

General Talk

Introduction

As many of you know, I am a scientist by training and background...indeed, I am perhaps the worst of all types of scientists...a burned-out theoretical physicist.

I must also confess I tend to be one of those people who lives more in the future than in the present or the past...

I can remember that...

- in the 1960s I was working out at Los Alamos on nuclear rocket engines designed to power the first manned mission to Mars...
- in the 1970s I was working in an exotic area known as laser-induced thermonuclear fusion in which we were attempting to use super high powered lasers to compress matter to the incredible densities and temperatures found in the center of stars.. and create tiny thermonuclear explosions in the laboratory, hence providing a limitless source of power...
- in the 1980s I refocused my efforts on building an Engineering College which I believed could trigger a major economic resurgence in this state...

And, now, entering the 1990s, I find myself looking once again to the future, facing the challenge of helping Michigan become the model of a University for the 21st Century...

As they say in the jargon of planning, I've been spending a good deal of time "futuring"...gazing into the crystal ball in an effort to determine just where our university should head in the years to come.

Themes of the Future

Think about it for a moment...

A few themes of the future...

- The students we are educating today will spend most of their lives in the 21st century...
- Yet most of us...and our faculties...are products of the 20th Century...
- Furthermore, the structure of the American university as we know it today is a product of the 19th Century!
The way we are organized into departments and colleges...our serial approach to education... even the concept of courses and credit hours... all were introduced over a century ago.

And yet the American society we serve has changed dramatically during the past century and continues to change at an ever accelerating pace.

It is therefore both appropriate and important to ask the question:
Is the University as we know it today really prepared to educate the citizens and serve the society of the 21st Century?

While it is always dangerous to speculate about the future, three themes seem very clear:

- i) It will be future in which our nation becomes a truly multicultural society, with a cultural, racial, and ethnic diversity that will be truly extraordinary in the history of our civilization...
Those groups we refer to today as minorities will become the majority population of

our nation in the century ahead...just as they are today throughout the world.

In this future, full participation of underrepresented minorities will not be just a matter of equity and social justice.

It will be the key to the future strength and prosperity of America, since our country cannot afford to waste the human talent represented by its minority populations.

ii) It will be a future in which America will become "internationalized"... in which every one of our activities must be viewed from the broader context of participation in the global community... as America becomes a "world nation", with ethnic ties to every part of the globe...

The fact is, a truly domestic US economy has ceased to exist. In slightly more than 5 years, US trade deficit has taken us from the world's largest creditor to its largest debtor nation.

US is the destination of about half the world's immigrants Probably 10 million this decade alone...

One-third of annual population growth is immigration

iii) It will be a future in which we rapidly evolve from a resource- and labor-intensive society to a knowledge-intensive society, in which intellectual capital...educated people and their ideas...become the keys to our prosperity, security, and well-being.

Our traditional industry economy is shifting to a new knowledge-based economy, just as our industrial economy evolved from an agrarian society at the turn of the century.

Industrial production is steadily switching away from material and labor intensive products and processes to knowledge intensive processes:

A transition in which..

Intellectual capital--brainpower-- is replacing financial and physical capital as key to our strength, prosperity, and well-being

It is my belief that these themes of pluralism, internationalization of America, and our evolution to a knowledge-intensive society will not only dominate the future, but will create a time of unusual challenge and responsibility, opportunity and excitement for this University.

The Need for a New Paradigm

The future will indeed be a time of great challenge... responsibility, and opportunity

It will be a time in which America becomes a highly multicultural society, a member of a global community ever more dependent upon knowledge.

Many of us are convinced that American higher education is facing a period of change similar to that which occurred in the latter half of the 19th century when the research university was born in response to the industrial age... when the great land grant universities were created to extend knowledge to all of society...

The research university of the future will be called upon to rebalance and adjust the traditional roles of the University, teaching, research, and service, to respond to the needs of the pluralistic, knowledge-intensive, world nation that will be America of the 21st Century.

In a sense, the time has come to develop a new paradigm for the research university of the 21st Century...

A Heritage of Leadership

And why shouldn't Michigan be the institution to develop this paradigm?

After all, in a very real sense, the University of Michigan developed the paradigm of the public university capable of responding to the needs of a rapidly changing America of the 19th Century...a paradigm that still dominates higher education today.

UM was not the originator of state universities, but was the first to free itself of sectarian control and become a true public institution.

From its founding, UM was identified with the most progressive forces in American higher education... Angell's attempt to provide "an uncommon education for the common man"...to couple research with teaching...to build strong professional schools...

Michigan is in an excellent position to develop this model for the nation--to once again assert its historical role as a leader in higher education in America.

In essence, we propose that Michigan reassert its historical role as the flagship of public higher education in America...

