

Alumni Remarks*

Greetings from Ann Arbor.

The Year Past

We indeed have a great deal to be thankful for in 1992
This has been an incredible year...demonstrating once again
that our "Go Blue" spirit is alive and well!
But our main claim to attention is still academics
and we have had a pretty spectacular year there, too.
Last month it was announced that UM has moved ahead
of MIT in the magnitude of our research activity...
to assume the ranking as America's leading
research university...and let me assure you,
this particular #1 ranking won't be lost next week...
...it will last at least a year!

Speaking of national championships in a revenue sport
...Business Week ranked Michigan #1 in nation
in Executive Education

USN&WR Rankings:

Undergraduate education: 8th in reputation
(behind only UC-Berkeley among publics)
...39th in expenditures...

We are one of only 3 universities in America with
our four major professional schools...
law, medicine, business, and engineering
...all ranked in the top ten...indeed, in the
top 5 in most cases...
(Stanford and Cornell being the others)

And we continue to be the world's leading
university in the social sciences...
with fields such as political science,
psychology, sociology, and economics
being ranked among the top programs
in the nation.

Our medical scientists continued their revolutionary work
in mapping and identifying genes
responsible for devastating diseases such as
cystic fibrosis, neurofibromatosis, and breast cancer.
(You've probably read about this work, which frequently
makes the front pages of the New York Times and
Wall Street Journal.)

World's first clinical trials in using modified
human genetic material to treat human disease
(hypercholesterolemia and malignant melanoma)
...and the first clinical trials for treating cystic fibrosis
have been approved and will start at Michigan in
several months.

Michigan chemist Gary Glick has recently discovered
that lupus antibodies can change the shape of DNA,

and his research will help to develop new drugs
to prevent tissue damage from lupus.

Michigan scientists and engineers managed to build
the world's most powerful laser...operating at 55 terawatts!
UM experiments were carried on five of NASA's space shuttle
missions, including the HRDI satellite developed by the UM
Space Physics Research Lab...and, unfortunately, the
tethered satellite experiment that was "hung up" in early
August.

UM was selected by the Environmental Protection Agency as
the national center for education on environmental issues.

Michigan, in partnership with IBM and MCI, continue to
operate and expand the National Research and
Education network, the computer network that now
links together over 4 million users throughout the world!

UM Libraries Catalog Online:

UM library became one of first major research libraries
in the nation to have its entire public card catalog
online (6 million volumes listed)

Minority enrollments at highest level ever:

Minority students rose to almost 7,000 or 22% of enrollment
African American students rose to 2,600 or 8%,
surpassing the earlier peak of 1976.

For the fourth consecutive year, UM has achieved a
record in hiring faculty of color, with 60 hired
in past year.

Our students and faculty also deeply engaged
in using their knowledge to address some of the most
critical problems in our society...for example, earlier
this fall ABC-TV honored two of our women faculty as
ABC "Person of the Week"...

...June Osborn,
chair of the President's Commission on Aids
...Catherine McKinnon,
perhaps the foremost legal scholar
on the laws governing sexual harassment

UM received a \$30 million gift to found
the William Davidson Institute, to assist nations
in making transitions from command- to
free-market economies.

Already some of our Business students and faculty
working in Eastern Europe to help privatize
commerce and industry

Faculty Honors and Awards

MacArthur Awards: John Holland, Ann Ellis Hanson
(making 5 such "genius" awards in the past three years
...Alice Fulton, Sherri Ortner, Ruth Behar)

Presidential Faculty Fellow: John Mitani

National Academy of Science: Melvin Hochster

American Academy of Arts and Sciences: 8 scientists
National Science Board: JJD re-elected in May
to two more years as Chairman

And, last fall the University of Michigan became the
first university in America to exceed \$1 million
in its annual United Way fund drive...
...all the more remarkable in view of the great
economic hardships we are experiencing in our state.

