved in encouraging Mayer to write to the heads of 20 South African universities. Mayer encouraged his colleagues to take a more visible stand in support of major changes in South African society and to proclaim their own convictions that educational excellence, at all levels, must be available to people of all races on an equal and non-segregated basis.

Several South African academic leaders responded immediately. They said that the best way U.S. institutions could help them was to fund scholarships in South Africa for non-white students.

The Universities of Capetown, Western Cape, Witwatersrand, Natal and Rhodes have vigorously defended their right to admit students regardless of race. But they are severely limited by government budgetary constraints, especially for residential students.

In his letter of appeal to the New England college presidents, Mayer urged each institution to seek to provide at least one scholarship, either through an

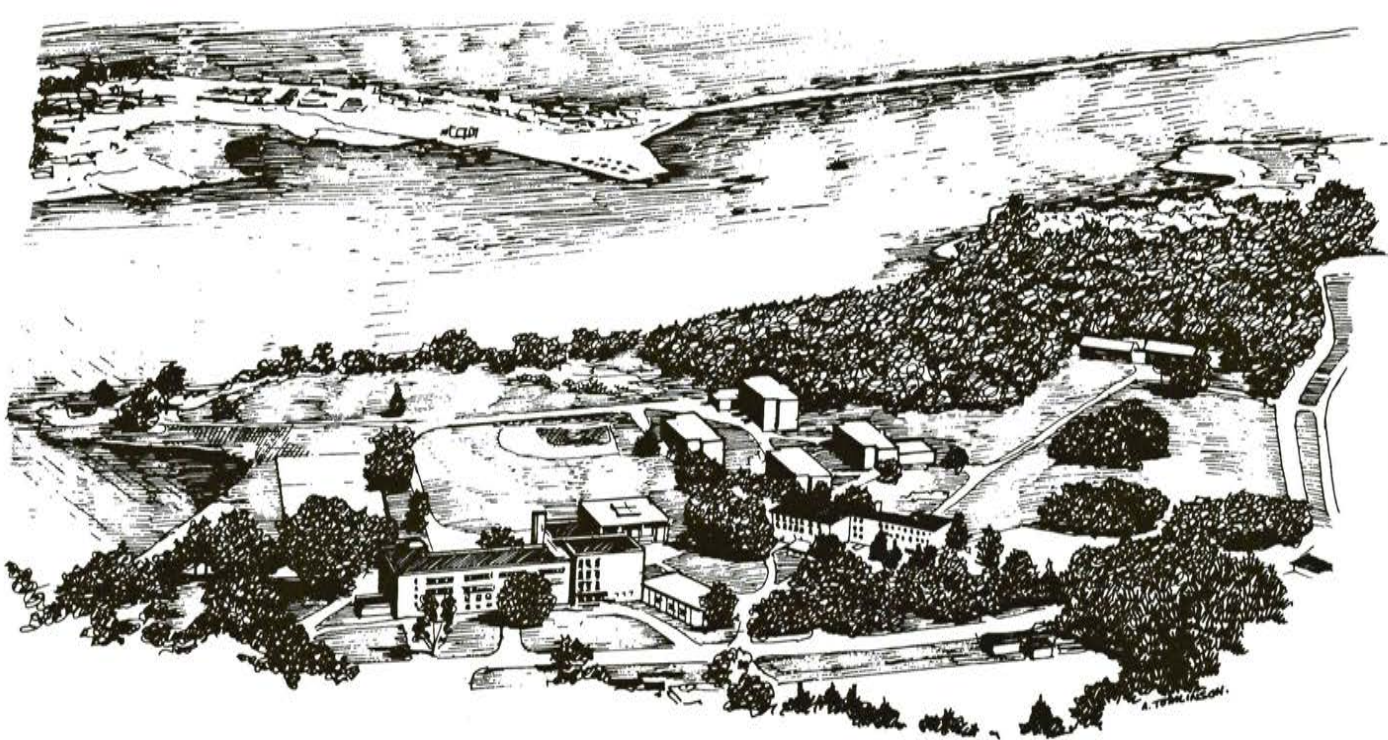


*"Unless we put education above politics and do everything that can humanly be done to prepare for the future, everything political leaders strive for will be jeopardized."*

*—Mangosuthu G. Buthelezi*

From left: Richard Higgins, *Boston Globe*; John C. Hoy, President, NEBHE; Jean Mayer, Chairman, NEBHE.





## A UNIQUE MEDICAL EDUCATION FORCE for NEW ENGLAND

Educating students as Primary Care Physicians to meet the needs of underserved communities and rural areas throughout New England

Administering free health services and education to thousands annually in fieldwork placements beginning in the first year of medical school in a variety of hospital and community settings

Emphasizing that the knowledge and technical skills of medicine evolve through the art of caring for the whole person

Creating new models for health education and care delivery



## UNIVERSITY OF NEW ENGLAND COLLEGE OF OSTEOPATHIC MEDICINE

Biddeford, Maine 04005

(207) 283-0171



outright gift from their budgets or from urging their students, faculty, administrators, friends and alumni(ae) to raise the necessary funds.

"The South African universities are clearly ready to absorb the cost of tuition, provide remedial courses where needed, and take the risks inherent in violating laws prescribing 'segregation,'" Mayer declared. "I feel that providing scholarships is a positive contribution we as New England educators can make to the dismantling of apartheid and the preparation of a non-white professional and politically sophisticated class in South Africa."

In his response to Mayer's letter of support, Saunders said that besides seeking scholarship assistance for blacks attending his university, he and his colleagues are exploring the possibility of using U.S. faculty and students in the South African educational system at both the university and secondary school levels.

Derek S. Henderson, vice-chancellor of Rhodes University, an institution with 600 black students, said in his letter to Mayer that "even though it is illegal to house blacks in our dormitories we have gone ahead, and the government has not taken steps to prevent us. We also have a vigorous academic skills program to assist those students, black and white, whose disadvantaged scholastic background has not fully equipped them for university studies."

He went on to say, "I very much appreciate your organization's offer to strengthen our hand in any way that you can. It is today very fashionable to cold-shoulder and isolate everything South African, without any deep concern for the effect that this has on those of us working for change from inside the country.

"Many academics will not visit South Africa on principle," he continued, "not even universities such as ours. Our academics find it increasingly difficult

to arrange sabbatical visits abroad. These continued contacts with the international intellectual community are vital to us in maintaining standards and in pursuing meaningful research. If you are able to assist us in this area, you will be doing us a great service."

Mangosuthu G. Buthelezi, chief of the Zulus, chief minister/president of Inkatha and chancellor of the University of Zululand, also responded. Buthelezi, leader of 8 million Zulus, is by many estimates South Africa's most powerful black leader.

"I believe," he wrote, "that your sentiments show a very wholesome insight into the fact that whatever the politics of South African leaders are, they ought to put improved education outside all party political conflicts. Unless we put education above politics and do everything that can humanly be done to prepare for the future, by enabling as many young blacks as possible to equip themselves to take their rightful place in a society where there will one day be equality of opportunity, regardless of race, color or creed, everything political leaders strive for will be jeopardized."

The South African Scholarship Program is a prime example of the kind of American-sponsored educational program for South Africa that foreign policy analysts Sanford J. Ungar and Peter Vale propose in the winter issue of *Foreign Affairs*:

"Massive aid programs, funded by the American government, foundations and business, should be instituted to help black South Africans attain better educations in a broad range of fields, from engineering to international relations.

"American-sponsored educational programs already available have barely scratched the surface; what is needed now is an effort to help black South Africans learn how to help run their country." ■

## A Constructive Alternative: The New England South African Student Scholarship Program

Make a positive contribution to the fight against apartheid in South Africa. Join the colleges and universities who are helping to eradicate racial inequality by providing the opportunity for South African students to attend integrated universities in their own nation.

Twenty-nine New England institutions of higher learning have contributed over \$320,000 to the New England—South African Student Scholarship Fund. If you want to make a difference, please mail your check to the South African Student Scholarship Fund, New England Board of Higher Education, 45 Temple Place, Boston, Massachusetts 02111.

### Participating Institutions

Amherst College (MA)  
Bates College (ME)  
Boston College (MA)  
Boston University (MA)  
Bowdoin College (ME)  
Community College of Rhode Island  
Connecticut College  
Dartmouth College (NH)  
Hartford Seminary (CT)  
Manchester Community College (CT)

MIT (MA)  
Middlebury College (VT)  
Northern Essex Community College (MA)  
Norwich University (VT)  
Providence College (RI)  
Radcliffe College (MA)  
St. Anselm College (NH)  
Trinity College (CT)  
Tufts University (MA)  
University of Bridgeport (CT)  
University of Connecticut  
University of Maine at Orono  
University of New Hampshire  
University of Rhode Island  
University of Vermont  
University of Southern Maine  
Wellesley College (MA)  
Wesleyan University (CT)  
Williams College (MA)

For Further Information, Call: **NEBHE** New England Board of Higher Education (617) 357-9620





David H. Sanders

**W**hen Harvard was established in 1636, Galileo was still writing his text *Discorsi e Dimonstrazioni Matematiche*. Rembrandt completed his painting *The Night Watch* the year of Harvard's first commencement. The College was nearly half-a-century old when Bach, Scarlatti and Handel were born.

This September, America's oldest institution of higher learning will celebrate three-and-a-half centuries of post-secondary education in the United States with a four-day observance of its 350th Anniversary. Harvard's 350th Anniversary Celebration will begin Thursday, September 4 and conclude on Sunday, September 7.

#### THE PAST

Little remains today but fragments and conjectures from Harvard's first century. Assorted documents gathered by archivists; conjectural drawings and models of the first College buildings; bits of ceramics dug up by archaeology students; silver items from 1644 and the Charter of 1650 tucked away in a vault. Pieces of the past.

---

# Harvard at 350

---



"There is virtually nothing to be seen of the first 100 years," notes William Bentinck-Smith, historian and honorary curator at the Harvard College Library. "There are only records in the libraries, the outline of the first College building marked in brass in the pavement of Massachusetts Avenue, and other shards and remnants of history."

Yet from these fragments can be pieced the story of this country's first college.

Only 16 years after the Pilgrims landed at Plymouth, the General Court of Massachusetts made a major commitment to establishing a "schoale or colledge." In 1636 it voted a sum of 400 pounds for the infant institution, a quarter of that year's entire tax levy. The following year a Board of Overseers was formed, and by the summer of 1638, the school had opened with a class of 12 students.

If any institution had a shaky start, this new college in the wilderness did that first year. On the first of June, a great earthquake struck the area which, according to a townsman, "caused divers men (that had never knowne an Earthquake before) . . . to cast downe their working-tooles, and run with gastly terrified lookes . . ." Two months later, a hurricane swept through the area, tossing one ship out of the water and pulling down a windmill near the house of the young minister John Harvard.

Natural calamity was augmented by the selection of Nathaniel Eaton as the first master of the college. A young man of 27, he proved himself, in short time, to be remarkably ill-fit to preside. The now notorious abuse of students by both him and his wife prompted one member of that first class, William Hubbard, to write some 40 years later that Eaton was "fitter to have been an officer in the inquisition, or master of an house of correction, than an instructor of Christian youth."

Samuel Eliot Morison, the noted Harvard historian, offered in his book *The Founding of Harvard College* what may be the only kind words written about the school's first director. "As there is little good we can impute to Eaton," wrote Morison, "let us at least give him the benefit of this inference: that he had some part in attracting John Harvard's interest and stimulating his benevolence."

The known facts of John Harvard's life are few. He lost his father and four of his five brothers and sisters to the London plague of 1625. Ten years later his mother died, the same year that he received his M.A. from Emmanuel College, Cambridge. In 1636 he married the sister of a classmate, and the following year left London for New England. There he was granted pastures near Charlestown, probably for

raising the cattle that records indicate he brought with him. He was active in local governance, serving on a committee to draft laws that eventually were incorporated into the famous Body of Liberties, the legal code for the Massachusetts Bay Colony.

On September 14, 1638, a year after the death of his remaining brother, John Harvard died. There is no record of a written will, but it is known that he left his library and half his estate to the College. At a time when legacies were most commonly left to churches, Harvard's choice of the young school was a notable benefaction.

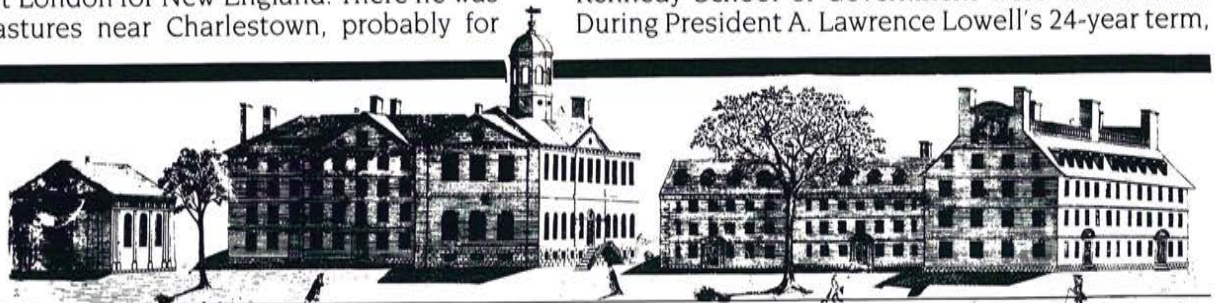
In recognition, the Great and General Court ordered that "the colledge agreed upon formerly to bee built at Cambridg shalbee called Harvard Colledge."

In 1640, the College appointed its first official president, Henry Dunster. Under his leadership, the College began to flourish for the first time. Dunster developed a curriculum based on the English model, erected a building in which students both lived and attended classes, and established the first scholarship fund in 1643 with a gift from Lady Ann (Radcliffe) Mowlson. In 1630, Dunster successfully obtained from the General Court a College Charter. That document still guides the University today in "the advancement of all good literature, artes and Science."

Looking back over three-and-a-half centuries of Harvard's growth, the flow of changes appears as a torrent. Throughout the 18th century, Harvard moved towards independence in its governance and support—selecting its first layman as president (John Leverett): turning to its alumni for money rather than the state; and gradually shifting the selection of Overseers from the Commonwealth's control to the College. By 1780, Harvard College had been recognized as a university by the state constitution, and in 1782, what was begun as an "Anatomical Society" a decade earlier became the newly established Medical School.

During the 19th century, the University expanded greatly in scope and size. New graduate schools were founded in divinity, law, dental medicine, and arts and sciences. The Harvard Observatory and Arnold Arboretum were created, and Radcliffe College was incorporated.

The University has continued to grow through the 20th century. The School of Business Administration, Graduate School of Education, School of Public Health, Harvard Extension, and John F. Kennedy School of Government were established. During President A. Lawrence Lowell's 24-year term,



Harvard College, circa 1770 (Harvard University Archives).



the University Museum was completed, the residential House Plan was founded, and more buildings were erected than in Harvard's history up to that time.

President James Bryant Conant established a program of "general education" in 1949, founded the National Scholarship program, and by admitting Radcliffe women to Harvard classrooms took the first step to the eventual full partnership of Harvard and Radcliffe colleges.

In 1956, President Nathan Marsh Pusey launched "A Program for Harvard College," then the largest fund drive ever conducted by a private university. During Pusey's administration, Harvard more than doubled its available floor space and established more than 150 new endowed professorships.

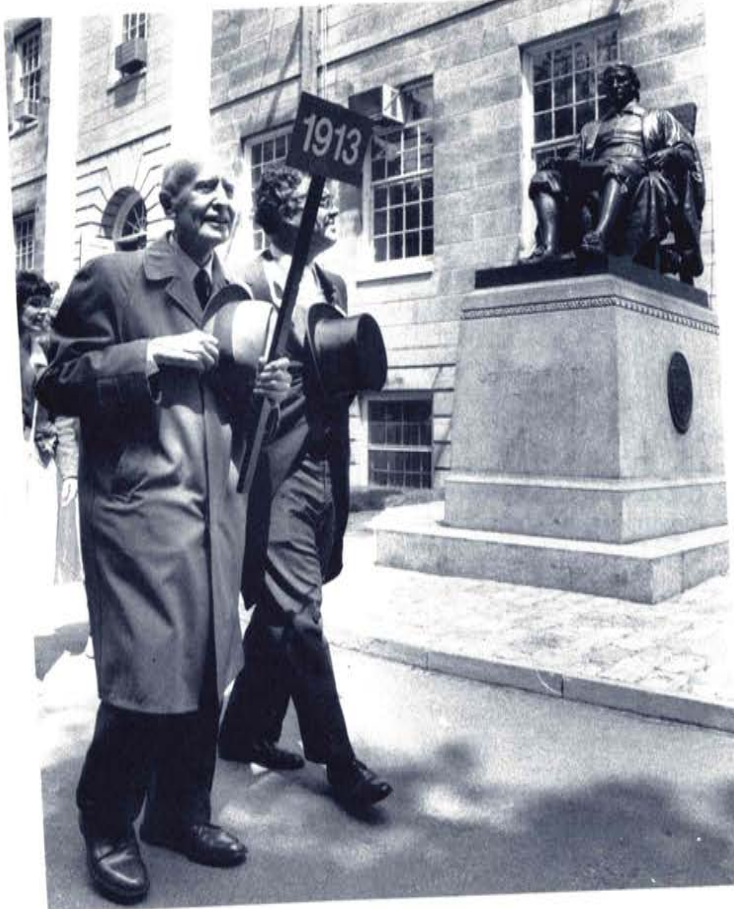
Derek Bok was elected Harvard's 25th president in 1971. His administration, building on the foundation of general education established under Conant and periodically modified during the Pusey years, designed and adopted a core curriculum for the College. He conducted the largest capital campaign in the University's history; adapted an equal admission policy for men and women; increased access to Harvard for the disadvantaged and underrepresented; and expanded Harvard's involvement in issues of national and international concern.

## THE PRESENT

From a college of 12 male students and a single master, Harvard has grown into a major research university with 16,800 degree candidates of whom 40 percent are women. Some 6,500 undergraduates are enrolled in Harvard College, while 10,300 students seek degrees at 10 graduate and professional schools. Undergraduate women are admitted to Radcliffe College by a joint Harvard-Radcliffe Admissions Office, and are also enrolled in Harvard College.

The University has a full-time faculty of more than 2,200 men and women. The Harvard faculty has produced more than 30 Nobel laureates, and 27 Pulitzer Prize winners. Six presidents of the United States have graduated from Harvard, and alumni include numerous business, government, professional and artistic leaders in this country and abroad.

The College Charter of 1650 still defines Harvard's governance structure, making Harvard the oldest corporation in the Western Hemisphere. The University owns and occupies more than 450 acres of land and more than 400 buildings in the Cambridge and Boston area. The University Library, the oldest library in the United States, is also the largest university library in the world with nearly 11 million volumes. Several of the University's museums are world renowned—including the Botanical Museum with its glass flowers, the Peabody Museum of Archaeology and Ethnology, and the Harvard Art Museums, comprised of the Busch-Reisinger, Fogg, and Sackler Museums.



## THE CELEBRATION

Harvard's many facilities—including its museums, libraries, residence houses, dining halls, classrooms, theaters and concert halls—will be filled with special receptions, symposia, exhibitions and performances throughout the Celebration. An estimated 40,000 people will attend the event, including 4,000 official representatives of Harvard College, Radcliffe, the professional schools, and other units of the University.

From its conception, the Celebration has been planned as a university-wide, four-day "family event" for Harvard alumni, faculty, students, staff, and Boston area neighbors. In addition, the first planning committee, reporting in 1982, identified a three-fold purpose for the Celebration: to observe a significant occasion in the history of Harvard University; to examine the state of higher education in the closing decades of the Twentieth Century; and, to rededicate the University to anticipating and meeting the challenges and opportunities of the future.

At the heart of the Celebration will be three outdoor convocations held in the Tercentenary Theater, built in Harvard Yard for the University's 300th anniversary and the site of Harvard's annual commencement exercises. The opening convocation on Thursday morning, September 4, will focus on Harvard's founding and its link to Cambridge University, where most of the founders and first governors of Harvard College were educated. Prince Charles, who graduated from Cambridge, will deliver the keynote address.



President Ronald Reagan has been invited to speak at the Friday convocation, continuing a tradition of U.S. presidents participating in Harvard anniversary celebrations. The tradition was established in 1836 when Andrew Jackson visited Harvard shortly before its 200th Anniversary, and has continued with addresses by Grover Cleveland in 1886 and Franklin D. Roosevelt in 1936.

On September 6, the Harvard Alumni Association convocation will feature an alumni parade, addresses by Harvard President Derek Bok and a special guest, and the presentation of a dozen or more Harvard Medals to alumni who have rendered distinguished service to the University.

Morning prayer and services of thanksgiving will be held during the four days, and Cambridge and Boston churches will be invited to join in the Celebration. Evenings will be filled with cultural events, including concerts, plays, films, art exhibitions, and numerous displays. Tentative plans exist for a festival of light and sound along the Charles River, and on Saturday night, Harvard Stadium will be the setting for a Celebration "spectacular" of entertainment, pageantry and fireworks.

Throughout the week, several dozen academic symposia will be presented by members of the various Harvard faculties. Several books will be published in connection with the Anniversary, and selected papers delivered during the Celebration will also be published.

In addition to the University's 350th Anniversary, the Harvard Law School Alumni Association will celebrate its 100th Anniversary this year, and both the Graduate School of Design and the John F. Kennedy School of Government will celebrate their 50th Anniversaries.

### THE FUTURE

An anniversary offers Harvard the opportunity to reflect on its august past, as did Ralph Waldo Emerson (class of 1821) after attending the Bicentennial Celebration. "The anointed eye," he wrote in his journal, "saw the crowd of spirits that mingled with the procession in the vacant spaces, year by year as the classes proceeded; and then the far longer train of ghosts that followed the company, of the men that wore before us the college honors and the laurels of the State—the long, winding train reaching back into eternity."

Even more important, the 350th Anniversary can rejuvenate the belief, expressed by Harvard President Lowell at the close of the Tercentenary Celebration in 1936, that universities will continue to be "faithful to their great purpose."

"So long as an institution conduces to human welfare," he told the gathering, "so long as a university gives to youth a strong, active intellectual life, so long as its scholarship does not degenerate into pedantry, nothing can prevent its going on to greater prosperity. In spite of the condition of many things in the world, I have confidence in the future."

Recognized  
For Excellence\*

**saint  
joseph  
college**  
West Hartford, CT

A UNIT OF THE SJC EDUCATION COMPLEX

Connecticut's  
Four-Year  
Women's College

\*U.S. News & World Report, November 1985  
Brunswick Foundation Award, January 1986



# Financing the Future of Higher Education

By Lawrence W. O'Toole



The fiscal outlook for many higher education administrators grows more bleak as they look for solutions to the many financing dilemmas they face: funding capital building programs, deferred maintenance costs, investments in equipment, increasing campus-based student assistance. At a point when higher education institutions are increasingly recognized for the significant contributions they make to the vitality of the New England economy, these same institutions face a severe economic crunch in supporting their growing initiatives in behalf of economic development and educational opportunity.

Squeezing from one side are simple pricing constraints. Since 1980, colleges and universities have been playing "catch up" with annual increases in tuition and fees that are outstripping inflation. The increases come at a point when federal support is being cut back dramatically in terms of direct and indirect aid available to both colleges and to students. The widening gap has led key policymakers to consider health care-type "cost-containment" programs as an affirmative federal solution to the problem of assisting students with financing post-secondary education. Squeezing from the other side are federal initiatives limiting the ability of educational institutions to issue tax-exempt debt for purposes of facility and equipment financing as well as for student loan programs.

Without exception, domestic programs are being scrutinized as the federal government searches for ways to cut into the growing national debt. Education programs particularly are facing formidable challenges by a web of legislation that includes budget reconciliation, dominated by the spectre of Gramm-Rudman automatic sequestrations, reauthorization of the Higher Education Act, and the dozens of different pressures presented by various tax reform measures. The central issue in the range of proposals being considered is the direction of our national policy on higher education and commitment of the federal government to provide financial assistance to students.

Evaluation of federal policies is necessary to assure that aid programs effectively meet current needs and to understand the elaborate intricacies of financing schemes that have made higher education accessible to all. Lawmakers must recognize that the interrelationships that exist in higher education through public and private funding can suffer major imbalances from minor short-term tinkering with programs. Principally, the policymakers must admit that an approach of capping costs, which thereby limits the research and academic experimentation that has led to many important scientific and economic contributions, is not the solution to be preferred as an expression of national education policy.

On the expenditure side, the largest student aid program, and therefore the one most often targeted as ripe for reform, is the Guaranteed Student Loan Program (GSL). In 1984, nearly 3.4 million students borrowed \$7.9 billion. The GSL is exactly the kind of public-private partnership that the Reagan Administration has advocated: a program in which private lenders provide private loan capital to students with the federal government providing a guarantee and partial interest subsidies. The structure allows a dramatic leveraging benefit of more than ten times the federal cost of the program.

Several factors have contributed to the swift growth of the GSL option; principal among them is that the GSL has become a national program instead of a program serving just states with a large population of independent college students. The costs of higher education at both public and independent institutions have risen to the point where a larger percentage of all students must borrow. States have done much to increase their support of student aid, but in the face of continued ceilings on other federal grant aid, borrowing under GSL is the only viable option.

During the past five years inflation and rising costs of education have brought about an increased reliance on loan capital by students and families at all income levels to finance higher education. As recently as ten years ago, 75 percent of all federal



aid was awarded as grants. Nearly 43 percent of the total amount of financial aid received by students in 1983-84 was in the form of guaranteed student loans, and in 1985-86 it is estimated that nearly 60 percent of all aid to college students is through loan programs. The percentage of undergraduate aid recipients of independent schools who obtained GSLs has risen dramatically over the past five years. Graduate students rely even more heavily on loans since they are not eligible for most federal and state grant assistance. In 1983-84, just under 70 percent of the graduate aid recipients at independent universities received guaranteed student loans. During the same year, 86 percent of the graduate aid recipients at public institutions secured GSLs.

For many middle-income families, college is within reach for their children only with some assistance from either government aid programs or private sources, including college-sponsored aid. Through the Middle-Income Student Assistance Act of 1978, Congress recognized that middle-income as well as low-income families need help paying for college. In recent years, more and more low-

income families are also turning to GSLs because grant and scholarship programs are not providing enough assistance to meet college costs. Many members of Congress have viewed lending plans as the best means to provide additional aid to students and families, partly because lending is a cost-effective way to provide assistance.

