

Michigan Higher Education

A Special Message to Michigan Residents

An Appeal for Help

We need your help in yet another way...

While it is clear that we are entering a very critical period in our state's history when higher education will increasingly be a key factor in our prosperity and social well-being,

It is also clear that both the quality of and access to higher education in Michigan is a subject of great concern.

Without your direct intervention...as alumni, a taxpayers and voters, and as citizens with a stake in Michigan's future

Your university, the University of Michigan, could sustain serious and permanent damage in the years ahead.

The Need:

It is clear that Michigan is changing today at a breathtaking pace...

We are becoming more diverse, more pluralistic as a people. Indeed, almost 90% of the new entrants into our workforce during the 1990s will be people of color, women, or immigrants.

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

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

In the pluralistic, knowledge-intensive, global future that is our destiny, it is clear that the quality of and access to

...education in general

...higher education in particular

...and great research universities

such as the U of M most specifically of all

are rapidly becoming the key determinants of the strength and prosperity of our state.

The Good news is that Michigan is well-positioned from this perspective, since over the decades we have built not only one of the finest systems of public higher education in the world, but we now possess several of the world's leading research universities.

The Bad News is that a tragic combination of public misunderstanding, short-sightedness, and political opportunism now threatens to permanently cripple Michigan's universities.

Worse, this failure comes at just that moment in our history when we are becoming more and more dependent on these same universities to lead our state into the future.

Dark Clouds on the Horizon

Eroding state support...

Over the past two decades, the State of Michigan has dropped from the position of a national

leader (ranked 6th in 1965) in its public support of higher education to among the lowest in the nation (ranked 37th in 1989)

- i) Appro per student 43rd
- ii) Appro as % of tax 37th
- iii) Two year % inc 42nd
- iv) Ten year % inc 45th

As a highly industrialized state undergoing a dramatic change to a knowledge-intensive economy, Michigan is critically dependent upon quality higher education. Yet Michigan has now fallen into the bottom ranks of industrialized states in its support of these critical resources.

Tuition wars...

This situation has been compounded by political efforts to force tuition levels to artificially low levels, even as our universities have become ever more dependent on tuition revenues in the face of eroding state appropriations.

This latter effort is ironic, since in reality, tuition levels in Michigan's public institutions (\$2,000 to \$3,000 per year) are quite comparable to those at most other public institutions and quite low compared to private institutions (\$10,000 to \$15,000 per year). Further, these tuitions cover only a small fraction (typically 20% to 30%) of the cost of an education at a public institution.

Further, Michigan public universities have significantly increased their financial aid programs to protect access. Indeed, at the U of M, we have a policy that all Michigan resident undergraduates are provided with adequate financial aid to meet their needs until graduation.

Since federal funding for financial aid has declined 50% in recent years, tuition revenue has become a primary source of funds for financial aid programs. Hence, political efforts to drive tuitions down also drive down financial aid pools as well. The result is that those least able to afford a quality education are in danger of becoming deprived of this opportunity.

Threats to autonomy...

But political efforts to set tuition levels in Lansing rather than on our campuses raise another even more serious threat.

The traditional autonomy of governance of Michigan's public universities has been the critical factor in sustaining program quality while continuing to serve the state in spite of sharp erosion in public support.

This autonomy allowed Michigan's universities to take strong internal actions, reallocating resources, redefining priorities, and increasing tuition levels to partly compensate for reduce public support.

In recent years, however, even as state appropriations have been declining, the political pressure to restrict tuition levels to artificially low levels has increasingly threatened this autonomy.

While such political efforts have been portrayed as an effort to protect access (affordability) to public

education in Michigan, they have had just the opposite effect by slashing financial aid programs. It is clear that these forces from Lansing are being driven by not by concerns about access, but rather by fears that the Michigan Education Trust program, a prepaid college tuition program developed and financial on the assumption of low tuition levels, will become financial insolvent.

Risks to the U of M

The state's flagship institution, the University of Michigan, is at particular risk.

Despite its critical role, the U of M has been particularly disadvantaged in its efforts to achieve adequate state support in recent years.

Due in part to the intensely political dynamics of legislative process--and to the absence of any public policy in higher education --the University has consistently been given the lowest priority in state appropriations for several years.