It was a pretty good year in athletics as well...
Football: Big Ten Champion, Rose Bowl
Basketball: NCAA National Champion Runnerup (Final Four)
Hockey: CCHA Champion, Final Four
Swimming: Big Ten Champions
Men's, 2nd in NAAs, Women's, 5th in NCAA
Cross Country: Big Ten Champions, 3rd in NCAA
Olympic Games: Medals...
Gold: Mike Barroman

And the list goes on and on and on...
...pretty remarkable
...but also what we expect from Michigan
How many fans of college sports would give anything
for a year like our Michigan teams have had...
And how many university alumni would give anything
if their university had a year like Michigan's...
And yet, excellence and extraordinary performance
and accomplishment is something we take for
granted at Michigan.

Perhaps that's the obligation, the burden, when
one is "the leaders and best"...

Appendix: National Rankings

The Gorman Report ranked
UM #3 in UG education (behind Harvard and Princeton)
UM #3 in Grad/Prof Education (behind Harvard and UC-Berkeley)

USN&WR

Undergraduate

8th in reputation

39th in funding

Professional

Business: 5th (only public in top 10)

Law: 7th (only one of 2 publics in top 10)

Engineering: 6th

Aerospace: 5th

Electrical: 5th

Environmental: 2nd

Industrial: 3rd

Mechanical: 5th

Nuclear: 2nd

Medicine: 11th (only 1 other public in top 10)

Sciences:

Geology: 6th

Mathematics: 8th

Health Professions

Dental: 3rd

Pharmacy: 6th

Nursing: 4th (only slightly behind 1st)

Health Services Administration: 1st

A typical year...but that's what you've come to expect

from your alma mater...

Student Characteristics

It has also been a spectacular year in terms
of faculty and student recruitment .

Just as an example, let me tell you a bit
about our entering students this year.

Believe me, our future will be in good hands
with the class of 1995. It is a wonder.

This is the largest entering class in our history--4,770 strong.

The number of applications
has tripled over the past 15 years.

We have students from every state this year
but South Dakota--(Rick Shaw will have
to strap on his snow shoes
and make a trip out there
to see what the problem is.)

Let me note an interesting point here:
from out of state than the entire
undergraduate enrollment of any of our peers

...UM: 5,400 out of state

...Stanford 6,000 total

...Harvard 6,000 total

...Yale 5,000 total

We have more undergraduate students

Test scores continue to rank high...

65% in top 10% of their class

As Juniors in high school, Class of '95 reported

935 elected to student offices

850 in student publications

725 in theater

1,979 in varsity athletics,

666 varsity chee leaders

1,125 performed in school music group,
even more had given a public recital

730 had exhibited works of art,

255 had written articles for public press

510 won prize for science work

644 volunteered in hospitals or clinics,

1059 volunteered in community program

846 volunteered in handicap/disadvantaged programs

524 received awards for community service
2078 held regular part time job
265 started their own businesses.

I think you'll agree.

Quite an impressive group

They are sure to make us proud.

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

Theme 1:

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...

Changes in University Financing

Yet while the spirit of the maize and blue is

as strong as ever, there are some very important

changes in another aspect of your University.

When most of you attended UM,

state taxes paid 80% of the cost of your education.

Today the state pays less than 25% of the tab for Michigan residents

...and, of course, nothing for students from out of state.

Indeed, in the past two decades, the State of Michigan

has fallen from from 6th to 37th place

in state funding for higher education.

And, while federal support has increased for research,

federal support for student financial aid has all but

disappeared except for the most severely underprivileged

because of the near silent but historic

shift of public policy in which education

has come to be regarded as just another consumer item

rather than as an essential investment in our country's future.

This has forced us along with most other public institutions

to rely increasingly on tuition for revenue.

In fact, as many of you know we made history two years ago

(not the kind we prefer to make)

When, for the first time in our history,

tuition revenue exceeded our state appropriation.

our state appropriation as a percentage of our budget.

Ironically enough, in that same year, again for the first time

federal support exceeded state support as well.

In a strange sense, two years ago Michigan became the first of

...the great public universities to become privately financed

...and the first of

...the great state universities to become federally financed

More specifically, state support has fallen to the point today
where the revenue portfolio for the University's academic programs is now
...25% state appropriation
...30% tuition and fees
...30% federal support
...15% private support and income on endowment

In one sense this is a somewhat better balanced portfolio
than the 80% state, 20% tuition and other...balance of your times
But, unfortunately, it has arisen more from the erosion of state support
than from growth in the other areas.

So, what to do?

What to do?

