

Birmingham

Stepping Down

At a good time

Leaving a University that is

Better, strong, more diverse, more exciting

Good News about YOUR University

National Rankings

Top Research University

Strongest university financially

Campaign for Michigan: \$1 Billion

Endowment: \$1.6 B (\$9.5 Billion)

TQM, VCM

Rebuilding campus (\$1.5 B)

UMMC transformation

New initiatives

Tauber Institute

Davidson Institute

Media Union

Molecular Medicine

Institute for Research on Women

Diversity

UM

Not only leading public

Competes with California, Harvard, Stanford

Importance of Research University

UM Leadership

- Prototype of comprehensive university
- True realization of Jeffersonian model of public university

Images of Michigan

- Michigan Stadium
- UM Hospitals
- Big Chill, Student Activism
- Silicon Valley East

- University of the Arts
- University of the World
- University as family, community, tie to our values
- Uncommon education for the common man
- University as the “inventor of the future”

Very important to recognize multidimensional nature of UM

...not just teaching, research, and service...

...but medical care, economic development, social change

...even entertainment (Michigan football and basketball)

...creating knowledge...and transmitting it to our graduates

This is particularly important these days.

The Importance of the Research University

It is clear that the public research university...

...an institution for which the University of Michigan

is not only the prototype, but perhaps also the flagship...

...touches the lives of a great many people in a

great many different ways...

Since WWII, our society has assigned to the research university

an increasing number of roles, broadening its mission

far beyond that of producing the educated people

needed by our society...the doctors, lawyers, engineers,

teachers, and other professionals.

Through education, research, and service...

through health care, economic development, and

...yes...even through a sense of pride in their

athletic accomplishments.

Yet as important as these institutions are today in

our everyday lives, it is my belief that

in the future they will play an even more critical role

as they become the key player in providing the

knowledge resources...knowledge itself, and the

educated citizens capable of applying it wisely...

necessary for our prosperity, security, and

social well-being.

The second quote is provided by Erich Bloch, former director of the National Science Foundation, who notes,
"The solution of virtually all of the problems with which government is concerned: health, education, environment, energy, urban development, international relationships, space, economic competitiveness, and defense and national security, all depend on creating new knowledge--and hence upon the health of America's research universities."

A World Transformed

Few of us realize the full implications of the ever-accelerating pace of change in our world...our nation...
...and, perhaps most of all, in our state.

Many of you have all heard me talk often about the themes of this change

....changing population, globalization, age of knowledge.

But this change is more than just talk...

change is transforming our world.

Indeed, one might regard continual change

is the only true constant of our age.

Who would have predicted several years ago

...that communism would be rejected around the world
swept away by the winds of freedom and democracy

...that the Berlin Wall would crumble,

Germany would be reunified

Eastern Europe would break away from the

Soviet Block to embrace democracy

and unite with Western Europe

...that the Soviet Union, China, together with
most other nation's of the world would act
together to defeat the actions of an

aggressive dictator in the Middle East

...and that the Soviet Union would fly apart from the

centrifical forces of freedom and nationalism
...that the share of the domestic automobile market
held by U.S. auto companies would drop below 50%
...that test-tube fertilization would become routine
...that a camel-herder in sub-Saharan African would be
able to speak on a palm-sized cellular phone to
a suburban commuter in LA
...or that Bo Schembechler would become
president of the Detroit Tigers

Yet all of these events have actually happened...along
with so many, many other events that have changed
our state, our nation, and our world.

Yet these changes are just the tip of the iceberg
...even more profound changes are underway.

We are becoming more diverse, more pluralistic
as a people. Indeed, almost 85% of the new
entrants into our workforce during the 1990s
will be people of color, women, or immigrants.

Our population, economy, and commerce are becoming
every day more interdependent with other nations as
the United States becomes a world nation,
a member of the global village --

And we are rapidly evolving into a new post-industrial
society--indeed, a "hyper industrial" society--
in which the key strategic commodity
necessary for prosperity and social well-being
has become knowledge itself, that is,
educated people and the ideas they produce.

Indeed, knowledge will play the same role that
in the past were played by natural resources
or geographical location or labor pools...

We live in a time of breathtaking change
...at a pace that continue to accelerate even as I speak.

The reality is that we have entered the 21st Century a decade early...

The 21st Century is here today, in 1991.

