

State of the University 1.2

Introduction

Typically, the president has used the State of the University address as an opportunity to report on the status of the University...
...kind of a "show and tell" about the past and the present
However, it seems more appropriate that in my first State of the University address I depart from the usual tradition of talking about "what is"...and instead focus on "what might be"...

I believe we face a period of unusual challenge and responsibility in the years ahead, but also a time of exceptional opportunity and excitement.

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 sequential 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 attempt to predict the future, three themes seem likely to dominate:

- 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 our history...
- ii) It will be a future in which America will become "internationalized"... in which every one of our activities must be viewed within the broader context of an interdependent global community... as we become a "world nation", with ethnic ties to every part of the globe...
- 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 social well-being.

Let's consider for a moment the challenges these themes pose for our society and its institutions...and for our University.

Challenges

1. Diversity and pluralism

America is changing rapidly...
By 2020, 35% of Americans will be Black or Hispanic.
By 2000, one-third of college age students will be from these groups...
By 2000, 47% of our school children (K-12) will be Hispanic or Black (today 25% are)
In the second half of 21st Century, Hispanics will become the

largest population group in America
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.

America of the 21st Century will be the most pluralistic,
multicultural nation on earth.

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.

America cannot afford the loss of this human potential,
cultural richness, and leadership.

If we do not create a nation that mobilizes the talents
of all our citizens, we are destined for a diminished
role in the global community, social turbulence caused
by growing schisms in our population, and, more
tragically, we will have failed to fulfill the promise of
democracy upon which this nation was founded.

Implications for UM

Many of us have become firmly
convinced that the ability of the University
to achieve and sustain a campus community
recognized for its racial, cultural, and ethnic
diversity will determine not only our capacity
to serve our state and nation and the world, but indeed
will become the cornerstone of our efforts to achieve
excellence in teaching, research, and service in
the years ahead.

Hence, we are determined that the University
must commit itself to leadership in higher education
by developing a model of what a pluralistic, multicultural
university must be to serve our nation in the 21st Century.

We believe the University has a mandate to build
a model of a multicultural community for
our nation...an environment which is supportive
of all individuals, regardless of race, creed,
national origin, gender, or sexual preference...

Which values and respects and indeed, draws its
strength from the rich diversity of peoples of
different races, cultures, religions, nationalities,
and beliefs.

It seems apparent that we cannot sustain the
distinction of our University in the pluralistic world
society that is our future without intellectual
diversity and an openness to new perspectives
and experiences.

Our challenge is not to make one group from many,
to blend together all cultures into a homogeneous
mixture...but to build from many varying cultural,
racial, and ethnic groups a truly multicultural
community in which we share those common beliefs
and values which bind us together.

In a very real sense, in our effort to build the multicultural
university of the 21st Century, we are attempting to

**address the most urgent and difficult issue
confronting
our nation.**

All of us--faculty, staff, and students--must

recognize that the challenge of diversity is our challenge and our responsibility, and until we recognize and accept this both as individuals and as members of the University community, we are unlikely to achieve our goals.

2. The Internationalization of America

Some signs...

Communications, travel, the arts and culture
Internationalization of commerce, capital, and labor...
Political security and interdependence...

Some facts of life:

Market for nearly all significant manufacturing industries has become world-wide
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.
Here in Michigan, in the heart of the Rust Belt, we have learned the painful lessons of the new global economic order...
...as key industries have fallen victim to intense competition from abroad...
our plants have closed...our cities have filled with the unemployed...and our social burdens have assumed staggering proportions...

The "shrinking globe" phenomenon suggests that understanding cultures other than our own is necessary not only for good citizenship in the global community, for personal enrichment, but, indeed, for our very national survival...

But there are other reasons for this international agenda...

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
Indeed, now that native fertility rates have stood since mid-1970s at 1.8 (below replacement level of 2.0), immigration promises to become the main determinant of future population variability

America is evolving into the first true "world nation", shifting rapidly away from Eurocentricity with an emerging focus on the nations of the Pacific Rim, with economic and ethnic ties to all parts of the globe.

Thus we are no longer self-sufficient or self-sustaining. We are not immune to the shocks of the world society. We have never been more dependent on other nations and peoples.