A Call for Action

If we are to be successful in defining and achieving a mission of leadership in higher education, it will take far more, of course.

Let me suggest several of the most critical themes:

1. The Commitment to Quality

This will require that we commit ourselves to focusing resources to achieve excellence...since in a future of limited resources, quality must inevitably dominate the breadth and capacity of our programs.

So too, must we recognize that, over time, the distinction of our institutions will be determined by their academic excellence...the quality of their teaching and their scholarship.

2. Diversity, Pluralism, and Multiculturalism

It is imperative that the University both recognize the importance of diversity and pluralism in its mission...

We must recognize that our ability to achieve excellence in teaching, scholarship, and service will be determined will be determined a considerable degree by the diversity and pluralism of our campus community. We draw great strength from diversity.

We simply will be unable to sustain the distinction of our university in the pluralistic world society that is our future without reflecting this diversity in the people who comprise our campus community and throughout our intellectual activities.

3. Intellectual Leadership

The challenge of change

It will be a future in which permanence and stability are discarded in favor of flexibility and creativity... in which the only certainty will be the presence of continual change...

Just as with other institutions in our society, those universities that will thrive will be those that are capable not only of responding to this future of change...but, indeed, have the capacity to manage change.

We believe the University should not simply just respond grudgingly to change and challenge; it must relish and stimulate and manage a process of continual change and renewal if it is to achieve excellence and leadership.

4. A Return to Fundamental Values

Let me suggest, that as we contemplate the various actions necessary for leadership in higher education, we would do well to reconsider the most fundamental values of the University.

For while change and renewal will be important themes of our future, they can only occur upon a foundation of fundamental institutional values.

Of course, academic institutions usually focus first on intellectual values...characters of the mind....

- The seeking of wisdom
- Discipline of the mind
- Respect for reasoned conclusions
- Intellectual integrity
- Freedom of inquiry

While these are of course essential in any university, there are also other sets of values which we must not ignore:

Values of moral character:

- Honesty
- Integrity
- Truthfulness
- Nonviolence
- Tolerance

Values of a civilized society:

- Compassion, Caring, Kindness
- Tolerance and respect
- Collegiality, civility, and community

A Mission for the 21st Century: Leadership

How of much of this particular vision of the future will actually come to pass?

Will the themes of pluralism, internationalization, and knowledge really dominate our future...

To be sure, change is not a predictable process...indeed one of the more interesting discoveries of contemporary physics has been that complex systems generally change in high nonlinear, sometimes discontinuous, and frequently random ways...

Hence there is always a certain hazard to predicting the future...

But then I always remember that old saying

"The best way to predict the future is to invent it!"..

And isn't that, after all, just the role of the University... the job of inventing the future?...

There seems little doubt that the decade ahead will indeed be a time of challenge and responsibility, opportunity and excitement.

The Role of Alumni and Friends

To the University

A university achieves greatness through its people... through their talents and abilities... their involvement and commitment...

But it is important to recognize that the "community" that comprises a university extends far beyond its students, faculty, and staff...

Rather this community extends outward... beyond our ivy-covered walls to embrace our alumni and friends...

it also extends backward in time...to include that long line of maize and blue that have build and sustained the distinction of this University...

I might even suggest that this community extends into the future...through those families...many of them already associated with the University.. that will produce the students and faculty for this institution in years to come

A key factory in the strength of the University...
active involvement by alumni

Not just for financial support...
although you can expect to hear from us even more frequently

Not just for your efforts in directing outstanding students to Ann Arbor -- many of them your own children or grandchildren...

Not just for influence...
although since Michigan produces leaders, many of alumni have the opportunity to have major impact on UM through their roles as leaders of government or industry

But beyond that, through your active involvement...
to provide to our students a sense of potential, what the future holds in store for them...
for our faculty, since by buying in to what we are trying to do, you provide them with strong evidence of the profound importance of their activitis

In a sense, our alumni and friends play the key role in passing the torch...
in passing from one generation to the next the Michigan tradition...the tradition of excellence which we all cherish so deeply.

Michigan's Role

As I and my colleagues have become ever more deeply involved in this process over the past two years, we have become ever more convinced that the University today faces a pivotal moment in its history... a fork in the road...

Taking the path in one direction will, with dedication and commitment, preserve the University as a distinguished-- indeed, a great--university, but only one among many such institutions.

However there is another path...a path that would require great vision and courage in addition to dedication and commitment...in which the University would seek not only only to sustain its quality and distinction, but it would seek to achieve leadership as well.

We believe the University could...and should... accept its heritage of leadership in public higher education... that the 1990s and beyond could be a time similar to that extraordinary period in the late 19th century when the University of Michigan was a primary source for much of the innovation and leadership for higher education.

The challenge of building a University for the 21st Century... a fitting mission for Michigan in the years ahead...