- i) It has ranked last, 15th of 15th, in five of the last six appropriation years
- ii) The combination of low priority within the legislative appropriation process and the general erosion in state support of higher education has led to a situation in which state appropriations to the University have exceeded the inflation rate in only four of the last 10 years.
- iii) Over the past two decades, the U of M ranks last among Michigan's public universities in the growth in state appropriation.
- iv) A similar picture of eroding priorities appears in the U of M's share of state capital outlay support for academic facilities, where again it ranks last in state support over the past two decades.
- v) Indeed, during this period the State has provided funding for only two new academic facilities on the Ann Arbor campus... and then only at a 50% participation rate.
- vi) Over the past two decades, Michigan's peer public institutions have been receiving an average of \$25 - \$30 M per year for facilities. In sharp contrast, the U of M has received less than \$4 M per year!
- vii) As a result, the inventory of critical facilities needs of the University has now swelled to over \$200 million.

As with the state's other public universities, the constitutional autonomy of the U of M has been the key factor enabling it to sustain the quality of its programs and its capacity to serve the state in the face of eroding state support.

The University has been able to sustain---at least for the moment--its quality in the face of these declining appropriations only by a combination of extraordinary internal management actions.

These difficult actions were necessary to focus resources on only the very highest priorities, intensified efforts to attract resources from the federal government and the private sector, and the need to increase tuition

and fees.

The impact of these efforts is obvious as state appropriations became a dwindling proportion of the University's operating funds. In FY90, state appropriations will have slipped to less than 44% of its General Fund (unrestricted) revenues and less than 15% of its total revenues.

Further, even this strategy of internal prioritization and the development of alternative sources of support has been threatened by recent efforts by Lansing to interfere with the University's autonomy in the areas of tuition, nonresident enrollment, and even curriculum and faculty hiring.

It seems clear that such efforts, if successful in the face of inadequate state appropriations, will cause serious and permanent damage to the University.

What can be done?

As alumni, citizens, and voters, I urge you to insist that...

1. State government cease its efforts to interfere with the capacity of Michigan's public universities to govern themselves--particularly during a period of serious financial stress caused by inadequate state support.
2. State government develop and implement a strategy to restore an adequate level of public support for higher education to raise Michigan from the bottom third to the top third nationally in state appropriations per student (although this is still far below our historical position).
3. State government bring to an end the present freeze on capital outlay appropriations for higher education (now entering its fourth year) and begin to deal with the seriously deteriorating facilities on our campuses.

Concluding Remarks

Higher education represents one of the most important investments a society can make in its future...since it is an investment in its people...

It is indeed the case that our state and our nation have developed the finest systems of higher education in the world...

But we must also remember this resulted from the willingness of past generations to look beyond the needs and desires of the present and to invest in the future by building and sustaining educational institutions of exceptional quality--

Institutions that have provided those of us in this gathering today with unsurpassed educational opportunities.

We have inherited these marvelous institutions because of the commitments and the sacrifices of previous generations...and it is our obligation as responsible stewards--not to mention as responsible parents--to sustain them to serve our own children and grandchildren.

It seems clear that if we are to honor this responsibility to future generations, we must re-establish the priority of both our **personal** and our **public** investments in education, in the future of our children... and hence in the future of our state and our nation.

"Runnin' on Empty"...

Personal Introduction

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

As such, I suffer from two character flaws:

- i) First, I tend to a bit too candid in my remarks...
...I generally tell it like it is...
...or at least how I think it is...
- ii) Second, I tend to be one of those folks who lives more in the future than in the present or the past...

My life as a scientist and engineer has been spent working on futuristic areas such as:

- i) Nuclear rocket propulsion
- ii) Laser-driven thermonuclear fusion
- iii) Supercomputers
- iv) robotics and artificial intelligence

Hence, perhaps it is natural that as we enter the 1990s, I should find myself looking once again to the future, facing the challenge of helping to build a University capable to serve our state and our nation in the 21st Century.

My Message

My message today will be suffer from both of my character flaws as a scientist/engineer...
...it will be a vision of the future...
...and it will be unusually candid.

In a nutshell, as I look to the future, I am sensing an ever-accelerating pace of change in our society, in our state, in our nation, in our world.

Yet I also fear that few have realized the enormous changes that our society is undergoing as it approaches the 21st Century.