Section 3 + Implications for UM

Among the University's many responsibilities and priorities, where does one rank our responsibility to the world at large, the global village?

It is true that this University has a long tradition of involvement in international activities...
olution...

There are many who content that our society is undergoing yet another such dramatic shift in fundamental perspective and structure.

As Erich Bloch, Director of the National Science Foundation puts it, we are entering a new age, an "Age of Knowledge"

The signs are all about us.

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:

Our nation's future has probably never been less constrained by the cost of natural resources.

Fundamental transformation underway in economy that is "likely to reshape virtually every product, every service, and every job in United States."

A transition in which..

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

This is having a profound impact on our social structure, culture, and economy.

In all developed countries, "knowledge" workers have already become the center of gravity of the labor force.

New ideas and concepts are exploding forth at ever increasing rates...

Concepts which have shaken apart the classical foundations of knowledge...

the theory of relativity

the uncertainty principle

the molecular foundations of life...

genetic engineering...

Radical critiques of fundamental premises, scholarship, and culture by feminists, minorities, and third world scholars.

Obscure, yet profound, new ways to approach knowledge such as Knowledge Enlineering

In many fieods, the knowledge base is doubling every few years...

Fupthermore, the typical college graduate of today will lik□ly change careers several times during a lifetime...

Hence a college education today wilo only serve as the stepping stone to a process of lifelong education .. and the ability to,ae□pt to...in`eed, to manage change...will become the most vamiable skill of all.

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It is apparent that America's great

intensive...dependent upon educated people and
5 - their ideas...and hence ever more dependent upon

research universities.

The most significant challenges before higher education today are intellectual and cultural in nature.

The renewal of the role, mission, values,

and goals of the university are the key challenge

before us.

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 began more than a hundred years ago when the research university was born in response to the industrial age... when the great land grant universities were born in a profound democratic impulse to extend the benefits of learning to all of society.

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

Frank Rhodes has used the analogy of a paradigm shift in suggesting that challenges and changes that will confront higher education in the years ahead.

A new paradigm:

- i) One that can respond to the opportunities, responsibilities, and challenges before higher education today and in the future.
- ii) One that can address in creative new ways our current and future national and regional needs
- ii) One that can link and balance the various missions it must perform
 - Teaching, research, and service
 - Quality, breadth, and size
 - Undergraduate, graduate, professional education and faculty development
- iii) One that can span the public and private sectors
- iv) One that can link together the many concerns and differing values of the diverse constituencies served by higher education
- v) One that can respond to the challenge of pluralism in American society and the world community by linking together the complementary objectives of cultural diversity and academic excellence
 - Seeking out and encouraging those largely excluded from higher education
- vi) Producing graduates who are both competent and committed, creative and compassionate

Roughly a century ago, universities were facing changes and challenges no less profound as America was

changing from an agrarian to an industrial society...
and they adapted by creating the research
university as we know it today.

It may well be that the time has come for yet another
change...and America and indeed, the world,...
changes once again to a postindustrial society...
a society intensely dependent upon knowledge

But I suspect that such a change in the paradigm of the
research university will not be gradual and evolutionary...
but rather dramatic and revolutionary...much like the
transformations of the scientific paradigm suggested by
Kuhn.

Further, rather than the paradigm serving simply to permit replication,
the new paradigm of the research university for the 21st Century
will clearly be an object for further articulation and specification
and refinement.

And this will require, perhaps more than at any time
in the recent history of higher education unusually
strong leadership...leadership capable of
identifying and articulating an exciting, challenging,
and compelling mission for our institutions and
then uniting our university communities...and
those who support and depend upon us...in
a common effort to pursue this mission.

A Heritage of Leadership

r - Who will determine the paradigm?

Why not Michigan?

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...

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

1. Michigan's Heritage of Leadership

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

\$ - public institution.

First large state institution to be governed by the

people of the state, 1817

So too, the organic act establishing the UM in 1837 was

"the most advanced and effective plan for a state
university, a model for all the state institutions of higher
learning which were established subsequently."

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"...