The reliance on loan capital for financing higher education is exacerbated by several significant factors. College costs are rising faster than family incomes and consuming a greater portion of it. Families can neither have a sufficient amount of money for higher education before their children reach college age, nor can they pull together the personal resources to pay for college costs out of current income. A disturbing re-emergence of the middle-income crunch is evidenced through figures showing that a smaller percentage of students from middle-income families attend independent colleges than the percentage of students from both lower- and higher-income families. Another trend focuses on greater numbers of students paying for their own educations by borrowing now and repaying out of future in-

come. Since 1970, college students have accumulated more than \$40 billion in student loan debt. Between 1985 and 1990 this figure will escalate dramatically.

The significant growth of the GSL program over the past several years has made loan capital available to more students; however, GSLs are not geared to meet increased college costs. The undergraduate loan limit of \$2,500 set in 1972 has never been increased, and each year the allotment represents less and less of actual college costs. Ten years ago, a \$2,500 GSL covered nearly half of the average cost of attendance at a four-year independent university, but today a \$2,500 GSL will pay for one fifth of the total costs of attendance at the same type of institution. In New England the problem is particularly acute.

An additional source of lower-cost loan capital became available when the PLUS loan program for parents was created by Congress as part of the 1980 reauthorization of the Higher Education Act. Parents are able to borrow up to \$3,000 annually for each child attending school. The interest rate on the loans is now 12 percent and repayment begins in 60

# Your Fundraising Connection

## Snelling, Kolb, & Kuhnle \* Fundraising and Executive Search Counsel



### Some of our current and recent clients include:

The American Morgan Horse Institute, Inc.	Embry-Riddle Aeronautical University	Miss Porter's School	University of London - Royal Veterinary College
The Beauvoir School of the Washington National Cathedral	Friends' Central School	National Trust for Historic Preservation	University of Maryland, University College
Beaver Country Day School	Gallaudet College	Norwich University	University of Massachusetts - Amherst
Brandon Hall School	Gaylord Hospital	Odyssey House, New Hampshire	University of Pennsylvania, School of Veterinary Medicine
Cedar Crest College	The Gill/St. Bernard's School	Planned Parenthood of Northern New England	Vermont Law School
Center for Northern Studies	Gould Academy	Quinnipiac College	Vermont Studio School
Cushing Academy	University of Guelph	Shady Side Academy	Vermont Symphony Orchestra
Champlain College	Harpeth Academy	Shelburne Farms	
Cottage Hospital	Hollins College	Resources, Inc.	
Elizabethtown College	Johnson State College	Sidwell Friends School	
	The Maret School	Special Olympics, Inc.	
	Midway College	Sweet Briar College	

Principals: Barbara W. Snelling, John N. Kolb, II, John H. Kuhnle

Offices: 20 Kimball Avenue • South Burlington, VT • 05401 • 802 • 864 • 7800 \* 6B Rivers Edge • 2301 Cherry Street • Philadelphia, PA • 215 • 561 • 3200  
Suite 600 • 2100 M Street, NW • Washington, DC • 20037 • 202 • 463 • 2111



days. A goal of Congress was to provide families with a program that would assist them in meeting the parental contribution required for their children's education.

The PLUS program has proved to be a successful and viable means of providing assistance to parents in New England where college costs are relatively higher because of large independent college enrollments and where an investment in higher education is viewed as a lifelong value, as the New England Board of Higher Education has documented. But, the program has not been an overwhelming success in other areas of the country, chiefly because of lower education costs and parental unwillingness or inability to borrow. Students and families at all income levels continue to need more education credit to help them pay for post-secondary schooling. Any congressional efforts that either stabilize or curtail the current GSL level undoubtedly will intensify the pressure for school administrators to increase campus-based assistance and create new scholarship and/or loan programs for their students. Funding new or expanded campus-based programs presents challenges for most public schools and many independent schools.

#### **New Sources of Aid**

New supplemental sources of student assistance are being developed outside of federal loan programs to help cover the unmet needs of families and students. These innovative supplemental loan programs are being offered by a variety of sources; however, many of these programs require colleges and universities to commit funds to a pool that, in essence, guarantees the loans against default.

The supplementary program that does not require Congress to commit any of its funds is the TERI (The Education Resources Institute) supplemental loan program. TERI loans are offered by lenders under different names and are fully guaranteed by The Education Resources Institute, a non-profit corporation located in Boston. Up to \$15,000 can be borrowed annually to meet costs of education not covered by other grants, loans, or scholarships. Payback of principal can be deferred until after graduation, and the payment period can extend over 15 years.

While the need for additional funding relief is evident, increasing present loan limits and creating new supplemental loan programs worry those who feel expanded loan programs encourage individual extension of deficit spending. The expansion of credit for parents does not raise the same type of concerns that are voiced about increasing student borrowing levels. The effect of increased loan limits is to afford relief to students and families to meet rising educational costs over the short term; however, the long-term effects of monitoring debt could become a repayment nightmare.

A particular problem is the need for students and families to be able to consolidate all education loans and make reasonable single monthly payments. The impact of over-indebtedness is a subject that is gaining widespread attention in the higher education community as well as in government circles. Some fear that students will avoid entering traditionally lower-paying professions; others say that purchasing power will be so limited that buying automobiles and homes will be out of reach and that today's young parents will still be paying off their own student loans when they must begin borrowing for their children's education in middle age.

Studies are being undertaken to determine the effect that indebtedness has on the decisions of GSL borrowers who are currently in repayment. Joseph Boyd has recently completed an attitudinal study of student indebtedness that is national in scope for NASFAA (National Association of Student Financial Aid Administrators). Preliminary findings of the Boyd Study indicate that most borrowers in repayment are not experiencing financial difficulties because of their student loan indebtedness. Nellie Mae is formulating a research project that will survey a representative sample of our 25,000 GSL borrowers who are now in the repayment process. The purpose of the Nellie Mae study is to determine what effects the loan obligations of New England students have on purchase decisions, career decisions, and family decisions.

#### **Societal Impact**

Clearly, other options for meeting the cost of higher education from family resources have their own levels of societal impact. Cooperative education programs that combine

terms of study and sponsored work activities provide many students with the means for financing college costs, but such programs cannot be expanded to include the universe of all needy college students. We face the potential of many college students pursuing their degree on an unsponsored year-on/year-off basis, thereby committing a full year's earnings to the next year of study. The impact that this trend may have on collegiate life, and the benefits derived from participation in the campus community, might result in accentuating the worst aspects of a "me first" generation. Similarly, greater reliance upon work by larger numbers of "between-studies" collegians may increase the competition for entry-level service jobs, traditionally positions held by high school graduates or dropouts, and potentially worsen the unemployment problem suffered by minorities and teenagers.

Administrators recognize that the financing crisis of students and families will at best threaten the economic diversity of student bodies and, at worst, will prevent access to higher education for growing numbers of students. Among the solutions to this problem is a combination of relief that includes a federal commitment to higher education by increasing grants and raising federally-guaranteed loan limits, and by authorizing consolidation of student and parent loans. Supplemental loan programs should be encouraged to provide alternative means for financing education, particularly the high costs of graduate education. And finally, lender participation in the GSL must not be discouraged through legislative action.

The balance of current financing components is delicate and efforts must be made to strengthen rather than destroy that balance. The stakes are very high; whether an affirmation of choice and access to education by all or a new education elitism reserving knowledge for only those who can afford it will occur is the basis upon which the national debate should focus. The very complexity of our current financing arrangements will hamper our efforts in providing clarity of vision to those in government leadership roles as well as the public at large. ■



# NELLIE MAE'S PROGRAMS SUPPORT ACCESS TO HIGHER EDUCATION

New England's institutions of higher education are among the most respected in the world and are a leading force in the economic vitality of our region. Nellie Mae is committed to supporting access to higher education for New England students through our programs and activities.

Nellie Mae's partnership with the lending community has contributed nearly \$250 million in education credit for New England students. Our secondary market activities assure the availability of loan capital to help all students finance their education at the school of their choice.

Schools and universities get expert analysis of higher education financing issues at Nellie Mae seminars and in Nellie Mae's *Legislative Issues* newsletters. Nellie Mae is developing even more programs and services to help institutions of higher education cope with the financing issues created by a dynamic economic environment.

For more information on our programs and to be added to our mailing list, please send us your business card.



## Nellie Mae

The New England Education Loan Marketing Corporation

25 Braintree Hill Park, Braintree, MA 02184 Tel. 617-849-1325



# Commission on Law and the Economy Appointed:

by Thomas C. Fischer

Will there be enough lawyers to meet New England's demands? Are there too many lawyers already? Are enough lawyers entering the public sector, providing services to the poor and those least able to defend themselves? Do our lawyers have the right skills to serve the needs of New England's business community? If not,

what will be the impact on the regional economy?

Few persons, including lawyers, have any sense of how the legal needs of the New England region are going to be met in the next decade or two. What we do know is that high-quality legal services—and lots of them—are necessary to our rapidly

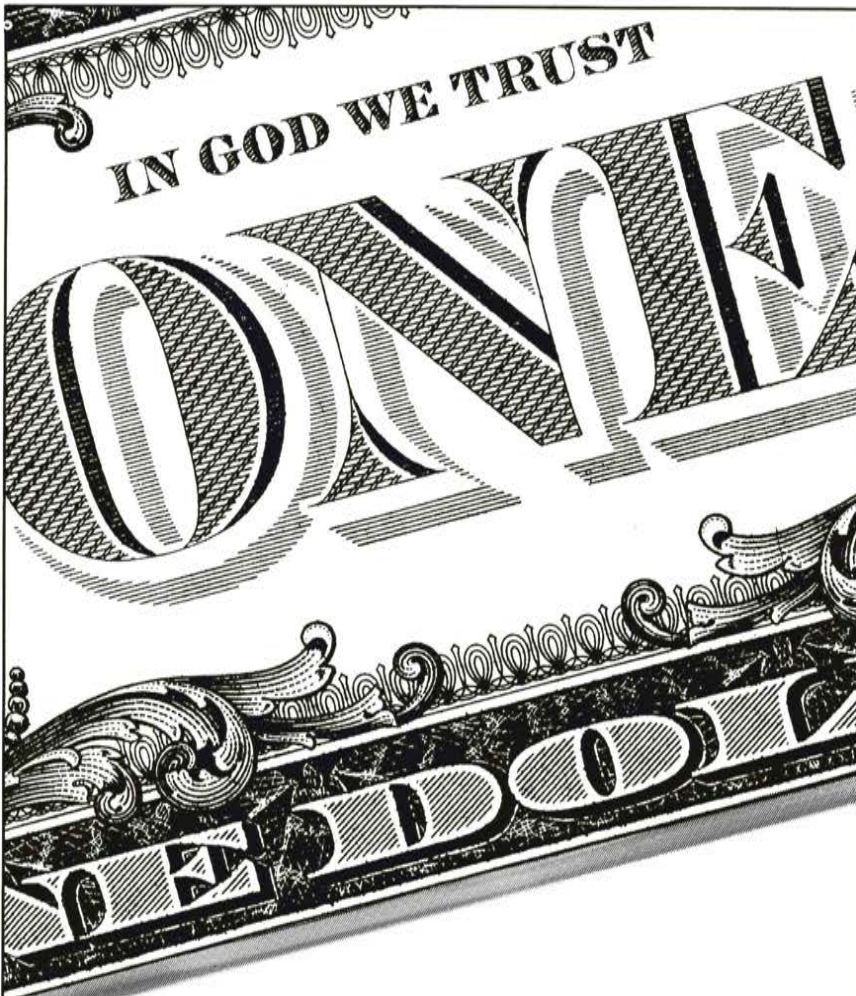
growing and increasingly sophisticated regional economy.

During two planning meetings of NEBHE's Commission on Law and the Economy of New England, the rich diversity of legal issues within its scope became evident. Discussion ranged from the law's traditional adversarial approaches to dispute resolution to the availability of legal services for high-tech industry and for the poor. Also in question were the implications of computerized legal information and the changing nature of legal practice. The New England Board of Higher Education has asked the new Commission to:

- Assess the current economic impact of the region's thirteen law schools, given the fact that the public and policymakers do not understand the significance of legal education and its role in the region's economy.
- Recommend ways in which New England law schools, law firms and bar organizations (through, for example, changes in recruitment and continuing legal education) can better serve the needs of the region's knowledge-intensive economy.
- Encourage access to legal services and maintain and extend high standards of ethical preparedness, through legal education and in practice.
- Assist in disseminating these findings and making recommendations to leaders in the professions, business, government and education.

The study will probably require eighteen to twenty-four months. The Commission's report should be released in the fall of 1987.

Preliminary planning for the Commission has developed over the last six months through a grant from the Law School Admission Council (LSAC), which supervises and administers the standard examination for admission to law schools, the Law School Admission Test (LSAT). The work of the Commission complements a study LSAC funded at Harvard Law School to learn more about lawyer mobility and job satisfaction. The LSAC believes that if the New England study shows supply and demand for legal services, reflecting distinct regional characteristics, the NEBHE project will be a model for studies of other regions of the U.S.



**Who on earth are you going to trust with your printing dollar?**

**THE NIMROD PRESS**  
*Printers & Engravers*

BOSTON, MA 02215 (617) 437-7900

*When your printing looks its best, so do you!*



COMMISSION ON  
LEGAL EDUCATION  
AND PRACTICE  
AND THE ECONOMY OF  
NEW ENGLAND

**Joyce London Alexander**,  
U.S. Magistrate, Boston, MA

**Rosalyn S. Bernstein**, NEBHE  
Board Member, Portland, ME

**Morris L. Cohen**, Professor of  
Law and Librarian, Yale Law  
School, New Haven, CT

**Dr. William R. Cotter**, President,  
Colby College, Waterville, ME

**William A. Daggett**, Senior  
Vice President, Bank of New  
England, Boston, MA

**Thomas M. Debevoise**, Dean  
Emeritus, Vermont Law  
School, Woodstock, VT

**James R. DeGiacomo**, Roche,  
Carens & DeGiacomo, Boston, MA

**Ellen Mercer Fallon**, Legal  
Counsel to the Governor, Vermont

**Richard G. Huber**, Professor,  
Boston College Law School,  
Newton Center, MA

**William R. Johnson**, Associate  
Justice, Supreme Court of New  
Hampshire

**Robert Meserve**, Past Presi-  
dent, ABA, Waltham, MA

**Richard Morse**, Chairman,  
Board of Trustees, University  
of New Hampshire

**Robert J. Muldoon, Jr.**, Chair-  
man, National Conference of  
Bar Examiners

**Florence K. Murray**, Associ-  
ate Justice, Supreme Court of  
Rhode Island

**William T. O'Hara**, President,  
Bryant College, Smithfield, RI

**Dr. Walter Peterson**, Former  
Governor of New Hampshire,  
President, Franklin Pierce Col-  
lege, Rindge, NH

**Senator John C. Revens, Jr.**,  
Rhode Island Senate

**Thomas P. Salmon**, Former  
Governor of Vermont,  
Salmon & Nostrand, Bellows  
Falls, VT

**Betty Taymor**, Director, Pro-  
gram for Women in Politics &  
Government, Boston College, MA

**James A. Thomas**, Associate  
Dean, Yale University Law  
School, New Haven, CT

**Oliver O. Ward**, President,  
Germanium Power Devices  
Corp., Andover, MA

Initial assessment of data col-  
lected from many sources suggests  
that there is much analytical data to  
enrich the study, but regional infor-  
mation has never been assembled in  
the way the NEBHE Commission  
proposes. Looking behind the raw  
numbers, what has been billed as a  
"lawyer glut" may simply be a major

maldistribution issue. Also, the  
growing number of women lawyers,  
the fact that minority access to the  
profession has leveled off, the ris-  
ing cost of a legal education, and the  
apparent shift from private to cor-  
porate practice all suggest profound  
changes in the nature and provision  
of legal service.

If the long-range implications of  
such changes are not widely under-  
stood, the legal talent necessary to  
support the New England economy  
may one day not be available. The  
diversity and interest represented by  
the Commission reveals an interest  
in assessing and planning appropri-  
ate options for the future. ■



## Education for Life

Since 1933 Southern New Hampshire's  
Leader in Higher Education

### UNDERGRADUATE SCHOOL FOR WOMEN

and the co-educational

SCHOOL OF CONTINUING EDUCATION

SCHOOL OF GRADUATE STUDIES

RIVIER COLLEGE - ST. JOSEPH HOSPITAL

SCHOOL OF NURSING

associate's and bachelor's degrees in over 50 majors  
master's degrees in 5 areas

certificate programs • non-credit courses  
career development and placement  
• available financial aid •  
classes year 'round -- start your studies in  
September, January or May

CALL TODAY FOR MORE INFORMATION  
RIVIER COLLEGE, Nashua, NH 03060 • (603) 888-1311



by JoAnn Moody

## Hatching New Technology-Based Corporations

New England universities considering the possibility of becoming mother hens to fledgling businesses need look no further than downtown New Haven for a successful brooder operation.

Four years ago, Yale University, Olin Corporation, and the City of New Haven founded the non-profit Science Park Development Corporation, recruiting Henry (Sam) Chauncey, once secretary of the University, to head it. Science Park is now the fastest growing incubator center for small businesses in the U.S.

To date, 80 new companies have found a home at Science Park in two well-worn but sturdy inner-city factory buildings, now owned by the Development Corporation. There the upstarts enjoy low rent and buy basic support services—such as computer time, typing, phone answering, conference rooms, parking, trash removal—at a discount. In addition, the entrepreneurs benefit from Chauncey's parenting: with his extensive University and state-wide contacts, he introduces them to bankers, venture capitalists, accountants, and sophisticated and specialized consultants, vital to the growth of the new enterprises. Soon Chauncey hopes to offer in-house advanced services such as patent and accounting counsel.

About one third of the Park's entrepreneurs are related to Yale—either alumni(ae) or faculty. What all of them are attracted to is a protected environment where they do not waste precious time managing basic support services. When the entrepreneurs outgrow their present rental space, they can easily move to larger quarters within the Park. Because such growth and movement are expected, no rental lease is required. Entrepreneurs, according to Chauncey, respond well to the hassle-free flexibility afforded by this arrangement.

But most attractive to the entrepreneurs is the proximity to Yale faculty and the Yale library, only a few blocks away. The creative flow of complex information characterizes New England's knowledge-intensive economy, a theme often sounded by the New England Board of Higher Education. Chauncey well understands this, taking special steps to assure that his entrepreneurs are up-to-date on research being performed by Yale faculty in such fields as biology, medicine, computer science, and "concept" engineering. The Yale Library's catalog will be accessible by computer for special use by Science Park businesses. Promoting the rapid flow of information between the Park and Yale is one of Chauncey's most important tasks. He foresees that this rapid flow will ultimately help the Park lead the nation in biotechnology start-up firms. One of the Park's largest companies, International Biotechnologies (a maker of enzymes), bears this out: IB moved to the Park to be near Yale biology professors. Some facilities

*Diversity at Science Park, whether among mature companies or nascent ones, best serves Chauncey's and the Development Corporation's second purpose: jobs for minorities living in the economically distressed neighborhood adjacent to the Park.*

for light manufacturing will also be made available to employers.

In order to ensure stability and diversity for the Park, Chauncey is also recruiting established firms. Southern New England Telephone's Sonacor Division has just occupied a large newly constructed "Class A" office building. Barnes Engineering is due in the fall of 1986. The YMCA will soon be renting space for a new branch at the Park.

It is clear that the Park is not headed toward becoming a specialty incubator center limited to biotechnology or another high-tech area. Again, diversity is the safer route, according to Chauncey. He is interested in helping hatch 150 technology-and-information-based corporations at any one time, whether they are low-tech or high-tech in nature. He plans the rejuvenation of other factory buildings to be made available to newcomers in fields as varied as management research and consulting, solar energy, electronics, telemarketing, industrial waste analysis, and medical diagnostics.

Diversity at the Park, whether among mature companies or nascent ones, best serves Chauncey's and the Development Corporation's second purpose: providing diverse jobs for minorities living in the economically distressed neighborhood adjacent to Science Park. The neighborhood, once the site of employment for hundreds of residents in the manufacturing of rifles, ammunition, and brass products now suffers from unemployment in excess of 20 percent as a result of Olin's pull-out.

To remedy this, the Development Corporation now trains community residents for jobs, both within the Park and without. Four different job training programs are currently under way, and graduates display a high level of job retention. Other training initiatives, with sponsors ranging from IBM to the State of



Connecticut and for-profit training consultants, are in the offing for residents.

### Advice to Other Universities

For campus officials considering their own unique links to an incubator center, Chauncey has some straight talk. He warns universities that the bureaucracy of their own faculty and administration can impede or even prevent the establishment and effectiveness of an incubator center. While the Science Park Development Corporation has a director representing each of the founders (Yale, New Haven, and Olin), these three are outnumbered by eight independent directors. The Corporation is self-sufficient, with a self-perpetuating board of directors. That independence, according to Chauncey, was critical in enabling the phenomenal start-up pace of Science Park: the Corporation was formed in January 1982 and the Park opened in September 1983. Such momentum becomes an important asset to the community, investors and budding entrepreneurs. Being caught in a demoralizing morass of campus and government discussions and red

*Within limits, faculty and students must be encouraged to transfer their ideas from the drawing boards and laboratories to the marketplace.*

tape, according to Chauncey, must be avoided.

Chauncey urges that buildings be "donated for use as incubator space. An independent center will find it hard to survive," he says, "if it must make a hefty mortgage payment each month. Olin Corporation is donating, over several years, its old factory buildings to the Park, and, in the process, realizing a tax write-off." He has found that alumni(ae) enjoy being asked to participate in the Park's activities, whether as unpaid or paid advisors, entrepreneurs, venture capitalists or publicists. "Universities," he suggests, "have yet to take full advantage of their good will."

Within limits, faculty and students

must be encouraged to transfer their ideas from the drawing boards and laboratories to the marketplace. Such movement is necessary to slow down the "brain drain" caused when top scientific, medical and engineering researchers move permanently from the academic to the corporate world.

"Think of ways to strengthen the community surrounding the campus," Chauncey advises. The prosperity of both should be of concern to both. In Yale's case, a rehabilitated neighborhood around Science Park will enhance the quality of life for Yale students and faculty who study and work only a few blocks away.

Chauncey's final suggestion is to "increase communication between campus officials and business leaders, whether or not a decision is made to start an incubator center." He cites the efforts of the New England Board of Higher Education in advancing the case for communication and collaboration between business and academe, but urges "continuing efforts at all levels to bring together business and the academy in constructive ways." ■

**SOUTHERN  
VERMONT  
COLLEGE**

**BENNINGTON  
VERMONT 05201  
802-442-5427**

Congratulations to

**CONNECTION**  
NEW ENGLAND'S JOURNAL OF HIGHER EDUCATION

on its Charter Issue

**SOUTHERN VERMONT COLLEGE**

"Educational achievement in career studies and liberal arts for students ready to fulfill their potential."





The ascending spiral of greatness  
in America has risen because  
industry has produced wealth,  
which in turn has supported  
educational institutions, which in  
turn have supplied leadership to  
industry in order that with each  
succeeding generation it might  
produce more wealth.

—WALLACE F. BENNETT

Success through education. EG&G believes the discovery of new technologies starts with a solid education. And the freedom to explore new ideas. These tenets have expanded our corporation to over 160 businesses worldwide.

 **EG&G** LEADERSHIP THROUGH SCIENCE AND TECHNOLOGY

EG&G, INC., CORPORATE OFFICES, 45 WILLIAM STREET, WELLESLEY, MASSACHUSETTS 02181



# Update: NEBHE Commission on Biomedicine

Change, like childbirth, is profound and painful, and often easier when assisted. New forms of health care and new products to support a changing process of health care delivery are coming into being. NEBHE's Commission on Academic Health Centers and the Economy of New England is deeply concerned about the kind of midwifery that ought to be provided to the new processes associated with biomedicine.

On one hand, the strengths of New England innovation include several of the world's most technologically-advanced universities, a variety of manufacturers capable of sophisticated developmental breakthroughs, and perhaps the largest concentration of technologically-oriented venture capital in America. These elements suggest a free-market approach to innovation. On the other hand, overseas competitors abound, backed by the finances and coordination of large industrial corporations, and government ministries motivated by national needs and aspi-

ration. Federal government is reducing its role as a major stimulator of academic R&D, and there is competition from other regions which have the advantages of well-developed traditional pharmaceutical and chemical industries. This set of circumstances argues for state policies and regional coordination as a major means of fostering New England economic development in biomedical fields.

The Commission has been charged with exploring the circumstances favoring positive economic change in the health sciences industry, specifically, the linkages which now exist between academic health centers and innovative private sector firms. (See *Connection*, Fall 1985.) The Commission is now reviewing the region's high biotech industry.

A new industrial complex of major economic significance and broad applications, based on DNA genetics, recombinant DNA, hybridoma production of monoclonal antibodies, and computer-enhanced instrumentation is developing in New Eng-

land and elsewhere. Some products already included are monoclonal insulin, blood clotting factor, and a number of test kits using immunochemistry. These enterprises devoted to the development of products and services used in the diagnosis, treatment, and research of bodily disabilities, disease, and other medical problems are called the high-tech biomedical industry. The high-tech/biotech industry is also devoted to the safe development of a wide range of products and services, including, for example, food stuffs.

Some 133 firms in New England, many newly formed, are engaged in the new technology. Among them are Biogen, Collaborative Research, and Damon Laboratories in biomedical products; Agritech Systems in biotech products; Pfizer and Stauffer in chemicals; Aetna, Biotechnology Investment Opportunities, and The Genetics Institute in finance; and Gorham International, Arthur D. Little, and Stone & Webster in consult-

*continued on page 67*

## Facts on the Health Industry of New England

In our six-state region, the health services industry is the second largest employer, next to government. The health services industry includes hospitals, nursing and health care facilities, medical and dental laboratories, outpatient-care facilities, as well as the offices of physicians, dentists, osteopathic physicians, chiropractors, optometrists, and health care practitioners. (Note: pharmaceuticals and medical instruments and supplies are not included in the category of health services.)

A total of 450,526 people were employed in the industry during 1983; this represents a 45.2 percent increase in numbers since 1975.

Additional facts of interest include:

- Between 1975 and 1983 over 140,000 jobs were created in the overall health services industry in New England, as compared to just 80,000 in high technology. The nine academic health centers of the region are the propelling

force behind the region's thriving health care sector.

- In 1983, the 450,436 jobs in health services, over 8 percent of total employment, generated payroll expenditures of \$6.8 billion. The direct, indirect and induced effects of the health care industry in New England in 1983 was estimated at \$15.2 billion.
- The health services sector was the second largest employer in New England in 1983 with 107,236 jobs in Connecticut; 36,495 in Maine; 232,090 in Massachusetts; 24,359 in New Hampshire; 34,804 in Rhode Island, and 15,452 in Vermont.
- The nine academic health centers defined as the focus for the NEBHE study employ nearly 45,000 people at the medical schools and their major affiliated teaching hospitals. They are linked to Boston University, Harvard University, Tufts University, University of Massachusetts, Brown University, Dartmouth College, University of Vermont, University of Connecticut, and Yale University.