We are becoming more diverse, more pluralistic as a people. Indeed, almost 90% of the new entrants into our workforce during the 1990s will be people of color, women, or immigrants.

Our economy and commerce are becoming every more interdependent with other nations as the United States becomes a world nation, a member of the global community -- as this past year's events in China, Russia, and Eastern Europe make all too apparent.

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

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

In the pluralistic, knowledge-intensive, global future that is our destiny, it is clear that the quality of and access to
...education in general
...higher education in particular
...and great research universities
such as the U of M most
specifically of all

are rapidly becoming the key determinants
of the strength and prosperity of our state.
But here there is some good news...

America is particularly well positioned,
since our research universities are clearly
the envy of the world, as evidenced by the
extraordinary demand by graduates of
every country to see advanced education
and training in the United States.

Indeed, higher education is not only our nation's
highest quality, but also probably also its most
competitive industry as measured by the
test of the marketplace!

Further, Michigan is particularly well-positioned
from this perspective, since our state has
built over the years not only one of the
strongest systems of public higher education in
the nation, but possesses several of the world's
leading research universities.

But, now for the bad news...and the candor...

We--that is YOU AND ME--seem hell-bent, both as a nation
and as a society, on destroying the extraordinary
resources represented by our research
universities, just as we are entering an
age of knowledge in which they will become
our most valuable resources.

Indeed, a tragic combination of public
misunderstanding, short-sightedness,
and downright selfishness, is now threatening
to constrain and hamper our universities...

Leading to the frightening prospect that we will
manage to destroy our international competitiveness
of higher education just as we have many other
American industries.

In my home state Missouri we have an old saying
that the best way to get a mule to move
is to first hit it over the head with a 2x4 to get its attention.

Now that I have your attention,
let me explain more clearly what is at stake here...

The Many Michigans...

Part of the difficulty here is that our universities have
become so complex, serving us in so many ways,
that it is difficult to comprehend the central role
they play in our lives.

What images come to mind when you hear
the words "The University of Michigan"

For example, when you hear the words

"The University of Michigan",

you probably think first of those traditional college images:

- Great faculty challenging and exciting students in the classroom..
- Students studying in our many libraries
- Scientists toiling away late in the evenings in our laboratories.....stiving to understand the universe
- Scholars pouring over ancient manuscripts in our collections of antiquity

But there are other images that, in many ways,
better reflect the extraordinary impact that
the university has on our everyday lives.

There is the Michigan of those marvelous Saturday
afternoons in the fall as 105,000 fans cram into

Michigan stadium to watch the Wolverines...
 or the pride you felt when Michigan
 won the NCAA championship in one
 of the greatest Cinderella moments in sports.
 Perhaps you think of the Michigan of the Big Chill...
 The tradition of student involvement helping to awaken the
 conscience of a nation...
 Or Michigan of the arts...
 Attracting to our state some of the most
 extraordinary performers of our time...
 Bernstein, Horowitz, the Grateful Dead...
 There is also the caring Michigan as seen by the over 750,000
 patients each year who are treated by the UM Medical Center,
 Or the Michigan as Silicon Valley East, working to build the
 high-tech infrastructure necessary to create new companies
 and new jobs...as evidenced by the \$5 B industry in
 industrial automation now building up in the Ann Arbor-
 Detroit-Warren crescent...
 Or the Michigan which attracts to our state almost
 a quarter of a billion dollars of federal R&D each
 year...not to mention many of the world's
 leading scientists and engineers
 Or the Michigan of the "cutting edge",
 which conducts the research that changes our lives...
 as evidenced, for example, by announcement earlier this month
 that a Michigan team had identified and cloned
 the gene responsible for cystic fibrosis,
 thereby opening up the possibility of saving
 thousands of lives every year.
 Or Michigan as the University of the World...
 Long reknown as a truly international center of learning...
 Whether it be through our great area studies programs
 the China Center, producing advisors to presidents...
 Japanese Studies, Southeast Asian Studies
 Russian and Eastern European Studies
 Or our alumni throughout the world...
 Or the Michigan of outer space...
 ...Apollo 15...the Michigan mission to the moon...
 ...which not only established the first UM Club in space...
 ...but named a crater after Michigan on the moon.
 And, of course, there is the Michigan as the educator,
 attempting to provide, in the worlds of one of our first presidents
 "an uncommon education for the common man"
 an education as good as any available
 in the world
 for all citizens, regardless of race, creed, and
 socioeconomic background
 ...to over 340,000 living alumni throughout the world...
 ...150,000 in our state alone.
 It is important to note these different perspectives of the
 University because all too often we tend to think of these
 marvelous and complex institutions in one-dimensional images
 that reflect only our particular interests or needs of the moment...
 ...when we read about student unrest on our campus...
 ...or open the tuition bill for our son or daughter...
 ...or see Michigan get two kickoffs run back on them by Notre
 Dame...
 In fact, perhaps the best way to think of a university
 is to recognize that our primary role is
 "to invent the future"...
 ...through the knowledge discovered on our campuses...