In this brave new fiscal world,
the University has had to face up to some difficult realities.

A business as usual approach would not do.

We will have to compensate, rebalance our resources.

We have already begun to put our management house in order.

We have been aggressively pursuing

very difficult reforms of "corporate culture"--reducing costs
and improving quality, productivity, efficiency, service orientation
implementing a massive program of "total quality management"
throughout the institution.

And thanks to Farris Womack's leadership
and the wise counsel of some of you in this room,
our investment and management performance
have improved dramatically.

The leadership team and the processes we have put in place
will, as Bo might put it,
keep us "lean and mean" for the long term.

In the opinion of many, there is no better
structured or deployed university --
no stronger University--in America today.

Michigan today has unique vision to contribute
to a long overdue national renaissance.

Michigan, more than any other institution
has what it takes to lead the way.

Key Challenge for 1990s

We believe the coming decade will be a critical turning point
not only for higher education in America,
but for the University of Michigan in particular.

True we face a period as challenging as any in our history,
as the past week has demonstrated.

But paradoxically, these are also times
that present the most extraordinary opportunity
for us to renew our mission of leadership
and to make critically needed contributions
to our state, the nation and, indeed, the world.

As Alfred Lord Whitehead has said,
"The great ages are unstable ages."

But to play our destined role,
to sustain our academic leadership,
to renew our academic and service mission
to meet the challenges of a new age,
to be faithful stewards of the exceptional trust placed in us,
to seize the day,

it has become essential that we raise
private funding on a scale
unprecedented for a public institution.

We must build up the 4th leg of support...
to a level comparable to our other sources of support.

More specifically, we have set a goal for 1990s
of doubling our annual gifts
...from their present level of \$95 M/y to
\$200 M per year by 2000
...and building our endowment from its
present level of \$500 M to \$2 B

Ambitious? Perhaps.

But it also is clear that we have no choice if
we are to sustain the quality and accessibility
of this great institution.

Campaign for the 1990s

How can we do this?

We asked ourselves this question
and we asked you, too.

The answer was clear and unanimous...
...the only way to build the level of excitement
and commitment necessary to achieve this
goal was to mount the largest fund-raising
campaign in the University's history
...indeed, in the history of public higher education!

We have approached the Campaign in a typical Michigan spirit
...with vision, boldness, and commitment

Like most campaigns, this one will focus on the support of

...people
...facilities
.. programs
through contributions to
...expendable funds
...endowment
...and the support of facilities

But, unlike our earlier campaigns,
this will be an all unit, all funds campaign
...in which all components of the University will participate
...and all contributions to the University during the Campaign
period will be counted.

Conclusion

The task we have set ourselves is immense-
both the academic renewal we envision

and the Campaign to support it we are now setting in motion--
but when in all of its history
have this University or its friends ever shrunk from leadership
whatever the burdens or obstacles?

We must summon the vision and the determination
to prepare the people and produce the ideas
that will help revitalize our national life.
But we cannot do the job alone.

Never have we needed our alumni and friends more than now.

No one can know your loyalty, generosity,
sense of responsibility to the University better than I do.
I am privileged to have seen and experienced it first hand.
on so many occasions.

I have seen your loyalty and caring,
your imagination and vision.

I have seen you find so many ways to give something back
to your University

I have heard you search for ways to provide a legacy to the future.

I believe that right now Michigan has unique strengths to contribute
to a long overdue American renaissance.

We have what it takes to lead the way.

We know where we want to go.

We have taken the first steps.

But only with your help and support can we hope to reach our destination.

We need each one of you--your all-out best effort... and then more--

Isn't that the Michigan way always?

Every time we have turned to you for help over the years,
you have been there.

And here you are again.

Opportunity for Impact

A university achieves leadership...greatness...

...through its people...

...through their talents and abilities,

...through their involvement and commitment.

The Michigan family extends far beyond those

on our campus for the moment, our students, faculty, and staff

It includes that army of maize and blue,

our 370,000 alumni, and our countless friends throughout the world

Yes, it is clear you have been...

...and will continue to be even more...

...the most critical factor in achieving and sustaining
the greatness of your University.

Your strong support of your University has always

been important...but perhaps never more so than today.