First to depart from the classical curriculum

in favor of the German approach stressing
faculty involvement in research and dedicated to
the preparation of future study, 1842

First university in the West to pioneer in professional

education, starting the Medical School in 1850,
the Law School in 1859, and engineering courses in 1854

Among the first to introduce instruction in zoology and botany,

modern languages, modern history, American literature,

pharmacy, dentistry, speech, journalism`
teacher education, forestry, bacteriology,
naval architecture, aeronautical engineering,
computer engineering...and even in my
own field, nuclear engineering (with the associated
Michigan Memorial Phoenix Project)

Harper's Weekly (1860):

"The most striking feature of the University is the
broad and liberal spirit in which it does its work.
Students are allowed the widest freedom consistent
with sound scholarship in pursuing the studies of
their choice."

Beyond tradition, however, there are other characteristics

of our University today which position us well for
this role of leadership.

2. Reputation as the flagship of public higher education

A large, comprehensive, public, research university
A serious commitment to scholarship
Unusual breadth, rich diversity of academic disciplines,
professional schools, social and cultural activities
Unusual degree of participation of faculty and students in
University decisions
Indeed, throughout its history, UM has been known for
a spirit of democracy and tolerance in its student
body.

3. People

A faculty of great intellectual strength and unusual breadth
This past year was our best recruiting year ever...
Student body of quality unsurpassed by any public institution
Quality x quantity = #1
Largest alumni body in US (1 out of every 1,000 Americans)
(President's Club Weekend: > 700)

4. Resources

Prosperous state, with the potential for greater support
Federal support...learning how to play game better
50% over past two years...now over \$200 M/y
Private support...Campaign for Michigan
\$160 million -- now \$60 million per year

5. Ability to control our own destiny

Best of public and private worlds
Autonomy of private institution
Public support - \$240 M/y -- \$4 B endowment
Greater than Harvard and Texas

It is this rich set of characteristics and opportunities,

when viewed within the context of the challenges
facing higher education today,
that suggest a challenging mission for the
University as it prepares to enter the 21st Century...

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

Of course, one of the canonical invariants, the constants
that will allow us to respond to a future of change
is an unrelenting commitment to academic excellence
and scholarly values.

This will require that we also 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 and fidelity to
fundamental scholarly principles.

But our adherence to the highest standards of
achievement must be based in a humble appreciation
of the sacrifices made by the generations
that built and sustain us.

We must also use our strength to benefit our
state, working closely with sister institutions,
the schools, and the public to build and sustain
an educational system worthy of our people.

2. Diversity, Pluralism, and Multiculturalism

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

And make a firm commitment to its achievement:

- i) Through the recruitment, support, retention,
and success of minority students, faculty,
staff -- and leaders
- ii) And through the development of an
environment of mutual understanding
and sensitivity that not only tolerates
diversity, but moreover seeks and
embraces it as an essential objective
of the institution.

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, from the
new intellectual perspectives and richness of
diverse cultural expressions and experiences.

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.

The Michigan Mandate

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 and control change.

One can argue that such renewal and change
are essential both the the achievement and
the sustaining of excellence.

Furthermore, leadership requires change,
innovation, and venturesomeness

To get better, we must seek a culture in which
creativity, initiative, and innovation are valued.

"A state without the means of change is without
the means of its preservation." (Burke)

Burke once noted that "A state without the means of change is without the means of its preservations."

As a scientist, I believe this is true for all institutions...and universities in particular.

Unfortunately, change can be threatening, particularly when it is imposed by external factors which victimize people

But change and renewal can also empower people; it can give them control over their destiny

However, also need a stable environment that can sustain change and risk-taking and even failure..

as they say in computers, a "fault-tolerant" environment

1. The safer you can make a situation, the higher you can raise the challenge.

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 sustain excellence and leadership.

The challenge of change

The intellectual renewal of the role, mission, values, and goals of the University is one of the greatest challenges before us.

In far-from-equilibrium conditions we find that very small perturbations or fluctuations can become amplified into gigantic, structure-breaking waves.

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
Democracy and justice

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
Courage
Compassion

Values of a civilized society:

Tolerance and mutual respect
Collegiality, civility, and community

5. The Important "Cs":

The C Words

Community, comity, compassion
Caring, concern
Cooperation, communication, civility

However as the pace of change has accelerated and its direction becomes less predictable, the potential for conflict

among various groups in society has increased, taxing both the capacities of our institutions to reconcile competing interests.