Indeed, many believe that we are going through a period of change in our civilization just as profound as that which occurred in earlier times such as the Renaissance, the Age of Discovery, and the Industrial Revolution...except that while these earlier transformations took centuries to occur... the transformations characterizing our times will occur in a decade or less!

All that can be reasonably said is that the world will change more in the next ten years than in any other period of history.

But are we ready for it?

Are we prepared to face a world whose economy, culture, polity, is driven by the explosion of knowledge itself?

Two Examples

Genetic Medicine

For those of you who were old enough, let me take you back some 40 years, to the early 1950s when the great fear of most parents was the dreaded disease polio.

At that time, UM was conducting the clinical trials on a new vaccine, developed by a Michigan faculty member, Jonas Salk, that was destined to eliminate the threat of this disease from our society.

Well, today, the University is engaged in an even more important quest...to change the entire nature of health care itself.

Medical scientists

Applications of molecular genetics to medicine

- i) Discovery and cloning of gene responsible for cystic fibrosis
- ii) Discovery of the gene responsible for neurofibromatosis...Elephant's Man disease
- iii) How to inject normal genetic material into a cystic fibrosis gene and cure it
- iv) Identified gene responsible for body's inability to handle cholesterol
- v) Within past several weeks have now discovered the gene responsible for diabetes
- vi) Now are closing in on the genes responsible for breast cancer.

When it is recognized that most diseases plaguing our society today are genetic in nature...cancer, heart disease, high blood pressure...the implications of this work are extraordinary indeed.

But this is only part of the story.

The University is also one of four sites in the US engaged in the Human Genome Project, aimed at mapping the entire human genetic code.

The implications are extraordinary, since it would allow one to immediately identify an individual's susceptibility to various diseases.

In effect, it would shift medicine from therapy to prevention, since such advance knowledge would allow one to adopt a life style to avoid such genetic diseases.

Linking together the world

Something equally profound...

On the University's North Campus is a large glass building, chocked full of computers, that in many ways may be the future of our state.

This is the command center of the

National Research and Education Network,

a massive network operated by UM in
collaboration with IBM and MCI
that links together the computers on
university campuses, industrial and
government laboratories throughout the world.

In fact, today the network already links together over
4 million users worldwide, and it is doubling in
size and scope every 6 months or so.

In a very real sense, UM is playing a lead role in building
an interstate highway system of information flow...
except in this case, the system is worldwide.

Why is this so important, aside from the fact that
it allows Michigan students, faculty, and staff to
collaborate with colleagues around the world?

If you think about it for a moment, you will realize
that the key activity which determined the course
of our civilization during the 20th century was
transportation...cars, planes, trains, oil, space...

Transportation was the enterprise that determined
prosperity, national security, even the nature of
our culture...with the growth of the suburbs,
international commerce, and so on.

A century ago the state of Michigan was well-positioned to
take a leadership role in this new range of industries,
and through the automobile industry became one of
the most prosperous and powerful regions on earth.

Many believe that the driving theme of the 21st Century,
will be communication, enabled by the profound advances
we are now seeing in computer technology, networks,
satellites, fiber optics, high definition televisions, and so on.

In a world in which hundreds of millions of computers,
servants to their users, easily plug into a global
information infrastructure, business mail would

routinely reach its destination in 5 seconds rather than 5 days, dramatically altering the substance of business communications.

Far more radically than the harnessing of steam and electricity in the 19th century, and perhaps more akin in impact to the discovery of fire by primitive tribes, the microchip and advances in biotechnology and genetic engineering are preparing the way for a revolutionary leap into a new age that will profoundly transform human culture.

Sound improbable? Observation: There are already

...30% of homes with personal computers

...50% of workers use computers

...70% of homes with children 8-12 have Nintendos
(30 million machines)

To some degree we have already felt the impact of this shift from transportation to communication as Michigan's industry has become less competitive...and less important. Yet, through the leadership role of UM, Michigan is once again positioned to play a leadership role in this new arena, to build a new industrial base in information technology that will provide the infrastructure for the communications industries that will dominate the 21st Century. Yes, Michigan is well positioned...IF we can demonstrate the same vision, commitment, and determination that our ancestors did over a century ago...

Challenges

Financial?

State supported--> state located

Political Correctness?

More diverse than ever

Deteriorating social foundations

Family and communities

Social Divisions

White against black

Rich against poor

Old against young

Politics

Populism

Commitment to excellence

Strategic investment in future

Prisons vs. education

Concluding Remarks

30 years at UM

Millennium Project

Wolverine signal