We will soon ask you once again to join us

in a grand challenge...a great adventure.

To launch the largest fund-raising campaign in the

history of higher education--necessary to respond

both to the needs and the opportunities before

your University.

To be sure, this will require commitment and sacrifice.
And in will require extraordinary loyalty to and love of
your University.

Yet few things we will ever do in our lives
could make so much difference
and things we do for this University.

This Campaign will impact the University
at an extraordinary time in the history of our nation
and our world...a time when the leadership provided by
institutions such as Michigan are needed more than ever before.

What you contribute now will literally
help give shape and direction to that time.

Especially in these changing times,
life offers few sure things
few opportunities to make a difference in the world.

But when you invest your time, your hard work,
your resources in Michigan,

It is a sure thing.

Because Michigan is really a very special place...

It is one of only a handful of universities capable
of truly changing not only higher education,
but the nation and the world.

Conclusion

As we conclude, let me convey thanks
...both personally and on behalf of your University
...for joining us these past two days
...for your extraordinary generosity and
commitment in years past
...and for your willingness to respond to this new
challenge for Michigan.

More importantly, many generations who come after us
will have reason to thank you.

The future of the University of Michigan is in your hands.

Theme 2

The Controversy

I'm sure I don't have to tell you that
in higher education is experiencing
a torrent of criticism these days.
...from parents and students
...from Governors and State legislatures
...from Congress and Government bureaucrats
...from the media and the public at large

We have been accused of being
...big, self-centered, and greedy...
...with spoiled, misbehaving students
...and even more spoiled faculty
...plagued by a long list of "isms" ...
...racism, sexism, elitism...extremism
...of scandals in intercollegiate athletics
...and even for the deterioration of intellectual values
...scientific fraud
...political correctness
...lack of concern for UG education
...gouging parents with high tuition
...and the government with inappropriate charges for research

Such scathing attacks on the American university
are of rather recent origin.
Throughout most of its history academia rarely
had to deal with public attention, much less criticism.
Historically, probably due to our medieval religious origins,
universities over the centuries kept about them
an aura of the sacred, a sense of being set apart
from the fray of ordinary life.
Universities were accepted and respected by society,
at least when it gave our institutions any thought at all,
which frankly was not all that often.
The seeming paradox today is that the extraordinary
broad public attention and criticism of academia comes
at a time when the university is more deeply engaged in society,
a more critical actor affecting our economy, our culture,
and our well being than ever before.

The Irony

To illustrate this growing importance of the university
let me give you two quotes:

The first comes from Derek Bok, former president of Harvard,
"In all advanced societies our future depends
to an ever increasing extent on new discoveries,
expert knowledge, and highly trained people.
Like it or not, universities are our principal source
of all three ingredients."

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."

And yet the attacks continue...

But, then again, perhaps it is not so paradoxical that
just as the university is becoming a key player in our society,
it should come under attack.

When you get right down to it, perhaps we are victims
of our own success.

We have entered an era in which educated people
and the ideas they produce have truly become the wealth of nations,
and universities are clearly identified as the prime producers
of that wealth.

This central role means that more people today have a stake
in higher education. More people want to harness
it to their own ends. We have become both more visible
and more vulnerable as institutions. We attract more constituents
and support, but we also attract more opponents.

In the process, the American university has become
for many just another arena for
the exercise of political power, an arena for
the conflict of special interests.

Universities have become a prime target for media attention
and exploitation. We are increasingly the focus of concern
of both the powerful and the powerless.

Hence, we should not be surprised to hear from our critics
since they are a sign that society has an increasingly
vital stake in what we do and in how we do it.

Let me illustrate this increasingly central role with two examples
from the University of Michigan.

The Signs of Change in Michigan

Needless to say, this time of change has
posed great challenges to Michigan.

The America of the 20th Century that we have known...
was a nation characterized by a rather homogeneous,
domestic, industrialized society...

But that is already an America of the past.

Our children will inherit a far different nation...
a highly pluralistic, knowledge-intensive, world nation
that will be the America of the 21st century

The impact of these changes are already painfully apparent
to Michigan's workers and industries.

In fact, it is here in Michigan...in the heart of the "Rust Belt"
that the impact of these extraordinary changes are
most clearly seen...