- With 5.3 percent of the U.S. population, New England's nine academic health centers educate 3,681 undergraduate medical students (5.4 percent of the U.S. total) and 5,285 graduate medical students in hospital residency programs (7.3 percent of the U.S. total). Moreover, the region itself attracts more than twice the national average per capita of the available federal funding for medical research and development.
- Academic health centers have an impact in the region well beyond their size because of their triad of specialized patient care, teaching, and research. The research activity, in particular, has spawned biotechnology development in the region and influenced the location of firms capitalizing on research applications.
- At a time when the focus is on cost, the specific benefits of academic health centers have been underestimated; their direct, indirect and induced impact on the New England economy is between \$2.9 and \$3.5 billion. ■



# Higher Education and the State: New Linkages for Economic Development

by Melvin H. Bernstein

The ties that colleges and universities have with economic development take on increasing significance in American higher education as New England and the nation compete in knowledge-intensive national and global economies. Specialized knowledge is the key to economic development. And we depend on our colleges and universities to nurture and concentrate the advanced knowledge in science, engineering and technology that fosters business innovations.

The movement to link higher education with economic development has picked up momentum throughout the United States and spread to other industrialized nations and many developing ones, including China. Our governors have made a stronger commitment to elementary education and extended that commitment to secondary education, colleges and universities. They are finally making improvements in the quality of higher education a top legislative priority in 1986.

New Jersey Governor Thomas Kean, on becoming chairman of the Education Commission of the States, told a state leadership audience in Philadelphia last July that improvement in the quality of higher education is one of his top two priorities for the next three years; support for public school teaching is the other. He spoke of the importance of listening to what people in higher education have to say and looking closely at successful state programs.

"Above all," he said, "our purpose is to articulate a vision for the resurgence of American higher education." He asked that an interim report be prepared early in 1986 for state legislative sessions and called for "practical suggestions for effective state action." Economic and national renewal demand no less.

Tennessee Governor Lamar Alexander also chose education as a top priority when he became chairman of the National Governors' Association in Boise, Idaho, last August. One of seven gubernatorial task forces he appointed on education is chaired by Missouri Governor John Ashcroft.

The task force will assess college quality and develop ways to evaluate the results of post-secondary education. Massachusetts Governor Michael S. Dukakis serves on the college-quality task force. The other New England governors serve on the following task forces: New Technology, New Hampshire Governor John H. Sununu, chairman; School Leadership and Management, Rhode Island Governor Edward D. DiPrete, vice chairman, and Connecticut Governor William A. O'Neill; Readiness, Vermont Governor Madeleine M. Kunin; and Teaching, Maine Governor Joseph E. Brennan.

Sadly lacking in the past, new criteria are now needed to help governors and legislators decide how well higher education performs, measures progress and allocates resources consistent with state goals. In the absence of concrete indicators, the effort to assess the quality of public higher education is elusive at best.

The astonishing surge of political and economic interest in our universities and the appearance in so many states of creative new research partnerships with industry have not come about by accident. The phenomenon is partly explained by recent economic experiences, and partly by rapid, fundamental change in science, technology and the world economy. For example, in the past 30 years alone, new technology has produced about 90 percent of all human knowledge in the sciences. That knowledge will double in the next ten to fifteen years.

It was not dire financial need that forced higher education to seek new economic partnerships with business and industry in 1981. The pressures of intense inflation and deepening recession accounted for some of it, and the failure of campus revenues to keep pace with skyrocketing costs also contributed. Reagan administration budget cuts and state retrenchments compounded these financial problems.

Even more significant were sweeping worldwide and national forces that shook the fragile infrastructure of higher education out of its tradi-

tional lethargy and defensiveness, and drove it into innovative high-technology partnerships and joint ventures with industry and government. To appreciate fully the economic importance of these new relationships, these are the developments to remember:

- The arrival of the knowledge economy. Knowledge industries today account for over 50 percent of American Gross National Product. One out of every two workers today collects, organizes or disseminates information.
- In an economy where knowledge is a critical economic resource, the university, existing at the center of the knowledge industry, is the fuel feeding the engine of national economic productivity.
- Productivity research reveals that since 1929, human capital has contributed more to American economic growth than financial capital, machines or factory plants. Knowledge, education and training have become essential for human capital to form and grow.
- The United States no longer dominates the global economic system as it did from 1945 to 1970, and has already lost world market leadership in autos, steel, machine tools and consumer electronics.
- Stiff international competition confronts 70 percent of all American goods sold in this country and overseas.

New England suffered during the recessions of the 1970's, but it was one of the first regions to see its economic future being linked directly to higher education. And that's not surprising: New England has the largest concentration of colleges and universities of any region in the country. By the late 1970's, New England had created a knowledge-intensive economy that could redefine and redirect its obsolescent manufacturing base and turn a dying economic infrastructure towards newer technologies.





## It's a corner of America where history began.

This vacation take your family on a trip through time they'll never forget. Come follow the streets of Massachusetts through 300 years of America's past.

Stroll along Boston's Freedom Trail to lively Faneuil Hall Marketplace or head out for the historic reenactments in Lexington and Concord.

Join our colorful ethnic festivals in the cities of Springfield, Worcester, Lowell, New Bedford and Fall River. Dine in a world class restaurant or stop for a bite at a sidewalk cafe.

Come feel the very pulse of urban life in our museums, our theaters, our sporting events.

Or take off for the salty air.

The shore and the islands of Massachusetts offer miles of sandy serenity. Here summer means long lazy days at the beach and timeless strolls through the antique shops and artists' havens that dot our coastline.

Feast on fresh lobsters and clams and visit our cranberry festivals and museums that salute whaling days and seafaring ships.

This vacation come share in the spirit of the North Shore, the South Shore, Cape Cod, Nantucket and Martha's Vineyard.

Or head for the

rolling hills of Massachusetts.

Come ease into the country life of Massachusetts. Take your time



## It's a corner of America with sandy shores and salty air.

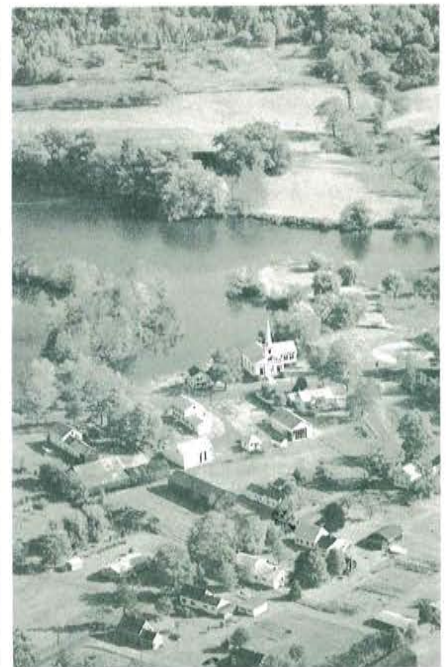
poking through the nooks and crannies of antique shops and country fairs, and stay in cozy inns

with romantic four poster beds and home cooked New England fare or continental cuisine.

Hike and bike and fish along the scenic Mohawk Trail. Thrill to a symphony under the bright stars at Tanglewood, and visit our colonial past in the historic villages of Deerfield, Hancock and Old Sturbridge.

This vacation let your spirit soar in the Berkshires, Pioneer Valley, Springfield and Worcester County.

*Come . . . share in the spirit that is your heritage. Come share in the spirit of Massachusetts. For the spirit of Massachusetts is the spirit of America.*



## It's a corner of America where time slows down at last.



Please send me a free Massachusetts Vacation Planner.

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Mail to: Spirit of Massachusetts  
Division of Tourism;  
100 Cambridge Street,  
13th Floor; Boston, MA 02202.  
Or call: 800-624-MASS.

The Commonwealth of Massachusetts;  
Michael S. Dukakis, Governor.

 **The spirit of Massachusetts is the spirit of America.**





# THIRTY YEARS OF SERVICE

On March 6 and 7, 1986, the New England Board of Higher Education is celebrating three decades of service to state government and higher learning.

We salute New England governors Edmund Muskie of Maine, Abraham Ribicoff of Connecticut, Christian Herter of Massachusetts, Dennis Roberts of Rhode Island, Lane Dwinell of New Hampshire and Joseph Johnson of Vermont, who prompted the Congress of the United States to authorize the Higher Education Compact in 1955.

Since then, 42 governors have worked with the region's legislative leaders to appoint delegates to the Board, supporting interstate cooperation among the colleges and universities that distinguish New England as a center for intellectual leadership.

We've seen thirty years of change. Thirty years of renewal.  
And thirty years of fostering regional development.  
That's reason to celebrate.

New England Board of Higher Education  
45 Temple Place, Boston, MA 02111



Detail of bronze molding on NEBHE building, Boston, Massachusetts



Given the Reagan administration's policy of reducing the scope of the federal government and returning power to the states, Washington is no longer the place to look for leadership and new initiatives in forging linkages between higher education and economic development. The leadership in this area now being displayed by the governors is a fresh departure: they, not the President and Congress, are defining the issues for higher education.

Not only are the states becoming the largest financial source of revenue for colleges and universities, they have steadily increased their contributions while the Reagan administration has been battling in Congress to cut federal support for higher education even further.

But the governors have been slower to pick up the ball and run with it than international circumstances require. They have yet to develop a vision for higher education in their states and set a specific agenda for it. They and their constituents have been preoccupied recently with the quality of public primary and secondary education. And now that their interest in that subject has peaked, they are ready to concentrate on higher education, a resource they know is unrivalled anywhere in the world in magnitude of investment, size and diversity.

Where do state legislators fit into the picture? They pass the budgets that make all state programs possible. Yet despite their wide formal powers, legislative leaders are far less visible than governors, who usually know more about the policy and political questions that concern higher education and can more easily shape public opinion to carry out gubernatorial programs.

But how does one educate and inform the legislators in New England on higher education?

To do the job, the New England Board of Higher Education has a grant award that relies on four basic techniques to help legislators and their constituents better understand the return they get on their investment in higher education and regional economic development:

- An *opinion poll* was taken of the region's 1,323 legislators on their views of higher education's role in economic development. Over 50 percent responded. Two major findings were that 9 out of 10 legislators

want academia to furnish better data to government; and three-quarters believe communications between legislators and higher education are poor.

- *Policy briefings* are held in the state capitols. Extensive data and tables tailored to each state are provided to legislators. Evaluations taken after the meetings show that legislators consider the briefings "a helpful learning experience" and want them held annually.
- *Publications of the proceedings* of the policy briefings are mailed to the region's legislators.
- Periodic meetings of a *Legislative Advisory Council*. The Council is an advisory group of legislative leaders from the six states created for the term of the grant. Plans are reviewed with the legislative advisors from the six states, and evaluations of the policy briefings and other activities are reported to them.

The NEBHE regional pilot project is supported by a three-year grant from the Fund for the Improvement of Post-Secondary Education (FIPSE) of the U.S. Department of Education.

What are the results of this legislative project? From an appropriations standpoint, this is what the record shows: Starting from a comparatively low level of public support for higher education in New England, Massachusetts' large percentage increase in appropriations in the last two years ranks it fourth among all the states. As a matter of fact, Governor Dukakis has proposed major funding increases for Massachusetts' 27 public colleges and universities and the largest-ever scholarship assistance in his FY 87 budget request. Maine ranks fifth in percentage gain, followed by New Hampshire in 17th place, Connecticut in 19th, Rhode Island in 38th and Vermont finishing 39th.

However, the benefits do not translate simply into cause and effect patterns for dollars appropriated; the legislative process is more complex than that. Rather, NEBHE's partnership initiative with the Caucus of New England State Legislatures engenders a more positive attitude towards higher education in the legislatures. Access is provided, attention is focused on issues, and dialogue begins.

All legislators, not just those on

*continued on page 75*

**A TRADITION  
of INNOVATION  
at**

**WESLEYAN  
UNIVERSITY**

Since 1953, Wesleyan's Graduate Liberal Studies Program has provided an exceptional opportunity for interdisciplinary study at the graduate level.

By selecting Wesleyan to resume the "unfinished business" of liberal learning, 2,500 program alumni have received the M.A. in Liberal Studies or the Certificate of Advanced Study.

Concentrations available:

- The Arts
- The Humanities
- Social Studies
- The Sciences
- Mathematics

Other features:

- Part-time, year-round study
- Distinguished faculty
- Seminar-style classes

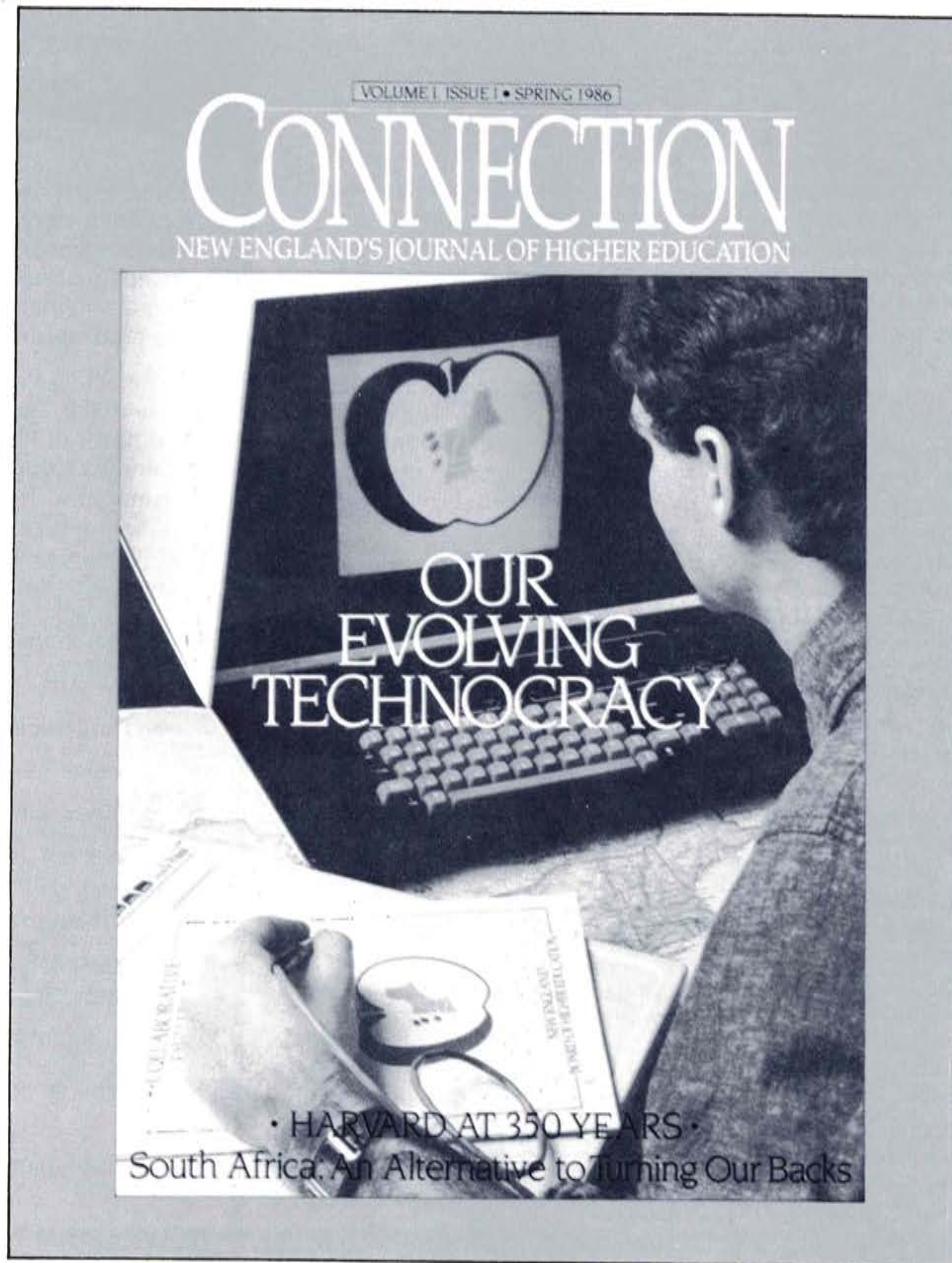
For information, contact

**WESLEYAN UNIVERSITY**  
Graduate Liberal Studies  
Box Z,  
Middletown, CT 06457  
(203) 344-7930





THE UNIVERSITY OF MASSACHUSETTS  
SALUTES THE NEW ENGLAND BOARD OF HIGHER EDUCATION  
ON THE PUBLICATION OF



AMHERST • BOSTON • WORCESTER



# COLLEGE COSTS ALARM AMERICANS:

*Too Expensive, But They Still Want It*

By John C. MacLean

To hear the advertising people talk about it, college is America's best friend. But if a recent sampling of American attitudes towards higher education in the eighties is on target, the friendship is cooling and the culprit is rising college costs.

The Opinion Research Corporation (ORC) of Princeton, N.J., polled a representative sampling of 1,004 adult Americans on their views about the cost and value of higher education. The nationwide poll was conducted during the first week of October, 1985 and sponsored by the New England Board of Higher Education (NEBHE) and the Council for the Advancement and Support of Education (CASE). One hundred and sixty-four New Englanders were polled for special comparison with both the national survey and five years of NEBHE's own regional surveys.

A growing number of adult Americans are of two minds about higher education, the poll revealed. Forty percent of them say they are alarmed about rising college costs but still intend to further their education beyond high school in college or vocational programs. That's a four-per-

cent increase in interest over 1984, when 36 percent said they hoped to continue their education, and a 16-percent jump over 1982, when 24 percent said they wanted some higher education.

Even though Americans say they are interested in further schooling, the poll found that better than three out of four believe that tuition and fees are increasing so rapidly a college education will soon be out of reach for the average person. Almost seven out of every ten Americans said they would only be able to afford college costs with the help of low-interest loans or grants.

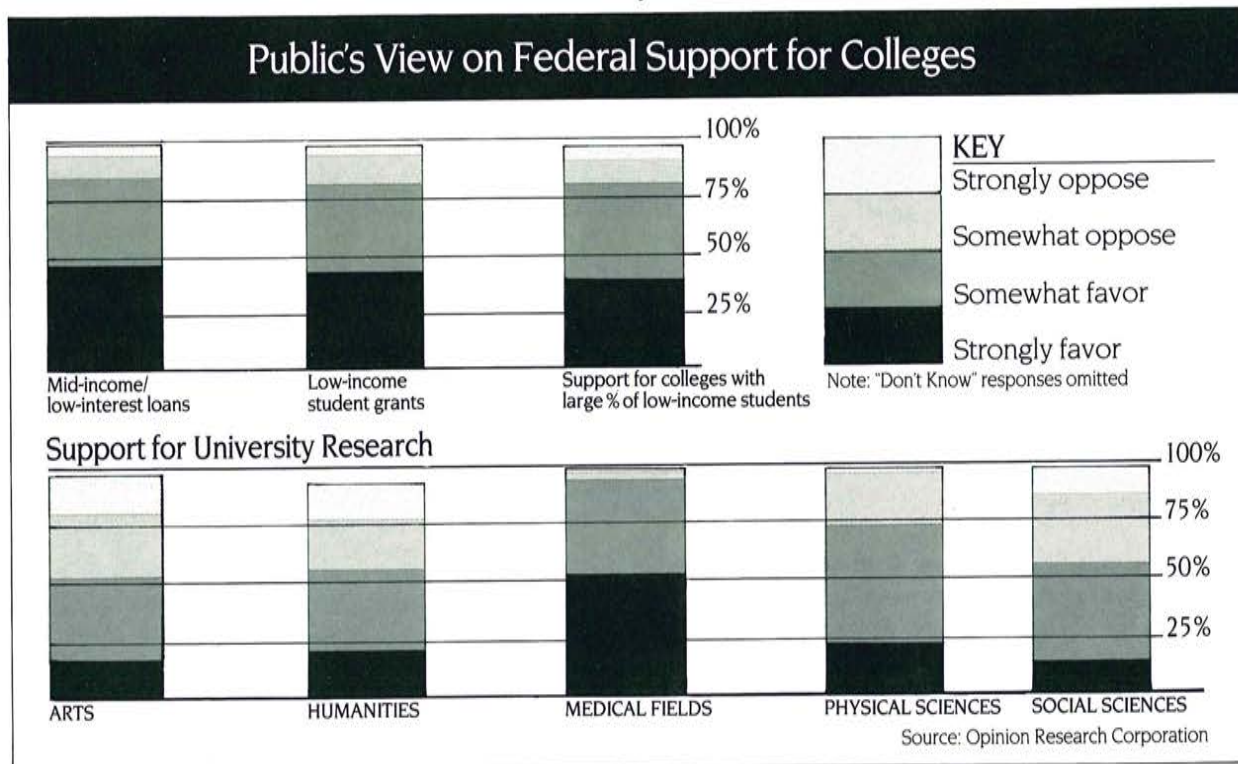
Cost is one reason that 26 percent of those polled said they would choose a vocational or technical school. The other popular choices were public two-year and public four-year colleges, each chosen by 21 percent of those surveyed. A majority of those questioned said that tuitions at vocational and community colleges were just about what they could afford. In contrast, 70 percent said that private four-year institutions were too expensive, and 54 percent said private two-year colleges were also too costly.

Despite their concerns that college is becoming too expensive, Americans—outside of New England—are becoming less inclined than ever before to support federally funded financial aid programs for low- and middle-income students, the survey found. In the 1983 poll, 63 percent said they favored increasing student aid, ranking it third in a list of 14 major programs that the federal government supports. In this survey, only 53 percent advocated more student aid, and it dropped to seventh place on the list of federal priorities.

For most Americans, the top priorities for federal programs are medical research (73 percent), medical care for the aged (72 percent), aid to higher education (61 percent), aid to agriculture (58 percent), aid to elementary and secondary schools (58 percent), and funds to clean up the environment (56 percent).

Although a large proportion of the population still supports low-interest federal loans to middle-income students, that support has steadily eroded during the past three years. In 1983, 51 percent strongly fa-

*continued on page 58*





by Ellin Anderson

## Rob Trowbridge President and Publisher Yankee Publishing, Inc. Promoting "The New England Mystique"

That lady from Kansas. Rob Trowbridge of Yankee Publishing, Inc., has devoted most of his career to her.

"I've got to make sure New England measures up to the idea of that lady from Kansas," he says.

The lady from Kansas is a mythical fan of *Yankee* magazine. But plenty of flesh and blood New Englanders have benefitted from what C. Robertson ("Rob") Trowbridge has done for them in the spheres of business, culture and education.

He succeeded his father-in-law, Robb Sagendorph, as president of Yankee Publishing in 1970. Under his guidance, Yankee has helped make New England a better place to live and work. Since its founding in 1935, *Yankee* magazine has promoted the "New England Mystique" and influenced attitudinal change about the region. "We nurture the idea of New England and preserve the values that characterize the region," Trowbridge explains.

What are the personal qualities behind the "New England Mystique"? There's the individualism and ingenuity of Eli Whitney, who in 1793 started a Connecticut tradition by inventing the cotton gin. "Since the United States Patent Office was established, more patents have been issued to Connecticut residents per capita than to any other state, or for that matter any other country," Trowbridge says.

In New England, the "work ethic" means a desire for efficiency. "Nobody wants to make work," Trowbridge declares. "Your object should be to get rid of drudgery, make work simple."

### His Yankee Heritage:

You may wonder whether Trowbridge's love for New England comes from having roots in the region, and the Trowbridge family does have a long history here. They emigrated to the New World from England in 1636, first to Taunton, Massachusetts and then New Haven, Connecticut. "If you

go to the New Haven Cemetery, there are more Trowbridges there than anywhere else," he says.

But his devotion to New England is more than just Yankee pride: running through the Trowbridge family is a history of issues involvement. Rob's father, the Reverend Cornelius P. Trowbridge, found expression for his public-mindedness in heading the "Friends of Prisoners," in the national leadership of "Planned Parenthood" during the 1930s, and through involvement with the "Right to Die" movement at its start in the 60s.

Born in Salem, Massachusetts, Rob Trowbridge attended Phillips Exeter Academy, Princeton University and Harvard Law School. While he has been a six-term member of the New Hampshire General Court and served 3 terms in the New Hampshire Senate (where he was chairman of the Senate Finance Committee), he did not enter Harvard Law School with a political career in mind; "I went because I didn't know what else to do," he says. A sojourn in a Philadelphia law firm followed. Unhappy as a lawyer, Trowbridge left for Engelhard Industries, serving as assistant to the president for six years. At age 32 he was self-employed as a consultant.

In 1964 Trowbridge and his wife decided to leave crowded New Jersey for New Hampshire, where he began doing odd projects for his in-laws' business. Soon Trowbridge realized that *Yankee*, the "little" magazine whose circulation was less than 40,000 in 1958, had great potential. In six years circulation climbed to 100,000 subscribers. Working with Judson Hale, editor of *Yankee* and its sister publication, *The Old Farmer's Almanac*, Trowbridge had boosted *Yankee's* circulation to 900,000 by 1983. In 1986, its fifty-first year, this figure approaches one million.

*Yankee* is nostalgic and reflective. "We look backwards and forwards," Trowbridge says. "New England is

composed of its past and its present. But we're not trendy—we deal with real people, not 'Real People' (the television show). We're accessible. That's why people relate to us."

In the December 2 edition of *New England Business* magazine, Trowbridge gave his views on education: "Education, in its broadest sense, including the awakening of adults to new trends, may well be our single biggest weapon in the battle for talent. Taken together with a concern for the environment, schooling and health, and coupled with a change of seasons and a beautiful, historically rich landscape, New England, all other things being equal, can and does hold her own in the battle for talent."

In 1983, out of a mutual concern for the preservation of New England and the education and training of its youth, Yankee Publishing and the National Trust for Historic Preservation formed a partnership to establish an intern program in the six New England states. Students in such fields as architecture, landscaping, historic preservation, planning, history, law and business have gained direct experience working with preservation organizations and public agencies throughout the region.

The program has changed a little since then, based on the needs of the students. Now internships can last nine months instead of 13 weeks and be undertaken during the school year as credited courses. "Some projects take longer than 13 weeks," Trowbridge explains. "It also solves the housing problem." Two or three years from now, New England-based students studying outside New England will have their projects funded.

### "A Good Trade on Every Page"

Trowbridge is aware that New England's present economic resurgence may prove a mixed blessing: While altering our surroundings, it offers newer and richer opportunities to the region's young people.



"A few years ago college grads thought there were no jobs out there," he says. "The young people had this idea that no one wanted them. The boom has changed that. If I have to trade the 'plus' of this attitudinal feeling of optimism among young people for the 'minus' of changes in our landscape—well, that's a fair trade-off."