Academic institutions are profoundly people-dependent...

Their key to excellence is attracting and retaining the outstanding students, faculty, and staff, and providing them with the environment and encouragement to push to the limits of their abilities, and then getting out of their way!

However, in striving for a culture

Which stresses excellence, achievement, and excitement...which removes constraints from talented people and encourages them to "go for it"!

Do we also run the risk of losing that sense of collegiality, that sense of a scholarly community attempting to focus its collective wisdom on the great problems of our times?

As we attempt to build stronger and stronger programs in the traditional disciplines, do we also create strong centrifugal forces which tend to pull the various components of the University to the periphery and diminish its core?

A challenge of the modern university is to find in our history and tradition the values that unite us and to renew those values to shape our future.

To strive for a true sense of an academic community in which the human mind is brought boldly to bear on the most enduring questions that confront us.

From the earliest moments in our long history, the UM has been known for a spirit of democracy and tolerance among its students and faculty.

Almost a century ago, Harpers Weekly noted: "The most striking feature of the University of Michigan is the broad and liberal spirit in which it does its work."

For that reason, we are convinced that we must look for experiences beyond the academic process to bring people together...to establish new bonds of friendship and understanding.

When we think of the university community, we tend to think first of students, faculty, and staff.

But, of course, our community goes far beyond this. It is a community of families, spouses and friends, convinced that there are thousands of members of this extended Michigan family who are every bit as committed to the University as those we call faculty or staff -- who contribute their energy and talents in a host of important, yet usually unrecognized and unappreciated ways. It is essential to draw these people into our community.

The Role of the Faculty

Of course, we realize in an institution of such size, complexity, and tradition, those of us over in the blockhouse will have little ability to define, redirect, or reorder the priorities of the University.

The articulation and achievement of any institutional mission must be a communal effort. It will rest with

faculty groups in and across schools and colleges; with students inside and outside their formal organizations; with professional and other staff throughout the University.

Hence, the role of the University leadership is simply to generate the debate...and then to provide resources for continuous experimentation.

For we are not a corporation, depending on the traditional hierarchy of command and control...

Rather we are a "voluntary" organization... a creative anarchy...in which people do what they believe in...

The momentum of this University...of any great university...must flow up from the faculty...through the administration... **from** you...not **to** you!

Great universities are run by their faculties... for their faculties, for their students, and for their society.

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 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.

Alternative Ending (but possibly omit)

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 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.

Roughly a century ago, universities were facing changes and challenges no less profound as America was changing from an agrarian to an industrial society...

and they adapted by creating the research university as we know it today.

It may well be that the time has come for yet another change...and America and indeed, the world,... changes once again to a postindustrial society... a society intensely dependent upon knowledge

I and my colleagues believe the University has the opportunity to influence the development of a new paradigm of what the research university will be in 21st Century America...a new model capable of responding to the changing needs of both our state and our nation. But this will require clear vision, an unusual commitment to excellence, and strong leadership...

Leadership capable of working with the University community and those throughout the state and the nation that depend on us, to develop and articulate an exciting, challenging, and compelling mission for Michigan as it prepares to enter the 21st century leadership capable of identifying and articulating an exciting, challenging, and compelling mission for the

the
And then to unite the University community...and those who support and depend upon us...in a common effort to pursue these goals.

Concluding Remarks

The intellectual renewal of the role, mission, values, and goals of the University is one of the greatest challenges before us.

It is important that we launch the debate...

I believe it is indeed a time during which our University should strive to reassert itself as a leader in higher education, perhaps even by challenging itself to develop the new paradigm of the research university so clearly needed by our nation.

Such a mission of leadership would provide both an exciting and appropriate direction for the University as it prepares to move into the 21st Century.

It would reinforce Michigan's special distinctiveness and strength...

i) the power of focused quality, which it shares with the most selective private institutions

ii) and the diversity, openness, and breadth which it shares with the best public institutions

It aligns naturally with our long tradition as a flagship institution.

And what more exciting mission could we have than to accept our heritage of leadership and strive to develop a University for the 21st Century.