...and the graduates we educate that can carry forth
this knowledge and apply it to society.

What is the University of Michigan?

The comprehensive research university is
a very large, complex, and diverse beast...

University of Michigan = "mega-university"

- i) Spans all intellectual disciplines and
professional areas
- ii) Provides instruction, research, service
- iii) Attempts to conduct programs that rank
among the nation's best in all areas
(and succeeds...)
(Indeed, most of our academic programs
are generally ranked higher than our
football or basketball teams!!!)

Parameters:

Enrollment: 36,000 (Ann Arbor) (47,000 total)

Faculty: 3,200 (14,000 employees)

Budget: \$1.6 billion

(of which less than 15% comes from the State...
indeed, with the erosion of state support over
the past decade, we now find ourselves in a
position in which tuition revenue and
federal support each exceed our state appropriation!)

Academic Units

17 Schools and Colleges

Hundreds of research centers, institutes,
and other types of interdisciplinary
programs

We also run the largest health care system in
the Midwest, treating over 750,000 patients each year...

We conduct events in the performing arts which rival
New York and London...

whether it be Leonard Bernstein performing his 70th
birthday concert with the Vienna Philharmonic
or, God-forbid, the Grateful Dead....

And, speaking of entertainment, we also have the
Bo and Steve show...the Michigan Wolverines...

playing in the fall to 105,000 every Saturday afternoon

Or, in the winter and spring, to every household in America...
...at least if we make the Final Four....

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...

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.

Let me explain...

Themes of Pluralism, Globalization, and Knowledge

Our universities today are at a particularly important moment

in history, since they are being called upon to educate students who will be spending most of their lives in another century...citizens of the 21st Century, if you will.

And while it is always risky to try to speculate about the future our students will find, three themes of 21st Century America seem clear...

i) It will be future in which our nation becomes a truly multicultural society, with a cultural, racial, and ethnic diversity that will be extraordinary in our history

In which those groups we refer to today as minorities will become the majority population of our nation in the century ahead...

In which women take their rightful place as leaders of America...

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 participation in the global community...

In an age of intercontinental missiles, threats to the global environment, instantaneous worldwide communications, a world economy, and an international marketplace of ideas and arts and political trends,

it is clear that we are becoming increasingly interdependent with other nations and other peoples.

Further, as the destination of roughly half the world's immigrants, the United States is rapidly becoming a "world nation" with not simply economic and political but strong ethnic ties to all parts of the globe.

The 21st Century will be the first post-European century in American history.

An absolute majority of young people born in US in the 21st Century will be born of parents of other than European background...

Asian, African, Hispanic

And this will represent a major change in the character of our society.

iii) The Age of Knowledge

But there are even more profound changes underway...

Looking back over history, one can identify certain abrupt changes, discontinuities, in the nature, the very fabric of our civilization...

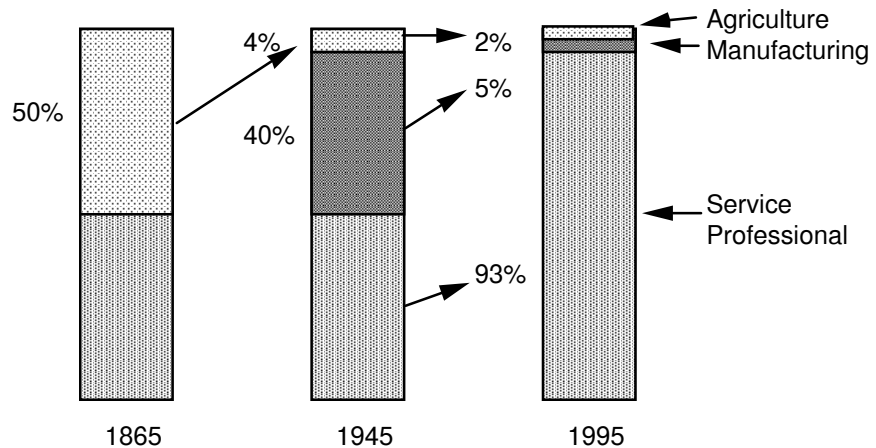
The Renaissance, the Age of Discovery, the Industrial Revolution

There are many who contend that our society is once again undergoing such a dramatic shift in fundamental perspective and structure.