Another Yankee success story is the evolution of *New England Business*, a closely followed forum of business in the region. Yankee bought it from Walsh Publishing in 1973. Originally put out by the New England Council, the former *New Englander* magazine was half business and half public policy.

"By 1978 we realized we couldn't bridge both these areas—it gave us an identity problem. We decided to confine it to business because business news in the region was so lacking. I just knew there was a big gap there. For instance, state legislators complained about a lack of business information.

"Now regional business magazines are the fastest growing aspect of publishing in America. We were there at the beginning. We can talk about the region's businesses in a serious vein and have all New England's business leaders—some 55,000, 80 percent of them in top management—read the same magazine. Our slogan is 'Reach the Top'—and we do."

Trowbridge has proposed a "Commission on Industry and Tourism" to attract tourists and businesses to the region. All six New England governors and most state legislative leaders have heard the proposal. Up until recently, individual states had resisted a concerted effort to promote regional tourism. But at a December 1985 meeting of the New England Governors' Conference which Trowbridge attended, the travel directors passed a motion to adopt a New England-wide approach to travel promotion.

Says Trowbridge, "The other regions, states, countries are all out there *looking* for just what we have here. A regional approach is called for in view of the fact that any impression, however vague, that New England is a dying area, or is too expensive, or is high tax—whatever—taints the efforts of each state to seek industry and tourists. New England has a great story to tell, but it simply is not going to attract attention if it



Garrett McCarthy Illustration

sends forth a varied, mixed impression of 'those little states—I forget their names.'"

Right now, he explains, New England is 7th out of 8 as a leisure travel destination in the U.S. Cities such as New Bedford and Salem, Massachusetts, have only recently acquired the first class hotels and information services that can handle international tourism. "New Bedford is terrific now," he says. "There are good hotels and restaurants everywhere."


"I feel strongly about the future of travel in New England. I'll be out there advocating it for a long time—if they pick it up, great, if not, well, that's not my job. The six states should get together to promote themselves in the international market. Travel's a wonderful place to absorb the otherwise unemployable, those who are 'low-tech': the young, the old, those working their way through school as waiters and waitresses and hotel help."

"A Good Trade on Every Page" is *Yankee* magazine's motto. This is how Trowbridge defines it: "Whatever is

on every page is valid and worth a little bit more than what you paid for it. That thought process pervades the magazine."

There's no better example of this than the active role *Yankee* has played in New England's cultural and economic revival—for instance, that of Newburyport, Massachusetts. "An article on Newburyport appeared in *Yankee* in 1969 when nothing was going on there—before the restoration had begun," Trowbridge says. "We interviewed several tradespeople, then returned in 1979 and talked to the same people after the restoration work had been done. It gave us a way of pointing out, 'This is what happened in Newburyport.' We're part of the process in telling the story. We told Newburyport's story as it happened and spread the word as to what was available in the New England region and what could be done with it. By publicizing it over a period of time, we helped effect change. This is how we're giving back to New England part of what the region is giving us. It's a matter of responsibility." ■





**MHEAC is helping  
thousands of students  
say yes to college in  
New England.**

Massachusetts Higher Education Assistance Corporation guarantees 100,000 student loans and 10,000 PLUS loans to New England students and parents each year. As a guarantee agency we cooperate with Sallie Mae, The New England Education Loan Marketing Corporation and various education loan servicers.



**Massachusetts Higher Education  
Assistance Corporation**  
Berkeley Place at 330 Stuart Street  
Boston, Massachusetts 02116

Harvard College  
Lowell State College  
State College of Technology  
College  
Western New England University  
Westchester Polytechnic Community College  
Assumption College  
England  
Anselm's College  
Bristol Community College  
Bryant College  
Northern Massachusetts College of Art  
Nichols College  
Mt. Wachusett Community College  
North Shore Community College  
Mount Ida Junior College  
Harvard University  
University of Rhode Island  
Saint Michael's College  
Dartmouth College  
Massachusetts School of Medicine  
Laboure College  
Dean Junior College  
Gordon College  
Maritime Academy  
Roger Williams College  
Tufts University School of Medicine  
Mount Holyoke College  
Massachusetts Community College  
Emmanuel College  
Bates College  
Chamberlayne Junior College  
New England Music College  
Cambridge College  
Salve Regina College  
Wellesley College  
Roxbury Community College  
Ware College  
Plymouth State College  
Atlanti College  
Bunker Hill Community College  
Colby College  
University of Hartford  
Harvard Law School  
Tufts University School of Medicine  
Williams College



By Michael J. Bennett

## Adding Up Gramm-Rudman, The Higher Education Act and Tax Reform: THE YEAR OF THE BIG CHILL

"The Big Chill," a movie about a group of "I-want-it-all" yuppies forced to take a good look at themselves following the suicide of a classmate, provides an apt parable for what's going on in Washington as the first impact of the Gramm-Rudman Act is being felt. That may be all to the good in the long run.

Unfortunately, the reassessment of financial means and ends may delay passage of the Higher Education Act in the generally favorable form voted out by the House. Worse, the soul searching and political stock taking, in the name of "tax reform," may result in deductibility of state and local taxes as well as charitable gifts being pared, at best.

The first installment of the Gramm-Rudman cuts, \$11.7 billion, or four percent of the \$265 billion slice of the current budget subject to the act, went into effect March 1. It immediately raised serious questions about fairness—and hypocrisy.

The act shelters or exempts politically sacrosanct programs such as Social Security, Medicare and military pay, with their built-in cost of living increases, amounting to \$703 billion or 73 percent of this year's budget. Federal employees and contractors, confronted by layoffs, delayed promotions and reductions in pay until 1991, aren't being hesitant about pointing up the discrepancy—and the unfairness.

It's obvious that deficit reduction, without across-the-board budget cuts everywhere, amounts to "voting differently for the same reasons," says Anne Sullivan, lobbyist for the state of Connecticut. Or, "wanting it all."

Columnist George Will was correct when he wrote last January that members of Congress had voted for Gramm-Rudman "to help them keep office by diluting the dignity of office; to preserve personal power, they have yielded institutional power, wholesale." But his words denouncing "the unseemliness of senators and congressmen constructing a

mechanism to insulate them from painful budget cutting choices," were less than prophetic.

The 31 senators and 154 representatives who opposed Gramm-Rudman have reason to believe their colleagues' affirmative votes may very well prove negative, if not semi-suicidal, at the polls. If nothing else, 20 percent of all wage earners derive at least part of their income from federal taxes. Even excluding the military, that's a very formidable interest group to offend.

And both Congress and the administration, which up until now has been able to make the best out of decreased federal spending and increased private prosperity, cannot

### Tax Breaks Expiring in 1985

Several tax breaks aiding colleges, universities, teachers and students expired in 1985. All tax legislation is now so political it is entirely possible some of these items will not be renewed, and none of them will be renewed retroactively.

The breaks included:

- Tax exemption on employee tuition benefits given by colleges and universities.
- Tax write-offs for corporations supporting campus research.
- Tax-free status for subsidized faculty housing.
- Tax-free status on some graduate student stipends.

As in all other areas of tax reform, each item has a special-interest constituency with the higher education lobby, making it more difficult to predict at this time the ultimate outcome in the Senate.

duck the responsibility of confronting, if not making, some very hard decisions. Under Gramm-Rudman, the unelected officials of the General Accounting Office and the Office of Management and Budget will come up with recommendations for cuts subject to review by the president and Congress. (The fact that they're unelected and therefore unaccountable is the basis of a case challenging the constitutionality of the law.)

But the schedules are so stringent and the time for review so limited (the President had two weeks in January to go over the March cuts; Congress a month, minus time out for the Feb. 8-18 recess) that the results inevitably appear arbitrary and capricious. And reform of what was billed as the most significant fiscal reform in years will soon appear inevitable and inexorable.

"That's a formula for stalemate," says Thomas Wolanin, staff director of the House Subcommittee on Higher Education. But it might be much worse.

Normally, the Senate would feel little hesitation about passing reauthorization of legislation as politically popular as the Higher Education Act. The action, after all, does not bind Congress to actually allocate funds; that has to be done by appropriations bills each year. Publicly voting for authorization measures, while quietly supporting lower appropriations, has always been an effective way for members of Congress to "have it all."

And the ceiling spending levels in the reauthorization bill are high, or can be made to seem so by spending opponents. The House bill authorizes \$10.6 billion during academic year 1987-88. That's \$1.3 billion more than Congress appropriated for the current fiscal year, a 13-percent increase at a time when the slice of the budget subject to Gramm-Rudman has already been cut four percent and is headed further down.

Of course, appropriations are al-





University of Southern  
Maine

is pleased to announce  
the establishment of a  
program leading to the

*Master of Science in  
Applied Immunology*

within the School of  
Applied Science

The program is offered  
in collaboration with  
the Maine Medical  
Center and the  
Foundation for Blood  
Research.

The program will  
qualify researchers in  
fields such as cancer  
research, genetics,  
organ transplants, and  
autoimmune diseases.

For further information,  
contact:

Brian Hodgkin, Ph.D.  
Dean

School of Applied Science  
96 Falmouth Street  
University of Southern Maine  
Portland, Maine 04103

# University of Southern Maine

 a unit of the University of Maine

ways less than authorized figures, but that's a subtlety organizations such as the National Taxpayers' Foundation will happily ignore. "We're looking for programs where the need isn't so great as in the past—food stamps, for example, where some sort of market mechanism should be brought to bear," says Sheila McDonald, lobbyist for the National Taxpayers' Union.

One such obvious target would be Guaranteed Student Loans and Pell grants, for which the House bill authorized \$7.2 billion. But of course, the numbers of high school graduates, compared to a base year of 1979, will be 18 percent fewer in 1986, 26 percent smaller in 1991, and 22 percent smaller in 1995, as Neal Peirce reported in *Business and Academia*. However, as he also pointed out, those savings should be transferred to "chronically underfunded" public colleges and universities. And, in fact, the House bill goes a long way toward that by targeting aid to the neediest students—the ones most likely to apply to public colleges—and lowering their debt load. That's badly needed, particularly in New England, where far below average in-state resident enrollments has created "an opportunity unfulfilled," as Kent Halstead of the National Institute of Education writes elsewhere in this issue.

That's because the tuition charged at New England public institutions is high by comparison to the rest of the country, says Halstead. However, reducing student eligibility for federal aid will hardly persuade legislatures to lower tuition rates. Mark Gearin, lobbyist for the state of Massachusetts, estimates some 40,000 of the 126,254 students receiving federal aid in the Commonwealth would be adversely affected by changes being considered in the Senate bill. Very few of them go to Harvard. "Fifty six percent of the students at Fitchburg State College are getting aid," he says.

But that message and others necessary to pass the re-authorization bill are not registering with key members of the Senate. Nothing could be more dangerous at a time when political alliances and coalitions have never been so divided—and unreliable.

Senator Warren Rudman (R-NH), as co-sponsor, and Senator Gordon Humphrey (R-NH) could be expected to vote for Gramm-Rudman. But what about Senators John Chafee

(R-RI), William Cohen (R-ME), George Mitchell (D-ME), Christopher Dodd (D-CT), Patrick J. Leahy (D-VT), John F. Kerry (D-MA), and, above all, Edward M. Kennedy (D-MA)? That action hardly inspires the warmest confidence that the reauthorization bill will fare well in the Labor and Human Resources Committee. Fortunately, Senator Robert T. Stafford (R-VT), one of the three members of the New England delegation to vote against Gramm-Rudman (the other two were Senators Claiborne Pell [D-RI] and Lowell Weicker, Jr. [R-CT]) is the chairman of the subcommittee responsible for marking up the re-authorization bill, the Subcommittee on Education, Arts and Humanities.

Even more fortunately, he is also strongly opposed to another measure which could have disastrous effects, not only on higher education but on the other forms of non-profit enterprise so characteristic of the New England region: repeal or modification of tax deductions for state and local taxes and charitable contributions.

That directly impacts on education, as NEBHE President John C. Hoy said in the *Boston Business Journal* last May: "Federal support for higher education has already dropped 45 percent in the past decade, and now accounts for only 13 percent of total external support. The steadily increasing revenue burden has been pushed onto state governments and has induced the dramatic tuition spiral." Limiting charitable gift deductions could also produce a loss of \$6 billion in charitable gifts overall and \$500 million to higher education.

Given those facts, Hoy's choice of the phrase "economic Dunkirk" to describe what could happen to non-profit organizations across the country would seem an exercise in understatement rather than hyperbole.

Nevertheless, little concern has been demonstrated in the Senate other than a resolution supporting continued deductibility introduced by Senators Alfonse D'Amato (R-NY) and Daniel Patrick Moynihan (D-NY). The resolution, which notes deduction has been "part of the tax code since 1913 when the first federal income tax was enacted," has garnered the support of less than 20 other senators. Senators Kerry and Weicker were the only two from New England as of mid-January. Ironically, but symbolic of this period of shifting political alliances and coalitions, not only D'Amato and Moy-



nihan but their three original co-sponsors, Senators Alan Cranston (D-CA), Pete Wilson (R-CA) and Paula Hawkins (R-FL), are from states with distinguished public higher education systems.

Charles Barch, director of the Northeast-Midwest Institute, thinks more sponsors will be enrolled as the energies of education lobbyists shift from the House to the Senate. That will be needed to offset the fact that Senator Chafee, one of the two New England delegation members on the Senate Finance Committee, the other being Senator Mitchell, has already taken a position favoring reduced tax deduction. He introduced legislation in 1984, according to aide Catherine Porter, which would retain deductibility but pare down the amount finally allowed to 85 percent of the total.

Because the delegation seems to be so divided on these fundamental and interconnected issues, the New England Congressional Institute hasn't become very directly involved, according to Patricia A. Davidson, executive director. But the anti-spending lobby has been far more active and single-minded.

Senator Robert Dole (R-KA), the Senate majority leader, has said he will bring a balanced budget amendment up for action in March, according to McDonald of the Taxpayers' Union. Thirty-two legislatures, two short of the two-thirds needed for automatic convening of a constitutional convention to consider such an amendment, have passed amendment petitions. Eleven more have such petitions pending.

Many members of Congress have opposed such a constitutional convention on the ostensibly high-minded principle that enormous damage could be done. And that's probably true, because a convention could not be limited to approval of balanced budgets in perpetuity, which in and of itself might be bad enough. Gramm-Rudman, after all, has only a five-year term to run, and can be repealed either by a Supreme Court decision or a simple majority of both Houses.

But an amendment, passed either by constitutional convention or a two-thirds vote of both Houses, can only be reversed by another constitutional convention or another two-thirds vote of the House and Senate. The Supreme Court is also effectively barred from interfering.

And the members of both the House and Senate also have a very good reason for taking action independent of a constitutional convention: their own political mortality. If a convention is assembled, delegates will be elected by Congressional district and in statewide races in numbers equivalent to the 435 seats in the House and the 100 in the Senate. Only one class of citizens are automatically barred from running: incumbent members of Congress. Of course, some of those delegates would be in a very good position to run against those incumbents later. No one knows that better than the incumbents.

That's why a vote on the amendment passed the two-thirds mark in the Senate in 1984 and came reasonably close to passage in the House, according to McDonald of the Taxpayers' Union. The House vote, 46 shy of the necessary two-thirds, came after the measure was forced out of the Judiciary Committee chaired by Representative Peter Rodino (D-NJ) by a discharge petition signed by more than half the members. It was only the action of Speaker Thomas P. "Tip" O'Neill, according to McDonald, in pushing through a no-debate rule, that prevented House enactment at that time.

The current political climate, of course, is even more favorable to budget cutting. Proponents of the Higher Education Act and opponents of "tax reform" believe that it could cripple higher education. But it's a political fact of life that only vigorous lobbying and public awareness programs can slow, if not reverse.

Both Senators Stafford and Robert Packwood (R-OR), chairman of the Senate Finance Committee, have said that neither the Higher Education Act nor tax reform are likely to emerge from committee until summer. That leaves some time, but not much, in which to tinker with the hearings procedure machinery, so that a Higher Education Act surfaces and a "tax reform" measure quietly submerges.

This is the year of the big chill. The only question remaining is whether it will become a permanent condition. The members of Congress have acted in such a way as to stay warm. It may not have been noble, but at least it shows they realize it's impossible to "have it all." ■



## THE NEW ENGLAND GOVERNORS' CONFERENCE

*Salutes*

## NEW ENGLAND BOARD OF HIGHER EDUCATION

*on the occasion  
of its  
30th  
Anniversary*



**NEW ENGLAND  
GOVERNORS'  
CONFERENCE, INC.**

76 Summer Street  
Boston, Massachusetts



# What to do if your kid doesn't earn \$15,000 this summer.

---

## Introducing the Alliance Education Loan

---

At Bank of Boston, we know how hard it is to put a son or daughter through college. The cost can be staggering. And it's not coming down.

That's why we developed the Alliance Education Loan. It's an innovative new program that can provide from \$3,000 to \$15,000 a year for college. And, while the student is in school, you pay only the interest on the loan. So your monthly payments will be at their lowest while your college expenses are at their highest.

The Alliance Education Loan. Only from Bank of Boston. Now you can put your kid through college without putting yourself through an ordeal.

© 1985 The First National Bank of Boston. Equal opportunity lender.

Please send me information on  
the Alliance Education Loan Program.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

Telephone \_\_\_\_\_

Put our strength to work for you.



**BANK OF BOSTON**

P.O. Box 1296, Boston, MA 02105

Conn. 3/86



# CORRESPONDENCE

I have noticed with interest that plans have been announced to broaden *Connection* commencing in the spring with the publication of a journal. If the new document is of the same high quality as it presently is, all readers should be pleased.

Richard J. Bradley  
Executive Director  
New England Association of Schools  
and Colleges

## South African Student Scholarship Fund—Reactions

I am delighted by your initiative to create a South African Student Scholarship Fund. Although I have heard many differing opinions about the divestment and disinvestment issue in recent weeks, all of those with whom I have spoken are in agreement that increased support for black and other non-white students to continue their education in South Africa is desperately needed.

Wesleyan will support at least one scholarship as part of this new program, and we hope to increase the number to two or three, depending upon support from members of our community. I will keep you informed of our progress on that score. Again, my thanks for the leadership you have provided at an important time.

Colin G. Campbell  
President  
Wesleyan University

I am pleased to learn of this action that the colleges and universities of New England will be taking jointly to improve educational opportunities for the nonwhite youth of the Republic of South Africa. I am hopeful that the UVM community will make support of this scholarship an annual commitment.

Lattie F. Coor  
President  
University of Vermont

The NEBHE proposal for scholarships at South African universities is most timely indeed, and we at Middlebury will participate. I enclose a copy of a memorandum circulated to the entire Middlebury community a few days ago and will be in touch in the near term to discuss with you the technicalities of the matter.

I am confident that our efforts here should produce two Middlebury scholarships for next year. Our thanks to you for taking the lead in this—it deserves to be successful.

Olin Robison  
President  
Middlebury College

The Radcliffe Trustee Executive Committee met recently, and I presented to the members of that committee the proposal that Radcliffe join with a number of New England institutions to support black South Africans studying in their own country. The Executive Committee supported this proposal. I am therefore pleased to tell you officially that Radcliffe will contribute the sum of \$2,800 annually over a three-year period for this project. At the end of the three-year period, we will review our commitment.

With the hope that this very worthwhile endeavor will bring good results.

Matina S. Horner  
President  
Radcliffe College

I sincerely wish there was more we could do. The South African Education Program is important and constructive—one that may in the long run do more to aid that troubled country than many of the more dramatic and more visible national and private efforts. Please know that you have, if little material support, my profound good wishes.

John R. Brazil  
President  
Southeastern Massachusetts University

continued on page 80

# FREE.

Mail this coupon. You'll receive one issue of **THE HARVARD EDUCATION LETTER** absolutely free.

Published bimonthly by Harvard's Graduate School of Education, **THE LETTER summarizes and interprets the latest research on schooling**. In plain English you discover what we really know about homework, the effects of preschools, television watching, and scores of other current topics. **THE LETTER** tells you which of today's policy debates could change the way children are taught tomorrow. And it opens the door on thought-provoking classroom issues that affect every parent and concerned citizen.

Your no risk subscription begins with this free issue. If after examining your free issue you decide **THE LETTER** isn't for you, just cancel within 30 days and owe nothing. But if having a say in a child's future is important to you, you'll want to pay the invoice for just \$15 and keep **THE HARVARD EDUCATION LETTER** coming.

## THE HARVARD EDUCATION LETTER

79 Garden Street, Cambridge, MA 02138

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Send details about low group rates

conn



by Ellin Anderson

## Renaissance in Portland

Is this the city with everything? Portlanders certainly think so. So does *New England Monthly* magazine, which called the former economic backwater "too good to be true." And the *Wall Street Journal* has described Maine's largest city as "unbelievably hot—maybe too hot." In December 1985, employment in the Portland labor market area reached an astonishing 97.5 percent.

Through the 1950s and 60s Portland declined, along with much of New England, which was tagged "the New Appalachia" in the 70s. Then Portland property values began to climb, especially in the beautifully restored Old Port district, little of which had been lost to urban renewal. Soon, upwardly-mobile young professionals rediscovered Portland, bringing with them a surge in construction and restoration, new income, and an educated sense of what Portland could become.

Today, Portland is growing and has no plans to stop—unless for its own good. But the city's economic boom,

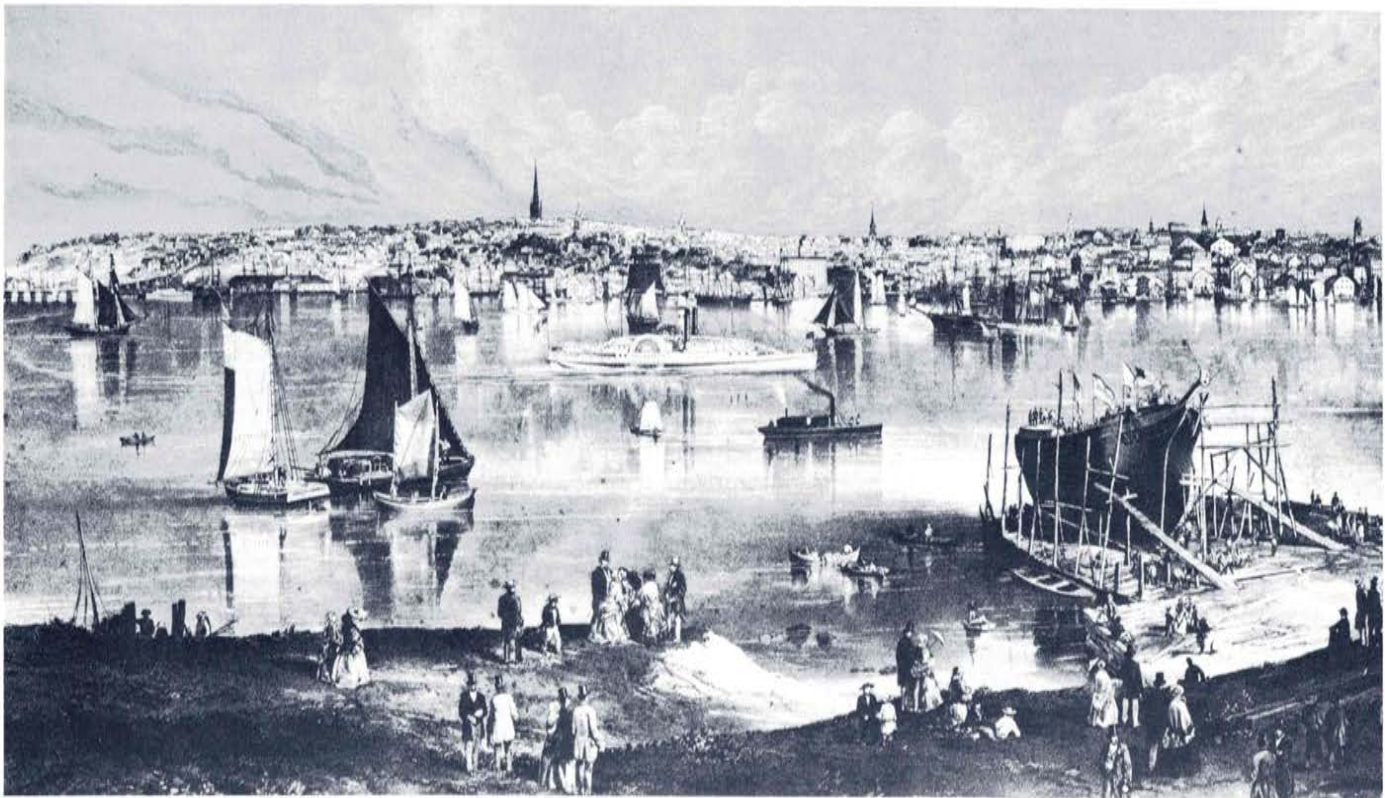
is a two-edged sword, bringing with it a significant labor shortage. In Portland, as in other parts of New England where skilled workers are scarce, companies are sharpening their recruitment strategies and raising wages.

The city of Portland, in Cumberland County, covers 22 square miles on Maine's coastline. The craggy shores to the north change to sandy beaches south of the city. Its natural deep-water port is one of the Atlantic Coast's safest. The White Mountains, to the northwest, keep excessive snow from reaching the Portland area, and, along with the ocean, moderate the temperature. Portland's scenic location, on an elevated peninsula jutting into Casco Bay, is definitely an asset. So is its accessibility: less than two hours from Boston by Route I-95 and serviced by all major airlines. Without doubt, Portland dominates Southern Maine as a center for investment banking, retailing and cultural activity.

First settled in 1632, "Falmouth," as it was first called, was virtually destroyed by British naval bombardment during the American Revolution. The city rose from the ashes to become an important center for lumbering and shipbuilding. In the nineteenth century, Portland flourished—unaware that these industries would not stand it in good stead forever.

Says Maine Speaker of the House John Martin of Fort Kent, "Portland has all the advantages of a major cultural center with the intimacy and vitality of a small town. Its very hospitable environment for all areas of the arts reflects strong government planning." Portland does have all the amenities: university, museum, symphony orchestra, Center for the Performing Arts, trendy shops and upscale restaurants. If you visit the Portland Museum of Art, you can look at Maine through the eyes of Winslow Homer, Edward Hopper, John Marin, John Bradley Hudson, Jr., Andrew Wyeth and Carl Sprinchorn.

View of Portland, 1855 (Historic Urban Plans).





And you can see the historic home of Henry Wadsworth Longfellow, Bowdoin class of 1825 ("Often I think of the beautiful town that is seated by the sea"), and Portland Head Light, commissioned by George Washington in 1791.