We all know that past decade was a period of great difficulty for our state... Industries of great economic importance to our nation such as steel and automobiles have fallen victim to intense competition from abroad... Plants have closed...we still have many people chronically unemployed...or under employed... There are many indicators of the impact of this transition on our state... Over the past decade, Michigan has slipped badly in several key indicators of quality of life:

- 30th in per capita income
- 37th in child well-being
- 39th in housing affordability
- 41st in overall employment
- 48th in business climate (perceived)
- 48th in high school graduation rates
- 50th in return on federal tax dollars

...and we will be paying out billions of dollars over the next decade to bail out the S&Ls in the Southwest...

Oh, we still rank near the top in some things...

For example, we rank...

- 14th in teenage unemployment rate
- 12th in property tax burden
- 13th in incarceration rate (and rising rapidly)
- 13th in percentage of children in poverty
- 10th in infant mortality
- 4th in public aid recipients
- 1st in mortality from major disease

The situation is particularly alarming for Michigan's children

- One-third of Michigan's children now live in poverty
- One-sixth live on public assistance
- Indeed, in Wayne Country, one-third of all infants now live in foster care...causalties of the drug culture that has taken over our cities

A bleak picture to be sure...

What are we doing about it?

Are we responding to these challenges, preparing for the future?

A Fork in the Road

It is clear that our state is in the midst of a profound transition...
...from an industrial economy based upon the abundance of natural resources, unskilled labor, and, to some degree, constrained, slowly moving domestic markets...

To a knowledge-based economy, characterized by intensely competitive world markets, rapid change, and--most important of all--educated people and their ideas.

This has not been...and will not be...an easy transition to make.

The truth is that the outcome is still very much in doubt!

Whether we will emerge from this transition as a world economic leader once again...with a strong, prosperous--albeit new--economy producing jobs and improving our quality of life.

Or whether we will fail to heed the warnings...
...to make the necessary investments and sacrifices today necessary for strength and prosperity tomorrow...

And become an economic backwater in the century ahead.

It is clear that we face a fork in the road ahead.

My central theme is that education, broadly defined, will be the pivotal issue in determining which of these two alternative futures will be Michigan's...and America's.

Indeed, I am absolutely convinced that the dominant issue of the 1990s will be the development of our human resources.

Just as previous economic transformations were closely associated with major public investment in infrastructure such as railroads, canals, electric networks, and highways.

In the coming economic transition, an equivalent infrastructure will be an educated population.

The actions we must take today...

...and the investments we must make...

...will clearly determine our capacity to respond to this future...

Conclusion

The choices before Michigan are not easy.

But the world moves faster than ever.

Change, driven by technology, has a speed all its own, and not to stay abreast is to fall behind.

We must address pressing social issues of employment, health, social welfare, we must meet the important needs of our citizens today.

But also we must balance these immediate needs with investment in our future.

If we don't invest in cures, our symptoms will, in time, become fatal...

For generations, the people of Michigan sacrificed so that their children could have a better life.

They had faith in education.

Now it is our generation's turn.

We must rekindle that faith and that commitment to the future today.

We must care for our children's future as much as we attempt to our present needs and desires.

We as a people, a state, a nation have to become more disciplined,

...we have to learn how to make hard decisions

...to make sacrifices as we pass from one era to the next.

Theme 3

So What Is Going On?

Why have we seen such hard times lately?

Has it been due to those aggressive Japanese?

Or perhaps the numbing influence of media and TV sound bites?

Perhaps it is an aging America that has forgotten
its responsibilities to its children?

No, these are just symptoms of underlying forces.

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.
Change is transforming our world.

Who would have predicted several years ago that:□

...Communism would be rejected around the world,
swept away by the winds of freedom?□

...that the Berlin wall would crumble, and that Germany
would be reunified?□

...that Eastern Europe would break away from the Soviet
block to embrace democracy and unite with Western
Europe?

...that the Soviet Union would literally disintegrate from
the centrifugal forces of freedom and nationalism?□

Yet the changes we have seen thus far are just the tip of the iceberg.

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 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!□

Today we are evolving rapidly to a new post-industrial,
knowledge-based society, just as a century ago our
agrarian society evolved through the Industrial Revolution.