For Portlanders who want to send their children to college where they can keep an eye on them—or further their own education, as many Portland adults do—there are seven institutions of higher learning: Andover College, Casco Bay College, the Portland School of Art, Saint Joseph's College, Westbrook College, the University of Southern Maine, plus the Southern Maine Vocational Technical Institute. Bowdoin College and the University of New England are within easy commute.

University of Southern Maine President Robert Woodbury points out: "The interactive quality of life in southern Maine is remarkable, particularly in metropolitan Portland. The vitality of our business school, public policy program and the new College of Applied Sciences reflects the collaborative nature of the area."

With 8,800 enrolled, the University of Southern Maine has an exceptional concentration of adult students, who reveal a cross section of what Woodbury calls Portland's "education-motivated workforce. The pressure to upgrade skills reflects the area's employment miracle." Nelson



& Small President Kenneth M. Nelson feels that "in the long run, Portland's most important asset is the University of Southern Maine."

Southern Maine Vocational Technical Institute has made a commitment to provide industrial training assistance for old and new Maine businesses, offering entry-level training for employers; programs at vocational centers and vo-tech institutes to meet manpower needs; and upgrading and retraining programs for Maine's workforce.

Medical care in Portland is exceptional. The Maine Medical Center, under the direction of Edward Andrews, M.D., former president of the University of Vermont, provides a network of state-of-the-art specialties and the basis for emerging biomedical high-tech industries. A new graduate program in applied immunology has been established by the Maine Medical Center, the Foundation for Blood Research and the University of Southern Maine. President Woodbury calls this "another example of the partnership approaches increasingly characteristic of the Portland area."

Portland's workforce is one of its greatest assets, with a high percentage of young and professional workers and continued arrival of talented and educated people. The size of the Portland SMSA (standard metropolitan statistical area) civilian labor force increased by more than 25 percent between 1977 and 1984, an addition of 22,000 new workers. The number of employed residents grew by more than 30 percent, or 24,500 new workers.

Richard Barringer, state director of planning, attributes Portland's success to exceptional demography. "Since 1965," he says, "well-educated young professionals have continued to immigrate. Their entrepreneurship gives Portland new economic roots."

Nearly one of every four persons employed in the Portland area is in a managerial or professional position. In 1980, white-collar occupations in Portland—managers, professionals, technicians, administrators, and sales personnel—claimed 57 percent of the metropolitan area's employed residents. Blue-collar and service occupations claimed only 13 percent.

Today's Portland has more lawyers per capita than any other American city except Washington, D.C. Former governor Kenneth Curtis, a practicing

attorney, comments, "The average supply of legal talent here probably provides Portland with the most highly protected citizenry in the nation—and we are not that litigious."

In 1970, Portland's urban population was 65,116. By 1980 this figure had dropped to 61,572, a change of -3.8 percent—but in 1984 it rose again to 62,640. Of Greater Portland's estimated 1984 population of 197,000, the "baby boom" generation accounted for more than a third. With their increasing spending power, these down-east "yuppies" carry a heavy demand for housing, goods and services.

The 13 municipalities of Greater Portland experienced an overall growth in number of housing units of nearly 30 percent between 1970 and 1979. During the last decade, over 15,000 housing units were added to the existing stock of 51,315 (1970), including more than 11,500 single-family houses and nearly 3,000 multi-family units.

The Greater Portland economy has created thousands of jobs; those jobs increasingly command professional or skilled levels of income. Per capita incomes in the Greater Portland area have risen 41 percent since 1979, while the national increase was 36 percent; even allowing for inflation and different starting bases, Greater Portland incomes have been rising relatively faster than those of the United States as a whole.

The combination of expanding population and income growth makes the Portland metropolitan area good for business. The November 11, 1985 issue of *U.S. News and World Report* ranked Portland second out of 74 American "Cities Where Business is Best" (based on change in employment ratios from a year earlier, the latest employment ratio relative to the U.S. average, change in non-farm employment and change in weekly earnings of factory workers).

Fishing has always been a major industry in the Greater Portland area. The catch on a Portland fishing boat would probably yield menhaden, ocean perch, flounder, cod, pollack, haddock, shark, hake or herring. Value of fish landings grew steadily from about \$7 million in 1970 to about \$24 million in 1980. It approached \$30 million in 1981, leveling off in 1982 and 1983.

In recent years, Portland's whole-

*continued on page 65*



# *YOUR EDUCATION IS NEW ENGLAND'S FUTURE.*

The public colleges and universities in New England share over 700 majors with residents of the region at reduced out-of-state tuition rates because they know how important your education is to you and to the future of New England.

CONNECTICUT  
MAINE  
MASSACHUSETTS



NEW HAMPSHIRE  
RHODE ISLAND  
VERMONT

**NEW ENGLAND BOARD OF HIGHER EDUCATION  
REGIONAL • STUDENT • PROGRAM**

Through the Regional Student Program, 5000 New England residents now attend out-of-state public colleges and universities within the region at reduced tuition for certain majors unavailable in their own state's public institutions. For more information and a new "Apple Book" catalog, see your guidance counselor or write: NEW ENGLAND BOARD OF HIGHER EDUCATION, Office of the Regional Student Program, 45 Temple Place, Boston, Massachusetts, 02111-617/357-9620.



## RSP UPDATE

by Charlotte Stratton

The 29th annual editions of the New England Regional Student Program (RSP) publications were released during National Higher Education Week, October 19-26, 1985. They included the RSP Poster, the RSP Brochure, and the "Apple Books"—the undergraduate and graduate catalogs of the Regional Student Program.

These publications, all bearing the theme "Your Education is New England's Future," were distributed to the region's secondary schools, public colleges and universities, public libraries, and state and federal legislators. Recipients were also provided with an order form for use in obtaining additional materials. As of early November, nearly thirty percent of those orders had been returned to NEBHE and processed.

The wise use of New England's higher education resources has been supported vigorously by the New England Board of Higher Education since its creation. In adopting the new theme "Your Education is New England's Future," NEBHE underscores the link between sharing these vital resources and the benefits flowing to students, their families, their home states and the region's economy as a whole. This is of particular importance since an overwhelming majority of RSP students surveyed in 1982 said they planned to work in one of the six New England states after completing their studies.

The RSP enables residents of the region to attend out-of-state public colleges and universities in New England at a reduced tuition rate for degree programs unavailable in their own state's public institutions. The program serves both undergraduate and graduate students, and encompasses nearly 700 academic majors throughout the region.

A total of 4,995 New England students participated in the RSP during academic year 1984-85, each saving an average of \$1,967 in tuition costs. New England students and their families have saved over \$100 million in educational costs since the inception of the RSP.

Two consistently popular RSP programs at the undergraduate level are the University of Rhode Island's five-year bachelor's degree program

in Pharmacy, and the Meteorology program at Lyndon State College in Vermont.

The pharmacy program at the University of Rhode Island enrolled nearly 17 percent of Rhode Island's entire RSP student population in 1984-85. Marcus Rand, associate director of admissions at URI, says that students enrolling in the pharmacy program are often from "pharmacy families. They read the journals and tend to be very well informed. Consequently, many potential students know that the College of Pharmacy is nationally recognized for its fine academic program." Rand also stated that the pharmacy program has gained national recognition for its research work in hypertension, cancer and heart disease.

Lois Vars, assistant dean of the College of Pharmacy, says that pharmacy students do many different things after graduation. "Quite a few go on to advanced degree programs here at URI and elsewhere," she says. "Students who are interested in the clinical aspects of pharmacy and want to work directly with patients in hospitals often go on to get a degree in clinical pharmacy. Others who may be interested in advanced drug research may go on to the Ph.D." Dr. Vars added that some students return to their communities to establish their own businesses and become active members of their communities.

Russell S. Powden, Jr., director of admissions and financial aid at Lyndon State College in Lyndonville, Vermont, describes students in Lyndon State's meteorology program as "very directed, serious, and dedicated. Meteorology is their major, but often it has also been their hobby years before college."

In 1984-85, over 14 percent of RSP students studying in Vermont were enrolled in meteorology at Lyndon State College. It continues to be the most popular RSP state college program.

Copies of all Regional Student Program publications are available free-of-charge throughout the year. They may be obtained from NEBHE's Regional Student Program Office, 45 Temple Place, Boston, MA 02111. ■



### Student Exchange Program

## Educational Opportunities New England in Québec for Students

Under the New England/Québec Student Exchange Program, eligible full-time students at participating New England institutions may spend one or two semesters during their sophomore or junior year of study at one of the participating Québec institutions.

**Inquire today at your International Student Exchange Services**

**Québec Government Office  
New England Board of Higher Education**





Margaret A. McKenna

Carol J. Guardo

Dr. Peggy Stock

## Three 'Firsts' for Women

Inaugural ceremonies marking the installation of **Margaret A. McKenna** as president of Lesley College, Cambridge, Massachusetts, were held on December 4. Named last August, the 40-year-old educator is the third president in the Cambridge institution's 75-year history and the first woman to occupy the position.

Before coming to Lesley, McKenna served as vice president for program planning at Radcliffe College and director of the Mary Ingraham Bunting Institute. Earlier, she served as deputy undersecretary of education in the U.S. Department of Education.

Trained as a civil rights attorney, McKenna began her professional career as an attorney in the U.S. Department of Justice's Civil Rights Division. She received a B.A. from Emmanuel College and a J.D. from Southern Methodist University School of Law.

In an inaugural address entitled "Shaping the Change: Higher Education and the Nation's Future," President McKenna asked that institutions of higher learning become "change masters," producing "socially aware and civically responsible graduates. Colleges and universities have the obligation to be catalysts of societal transformation—actively involved in shaping change," she said.

**Carol J. Guardo**, provost and professor of psychology at the University of Hartford since July 1980, has been named the seventh president and 15th chief executive of Rhode Island College. She is the first woman to head the 131-year-old state college, located in Providence. Before her appointment as provost at the University of Hartford, Guardo was dean of the College of Liberal Arts at Drake University in Des Moines, Iowa, and before that, dean of the College and associate professor of psychology at Utica College of Syracuse University in Utica, New York.

Guardo is a member of the Board of Directors of the American Council of Education and the Board of Direc-

tors of the Association of American Colleges. She has served in a variety of roles with the North Central and New England accrediting associations and has published extensively in her field of psychology as well as in higher education. Guardo received her baccalaureate degree from St. Joseph's College, her master's degree from the University of Detroit and her Ph.D. from the University of Denver, where she was a National Science foundation fellow.

**Dr. Peggy Stock** was elected president of Colby-Sawyer College, New London, New Hampshire in December 1985. She is the sixth president and first woman to head the oldest independent women's college in New Hampshire. Previously, she was vice president for administration at the University of Hartford, and before that both special assistant and executive associate to the president. Stock received her B.S. from St. Lawrence University in Canton, New York and an M.A. from the University of Kentucky. She has held faculty positions at the University of Kentucky, Thomas Moore College, the University of Cincinnati, Montana State University and the University of Hartford.

Dr. Stock was state Coordinator for the Connecticut Identification Program for the Advancement of Women in Higher Education and is chair of the Fellow's Program of the American Council on Education. The author of a variety of journal articles on topics in psychology and education, she is known nationally for successfully integrating her research on women into college curricula.

# *A New England Tradition* Cooperation

## Council of Presidents

### NEW ENGLAND LAND GRANT UNIVERSITIES

- University of Connecticut
- University of Maine at Orono
- University of Massachusetts
- University of New Hampshire
- University of Rhode Island
- University of Vermont



# PEOPLE

## Law Scholar Benno Schmidt Will Lead Yale

**Benno C. Schmidt, Jr.**, dean of Columbia University Law School, will make accessibility to Yale a priority when he succeeds **A. Bartlett Giamatti** in June. Schmidt, an internationally recognized authority on constitutional law, has vowed to keep Yale open to qualified students regardless of financial need.

A graduate of Yale College in 1963 and the Yale Law School in 1966, Schmidt came to Columbia in 1969 as assistant professor of law. He was named full professor four years later; in 1983 he was appointed the University's fourth Harlan Fiske Stone Professor of Constitutional Law. In July 1984, Columbia's trustees chose Schmidt as the tenth dean of the University's Faculty of Law, succeeding Dean Albert J. Rosenthal. Colleagues applauded the selection, one noting Schmidt's "dedication to scholarly excellence, collegial warmth, gracious style and wit."

At a December 1985 press conference, Schmidt said, "I am humbled before the challenges of this job, before the distinction of Yale's current president and his predecessors, and

before the excellence, energy, and decency of this unique institution. Yale is one of the signal achievements of the experiment that is America, a treasure of western civilization. As a place where knowledge is advanced, where scientific investigation and humanistic inquiry are nourished, where artistic creation is stimulated, Yale stands almost alone in importance in the world."

Schmidt is also an expert on the history of the Supreme Court and American law concerning mass communications. He has written widely on legal topics, and is known to many American television viewers as a moderator in the PBS series, "The Constitution: That Delicate Balance," first shown in January 1983.

## Professors Named to New Academic Chairs

The first academic chair at Bryant College, Smithfield, Rhode Island, has been filled by **Dr. Pat Norton**, a regional economist with a background in public finance and urban economics. The Norman Sarkisian Chair in Business Economics was endowed by Hartford executive and Bryant alumnus and trustee Norman Sarkisian. It is the first of three

academic chairs being established under Bryant's \$25 to \$29 million strategic plan for academic and campus improvement announced by President William O'Hara last year.

As the Sarkisian Chairholder, Norton will teach a special course on Rhode Island's economic future, conduct research, work with the Rhode Island business community on special projects and conferences, give public lectures, help develop Bryant's economics curriculum, and write grant proposals. He will also look into the possibility of establishing an institute to coordinate special courses and conferences. Previously, Norton taught economics at Mount Holyoke College and the University of Massachusetts/Amherst. He holds a Ph.D. and an M.A. in Policy Analysis from Princeton University, an M.A. in Economics from the New School of Social Research, and a B.A. in Economics from Dartmouth College.

**Dr. H. Brownell Wheeler**, professor and chair of surgery at the University of Massachusetts Medical Center, Worcester, will be the first to hold the Harry M. Haidak Distinguished Professorship in Surgery, a \$1 million chair endowed by retired businessman Richard M. Haidack in memory of his brother. Wheeler says the endowment "is what UMass needs to remain financially viable

---

---

## A New Solution for Paying Higher Education Costs\*

### \* *The TERI Loan Program*

- Annual limits up to \$15,000 with 15 years to repay
- No income restrictions
- Interest-only payments while in school
- Variable interest rate (now 11.5%)
- Fully guaranteed with no commitment of school assets

*Let us tell you more about TERI Loans*

**The Education Resources Institute**

330 Stuart Street

Boston, Massachusetts

**617-426-0681**



and academically competitive. Most great American schools are supported by substantial private funds, endowments and other forms of philanthropy. At the Medical Center, an endowed professorship will allow the chairholder freedom to devote more time to teaching and research interests."

A vascular surgeon, Wheeler served as the Medical School's first chief of staff from 1974 to 1977. A native of Kentucky, he attended Harvard Medical School and went on to the University of London, where he served a fellowship in surgery. Wheeler is internationally known for developing a technique called impedance plethysmography, the method most widely employed for diagnosing blood clots in the leg veins.

In recognition of the tragedy suffered by a Pennsylvania family in 1974, the Commonwealth of Massachusetts has established the Arnold Frank Zeleznik Chair in Psychiatry at the Worcester Medical Center.

What is probably the country's first legislated professorship for the study of the violently mentally ill will be held by **Dr. Paul S. Applebaum**. The 34-year-old forensic psychiatrist has emerged as one of America's most prominent physicians in the field of law and mental health. "Dr. Applebaum is a student and scholar of violent behavior, and his expertise in the problems raised by the dangerously mentally ill makes him particularly well-suited to the purposes of the Zeleznik chair," said UMass Medical School's chancellor/dean

Dr. Robert E. Tranquada in announcing the appointment.

On December 20, 1974, Carter and Betty Zeleznik were in a Miami hotel with their two sons when Vernal Walford, recently released from a Massachusetts mental hospital, snatched nine-year-old Arnold Zeleznik from a corridor and killed him. The Zelezniks initiated an eight-year search for the truth about Walford's release from Northampton State Hospital; the Massachusetts Senate's 1982 inquiry and the establishment of the Zeleznik chair ultimately resulted from their quest.

Dr. Applebaum is a native of Brooklyn, New York, who graduated from Columbia College in 1972. He comes to the University from Harvard Medical School, where he received his M.D. in 1976 and later was appointed associate professor of psychiatry.

## Marking Leaves Post

**Dr. Kasper C. Marking** announced in November that he will leave his position as chancellor of the University System of New Hampshire at the end of June. Marking told members of the University System's Board of Trustees that the "specific tasks for which I accepted the chancellorship have been accomplished. There is a new spirit throughout the University System, and this is an appropriate time for the board to engage a chief executive officer who will make a long-term commitment to these responsibilities."

He said specific tasks he assumed when named chancellor in February 1983 included strengthening cooperative relationships among the institutions of the University System; the selection and integration of new presidents on two campuses; and "our far-ranging efforts to make education a higher priority for government and the people of New Hampshire."

Before assuming the chancellorship Marking served for six years as president of Plymouth State College, one of the four major institutions of the University System. Before he came to New Hampshire in 1977, he was for five years president of Briar Cliff College in Sioux City, Iowa, and academic vice president and dean of faculty at Minot (North Dakota) State College from 1969 to 1972. He earned his Ph.D. in Higher Education at Washington State University (1967), a master's degree in Philosophy from the Franciscan Institute of St. Bonaventure (1954) and his bachelor's degree from the University of Portland, Oregon, in 1952.

## Hanford of College Board to Retire

College Board President **George H. Hanford** will retire on August 31, 1986, or as soon as a new president is named. College Board Chairman John W. Porter said at a meeting in New York in December 1985, "Mr. Hanford's decision was accepted with regret by the Board of Trustees, but with deep appreciation for his many accomplishments and con-

*Ketchum, Inc.*... founded in 1919

The largest and most experienced firm in fund-raising

Serving New England from our office in Boston

Ketchum services: Direction of fund-raising campaigns, fund-raising counsel, pre-campaign prospect cultivation programs, communications counsel, guidance in long-range development programs, counsel on foundation and corporation proposals, internal audits of development programs, LIFEndowment, executive recruiting service.



Ralph W. Peterson, CFRE  
Senior Vice President  
Manager  
New England Region



Robert D. Demont, Jr.  
Regional Representative

One Post Office Square  
Boston, MA 02109  
(617) 482-6060

Ketchum headquarters:  
Pittsburgh  
Other Ketchum offices:  
Charlotte  
Chicago  
Dallas  
Los Angeles  
Ketchum Canada Inc.  
Toronto



tributions as president." John T. Casteen III, vice chairman of the College Board and president of the University of Connecticut, has been appointed to chair the search committee for a new president.

A member of the College Board staff since 1955, Hanford was named president in 1979, following a career that included service as assistant treasurer, treasurer, vice president for administration, vice president for programs, senior vice president, executive vice president, and acting president. Prior to joining the Board, he was an assistant dean at the Harvard Graduate School of Business Administration.

NEBHE president John C. Hoy comments: "Hanford's contributions to American higher education are immense. From the Supreme Court Decision of 1954 to the current reauthorization process in Washington, he has been a person of firm and liberal commitment to equal opportunity and equal access. The Hanford legacy is one of insight and compassion, which will continue to inform the quest for quality education in a democracy."

## Tesconi Will Return to Teaching

After eight years as dean of the University of Vermont's College of Education and Social Services, **Charles A. Tesconi, Jr.**, will return to full-time teaching and research. He is known for his writings and leadership roles in professional and learned societies. Tesconi will finish aca-

demical year 1985-86 as dean, then take a year-long sabbatical leave to write a book and to continue his ongoing research on factors associated with successful schools. In the fall of 1987, he plans to return to UVM as a full-time faculty member.

Tesconi was appointed dean of UVM's college of education in 1978. UVM President Lattie F. Coor says of Tesconi, "His commitment to school improvement as a scholar and as a leader has had a significant impact on the nature and direction of our college of education and of the schools in Vermont and in the Northeast. He has provided a solid base from which our college of education can respond effectively to the challenges of the future."

## Campbell Steps Down

**Dr. Philip Campbell**, dean of Holyoke Community College and professor of history since 1964, has announced his retirement from the College effective August 31. He received his undergraduate degree from Bowdoin College, an M.A. in American Studies from Duke University, and his Ph.D. in American Civilization from Brown University. Prior to coming to HCC, Campbell taught history and served as chairman of the Department of Social Science at the Hampton Institute.

He is a 1984 recipient of the College's George Frost Award for Excellence, and in December 1985 was awarded a Commonwealth citation for outstanding performance as part

of the Massachusetts Performance Recognition Program for state employees. College President David Bartley says of Campbell, "He's had almost as much impact as Dr. George Frost (founder and first president of HCC) on this College, and as a result he'll surely be missed."

## Bryant Mourns Death of Chancellor

The Bryant College community was saddened last fall by the death of one of its most notable leaders, **Dr. E. Gardner Jacobs**, chancellor, trustee and president emeritus. Jacobs served Bryant for more than 64 years. It was during his tenure as president that the Smithfield campus was secured from the late Earl Tupper, of Tupperware, Inc., and Bryant's former campus on Providence's East Side sold to Brown University. These achievements paved the way for Bryant's emergence as a nationally recognized business college.

Jacobs held a number of administrative posts at the College after graduating from Bryant in 1921, including vice president for development and chairman of the Board of Trustees. He held master's and honorary degrees from Rhode Island College, Portia Law School and Calvin Coolidge College.

## Steps Up . . . To President

**The Reverend John Fabian Cunningham** was inaugurated as the

## There's Something Special About a Small Private College



...And there's something **extra special** about **Post College** Waterbury, Connecticut! Post makes that private college education affordable, as well as desirable.

*Choices in top quality Baccalaureate degree programs in Liberal Arts and Business Administration*

### From the School of Arts and Sciences

English      Psychology  
History      Sociology  
General Studies

### From the School of Business Administration

Accounting      Marketing  
Management      Marketing (with Fashion)  
Office Management

*Twenty Associate Degree Programs*

Office of Admissions

**POST COLLEGE**

800 Country Club Road, Waterbury, Connecticut 06708 • (203) 755-0121





**"The United Negro College Fund helps  
turn dreams into achievements."**

Leontyne Price

Over the years,  
the 42 predominantly black colleges of the United Negro College Fund have educated  
nearly half a million doctors, teachers, scientists, and engineers.  
Not to mention one opera singer.

**Give to the United Negro College Fund.**  
**A mind is a terrible thing to waste.**

Photo: Anthony Barboza  
© 1984 United Negro College Fund, Inc.

A Public Service of This Publication  
**Ad  
Council**



tenth president of Providence College in September 1985. He succeeded the Reverend Thomas Peterson.

In his inaugural address, Cunningham spoke of the high cost of a college education today. "One of the factors which has caused rises in tuition is the Reagan administration's cutbacks in federal aid," he said. "To be sure, federal assistance is still huge; it was an estimated \$14.1 billion in 1984 in loans, grants, and loan guarantees. But by stiffening requirements and eliminating special grants to the children of social security recipients, the Reagan administration has reduced aid by 15.6 percent in real terms since 1981. We must be profoundly concerned about a world in which the middle class is hard-pressed to remain in the game."

Dignitaries attending included Rhode Island Governor Edward DiPrete and Providence Mayor Joseph R. Paolino, Jr. Father Cunningham has been affiliated with the Dominican college since he was a student in 1945, and has held several key positions including that of dean of the College.

**Brian Donnelly** is now president of Fisher Junior College, Boston. A native of East Boston, he received his B.S. in Biology from Boston College, his M.A. in Philosophy from the University of Notre Dame, and his Ph.D. in Higher Education Administration from Michigan State University. Donnelly has been dean of academic affairs and chief administrator at Central Ohio Technical College since 1981. He has nineteen years' experience in community, technical and junior college education, including faculty, administrative, state board and national consulting positions.

Donnelly has served on the executive committee of the American Association of Community and Junior Colleges Board of Directors, and been president of the National Council of Community Services and Continuing Education. He was a member of the President's Task Force on Vocational Education and a social worker for the City of Boston.

### ... To Chairman

**Jeremiah H. Lowney, Jr.**, is the new Chairman of the Connecticut Board of Governors of Higher Education. An orthodontist, he lives in Colchester.

Trustees of the University System of New Hampshire have elected **Paul**

**J. Holloway** of Exeter chairman of the University's Board of Trustees. He succeeds retiring trustee Richard A. Morse, a Manchester attorney. Holloway, a 1960 graduate of Temple University, has been a USNH trustee since 1972; vice chairman of the board for five years, and chairman of the trustees' Finance and Budget Committee for eight years.

### ... To Provost

**Anthony N. Penna** will become provost and senior vice president for academic affairs at Northeastern University effective August 1. Penna was most recently acting dean of the College of Humanities and Social Sciences at Carnegie-Mellon University, and before that associate dean and director of that university's Education Center. He has taught at Carnegie-Mellon since 1969. Penna has a bachelor's degree from Boston College, a master's degree from the University of Chicago and a doctorate from Carnegie-Mellon.

### ... To Vice President

Endicott College, Beverly, Massachusetts, has named a new vice president for enrollment management: **Robert J. Kates**. An executive with the College Board from 1967 to 1981, his positions there included vice president, student assistant services, and director of the New England regional office. In recent years, Kates has maintained a private practice, advising families on financial options and financial planning for higher education. He holds a bachelor's degree in Industrial Engineering and an M.Ed.

Colby College associate professor of government **G. Calvin Mackenzie** has been named vice president for development and alumni relations. He also directs Colby's public policy program. Mackenzie has taught at Colby since 1978.

**Bernard H. Brown** has been promoted to vice president for student affairs at Worcester Polytechnic Institute. Dean of students since 1981, Brown succeeds Robert F. Reeves who retired last spring. Brown joined WPI in 1966 as assistant dean of student affairs. He had previously served as administrative assistant to the dean of men at the University of Connecticut and head resident director at Northeastern University. He

*continued on page 72*

# THE CHELSEA TIE



*Choose the finest neckwear, custom designed for your alumni... class reunions... donor recognition*

*(minimum 150)*

*A good bookstore item, too!*

*Call or write*

WE HAVE THE EXPERIENCE

**WM·CHELSEA LTD.**

Post Office Box 159  
Scarsdale, NY 10583  
914/725-2040



continued from page 39

vored low-interest government loans. In 1984, the figure dropped to 46 percent, and now the comparable "strong support" figure is only 40 percent. Polls have shown a similar decline in strong support for federal aid to colleges and universities with large numbers of low-income students: from 50 percent in 1983, to 46 percent in 1984, and now only 37 percent.

There has been a comparable drop in public support since 1983 in federal funding for academic research. Two years ago, 79 percent of respondents favored and only 15 percent opposed federal funding for university research in the physical sciences. This year, 74 percent favor and 22 percent oppose such U.S. Government support for the physical sciences. Similarly, in 1983, 75 percent favored and 19 percent opposed U.S. funding for academic research in the social sciences. Now, only 61 percent favor and 35 percent oppose such support. There also has been a 16-percent decline in support for federal funding of academic programs in the arts, with only 59 percent currently favoring such aid.

The survey also found that for the

fourth consecutive year many more Americans feel that the quality of a college education in the U.S. is improving (44 percent) rather than declining (16 percent). A total of 37 percent feel that the quality of an education remains about the same.

In addition to these findings, the survey also revealed that:

■ By a 44-to-22 percent margin, Americans feel that recent abuses in intercollegiate athletics hurt more than help the overall image of higher education. Another 30 percent said that abuses in campus sports have had no effect on higher education's image. In response to a related question, however, 68 percent said that the role of sports in college today is overemphasized, compared to 29 percent who feel that the emphasis on college sports is about right and 2 percent who feel college sports are underemphasized on campus.

■ By a 77-to-22 percent margin, Americans favor retaining the current federal tax deduction for gifts to charities and educational institutions. There has been some consideration given in recent months to eliminating these deductions as part of the overall reform of the U.S.

income-tax system now under discussion.

■ A slightly higher proportion of Americans (43 percent) believe that colleges' primary criterion for awarding financial aid to students should be their academic abilities and promise, compared to a somewhat smaller number (41 percent) who feel the decision should be made based on financial need. Of those polled, 14 percent said both are equally important.

■ More than one out of every three Americans, 37 percent, claim that they have donated money or property to a college or university. This is an increase of seven percent over 1984, when 30 percent claimed to have made a college donation. Those who have made donations claim to have done so out of loyalty to the college or the university they attended or because they believe in supporting higher education. Those who have not made a donation claim they have not done so because they cannot afford to or have not been asked.

■ For the fourth consecutive year, many more respondents view teaching (83 percent) as a more important purpose of higher education than ei-

## SO WHAT'S NEW AND DIFFERENT ?

**NEW.** The Master's Degree program in Health Services at Saint Joseph's College.

**DIFFERENT.** With our External Degree Program, you can earn your Master's through guided independent study and campus-based summer sessions.

- At Saint Joseph's College, the External Degree Program provides learning opportunities for adults who are unable to pursue their degrees in the traditional manner.
- For information on the Master's program in Health Services Administration, write: External Degree Program, Saint Joseph's College, North Windham, ME 04062. Call (within Maine) 892-6766 or (toll free outside Maine) 1-800-752-4723.

On Sebago Lake  
In Southern Maine

**Saint Joseph's College**

## Within easy reach in more ways than one.



With Woodstock just around the corner, getting away for a night or two can be as easy as pie. You'll feel divinely pampered in our spacious guest rooms, each with handmade bed quilts, color TV, private bath, and delicious welcoming gift—all for just \$39 per person (double occupancy) from now till May 23, 1986.

Beautifully landscaped, the 120-room Inn faces the Village Green. We have complete dining and lounge facilities, 18 holes of magnificent golf, 10 tennis courts, and a host of other resort and area activities. Call today and ask for our \$39 Special!

*The Woodstock Inn*  
& Resort

WOODSTOCK, VT 05091 • A ROCKRESORT

We go to great lengths for luxury.  
Luckily you don't have to.



ther research (66 percent) or public service (35 percent).

New Englanders even more than Americans overall worry about the rising costs of a college education and strongly favor continued federal support for colleges and universities that have a large percentage of low-income students, as well as increased aid for needy students.

The poll of New Englanders found:

- 8 out of 10 think rising costs will put college out of reach of the average person for several years to come.
- 7 out of 10 say most people can't afford to go to college.
- 8 out of 10 think tuition is too high at private colleges and universities.

More than most Americans, New Englanders know the importance as well as the high cost of a college education and strongly support government financial assistance.

The survey showed that of the New Englanders polled:

- 58 percent strongly favor grants to low-income students. Only 46 percent of the national sample do.
- 52 percent strongly favor low-interest loans to middle-income students, compared with the national sample of 40 percent.
- 51 percent strongly favor support for colleges and universities that have a large percentage of low-income students, compared with only 37 percent of the national sample.

Tuitions at public and independent colleges and universities soared between 1978 and 1985, according to an analysis by NEBHE. While the U.S. rate of inflation rose 68.9 percent in that period, tuitions at public institutions nationally rose 113 percent, and the most expensive independent institutions went up 120 percent. By contrast, tuition at New England's public land-grant universities rose only a modest 79 percent for state residents.

The field work for the 1985 survey on American attitudes toward higher education was carried out by telephone between September 27 and October 7, 1985. For a random sample of 1,004 respondents, the statistical margin of error at the 95 percent confidence level is plus or minus 3 percent.

Copies of the complete research results are available from Opinion Research Corporation, P.O. Box 183, Princeton, New Jersey 08542, at a cost of \$95 per copy.

## New Englanders Take The Lead in Supporting Federal Aid

New Englanders more than other Americans say the federal government should channel increased spending toward aid for higher education.

An independent, nationwide public opinion poll co-sponsored by the New England Board of Higher Education (NEBHE) and the Council for the Advancement and Support of Education (CASE) shows that when ranking the top three of 14 federally funded programs, New Englanders, by wide margins over the national sample, support increased aid for higher education, medical research and

needy college students.

"The poll results demonstrate once again the public conviction in New England that higher education and medical research are critical priorities to the strength of our nation and region," says John C. Hoy, president of the New England Board of Higher Education.

The poll found the following significant differences when comparing New England and national attitudes on whether federal support for higher education and medical research should be increased, stay at its present level, or be decreased:

	Increase		Stay as is		Decrease		No opinion	
	N.E.	U.S.	N.E.	U.S.	N.E.	U.S.	N.E.	U.S.
Government aid for higher education	73%	61%	20%	28%	6%	10%	2%	1%
Government funding for medical research	82%	73%	17%	21%	1%	5%	0%	1%
Government financial aid for college students	71%	53%	21%	35%	6%	11%	2%	2%

When asked how strongly they felt about continuing federal funding for the following higher education and medical research programs, New Englanders again scored well ahead of the national sample. A majority of people sur-

veyed in the six-state region continue to "strongly favor" medical research and student financial assistance programs, while the highest intensity of support from national respondents falls below the majority level in every category.

	Strongly Favor		Somewhat Favor		Somewhat Oppose		Strongly Oppose		No Opinion	
	N.E.	U.S.	N.E.	U.S.	N.E.	U.S.	N.E.	U.S.	N.E.	U.S.
Grants to low-income students	58%	46%	32%	38%	3%	8%	6%	6%	1%	2%
Low interest loans to middle-income students	52%	40%	31%	41%	12%	12%	4%	6%	1%	1%
Support for colleges and universities with a large percentage of low-income students	51%	37%	35%	45%	20%	10%	3%	6%	1%	2%
Support for university research in medical fields	62%	52%	34%	37%	3%	6%	1%	4%	1%	1%

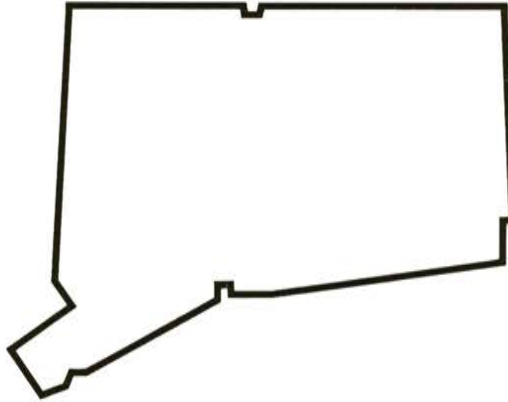
For the first time in three years, serious slippage is shown in national public support for federal aid to middle-income students. In 1983, when Americans were asked how strongly they favored or opposed government-financed low-interest loans to middle-income students, 51 percent of the respondents said they strongly favored such federal loans, and only 9 percent said they were opposed. By 1985, those who strongly fa-

vored such loans had dropped to 40 percent; those who opposed them had nearly doubled to 17 percent.

But the strength of support from New Englanders for low-interest loans to middle-income students remains steady and at a majority level. In 1983, 54 percent strongly favored such loans; by 1985, 52 percent still strongly favored them.

By John C. MacLean





***This ad is for companies  
that don't recognize this  
as the shape of things to come.***

Take a close look at the shape of Connecticut's economy and you'll like what you see.

You'll see a state whose economy is being called "one of the strongest in the nation." Where new construction activity is growing at twice the national rate. And where the work force is one of the most highly skilled and best educated in the U.S.

You'll see the shape of things to come—from our Economic Development Department... Things like investment incentives, development assistance and financing programs...

- Low cost working capital, venture capital and small business loans.
- Low cost, state subsidized, ready-to-build sites.
- Exporting, sales lead assistance.
- Recruitment and job training assistance.
- And much more!

For details about how your company can reap the benefits of the economic state we're in, contact:  
Commissioner John J. Carson,  
Connecticut Department of Economic Development, Suite 12, 210 Washington St.,  
Hartford, CT 06106. Or call (203) 566-3787.

***Connecticut... The perfect climate for growing businesses.***



## Competitive Funding for Higher Education

In academic year 1985-86, public and independent colleges and universities in New England have received their share of private sector and government grants and awards. Nationally, in 1985, private gifts to higher education increased to an all-time yearly high of \$5.6 billion, with substantial gains in state funds helping to fill in the gaps.

**Brown University** has received \$10 million from the Department of Energy for construction of a new Center for Information Technology. The new building will include two electronic classrooms equipped with advanced computer work stations, and will provide space for the University's rapidly growing research programs in academic computing. The Hewlett-Packard Company has announced a \$2.5 million grant to Brown's Department of Computer Science. The grant is part of Hewlett-Packard's \$50-million program in support of academic computing.

The **University of Rhode Island** has been awarded a grant of \$494,000 from IBM to develop programs in product design for manufacturability and automation, leading to a Master of Science degree in Advanced Manufacturing within the College of Engineering. The primary goal of the program is to strengthen the capabilities within the state and throughout the nation for producing high-quality manufactured goods at competitive cost.

In addition, URI was recently awarded a grant of more than \$200,000 from the Fund for the Improvement of Post-Secondary Education (FIPSE) to design, write, and test the software for a unique computer system to teach freshman chemistry. Students will be able to select a particular problem and observe the system performing the various steps necessary to solve it.

Digital Equipment Corporation has awarded two **Rhode Island College** professors a special investment grant to develop a computer-based



*In Osaka, Japan, Vermont Governor Madeleine Kunin (lower right) looks on as St. Michael's College president Paul Reiss grants honorary Doctor of Laws degree to Japanese industrialist Hosai Hyuga.*

instructional package to aid in teaching western civilization. More than \$300,000 worth of computer equipment has been provided to the college by the electronics company. It will be used by the History Department's David Thomas and Jeffrey Newton to prepare a series of computerized modules which could be used as a central part of the college's introductory history sequence. Competition for the grant from Digital Corporation was national, and although similar programs exist in the sciences there are few, if any, in the humanities.

**St. Michael's College** is one of nine New England institutions named as recipients of a scholarship fund totalling \$555,000. Administered through a trust in memory of Rosamond F. Granger of Milford, New Hampshire, the trust will be divided equally into nine \$61,667 portions. Institutions named to receive the scholarships, in addition to St. Michael's, include the **University of Vermont, Norwich University, Middlebury College, the University of New Hampshire, Dartmouth College, Colby-Sawyer College, St. Anselm College** and **New England College**.

**Holyoke Community College** has received approval for a four-year Title III Special Needs Grant to develop and expand student services. Funding for the first year amounts to

\$249,953; the college must reapply each year for the funds, a non-competitive procedure. Future awards depend on the College's performance and the appropriation received by Title III. Over the four-year period, HCC could receive as much as \$1,055,000.

A \$500,000 grant from the Pillsbury Corporation establishes the William H. Spoor Dialogues on Leadership, to encourage the research and teaching of leadership at **Dartmouth College**. Already nationally known for leadership research, Dartmouth plans to support greater interdisciplinary efforts through visiting fellows, colloquia, seminars and publications.

The Lincoln Filene Center for Citizenship and Public Affairs at **Tufts University** has received a \$390,000 Ford Foundation grant to strengthen research on citizen participation. The grant is the largest ever received by the Center, as well as one of the largest foundation grants ever rewarded for citizen participation research. The Center's mission has evolved over the years from providing civic education for students to encouraging and studying adult and corporate citizenship. It also provides volunteer opportunities for high school students through its youth citizenship program.

**Amherst College** has been awarded two grants of \$125,000 each from the Andrew W. Mellon Foundation of California to create a new Hewlett-Mellon Presidential Discretionary Fund. Over the next three years, the college will raise \$750,000 in matching funds to receive the \$250,000 in grants and to create the million dollar endowment. Income from the Hewlett-Mellon Fund is to be allocated by the president of the College for projects leading to faculty and curricular development and institutional self-renewal. In addition, the Mellon Foundation awarded Amherst College a grant of \$250,000 to develop new ideas to advance inquiry and teaching.

**Colby College** will also benefit from the Mellon Foundation, having received an award of \$225,000 for



new programs. Colby is considering a new freshman program that requires study, during the first semester, of major thinkers, ideas and issues; a team-taught January program of interdisciplinary seminars, and a second semester devoted to the study of the nature and preservation of culture.

## New England's Presence Abroad

Are New England's institutions of higher learning well-known overseas? Here are a few that are making an international presence felt:

**New England College** is unique among American colleges in having a British campus, letting its students study overseas as part of their regular academic program. Majors offered at the Arundel, Sussex campus include business administration, English, international administration and political science. Special advantages of studying in Arundel are field trips associated with classroom courses, internships in international firms and agencies and the New England Repertory Company, a theater troupe that travels throughout the British Isles.

Among its many international exchange programs, **Brown University** operates America's only student and faculty exchange program with East Germany. This involves a semester or year of study at Wilhelm Pieck University, Rostock, in history, German, physics and especially pre-medical fields.

**Boston University** is the major provider of graduate education for the armed services in Europe, operating fifty-four education centers from Scotland to Sicily. Civilians attached to the Department of Defense, qualified dependents and other authorized civilians are also eligible to study at the centers.

**St. Michael's College** of Winookski, Vermont, is establishing ties with Japan, most notably contracting a faculty and student exchange program with Seibo Women's Junior College in Kyoto. In December 1985, Governor Madeleine Kunin travelled to Osaka to participate in a degree-granting ceremony for Japanese industrialist Hosai Hyuga, who was named doctor of laws by the college.

The **University of Southern Maine** has a sister college, King Alfred's College, in Winchester, England. Six-

teen or more students per semester travel between the two schools to study such subjects as theatre, history and education. The **University of New Hampshire's** Whittemore School of Business and Economics has a faculty and student exchange program with the University of Grenoble. In Leningrad, UNH's Associated Academic Programs in Soviet culture and language are administered summers by UNH faculty. The **University of Connecticut's** latest achievement in establishing programs of foreign study is a new business studies relationship with the University of Grenoble, in which 23 students from UConn and the **Universities of Maine, New Hampshire and Vermont** will study in France.

The most recent addition to the selection of overseas programs offered by **Bowdoin College** is the "Fall Term in Beijing," now in its third year. It is a program of intensive Chinese language study combined with courses on Chinese society and history. The program is open to twenty to twenty-five students with a serious interest in China, from **Bates, Bowdoin, Colby, Hampshire, Hobart and William Smith, Mount Holyoke** and **Williams Colleges**. It

Salem  
State  
College  
A Tradition of Excellence

*A tradition of responding to society's changing needs with new degree programs such as:*

- Cartography •Geological Sciences
- Computer Science •Office Administration
- Criminal Justice •Theatre
- Sport, Fitness & Leisure
- Master of Business Administration
- Master of Nursing Education

*For information on 26 fields of study  
Call 745-0556, ext. 2251*



**STREKALOVSKY & HOIT, INC.**  
**ARCHITECTS**

51 NORTH ST.  
HINGHAM, MASSACHUSETTS

ARCHITECTS FOR THE NEW ENGLAND  
BOARD OF HIGHER EDUCATION



provides an opportunity to gain first-hand knowledge of contemporary China through course work and guest lectures, frequent field trips, travel to other parts of China, and introductions to Chinese college students.

**Bates College** has recently joined Bowdoin and other affiliates to sponsor the Intercollegiate Sri Lanka Educational Program (ISLE) for study in Sri Lanka. The program, offered during the fall semester, gives qualified students the opportunity to immerse themselves in Sri Lankan culture under the guidance of a faculty member from one of the sponsoring colleges.

## Engineering Improvement

Time was when **Harvard University** disdained to include computer science in its curriculum. Now the university has begun a drive to raise \$20 million to step up its program in electrical computer and systems engineering, an area where Harvard has some catching up to do with other universities and private industry. The funds will go toward constructing research laboratories and endowing five new professorships

over the next five years. Electrical engineering is presently offered as a small program within the Division of Applied Sciences—but its importance to all aspects of technology must be recognized. The fund drive and plans to reorganize the field at Harvard are part of a new effort to strengthen the Applied Sciences Division.

A solution to the problem of increasing access to the **University of Massachusetts/Amherst's** highly competitive College of Engineering without sacrificing quality may be at hand. Starting this fall, under a new joint admissions program, students may be admitted to the University and community college engineering transfer programs simultaneously. Dean James John of the College of Engineering says, "We are very enthusiastic about this program. It will let us keep our quality high and allow students who previously may have lacked the funds or simply were not ready to come here a chance to get into one of the best colleges of engineering in the Northeast."

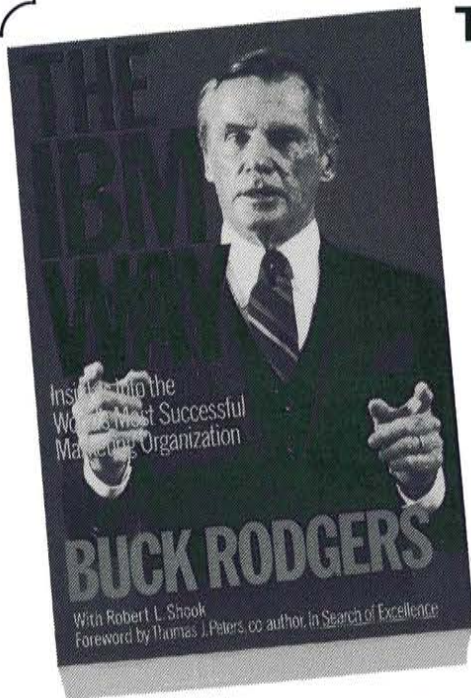
Participants in the dual admissions program will automatically transfer to the University after completing two years of engineering

courses at one of the following community colleges: **Holyoke, Berkshire, Springfield Technical, Greenfield, Northern Essex** or **Cape Cod**. The student will graduate with an engineering degree from the University.

The **University of Hartford's** College of Engineering has launched an Engineering Applications Center whose goal is to be of direct service to business and industry in Connecticut and New England. The Center, which will be headed by Professor Raymond Krisst of the College of Engineering, will include the College's Manufacturing Technology Institute, its Acoustics and Vibrations Laboratory, the Energy Institute, and the Regional Infrastructure Institute.

Among the activities to be sponsored by the Center are applications projects, technical feasibility studies, short courses, symposia, forums and demonstrations, all concerned with technological and resource management issues. In addition to serving business and industry, the Center will make its expertise available to local and state government formulating new industrial development strategies. Services to be

*continued on page 68*



# THE IBM WAY

"Insights into the World's Most Successful Marketing Organization"  
by Buck Rodgers

with Robert L. Shook, foreword by Thomas J. Peters, co-author of *In Search of Excellence*.

**\$17.95**

IBM is one of the greatest sales and marketing organizations ever assembled, yet it operates more like a cottage industry than a huge multinational organization. How does IBM do it?

Buck Rodgers, the man who has personified "The IBM Way," describes for the first time the reasons behind its extraordinary achievements.

To order *The IBM Way* or any other book(s) or map(s), call toll-free: 1 (800) 553-3550 in MA or 1 (800) 553-5331 outside MA.

The BU Bookstore carries over 80,000 titles from over 300 categories. Our second and fifth level bookstores contain the largest selection of technical, reference and trade books in New England, as well as the most comprehensive map shop in the region.

Corporate and institutional discounts are also available.



## B.U. Bookstore

**There's something more to New England's largest bookstore.**

Kenmore Sq. (617) 267-8484. Toll free 1-800-553-3550. Hrs: Mon.-Sat. 9:30 AM-7 PM; Sun. 12-5 PM.  
Major credit cards. Free parking on Deerfield St. Green Line to Kenmore.



# **A president, Stephen Joel Trachtenberg, and his university, the University of Hartford . . .**

"The University of Hartford isn't just non-profit. It's pro-student. It isn't just a place that is legally prohibited from skimming money off the top and paying it out to stockholders and managers. It is an institution motivated by the old-fashioned concept known as ideals, a place that looks at young men and women and sees not problems or anxieties but hopes and responsibilities."

(Remarks to parents during Parents' Weekend, Oct. 26, 1985)

"What we have, in the United States of America, is a higher education system so pervasive and pluralistic that it is truly the envy of the world. What is potentially tragic, I believe, is that educated Europeans can probably do a better job of describing it than most educated Americans . . . In part, the vast ignorance Americans display toward their colleges and universities is the fault of those who teach and administer within those very same institutions. At a time like the present, that could prove to be a fatal weakness . . . We need to communicate to all Americans that the community college on their doorsteps and Harvard or Yale or Stanford or M.I.T. are in fact part of a higher education continuum that is unique to this country."

(June 14, 1985, at Boston's Marriott Copley Place during a conference on tax reform and higher education)

"I look at the University of Hartford and I see a school whose influence radiates out in virtually every direction. It has steadily improved its academic programs. It is deeply involved in the communities that surround and support it. Its Capital Campaign is drawing levels of individual and corporate support that would have seemed, only 10 or 15 years ago, like flights of wildest fancy . . . And all of this energy and verve is deeply connected with the very special kind of integrity that comes from knowing that your well-being depends on your own efforts . . . We are the way we are because we know that it is our efforts, our hard work, and our dedication that will carry us through into the 21st century."

(From remarks to the Board of Regents, May 14, 1985)



## **UNIVERSITY OF HARTFORD**

West Hartford, Connecticut 06117-0395

Enrollment at the University of Hartford is open to qualified students regardless of race, color, creed, sex, age, ethnic or national origin, or handicap status.



PORTLAND  
continued from page 49

sale, service and retail sectors have all enjoyed healthy growth in employment, number of establishments, and sales or receipts. According to 1982's economic census, wholesale sales were up 61 percent from 1977 to 1982, receipts of service establishments increased by 140 percent, and retail sales grew by 68 percent. As of December 1985, retail sales per household in Portland were the second highest in the country.

The metropolitan area's effective buying income, pushed up by combined population and per-household income growth, is now \$2.2 billion per year, nearly double the 1975 level. Retail trade typically captures a large share of effective buying income.

The city's completed and planned building and restoration projects reflect not only recent but anticipated future growth. In August 1985, construction activity had risen 14.8 percent in one year. Major construction and restoration projects recently completed or currently under way include:

- One City Center, a 13-story, \$26 million office and retail tower which will boast more than an acre of floor space, with two dozen or more restaurants and shops.
- A "quick care" medical building, to be located on South Portland's Waterman Drive, and a similar emergency clinic on Brighton Avenue.
- A 104-room Super 8 Motel and a 130-room Budget Traveler Motor Lodge. The former Milk Street Armory in the Old Port district will reopen as the Old Port Regency, a luxury hotel.
- New housing: More than 1,300 units of apartments, free-standing homes and condominiums were proposed or completed in 1984, not counting individual units. Liberty Group of Portland has purchased Central Wharf on the Portland waterfront and plans to develop 85 condominiums, 170 parking spaces and a marina. Gleichman & Co. has city approval to erect a \$9 million, 15-story apartment building on Cumberland Avenue.
- A \$1.6 million reconstruction of the Commercial Street roadbed and a \$4 million Casco Bay ferry terminal on the west side of the Old Maine State Pier. A new cargo

pier and a new bridge over the harbor are also planned.

- The \$50 million, publicly-assisted Bath Iron Works overhaul facility, which continues to build navy ships and bring them in for overhauls and refitting.

The Portland renaissance is all very well for the upwardly-mobile professional, but what about those who have been overlooked by the economic and cultural miracle? The city spent more on welfare in 1983 (\$1.3 million) than in 1980 (\$670,000); in 1985, about \$4.5 million. And as the existence of the Kennedy Park housing project proves, there is an acute shortage of affordable housing for low- and middle-income families.

Some fear that gentrification could spread to the city's industrial waterfront. The Portland Fish Pier project, a 14-acre site for local fishermen with complete berthing, fish processing, auctioning and vessel services, is a strong hedge against this possibility. Private developers have completed a \$1.3 million services building; the city will contribute a like amount to a cooler and auction building.

Portland's economy remains hot, but a city can't stay hot if it throws cold water on property owners. Like most old New England cities, it depends far too much on a regressive property tax, which burdens the city's working poor with a disproportionate share of the costs of central city services. Boston's property tax represents 37.6 percent of that city's total revenues. In Burlington, Vermont, 68.2 percent of all city-based revenues derive from the property tax. Manchester, New Hampshire, similarly receives 69.6 percent of its revenues from property taxes. And Portland receives a whopping 73.3 percent.

Much has been done to reduce the city's over-reliance on an absolute property tax. Portland officials cut back the city's workforce by 15 percent, or 175 positions, in July 1981. In 1984, legislators increased state revenue sharing money; city government has requested an entertainment tax for the Portland area. Further, new revenues will be generated from the city's airport and harbor facilities. Says civic leader Rosalynne Bernstein, former chair of the Portland Museum of Art, "Portland is clearly the beneficiary of an effective public-private partnership." ■

(Statistics: Greater Portland Chamber of Commerce.)

## ACTUAL MINDS, POSSIBLE WORLDS

JEROME BRUNER

One of the principal architects of the cognitive revolution sets forth nothing less than a new agenda for the study of mind.

In this characteristically graceful book, Jerome Bruner examines the side of the mind that creates good stories, gripping drama, primitive myths and rituals. He shows how imaginary world-making undergirds human science, literature, philosophy, and even our own sense of self.

\$15.00

## GLIMPSES OF THE HARVARD PAST

BERNARD BAILYN,  
DONALD FLEMING,  
OSCAR HANDLIN,  
AND STEPHAN THERNSTROM

This happy combination of literary essay and history by four distinguished members of the Harvard faculty will be of continuing interest not only to members of the Harvard Community, who will treasure this memento of Harvard's 350th anniversary, but also to historians of higher education.