Key element in transformation, is the emergence of knowledge
as the new critical commodity, as important as mineral ores,
timber, and access to low skilled labor were at an earlier time.

This new critical commodity knows no boundaries.

It is generated and shared wherever educated, dedicated,
and creative people come together...and, as we have learned,
it spreads very quickly--worldwide, in fact.

In a sense, we are entering a new age, an age of knowledge,
in which the key strategic resource necessary for our
prosperity, security, and social well-being has become
knowledge--educated people and their ideas.

I used to portray the 1990s as the countdown toward a new millennium,
as we found ourselves swept toward a new century
by these incredible forces of change.

But the events of the past two years suggest
that the twenty-first century is already upon us, a decade early.
But change itself is not our real problem.
Our problem is that as a people we are not facing up
to the challenge of change.
We are not yet prepared to face a world whose economy, culture,
and politics are driven by the explosion of knowledge.
This is particularly true in our state.

The Challenges Before Our State

The Challenge of Change

My wife and I have lived in Michigan for almost twenty-five years,
paid taxes here,
brought up a family,
and have seen our state go through wrenching changes.

In the past our industrial base -- our economy --
has relied on the fortunes of a few large companies
--and one large industry.

For most people, there was never any reason
to be particularly entrepreneurial
or to worry about anything more than occasional
uptakes and downturns in the economy.

Only during the last decade have many of us begun to understand
that the old economy will never return,
that even if successful firms become even more successful,
the huge economic base upon which
all of our policies were formed will never return. □

Michigan is midway through a several decade-long transition
from a state dominated by a single industry
and a few large companies to one dependent
upon tens of thousands of small, dynamic companies
competing in a broad spectrum of world markets

A transition from

...low skill, high pay jobs
to high skill, high pay (or low skill, "no" pay) jobs
...from a transportation industry state
to a communication industry state
...from the Industrial Age to the Age of Knowledge
in which educated people and ideas have become
the key strategic commodities
determining economic prosperity,
national security, and quality of life

Unfortunately, Michigan is currently not well-positioned
to make this difficult transition
since over the years our state has evolved
...in tax policy
...regulatory policy
...social services
...investment strategy
...and politics

to serve a big business, big labor, big government
...and, in reality, a single industry.

Yet this old alliance -- big business, big labor, and big government
-- is increasingly irrelevant to our future--
although we are still propping it up.

The question is: What is the new alliance that we will build,
and which enterprises will comprise it?

A look at the past decade provides a hint...

Even as we were losing thousands of jobs
with the decline of the auto industry,
we were also gaining over 200,000 new jobs
from thousands of new companies.

Professor John Jackson makes a strong point that,
despite the doom and gloom of plant closings,
Michigan still has a very dynamic economy.

Yet, unlike the past, the growth and maturation of
these new companies is far more rapid,
and they also have shorter life spans,
since they are swept along by
the rapid pace of technology.

He uses the analogy of a forest,
where mature trees gradually fall or are harvested
and young saplings grow in their place.

From this perspective it seems clear:
we must restructure our state
to create, attract, and support
the tens of thousands of new companies
on which our future will depend
to enable them to function in a
rapidly changing
frighteningly competitive
and knowledge-intensive
world marketplace.

Michigan's challenge is not dissimilar
to that faced by industrial corporations
by government
by universities themselves

We must restructure ourselves to serve the future...
...rather than simply perpetuate the past.

Or more to the point, how do we restructure our state,
our business and industry, our government, and our institutions
to prosper in the Age of Knowledge that is already upon us. □

We must face up
both to the challenges
and the opportunities
before us.

The Old Systems--Still In Place

Yet, at the present time, however,
the old structures are still in place

and are an impediment to future prosperity.

Let me give some examples:

Our Tax System

Our tax system,

which has remained the same for decades,
is designed for a 1950s/1960s economy.

UM economist Paul Courant,

who understands the Michigan tax system
as well as anyone, suggests that virtually
all of our taxes in Michigan
contain special provisions that give an advantage
to some economic activities relative to others - i.e., loopholes.

Over time, special interests, the industries with the most clout,
have tilted the scale so that the tax system
has become largely inefficient. □

A good example:

Michigan's tax abatement law...
...provides big industry (primarily big auto)
with \$292 million in tax breaks
...at the expense of small business
...school financing
...and other social needs.
And with little positive return...