\$15.00

## BEYOND THE IVORY TOWER

*Social Responsibilities  
of the Modern University*  
DEREK BOK

"An extremely well written, thoughtful and cogent analysis of some of the most complex and emotional issues before higher education today."

—*Washington Post Book World*  
\$7.95 paper

HARVARD  
UNIVERSITY  
PRESS

Cambridge, MA 02138



# TUFTS UNIVERSITY SCHOOL OF VETERINARY MEDICINE

---

*New England's  
Veterinary School*

---

- Tufts University School of Veterinary Medicine was founded in 1978. Current enrollment is 260 students in the fully accredited four-year program leading to a Doctor of Veterinary Medicine (D.V.M.) degree. Tufts seeks geographic diversity in its student body, and accepts candidates from every state and country.
- Tufts offers the advantages of a multi-campus — urban/suburban and rural — setting. Basic science courses are taken at the health professions campus in Boston where all students share fundamental interdisciplinary medical education. This distinctive feature about the TUSVM curriculum is Tufts' "one medicine" concept which maximizes the benefits of its shared basic sciences departments with the School of Medicine, School of Dental Medicine, and Sackler School of Graduate Biomedical Sciences.
- In addition to basic sciences and large and small animal studies, the TUSVM curriculum includes course work in Wildlife Medicine, Environmental Studies, and Aquatic Animal Medicine, as well as analysis of ethical and societal issues related to domestic, laboratory, and wild animals. In 1983 TUSVM initiated an international livestock development project in Niger, West Africa.
- TUSVM students obtain their main clinical experience at TUSVM's modern new Large Animal Hospital and the Henry and Lois Foster Hospital for Small Animals in Grafton, Mass., Woods Hole Marine Biological Laboratory in Woods Hole, Mass., and the Ambulatory Service in Woodstock, Conn.
- TUSVM is committed to providing the multi-disciplined education necessary for the veterinarian of the future. For additional information about Tufts University School of Veterinary Medicine programs and facilities, please write or call:

Admissions Office - Peter Storandt  
Tufts University School of Veterinary Medicine  
200 Westboro Road  
North Grafton, MA 01536  
(617) 839-5302 x 4719

**Applicants from every state and country are eligible for admission.**



## BIOMEDICINE

*continued from page 33*

ing and other services. They compete with firms across the country and around the world, such as Genentech (California, formerly of Massachusetts), Cetus (California), Genex (Maryland), and Immunex (Seattle, Washington).

These new emerging industries have characteristics important to regional policymakers and to the region's nine distinguished academic health centers. First, they spring from no prior industry; the discoveries in DNA research and the techniques of recombinant DNA and monoclonal antibody production are fundamental. These industries are direct outgrowths of academic research.

Their growth and financing do not follow the same pattern the computer industry followed. Far more capital is required to move an idea to a biomedical product than is needed in the software industry — sometimes 100-fold more expensive. Also, a far longer development time is required, four to seven years, in part due to Federal regulations governing field trials. While there is Federal research funding, it is not on the scale provided to the development of computer and aerospace projects; and the Federal government is not the dominant market for high-biotech products and services. Development is overwhelmingly a private sector and thereby commercial enterprise.

Some firms in high biotech have already reached a middle stage of development. They are engaged in clinical field trials and operating pilot plants. The largest firms have amassed capital on the order of \$120M through public and private offerings. About one-third of U.S. "high biotech" appears to be funded by private venture capital, most of the rest by public offerings and limited joint ventures with major pharmaceutical and chemical firms, and to a minor degree by other means.

Currently, New England high biotech, while labor-intensive, employs approximately 6,000 people. It is estimated that due to long product development time-lines and the current regulatory climate, biotech will not make a sizeable contribution to New England employment for another decade.

As one would expect of a field of new, growing, well-financed companies on the verge of significant dis-

coveries and large markets, high biotech is intensely competitive at every level—individual, corporate and regional. A Nobel Prize was awarded to Crick and Watson when they described the structure of DNA, the discovery underlying the field. Walter Gilbert, formerly chairman of Biogen, is a Nobel Laureate. Genentech and Cetus, the two largest firms, are close rivals in the race to develop and market TNF and interferons. Cetus estimated the U.S. market for cancer treatment drugs will grow to over \$2 billion in ten years. Cetus is following a high-risk, high-return strategy toward this prize. In New England, Cambridge BioScience is developing a diagnostic kit for AIDS. Most firms must compete for venture capital, and many are finding the second round of financing difficult. Regions have entered the competition for high-biotech jobs with financing, industrial parks, and collaborative arrangements.

The emerging New England biotech industry is volatile. Much of its capital is intellectual and can be attracted elsewhere. Genentech was founded in New England by a Harvard professor but moved to California. Walter Gilbert left New England for the West also, but is now returning after some years away. While other regions can beckon with venture capital, New England appears to have about one-third of the venture capital available in the nation.

Many states and foreign governments are trying to attract new high-biotech companies. Recently, the Scottish government advertised in the Wall Street Journal for high-tech firms to move to Scotland and take advantage of favorable tax treatment and a research park near Scottish universities. Damon is building a major facility in Scotland. The French government has made similar offers, and Millipore and Biogen (and Digital) are operating in Alsace. Maryland, Texas, Pennsylvania, and New Jersey have recently appropriated funding for research parks or biotech programs, or both.

High biotech is closely related to the research capability of the academic health centers, a New England resource which leads all regions in the United States but which is far from dominant. Carefully nurtured, an R&D capability in high biotech could be an important future contributor to the New England economy and take its place among several other advanced New England industries. Commission members

are well aware that they are studying the strategy of a long-distance race.

Besides the linkages themselves, there are several new agencies, existing and proposed, which seek to aid in the transfer of biotech expertise to the industrial sector. First among them is the new Science Park at New Haven. Henry Chauncey, Jr. is its president and a member of the NEBHE Commission. Science Park is an example of the innovative consortia of business, government and academia that are appearing across the country. The partners of Science Park are Olin Corp., the State of Connecticut, the City of New Haven, and Yale University. Their intent is to provide a setting which encourages the exchange and economic development of promising scientific ideas. (See related article, page 30.)

Once ideas have been developed sufficiently to have commercial potential, the right to use them must be protected. The process of obtaining an appropriate patent remains mysterious to many in academia and in new companies as well; many promising opportunities are lost because of it. An example is the defibrillator, carried by cardiac-arrest teams around the world. It was developed in Boston, but it is now manufactured outside the U.S. The Commission will look at a proposal for a regional Patent Assistance Office, an idea similar to a very successful operation at Stanford University described to the Commission by David Lampe, an MIT anthropologist studying the high-tech development of Route 128.

The work of the NEBHE Commission will continue for two years. It will be carried out by committees whose distinguished members come from business, government and academia. The conclusions and recommendations will be presented to leaders throughout New England for their consideration, application and use. It is hoped that the Commission's findings will be influential, as has been the pattern of prior NEBHE reports.

Economies will be forced upon the academic health centers by events beyond the control of the New England states, yet "high-biotech" development will continue. It is likely that such development will be surveyed and influenced, but not controlled, by groups from business, government, and industry, like the Commission for Academic Health Centers and the Economy of New England. ■



provided include in-depth assessments of the competitiveness and efficiency of manufacturing processes and assistance in solving specific technical problems. The Center will be able to carry out testing and evaluation programs that spare companies major investments in research and development.

The **University of Lowell** Board of Trustees recently approved a new Master of Management Science in Manufacturing Engineering. The University of Lowell Graduate School Division, which has grown from 29 programs in 1976 to almost 40 in 1985, has added a Master of Management Science in Manufacturing Engineering to its offerings. Developed by the College of Engineering and offered through the Department of Industrial Technology, the new master's degree program will include advanced level work in manufacturing engineering as well as multidisciplinary material from the Colleges of Management Science and Liberal Arts.

According to Professor John D. Colluccini, program coordinator, "As the manufacturing area becomes increasingly sophisticated and more automated, the need will grow for

qualified engineers who are able to manage the workplace efficiently with knowledge of the new machinery as well as how to design the future factory setting, so that there is a satisfactory interface between human and machine. This new master's program is geared to all engineers working in a manufacturing environment who wish to integrate their technical knowledge with a management discipline," he says.

Emphasizing that the Master in Manufacturing Engineering program will prepare the technically trained individual for a more useful role in management, particularly in the financial techniques needed to keep U.S. products competitive, Colluccini added that graduates of the multidisciplinary program will be well qualified to continue on in a technical career or concentrate in the management area.

Applicants must hold a B.S. degree from an accredited college or university in either Engineering, Industrial Technology or Engineering Technology. Prerequisites for the program include statistics, accounting, economics and FORTRAN or another high-level computer language. Courses offered include automation,

robotics, computer-integrated manufacturing, ergonomics, industrial relations and economic forecasting.

## UMass Med School and Fallon Clinic Form Corporation

The **University of Massachusetts Medical School** Group Practice and the Fallon Clinic, Inc. have established the Northeast Medical Alliance, a new corporation which will enable them to work cooperatively in areas of mutual interest. The announcement was made by John A. Duggan, M.D., president of the Fallon Clinic, and Robert E. Tranquada, M.D., chancellor/dean of the Medical School.

"The Fallon Clinic and the University's Group Practice have complementary interests in providing innovative and cost-effective high-quality health care and supporting the educational mission of the Medical School," says Dr. Duggan.

The new corporation is the first in the nation to be established between a medical school's clinical faculty and an existing health maintenance organization's physician group. It is designed to support mutual goals of

# Bay Path Junior College

Longmeadow, Massachusetts 01106 (413) 567-1681

Bay Path's two-year associate degree programs prepare women for living, for rewarding careers, and the opportunity to continue their education at leading colleges and universities.

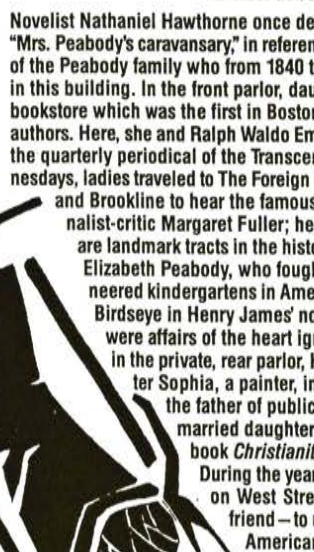
### Programs of Study

- Accounting
- Arts Management Assistant
- Business Administration-Management
- Certified Professional Secretary
- Computer Applications
- Executive Assistant
- Executive Secretary
- Fashion Merchandising and Retail Management
- Hotel Sales and Convention Planning
- Interior Design
- Legal Assistant
- Legal Secretary
- Medical Assistant
- Travel Administration
- Arts and Sciences - Liberal Arts

Call or write today for a copy of the college catalog

**The Thrill of Learning  
/ The Joy of Earning**

### Fresh American Cookery CORNUCOPIA 15 West Street



Novelist Nathaniel Hawthorne once described 15 West Street as "Mrs. Peabody's caravansary," in reference to the diverse activities of the Peabody family who from 1840 to 1854 made their home in this building. In the front parlor, daughter Elizabeth opened a bookstore which was the first in Boston to offer works by foreign authors. Here, she and Ralph Waldo Emerson published *The Dial*, the quarterly periodical of the Transcendentalist poets. On Wednesdays, ladies traveled to The Foreign Bookstore from Cambridge and Brookline to hear the famous "Conversations" of journalist-critic Margaret Fuller; her West Street lectures are landmark tracts in the history of American feminism. Elizabeth Peabody, who fought for Abolition and pioneered kindergartens in America, was a model for Miss Birdseye in Henry James' novel, *The Bostonians*. Nor were affairs of the heart ignored at 15 West Street: in the private, rear parlor, Hawthorne married daughter Sophia, a painter, in 1842, and Horace Mann, the father of public education in America, married daughter Mary, author of the cookbook *Christianity In The Kitchen*, in 1843. During the years the Peabody family lived on West Street, they were hosts - and friend - to many who helped broaden American thought and literature.

# CORNUCOPIA

15 West Street · Downtown Boston

Lunch Mon-Fri

Dinner Tues-Sat

338-4600



medical education and health care delivery. Physicians from the two organizations will work cooperatively to provide health-care services and to afford medical students and residents an opportunity to practice medicine in a pre-paid, HMO environment.

"There's no question," says Dr. Tranquada, "that our students and residents need to learn the importance of delivering the best medical care in a cost-effective manner, and that includes exposure to such alternative delivery systems as HMO's. New physicians are entering a very competitive health-care environment, and we have an obligation to teach them the new ground rules. Those of us in academic medicine must open up new opportunities for our students and residents to learn. We must prepare them for the realities of medical practice in the 1990's and beyond." To do this, Fallon Clinic physicians will expand their participation in the School's medical education programs, Tranquada adds.

Although in recent years some medical schools have established HMO's, all but one or two of them have dissolved and formed separate entities, according to Dr. Duggan.

"This affiliation is unique because the initiative is taken by two groups of physicians—one associated with an HMO and one with a medical school—and it involves not a contract subject to renewal, but the foundation for a lasting and growing relationship," he says.

Officials of both organizations believe that this development can be a model for many other academic healthcenters. Chancellor Tranquada says that the new corporate joint venture "goes well beyond the usual contracts between hospitals and HMO's. It will enable us to attack, frontally, one of the most significant problems facing academic medical centers: the delivery of complete and affordable health care and the identification of opportunities for training tomorrow's doctors."

In addition to its goals in medical education, the venture will provide a laboratory to study the organization and management of clinical practice and the delivery of health care.

According to Alan M. Stoll, Fallon Clinic administrator, "Through the development of a collegial relationship between the physicians of the Fallon Clinic and the faculty of the UMass group practice, we have a rare

opportunity to build on the strengths of both organizations, and to develop creative approaches that offer high-quality health care."

Keith J. Waterbrook, executive director of the UMass Group Practice, says, "It is our intent that this new cooperative relationship be a testing ground for further integration of the health-care system. We hope to keep Central Massachusetts in the forefront as an innovator in reducing the costs of health care."

Initial emphasis will be placed on the educational aspects of multi-institutional comprehensive rehabilitation services, provision of residency services in support of cost-effective day surgery, sharing of resources, and the provision of health-care services in underserved areas and for the elderly.

## Fitchburg State College Aids Area Businesses

The Montachusett Economic Center at **Fitchburg State College** provided more than half a million dollars in services to area businesses last year. Faculty and students from the college provided 47 businesses with marketing studies and management assistance valued at \$511,409

# Open House

Friday, April 4, 1986 3:00-6:00 PM

## "Increasing Your Productivity Through Personal Computing"

A Seminar  
4:30-5:30 PM

Before and after the program our consultants will be happy to personally discuss with you how you can put a computer to work for you or your staff!

University Computers at Boston University Bookstore is a full service computer center—Sales, Support, Training, and Service. As part of the educational community we serve the needs of faculty, administration, staff, and students in their academic personal computing needs. We also service companies and individual needs.

Join us for our OPEN HOUSE, attend our free seminar, and learn how you can enhance your productivity through personal computing. R.S.V.P. by April 1.

*Refreshments will be served.*



Authorized Dealer



**B.U. Bookstore**

There's something more to New England's largest bookstore.

660 Beacon Street  
Boston, MA 02215  
(617) 236-7464

Kenmore Sq. (617) 236-7464. Hrs.: Mon.-Sat. 9:30 AM-7 PM; Sun. 12-5 PM. Major credit cards. Free parking on Deerfield Street.



**UNIVERSITY  
COMPUTERS**  
BOSTON UNIVERSITY  
BOOKSTORE



---

**CENTER FOR  
MANAGEMENT DEVELOPMENT**

Innovative and effective programming for professional continuing education, through seminars, non-credit evening course programs, in-company training, and specialized instruction for training and development professionals.

---

**SMALL BUSINESS  
DEVELOPMENT CENTER**

Professional management assistance, free of charge, which reaches the roots of Rhode Island's economy: the owners of small businesses. Operated in conjunction with the US Small Business Administration.

**To get to the top,  
you have to start at the top.**

---

**UNDERGRADUATE DAY SCHOOL**

One of the most competitive in the nation, leading to bachelor of science in business administration degrees in accounting, applied actuarial mathematics, business communications, computer information systems, economics, finance, institutional management, management, and marketing.

---

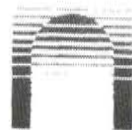
**GRADUATE SCHOOL**

MBA and MST programs which build on an individual's undergraduate study and acquired career experience, creating professionals who are prepared to rise to the top in their fields. Degrees in accounting, finance, management, health care management, computer information systems, entrepreneurship, and taxation.

---

**EVENING SCHOOL**

Continuing education for those studying for personal enrichment, or working towards bachelor or associate degrees in accounting, computer information systems, economics, finance, institutional management, management, marketing, transportation, general business, office administration (bachelor degree only), and criminal justice.



**BRYANT  
COLLEGE**

Smithfield, RI 02917-1284



for the calendar year that ended December 1985. (That figure is based on standard costs for market survey design and analysis, consulting fees and other costs associated with such studies.) MEC is funded by the Fitchburg State College Foundation, Inc., a nonprofit corporation that raises funds from alumni, corporations and friends for a series of programs, including MEC, on campus.

"We're pleased that in less than five years we've been able to expand our services to help this many businesses and nonprofit agencies," says MEC Director Ann Bogojavlensky. "Most small businesses that need marketing services simply can't afford the consulting fees private agencies charge." For its efforts in aiding small businesses, FSC was designated a Small Business Institute by the U.S. Small Business Administration in 1982.

MEC's clients include nonprofit agencies, businesses, municipalities and other organizations. Among those provided services by the Center this year were banks, schools, health care agencies, retail stores, computer firms, the YMCA and the towns of Ayer and Shirley. Typical projects include survey design and research, data analysis, report writing, polling, field work, artwork, computer processing, printing and report writing.

In addition to the projects, the Montachusett Economic Center sponsors free seminars on such topics as computers, taxes, retailing and mature industries. Other projects supported by the Foundation include the "Women in Today's Society" seminar and lecture series, faculty research grants and merit scholarships.

### Boston Globe Offers "Paper Route to College"

In a new development which will affect thousands of young people in metropolitan Boston, *The Boston Globe* has established a unique college scholarship program for newspaper carriers, which went into effect January 1. *The Boston Globe* "Paper Route to College" scholarship program will provide one year's full tuition, up to a maximum of \$5,000, for any *Globe* newspaper carrier who satisfactorily delivers the *Globe* for three consecutive years in a home-delivery route.

The *Globe's* program goes far beyond any now in existence, according to Millard G. Owen, *Globe* vice president for marketing and sales.

"The *Globe* program is unique in two ways," says Owen. "First, *any* carrier who meets the requirements is eligible; and second, \$5,000 is a much greater amount than any previous or current carrier scholarship program."

"The Paper Route to College" program is a natural extension of the *Globe's* commitment to the education and development of our youth," continued Owen. "For more than 35 years, we've been sponsoring academic and athletic programs to encourage scholastic excellence in young people in the Commonwealth. Now, for a job well done as a newspaper carrier, we can provide what we think is substantial educational assistance to a group of people who are very important to the *Globe*."

Other requirements of the program are that the carrier must be at least 12 years of age and live in an area where the *Globe* is home delivered. The scholarship, which may be used at a school of the carrier's choice, will be paid directly to the school and is in addition to the regular compensation carriers receive for delivering the newspaper.

In addition, the *Globe* has pledged \$200,000 for another scholarship program for students of the Boston Public Schools. Two graduates annually from each of 17 Boston public high schools will receive a full, four-year scholarship to the **University of Massachusetts/Boston**. Each school's principal will select the individual for the UMass Scholarship, awarded on the basis of both academic and student citizenship potential.

### Blue Hills Technical Institute Becomes Second Massasoit Community College Campus

August 1985 marked a new beginning for **Massasoit Community College**. Following year-long negotiations, an agreement was signed by President Gerard F. Burke which made the **Blue Hills Technical Institute** in Canton a second campus of Massasoit. The addition of widely acclaimed technical programs offered at the two-year degree level by the Technical Institute to the Massasoit curriculum turned Massasoit into the most comprehensive community college in Massachusetts.

"I am delighted with the merger, which now combines the Technical

Institute's 11 one- and two-year technical and health programs with Massasoit's 14 two-year liberal arts, business and vocational programs to form a very comprehensive curriculum," says President Burke.

The new programs introduced into the Massasoit curriculum from the Technical Institute include two-year Applied Science degree programs in Advertising, Art and Design, Architectural Technology, Civil-Structural Technology, Data Processing and Computer Programming, Electronic Technology, Electro-Mechanical Technology, Heating, Ventilating and Air Conditioning Technology and Medical Laboratory Technology. One-year Certificate programs are offered towards a Certificate of Dental Assistant and Medical Assistant.

"Initially, we plan to run the two campuses in tandem so that from the students' point of view they'll see very little change except that the tuition will drop dramatically (\$2,445 to \$780)," adds President Burke.

### Task Force To Look at Dairy Biotechnology

The **University of Vermont** has appointed a task force to examine the potential impact of recent biotechnological developments on the Vermont dairy industry. Robert Sinclair, dean of the University's Division of Agriculture, Natural Resources and Extension, has asked a panel of UVM researchers and extension specialists to study the economic and sociological implications of such technological developments as synthetic bovine growth hormone and isoacids, both of which have been shown to markedly increase milk production efficiency.

Technological advances of this sort could have serious implications for the Northeast and especially Vermont, where dairy farming is the single largest agricultural enterprise. At present, there is a worldwide surplus of dairy products. New products that significantly increase milk production could cause that surplus to rise, causing prices to fall and making it more difficult for small farms to compete against large ones.

The task force will talk to both researchers and farmers and study recent research reports on these and other biotechnological developments.

*continued on page 76*



PEOPLE  
continued from page 57

earned both his bachelor's and master's degrees at Springfield College.

**Dr. Charles M. Hepburn** has been appointed vice president for academic and student affairs at Anna Maria College, Paxton, Massachusetts. He had been vice president of the College of Great Falls, Great Falls, Montana, since 1978. Prior to this he was vice president for academic affairs and vice president for research and development at Lake Superior College, Sault Ste. Marie, Michigan.

**Thomas M. Berger** of Winchester has been appointed vice president for finance and administration at Newbury College, Boston, and is the first to hold that post. Before joining Newbury he was vice president of finance at Telelogic Inc. in Cambridge. Berger holds a B.F.A. from Denison University and an M.B.A. from Boston College.

## More Steps . . . To Dean

Laurence Lesser, president of the New England Conservatory, Boston,

announced in October 1985 that **Robert L. Annis** has been promoted from director of admissions to dean of admissions. Annis, who has headed the admissions office for the past two years, will now oversee the financial aid and placement offices in addition to admissions.

According to Lesser, "The new structure responds to the changing character and attitudes of the student population and addresses the need for a coordinated enrollment management approach at the Conservatory." Annis, who received degrees in Clarinet Performance from the Conservatory and the University of Southern California, is also on the Conservatory's faculty. He was director of the Summer School from 1978 to 1980.

**Dr. Joan M. McGowan** has been named dean of academic services at Salem State College, Salem, Massachusetts. McGowan, formerly assistant dean of academic affairs at Bunker Hill Community College, is a founding faculty member of both Bunker Hill and Middlesex Community Colleges. She received her bachelor's degree from Emmanuel College and did her graduate work at the University of Vermont. She later re-

ceived a doctorate in Education from the University of Massachusetts.

In her role as dean of academic services, McGowan is responsible for the offices of admissions, student records and registration, computer services, instructional media, academic advising and the Learning Center.

At Amherst College, Amherst, Massachusetts, **William W. Heath**, professor of English at Amherst since 1956, is the new dean of freshmen. **Jean D. Moss**, who holds an M.Ed. and expects an Ed.D. from the University of Massachusetts/Amherst, has been named assistant dean of students. She has administrative and counselling experience at the University of Massachusetts and has been a cross-cultural consultant in Atlanta, Georgia, at Brown University and at Smith College.

Two new deans have been appointed at Brown University. **Preston Smith** has been appointed director of the Third World Center and assistant dean of the College. Formerly assistant dean of students at Hampshire College in Amherst, Massachusetts, Smith received his A.B. from Howard University in Washington, D.C., and is currently working toward

# Ploughshares

INTERNATIONAL WRITING ISSUE edited by Stratis Haviaras

Work by fifty poets and authors, including:

ANNA AKHMATOVA  
YVES BONNEFOY  
ITALO CALVINO  
RAYMOND CARVER  
C.P. CAVAFY  
ALAN DUGAN  
ODYSSEUS ELYTIS  
GRAHAM GREENE

EUGENE GUILLEVIC  
HAVIZ  
SEAMUS HEANEY  
MIROSLAV HOLUB  
PRIMO LEVI  
NAGUIB MAHFOUZ  
EUGENIO MONTALE

ROBERT NOZICK  
CESARE PAVESE  
VASKO POPA  
RACINE  
YANNIS RITSOS  
JAROSLAV SEIFERT  
TOMAS TRANSTRÖMER

Rendered into English from twenty different languages by many men and women of letters, most of whom are themselves poets and writers.

Please enter my subscription

I enclose \$ \_\_\_\_\_

Please send Vol. 11, No. 4 (\$7.00) only.

**Ploughshares, Inc., Box 529,  
Cambridge, MA 02139**

SUBSCRIBE!

1 year (\$14)

2 years (\$26)

3 years (\$38)

life (\$200)

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_



a Ph.D. in Political Science at the University of Massachusetts/Amherst.

**Jean Wu** has been appointed as an associate dean of the College. She will coordinate the Resident Counselling Program and work with Smith in the Minority Peer Counselling Program. She was previously director of the Bureau of Study Counsel at Harvard. Wu did her undergraduate work at both King's College, Hong Kong, and Simmons College, Boston. She received her Ed.D. degree from Harvard.

**Carrie N. Dickens** of Roxbury has been appointed associate dean for continuing education at Massachusetts Bay Community College in Wellesley Hills. Dickens received her Ed.D. from Boston University and her M.Ed. from Pennsylvania State University. She joins the college from Pennsylvania State University, where she was assistant professor of adult education and coordinator of the In-tramural Master's Program.

### ... And More

**Dr. Shirley Weaver**, former coordinator of Osteopathical Clinical Education for Michigan State University, has been named director of the Biddeford-based University of New

England Area Health Education Center (AHEC) Program. Weaver's responsibilities will include organizing and evaluating a federally sponsored AHEC in the service area, including the development of clinical training and continuing education for health professionals in Maine's five northern and easternmost counties, Hancock, Washington, Penobscot, Piscataquis, and Aroostook. The Center will serve with special focus Native American members of the Passamaquoddy and Penobscot tribes.