It is not that Michigan as a state is overtaxed
--indeed, its total per capita tax has now dropped
somewhat below the national average.

Rather it is that its present tax system is

...obsolete,
...unnecessarily burdensome,
...and intensely unfair.

Further, Michigan's tax system

is not strategically aligned to Michigan's future. □

Our reliance on property taxes,

the Single Business Tax ,
and tax abatements
and other tax "expenditures" or loopholes,
which benefit special interests
subsidizes and perpetuates the past
while strangling the future.

Its does little, if anything, to promote economic growth.

...to encourage saving and investment.

Simply put, the tax system is out of date

and it is time for tax reform.

And here it is important to add that

we need a total overhaul...
...not simply a quick patch-up job.

For example, simply reducing property taxes

may relieve some serious inequities
but in and of itself,

it will not accomplish
what really needs to be accomplished.

Indeed, simply cutting taxes
could well destroy the ability
to make strategic investments in areas
critical to Michigan's future
such as education and infrastructure.

Rather our goal should be
to restructure Michigan's tax system
-- streamlining and simplifying it--to make it
...less burdensome to small business,
...more fair to taxpayers,
...and capable of supporting key investments in our future. □

State Expenditures and Investments

We need to take a harder look
at state spending policy generally,
to really ask the question:
what is the role of state government,
and how should resources be allocated.

For decades Michigan was fabulously wealthy.

We developed a culture of expensive practices and expectations
--employee benefits, health care, social services, litigation.

Yet today, as Michigan's economy attempts to adjust
to a brave, new world, it still attempts to support
a Cadillac appetite with a Ford income. □

We are not investing our resources strategically.

We are tending to deploy them to pay for past sins
(corrections, social services, entitlements)
or sustain and perpetuate the past (tax abatements)
rather than than investing in the future
by creating new knowledge, new skills, and new jobs. □

One Key: Education

We urgently need a unified, strategic approach
to restructuring our state's tax and expenditure policies
in a way that looks to needs of future generations
rather than simply our own present desires.

One of the strongest beliefs I hold
is that the key to economic growth is education,
not economic development programs.

Education is the only enterprise that will save us
from becoming a backwater economy.

It is a point of "lift off," from which we can create
new markets, processes, and skills. □

Over the next five years, we must make some hard choices
and reform our K-12 system.

We are closer to designing a system
that lets students, teachers and parents
know what is expected of them,
that uses international benchmarks

to compare our schools.
But we are still far away from getting parents
to understand that there indeed IS a problem
and we are still focused on school finance vs.
a clear vision of what will make better schools.
Michigan children may be able
to compete with children from Ohio,
but they are far behind children in Beijing.
K-12 reform is imperative
and that message must be delivered
more forcefully not just in Lansing, but around the state. □
But there is something else...
Even if we are successful in our reform of K-12 education,
it is clear that we must make additional investments
to create the new jobs that can employ these graduates.
This jobs presently do not exist in our state. □
And that leads me to a second critical area
for strategic investment: R&D

The Other Key: Job Creation in An Age of Knowledge

It is important to realize that increasing
the competitiveness of existing industry,
while perhaps retaining market share and sustaining profits,
will NOT retain jobs (since doing things with less people
is a frequently a key to increased productivity).
Efforts such as total quality management, shorter cycle times,
just-in-time inventory, will not create new jobs
but, at best, will only preserve existing jobs.
Rather, in an Age of Knowledge, new knowledge itself
is necessary to create new jobs.
From this perspective it seems increasingly clear
that new jobs in Michigan are not going
to be spawned by existing industry
but instead will be created by entirely new activities, e.g.,
...genetic medicine,
...biotechnology,
...information technology and computer networking
...optic, lasers, ultra high speed technology
...automated manufacturing
From this perspective it is clear that
the most powerful economic engines in Michigan
may well turn out to be our two great research universities:
the University of Michigan and
Michigan State University.
Why?:
Key ingredients in technology-based economic development
Technological innovation
Technical manpower
Entrepreneurs
Through research produce creativity necessary for innovation

Attract "risk capital" through massive federal R&D support
Produce scientists, engineers, and entrepreneurs
to implement new technology

Key to technology transfer

Traditional: graduates, publications

Entrepreneurs

Startups

Importance of world-class research universities

Look around:

New England: --> MIT

Bay area-Silicon Valley --> Stanford & UCB

Southern California --> Caltech

Astin --> U. Texas

A fact of life:

Only world-class research universities
are capable of major impact

Must play in the big leagues...with MIT, Stanford, Berkeley...

To attract the outstanding faculty and students
and massive resources necess□□□\$for technological leadership.

UM and MSU are among the best in the world

-- and we can take advantage of the talent and resources
that reside in them right now -- today.

But to do so, we must think and act far more strategically
than we have done in the past.

The Future of Michigan

As we scramble to deal with
the daily reality of continuing fiscal crisis,
it is easy for all of us
to lose sight of the larger forces at work
here in Michigan and across America.

It is easy, too, to look for scapegoats
--to blame Democrats or Republicans,
the Japanese or the Germans,
for the problems of our economy and society.

But that would be wrong.

It also diverts us from reality.□

Michigan's problems are not partisan.

Michigan's problems are not political.

Our problems can't be laid at foreign doors.

Michigan's problems are structural.

Our political and economic system cannot produce
the revenues needed to meet the demands placed upon it. □

As a result of this fundamental structural inadequacy,
we are being forced to meet our urgent current needs,
to protect invaluable resources such as our schools,
to balance our current budget
--by shifting burdens to future budgets,
where they will become even more painful.□

We are held hostage by our outdated tax system,

a lack of understanding of what knowledge can do
in creating economic growth.

In this state, we simply are not increasing
our base of knowledge quickly enough,
nor are we investing adequately
in funding knowledge creation.

Like much of American industry,
state government has become too large and bureaucratic,
no longer responsible to its citizens.

In his first years as Governor,
John Engler took the very difficult and painful steps
to begin to turn that around.

Nobody likes to do it, but it had to be done
if we were to thrive again as a state.

In this effort, Governor Engler and his colleagues in Lansing
have cut away much of the undergrowth that was clogging
government and the economy.

While it has been painful,
over the last two years
Michigan has indeed been unique among the states
in its capacity to eliminate a massive funding deficit
while holding the line on taxes,
downsizing unnecessary government,
and protecting education as its highest priority.

But now it is time to build once again.

Instead, the state MUST invest if it wishes to create
...new knowledge
...new industry
...new jobs
...and make the transition to prosperity
in the next century

It is clear that our state is in the midst of a profound transition.

We are leaving behind our industrial economy,
once prosperous due to an abundance of natural resources,
unskilled labor, and--to some degree
--constrained, slowly moving domestic markets.

Our future will be quite different:

Michigan must compete in a knowledge-based economy,
characterized by intensely competitive world markets,
rapid technological change,
and--most important of all--
--its dependence upon educated people and their ideas. □

This has not been--and this will not be--an easy transition to make.

We face another five to ten years of low economic growth
as we make the transition to a knowledge economy.

Times are going to be much worse before they improve.

The truth is that the outcome is still very much in doubt.

Will we emerge from this transition as
a world economic leader once again,

with a strong, prosperous--albeit new--economy
producing jobs and improving our quality of life?

Or will we fail to heed the warnings,

fail to make the necessary investments and sacrifices today
necessary for strength and prosperity tomorrow,
and instead become an economic backwater in the century ahead. □

We have to roll up our sleeves right away and try new things,

open our minds to new possibilities,
to try to understand what businesses need to grow,
and to take advantage of some of our greatest assets,
such as the University of Michigan and Michigan State. □

We must work together on a radical plan for our future

-- let's try to do what hasn't been done before.

Now we must blaze new trails,

encourage new industry to replace the old,
encourage individual initiative in the best American tradition.

It is time to become a lean, mean, economic machine.

That is what needs to happen.

As long as we live by the old standards

of protectionism and special interest government,
we will merely shore up the past.

There is an old saying in politics...

"Democracies always do the right thing
. . . after they have tried everything else."

Well, I think that's where we find ourselves today.

We have tried everything else.

Now the time has come to do the right thing.

It's up to us. □