In accepting the position, Weaver, who received her Ph.D. in Higher Education Administration and Curriculum from Michigan State University, said that "for most of my professional life I have held administrative positions in which I was responsible for either the quality of patient care or the quality of students' professional development. The role of the AHEC project director, as I see it, is to ensure the latter with an eye towards contributing to the former."

**John Lawson**, formerly Massachusetts' education commissioner, recently joined the faculty of the University of New Hampshire. Lawson, who graduated from UNH in 1949, will teach collective bargaining,

finance and administration through the UNH graduate program in educational administration.

Lawson began his educational career as a teacher-principal in the Antrim, New Hampshire schools in 1949. He returned to UNH for a master's degree in 1952, and went on to be superintendent of schools in several Massachusetts and one Ohio school district. Lawson has maintained close ties with UNH, serving as president of the UNH Alumni Association in 1981 and 1982. He has also been on the Board of Boston's Museum of Fine Arts, MIT's Board of Overseers and the Massachusetts Telecommunications Commission.

**Dr. Mildred S. Dresselhaus**, Abby Rockefeller Mauze Professor of Electrical Engineering and Physics, has been named an Institute Professor at the Massachusetts Institute of Technology. The title of Institute Professor is an honor bestowed by the faculty and administration on a colleague for distinguished accomplishment in scholarly, educational, service and leadership pursuits. She is the first woman so designated at MIT.

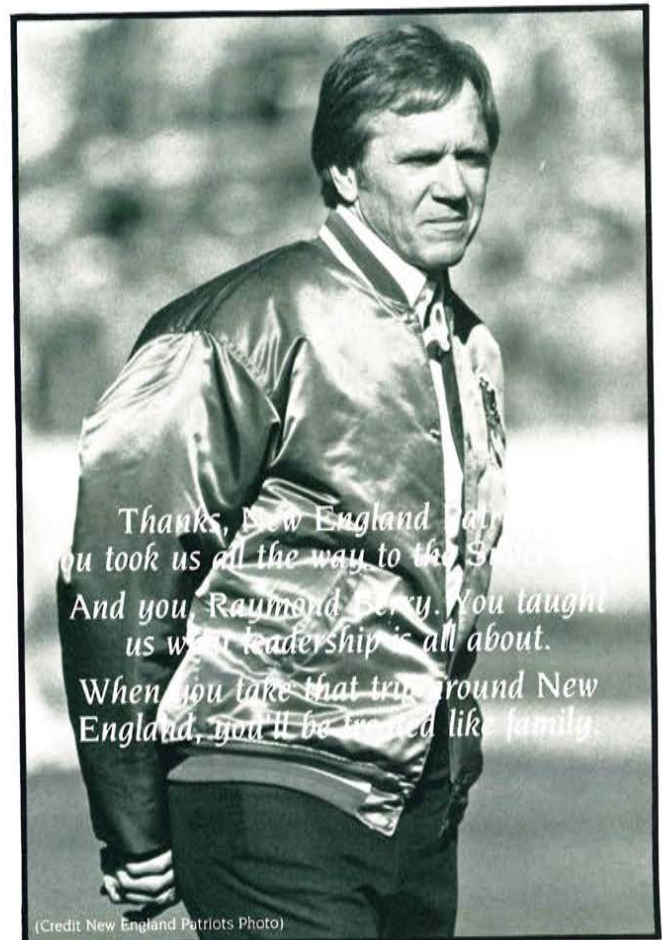
Dresselhaus has focused her  
*continued on page 75*

## OPPORTUNITY

for minority and  
disadvantaged high school  
juniors and seniors

National Scholarship Service and  
Fund for Negro Students 1986 Student  
College Interview Sessions

- NEBHE and the Higher Education Information Center of Boston are proud to co-sponsor the National Scholarship Service and Fund for Negro Students (NSSFNS) 1986 Student College Interview Sessions.
- The Boston and New Haven sessions are two of eighteen held all over the United States. They're designed to provide an opportunity for minority and disadvantaged high school juniors and seniors to meet with college reps and discuss admissions policies, financial aid and career options.
- Sessions will be held April 11th at the Sheraton Boston Hotel, and April 16th at the New Haven Park Plaza Hotel, from 9am to 3pm. Admission is free to students and their parents.



*Thanks, New England Patriots,  
you took us all the way to the Super Bowl.  
And you, Raymond Berry. You taught  
us what leadership is all about.  
When you take that trip around New  
England, you'll be treated like family.*

(Credit New England Patriots Photo)





## **Rhode Island Higher Education Assistance Authority**

### **Rhode Island Student Loan Authority**

PARTNERS IN THE HIGHER EDUCATION ADVENTURE.  
TOGETHER WITH —

- Schools and Colleges throughout the country.
- Lending Institutions throughout Rhode Island.
- The United States Department of Education.
- The 44 other public and private non-profit agencies who administer the Guaranteed Student Loan Program in the states and territories of the United States.
- And students with a dream.

State-based and private non-profit guarantee agencies, secondary markets, direct lenders and commercial lenders carry out the mission created by the Congress to administer the Guaranteed Student Loan Program and the Parent Loan Program in a decentralized activity, on a state by state basis. Participating institutions are committed to helping students and parents meet their financial needs to achieve the educational objectives of students as future contributors to our society and our economy.

The Guaranteed Student Loan Program provides:

- Universal access to higher education.
- Builds on the unique and individual needs of each state and its citizens.
- Provides the most effective control of student loan defaults possible.
- Provides the most direct and timely service to students, schools and lenders.

An idea that works!

A program that works!

## **Rhode Island Higher Education Assistance Authority**

**274 Weybosset St., Providence, 02903  
(401) 277-2050**



education committees, now know more about the economic contributions of higher education to their states, and are more inclined to heed higher education's message. Not only do the lawmakers receive new data and trend analyses, they get it in a comparative format that measures how their states compare with others in New England and throughout the country. Most importantly, they learn to look upon higher education as an investment in long-term economic development instead of as just another budget expense.

How can colleges and universities in other regions use NEBHE's legislative model? Naturally, the political and economic traditions of each state dictate the opportunities for collaboration between legislators

and the leaders of higher education. The project is probably best suited to regional or statewide organizations serving the interests of both public and private colleges and universities. Either regionwide organizations like NEBHE can do the job, or new groups and associations can be organized. Any groupings of colleges and universities can collectively keep their legislators better informed.

A word of caution for other regions: State Representative Irving Stohlberg of Connecticut, chairman of the Caucus of New England State Legislatures, says, "I'd be cautious about transferring conclusions about our higher education project to other parts of the country. The project has greater application to New England than elsewhere because of our strong tradition of higher education, cohesiveness and smaller distances to travel."

While it is true that what works in one region may fail in another, re-

gions with similar problems will obviously benefit from finding out what gave rise to the New England legislative model, why it works, and what results it is likely to achieve.

New England's strategic plan for higher education and economic development is long-range. NEBHE's new legislative program sets the agenda for objectives, defining the issues and keeping them before the legislatures. The high turnover of state legislators (approximately 35 percent) every two years means consistently informing a changing cast of new players who are spread thin over a vast array of issues. Helping legislators see higher education as a resource for economic development—not just another special interest—is what the New England project is all about.

Note: This article is drawn from a report on the New England project which will be published by the National Institute of Work and Learning in Washington, D.C. ■

PEOPLE  
continued from page 73

scholarly attention on the electronic, optical and magneto-optical properties of semiconductors and semimetals. Her recent work has concentrated on graphite intercalation compounds, graphite fibers and the modification of electronic materials by intercalation and implantation.

Dresselhaus received a B.A. degree from Hunter College. Following a year as a Fulbright Fellow at Cambridge University, England, she entered Radcliffe College where she earned an M.A. in 1953. She received her Ph.D. in 1958 from the University of Chicago.

## Appointments To Academic Associations

**Walter R. Peterson**, president of Franklin Pierce College in Rindge, New Hampshire and former governor of that state, has been elected chairman of the New Hampshire College and University Council Board of Directors. He succeeds Edward Shapiro, president of New Hampshire College. **Dr. Gordon Haaland**, president of the University of New Hampshire, was elected vice chairman; **Dr.**

**Carol J. Descoteaux, C.S.C.** president of Notre Dame College in Manchester, was named treasurer.

The New Hampshire College and University Council is a consortium of 14 colleges and universities: Dartmouth College, Franklin Pierce College, Saint Anselm College, New Hampshire College, Colby-Sawyer College, Keene State College, Plymouth State College, the University of New Hampshire, Rivier College, Notre Dame College, Nathaniel Hawthorne College, Daniel Webster College, New England College, and the School for Lifelong Learning.

**Dr. Arthur J. West II**, chairman of the Biology Department at Suffolk University, Boston, has been named president of the National Marine Educators Association. The NMEA is an organization that helps educators at all levels utilize the marine environment in their teaching. The Association consists of 14 chapters with more than 2,000 members throughout the nation. West has served in many capacities since he joined Suffolk in 1952: instructor, assistant professor, associate professor, professor, co-chairman and chairman of the University's Biology Department. He received a B.S. and M.A. from Suffolk and a Ph.D. from the University of New Hampshire, Durham.

**Marjorie Goudreault**, a Northern Essex Community College trustee,

has been elected to serve a second term as president of the Massachusetts Community College Association (MCCA), a statewide organization of presidents and trustees who participate primarily in long-range planning and advocacy efforts for the Commonwealth's 15 community colleges.

The election took place November 1, 1985, during the MCCA annual meeting at Cape Cod Community College in West Barnstable. Dr. Gerard Indelicato, special assistant to the governor for educational affairs, delivered the keynote address. Indelicato emphasized the importance of trustees in the governance and future of community colleges.

## Welcome Aboard

Three Connecticut appointments to the New England Board of Higher Education were made in August 1985. We welcome **Kevin E. Booth, Esq.**, of Niantic; **The Honorable M. Adela Eads**, senator from Kent; and **The Reverend Valdez Loma St. Clair** of Ansonia.

Booth received his B.A. degree from the College of the Holy Cross in Worcester, Massachusetts, and a J.D. from Catholic University of America Law School in Washington, D.C., where he was editor-in-chief of the *Catholic University Law Review*. After graduation Booth went to work for





Brian Donnelly



George H. Hanford

continued from page 75

the Washington law firm of Covington and Burlington. He has served as Republican Committee town chairman and selectman in East Lyme and as campaign chairman for State Senator Pierce Connair. He is now a partner in the law firm of Booth and Mattern.

St. Clair is pastor of the Macedonia Baptist Church of Ansonia. He received his B.A. from Benedict College and his B.D. from the Starks School of Theology; LL.D. from the National Ecclesiastical University, London; and D.D. from Livingstone College in Salisbury, North Carolina. Currently he serves on the Ansonia Board of Welfare, the Ansonia Board of Education and the Ansonia Building Commission.

Eads, who lives in Kent, is assis-

tant majority leader in the Connecticut senate. She was educated at Sweet Briar College and the Katharine Gibbs School, and has been on the Kent Board of Education since 1959, serving as its chairman from 1961. Eads has served two terms in the Connecticut House of Representatives and was elected to the state Senate in 1980. She is a member of the Governor's Committee on Equity and Excellence in Education, and has served on the Governor's Educational Block Grant Advisory Committee.

In addition, **Bernard V. Buonanno Sr.**, of Smithfield, Rhode Island, president of New England Container Company, Inc., is joining the Board for the second time. **Hilton A. Wick** of Vermont replaced George Little in October, 1985. ■

CAMPUS  
continued from page 71

## Introducing ULowell's New Biotech Major

The College of Pure and Applied Sciences at the **University of Lowell** is sponsoring an undergraduate biotech program. The Bachelor of Science in Biotechnology, which is being offered in the College of Pure and Applied Science's Department of Biological Sciences, will train students for a diverse job market requiring backgrounds which range from the technology involved in brewing beer to the new and exciting applications of genetic engineering.

According to program coordinator Thaddeus Osmolski, Department of Biological Sciences chairman, "The University of Lowell has been placing people in the biotechnology industry for years. The initiation of this program simply formalizes what up to this point has been an option of the Bachelor of Science program in Biological Sciences."

# YALE

## The Program for Special Students

A new program for nonresident Special Students  
leading to the  
degree of Bachelor of Liberal Studies

Students will be selected  
on the basis of their maturity and experience  
as well as previous academic record

*For information:*  
Program for Special Students  
211 SSS 1604A Yale Station New Haven, CT 06520  
Telephone: 203 436-2940

## For Your Information

A wide variety of publications  
dealing with higher education  
and economic issues in New  
England are available from NEBHE.

*Business and Academia: Partners  
in New England's Economic Renewal;*  
*New England's Vital Resource: The  
Labor Force; and Renewing Excel-  
lence: The 1984 New England Legis-  
lative Survey* are just a few of the  
titles available. You can order back  
issues of *Connection* as well.

For a complete list of publica-  
tions, please write to the  
**New England Board of Higher Education,**  
45 Temple Place,  
Boston, Massachusetts 02111



In addition to a survey of area high school students and freshmen entering the College of Pure and Applied Science at the University, 23 private companies and 42 private and public organizations were asked to respond to a questionnaire which assessed current levels of employer demand.

"Career opportunities in the field of biotechnology have been proliferating within, and immediately adjacent to, the area the University serves as well as in the growing number of industries in the Route 128 area," explained Osmolski. He added, "The Bachelor of Science in Biotechnology curriculum will prepare people for jobs in genetic engineering, hybridomas, cell culture and industrial microbiology or may be used as the basis for graduate study."

### The Community College of Vermont Celebrates 15th Anniversary

In the fall of 1970, the **Community College of Vermont** was a single, cramped office in Montpelier with a handful of people and a menu of ten courses. By the spring of 1985, CCV was a network of 12 offices statewide with a staff of 70, an instructor pool of 400-plus and a rich menu of offerings.

In its fifteen years of service to Vermont and its students, CCV has placed special emphasis on those Vermonters who would not otherwise have access to college because of time constraints, family obligations, low income and lack of academic self-confidence. To accomplish its mission, CCV uses, instead of a campus, a statewide network of offices that draws upon local community facilities, instructors and good will. Another aspect of the CCV mission is concern for the economic health of the state. In addition to regular college courses, workshops and special training sessions are targeted at the needs of businesses and state agencies.

In the future, CCV will strive for still higher academic quality and new services. Access via geographic coverage, a founding goal, has been achieved, but two or three small satellite operations might be added if demand grows enough. CCV will also launch a bi-annual journal, *Vermont Affairs*.

### Educational Reform In Action at UMaine/Fort Kent

"Really useful."

"It's something we actually use every day."

"It definitely changed my attitude."

These were some of the comments made by participants in the St. John Valley Inservice/Preservice Project following the first session.

A joint effort involving the **University of Maine at Fort Kent** and area public schools, the project is providing day-long training sessions in models of teaching for student teachers from UMFK and their supervising teachers. Workshops are planned for each semester of this school year.

The project is unique in that it represents a collaborative effort by area schools and the university to provide superior models of teaching, using student and practicing teachers.

The training sessions involve the presentation of a teaching model by a "facilitator." Participants then divide into groups and develop a model which is later presented to the whole workshop. Following each training session, teachers and student teachers return to their classrooms and apply the models, coaching each other. Videotapes of the classroom experience will be used at future training sessions. The models deal with information processing or methods of presenting information to students.

The Inservice/Preservice Project is partially funded by an innovative grant from the Maine State Department of Education and Cultural Services. The grant proposal was written by Terry Murphy, assistant professor of education and director of the UMFK Professional Development Center, in cooperation with area school administrators.

As *Connection* went to press, **Bryant College** in Smithfield, Rhode Island was planning a conference titled "Rhode Island's Economy in the Year 2000: Getting from Here to There," which was held in January. Leading economic analysts from Rhode Island and the region plan to study the housing demand from Boston, the coming of "full employment," the role of information jobs, and Rhode Island's high-technology sector. ■

## A SALUTE TO CONNECTION

### and The New England Board of Higher Education from NORWICH UNIVERSITY

The Nation's First  
and Only Remaining  
Private Military College

Traditional Undergraduate  
Majors on Two Campuses in  
the Following Areas:

- Business
- Education
- Engineering
- Humanities
- Mathematics and Science
- Nursing
- Social Science

The Russian School  
of Norwich University

A Total Immersion Program  
Leading to the M.A. Degree

External Degree Programs  
for Adults Offered on the  
Vermont College Campus:

- The Adult Degree Program
- The Graduate Program
- The Master's Program  
in Art Therapy
- The Master of Fine Arts  
in Writing Program

### NORWICH UNIVERSITY

Norwich Campus  
Northfield, VT 05663

Vermont College Campus  
Montpelier, VT 05602



**Because you never know when the Tuesday will come when you'll use the news we give you Monday.**



Lawyers Weekly and Lawyers Alert are two publications you want to have in your law office.

Each Monday, Lawyers Weekly is delivered fresh and informative and brimming with news of the previous week's legal and legislative developments in Massachusetts.

Twice each month, Lawyers Alert arrives at your office, bringing you easy-to-read and comprehensive summaries of important developments in the courts nationwide. This attractive journal can keep you a step ahead in the practice month after month.

**Because you never know when you will need your own personal subscription to Lawyers Weekly and Lawyers Alert, act now by calling 617/227-6034 or using the coupon below.**

 **30 Court Square, Boston, Mass. 02108**

- Yes, I want to save time and keep up-to-date. Please enter my subscription to Lawyers Weekly at \$140.
- Please start a subscription to Lawyers Alert at \$99.00/year.
- Enclosed, find my check       Bill me

Name \_\_\_\_\_

Firm Name or Employer \_\_\_\_\_

Address  Home  Office \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Business Phone \_\_\_\_\_ Home Phone \_\_\_\_\_

Law School \_\_\_\_\_ Year of Admission to Bar \_\_\_\_\_



# Calendar

## MARCH

**6** National Association of Independent Schools Annual Conference  
Atlanta Hilton, Atlanta, Georgia, March 6-8  
Inquiries: Selby Holmberg, Director of Public Information, NAIS (617) 723-6900

**12** American Association of Higher Education National Conference  
Washington Hilton, Washington, D.C., March 12-15  
Inquiries: Sarah Hawco, AAHE (202) 293-6440

**16** Association of Governing Boards of Universities Annual Conference  
Sheraton Harbor-Island, San Diego, California, March 16-18  
Inquiries: Lane Hurdle, Conference Secretary, AGBU (202) 296-8400

## APRIL

**6** National Association of College Admissions Counsellors Spring 1986 College Fairs  
Springfield Civic Center, Springfield, Massachusetts, April 6-7  
Inquiries: NACAC (312) 676-0500

**10** The University of Georgia National Conference on Professional and Personal Renewal for Faculty, in cooperation with the American Association for Higher Education and the Teachers Insurance and Annuity Association  
Terrace Garden Inn, Atlanta, Georgia, April 10-12.  
Inquiries: Dr. William Jackson, University of Georgia (404) 542-1355

Dr. James Calhoun, University of Georgia (404) 542-1173

**11** National Scholarship Service and Fund for Negro Students (NSSFNS) Student College Interview Sessions  
Sheraton Boston Hotel, April 11  
Park Plaza, New Haven, Connecticut, April 16  
Inquiries: Samuel H. Johnson, SERO/NSSFNS (404) 577-3990

**13** American Association of Community and Junior Colleges Annual Convention  
Sheraton Twin Towers, Orlando, Florida, April 13-16  
Inquiries: Dr. Connie Sutton, AACJC (202) 293-7050

*continued on page 80*



**FISHER**  
JUNIOR COLLEGE FOUNDED 1903

### EARN A DEGREE IN:

#### BUSINESS COMPUTER APPLICATIONS

- Hands on Training
- Lotus 1, 2, 3, Basic, Pascal
- d-Base, Multiplan, Condor
- Word Processing
- Spreadsheets

#### ACCOUNTING

- Basic Accounting Principles
- Intermediate and Cost Accounting
- Computerized Spreadsheets
- Taxation

#### BUSINESS ADMINISTRATION

- Accounting Procedures
- Business Law
- Marketing
- Management Skills
- Computer Applications for Management

#### MEDICAL ASSISTING

- Medical Terminology
- Laboratory Techniques
- Word Processing
- Third Party Payments
- Clinical Skills

- Achieve computer literacy on your own individual computer
- Convenient Locations — One near you — 40 choices
- No Registration Fee
- Financial Aid available for eligible students
- To Enroll — Walk in Sign up Monday through Thursday 9 am - 8:30 pm; Friday 9:00 am - 4:30 pm

OR  
**CALL 536-4647**  
108 BEACON STREET  
BOSTON, MA 02116

BOSTON CAMPUS  
EAST BOSTON EXT.  
CAMBRIDGE EXT.  
WINCHESTER EXT.  
WAKEFIELD EXT.  
WATERTOWN EXT.

108 Beacon Street  
East Boston Central Catholic School  
Mattignon High School  
Winchester Senior High School  
Our Lady of Nazareth Academy  
St. Patrick High School

536-4647  
569-8436  
492-0164  
729-9246  
245-0061  
923-0777

Accredited by New England Association of Schools and Colleges





## BRIDGING THE GAP

Between the abstract and the practical. . . between the practitioners and the policy analysts. . . journalists and the academic communities.

The **New England Journal of Public Policy** creates an exchange of ideas by providing a medium of communication

- between those who make policy and those who implement it
- between practitioners in general and the academic and research disciplines that complement them

Join us as we explore the relationships between values and culture and as we examine the symbiosis of the two reflected in public policy. We feel that you will be sharing in the uniqueness of the New England economic and political experience!

A Journal of the John W. McCormack Institute of Public Affairs  
University of Massachusetts at Boston

Name \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_

\$9.00 Individual Subscription

\$20.00 Institution Subscription

The *New England Journal of Public Policy* is published twice yearly.  
For further information call 1 • 617 • 929 • 7275

## CORRESPONDENCE

*continued from page 47*

I appreciate your initiative in the creation of the South African Student Scholarship Fund. I shall direct a check for \$2,800 to fund one scholarship to the Board immediately.

Boston University presently funds four tuition scholarships for South African students through the South African Education Program. We also train twelve black South African journalists during the summer in a program operated by the College of Communication at Boston University. I welcome the opportunity to participate in the South African Student Scholarship Fund. Please keep me apprised of the status of the program.

John R. Silber  
President  
Boston University

I am writing to respond to your recent letter following up on Jean Mayer's excellent initiative to provide scholarships in their own country for South African students of color. My colleagues and I strongly support this program and will commit ourselves initially to the funding of one scholarship for a three-year period at the rate of \$2,800 per year. We will review that commitment in the third year of the program.

Peter R. Pouncey  
President  
Amherst College

I applaud the New England Board of Higher Education for its aggressive stance on the South African issue and will get back to you with our commitment.

Thank you for your leadership role in this initiative of international importance.

Daniel H. Perlman  
President  
Suffolk University

## CORRECTIONS

We mistakenly reported in our Fall 1985 issue of *Connection* ("New England Tuitions Are Among the Most Expensive Nationwide") that in-state tuition and fees for 1985-86 at the University of Rhode Island were \$2,437, and that this represented a 34-percent increase over the previous year. The correct figure for in-state tuition and fees at URI for 1985-86 is \$1,962. This represents a 6.3-percent increase over the previous year's figure for tuition and fees of \$1,846.50.

In the same article, the statistics quoted for Aquinas Junior College-Milton and Aquinas Junior College-Newton were transposed. The correct figures are listed below:

	Tuition/Fees		Percent Increase
	1984-85	1985-86	
Aquinas Junior College-Milton	\$3,435	\$3,735	8.7%
Aquinas Junior College-Newton	\$3,100	\$3,700	19.4%

In our fall issue, we reported that Dean Junior College was the most expensive independent two-year college in New England. We should have said that Dean was only the most expensive of a random sample.

*continued from page 79*

## 15 New England Transfer Articulation Association 1986 Spring Conference

Sheraton-Islander Inn and Conference Center, Newport, Rhode Island, April 15-17

Inquiries: Dwight E. Cook, President, NETAA (617) 697-1237  
Terri Labine, Vice President, NETAA (413) 538-7000

## MAY

### 5 National Association of College Admissions Counsellors Spring 1986 College Fairs

Bayside Expo Center, Boston, Massachusetts, May 5-6  
Hartford Civic Center, Hartford, Connecticut, May 14-15  
Inquiries: NACAC (312) 676-0500

*Significant events of interest to Connection readers can be listed in the Connection "Calendar". For inclusion in "Calendar," please send \$25.00 and a description including title of the event, sponsors, contacts, date and location. Please call us at (617) 357-9620 to check deadlines for quarterly issues.*



# OUR CAMPUS IS THE CITY.

There is a special place in the educational system for the urban university. The university that draws on all the resources of the city, that reflects the city's growth and life, that provides a continuity of education for generations of residents.

Suffolk University fits that description. We've been offering quality private education at an affordable price for over half a century. We also offer a convenient Beacon Hill location, small classes that emphasize personal attention, and a challenging, yet supportive, environment.

The result is a top-flight professional management, liberal arts and sciences, or law education. Call Suffolk University today for more information. There's a special place for you right here.



**Suffolk University**

8 Ashburton Place, Beacon Hill, Boston, MA 02108 (617)723-4700.  
Undergraduate Admissions, Ext. 71. Graduate Admissions, Ext. 302.











# An Apple<sup>®</sup> Today is a Teacher Today!



Every 2½ years, the amount of information in the world doubles. That's a staggering amount of data for today's college students to absorb, and that's where Apple Computer can help. Apple believes computers should be lifelong tools. Apple continues its long-standing commitment to the education market with dynamic solutions like:

-  Extensive word processing capability on the Macintosh™ 512K for university students producing reports, theses, and dissertations.
-  Creative software development for specialized needs of faculty and administration.
-  Connectivity allowing Apples to link into larger mainframe computers.
-  Growth paths which allow schools to trade and upgrade their Apple equipment.
-  New developments in the field of special education.
-  New opportunities to receive training, support, and service from throughout the Apple Education Dealer Program.

Apple has developed successful relationships with over 225 colleges through the Apple University Consortium and the University Purchase Program. In New England, Apple has worked strategically with Dartmouth, Brown, Yale, Harvard, and Boston College. To find out how Apple can be a powerful solution for your institution, contact Apple at (617) 481-2840.

© 1986, Apple Computer, Inc. Apple and the Apple logo are registered trademarks of Apple Computer, Inc. Macintosh is a trademark of McIntosh Laboratory, Inc., and is being used with express permission of its owner.



New England Board of Higher Education  
45 Temple Place, Boston, MA 02111

Non-Profit  
Organization  
U.S. Postage  
PAID  
Boston, MA  
Permit No. 161