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.

Some examples:

1. Industrial production is steadily switching away from material and labor intensive products and processes to knowledge intensive processes:
2. Our nation's future has probably never been less constrained by the cost of natural resources.
3. Increasing manufacturing production has come to mean decreasing blue collar employment!



4. We are in the midst of an information revolution that is changing the basis of economic competitiveness and world power. (Indeed, if you want to know the real reason for the recent events in Eastern Europe, China, and the Soviet Union--the collapse of communism--it was the silicon chip which created a truly international exchange of ideas and perspectives that could not be constrained by any government!)

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.

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.

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.

The knowledge revolution is happening worldwide and at a very rapid rate.

Concerns...

Needless to say, these same challenges of pluralism, of globalization, and of this age of knowledge that is our future will pose great challenges and demand similar changes in our state and our nation.

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

But that is an America of the past.

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

Of course, these themes of the future, the changing nature of the American population... our increasing interdependence with other nations and other peoples... and the shift to a knowledge-intensive, post-industrial society.

Are actually not themes of the future

...but rather themes of today...

...in a sense, I have simply been reading the handwriting on the wall...

Yet I also fear that few have realized the enormous changes that our society is going through as it approaches the 21st Century.

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...

The past decade was a period of great challenge 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...our cities are filled with chronically unemployed...indeed, perhaps even an underclass

Michigan's per capita income has now dropped below the national average...

Michigan has dropped to 20th in per capita income (and at \$15,393 is now slightly behind the national average of \$15,481)

Our unemployment rate consistently is at the top...

In Michigan we no longer worry about nuclear war and and the bomb because we believe that "The odds are greater that America will be bought up by the Japanese than blown up by the Russians..."

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. Indeed, 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
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 watershed--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.

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.

Examples:

1. We already see this in Michigan...

A recent article by the Booth Newspaper chain noted that the most prosperous cities in Michigan were characterized by a well-educated and highly skilled labor force...areas such as

Grand Rapids, Oakland County, and Ann Arbor. Indeed, over 90% of the people in Ann Arbor have completed at least 12 years of school.

In contrast, those areas most hard-hit by the economic transition have been cities such as Saginaw, Flint, and Detroit, cities in which only 50% of the population has a high school education.

2. Indeed, when then Vice-President Bush was traveling around the country and meeting with corporate executives to prepare himself for the 1988 election, the message he heard time and time again was the the key investments the United States had to make were in:
 - i) education
 - ii) technology
3. This situation has not gone unnoticed by our competitors from abroad. Indeed in recent trade negotiations, Japan admonished the United States to stop worrying so much about near-term financial issues and instead focus on long-term strategies by investing in scientific research and upgrading the quality of its schools--particularly in critical areas such as mathematics, science, and foreign languages.

Hence the challenge before higher education is the challenge before America...

And the actions we must take...

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

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

The "Pipeline Problem"

But here we face very serious challenges...

...clouds on the horizon...

and they involve the knowledge and skills of our people

Yet here we are in real difficulty, because we are not educating enough new people to maintain the strength and prosperity of our nation.

This has become known as the "pipeline problem", since it involves the full spectrum of education, from preschool through K-12 through higher education to lifelong education.

K-12 Education

By any measure, K-12 is in serious trouble.

We are "A Nation At Risk"...

Our education system simply has not responded to the challenges of the age of knowledge...

Note: it is bad enough that...

10% of Americans are illiterate

25% now fail to complete high school

But in recent years we have learned that in international comparisons of achievement in science and mathematics, our grade school and high school students score at the very bottom of industrialized nations.

We are a sports-oriented society, and we like to frame issues in the language of the playing field like "being Number one".

But folks, this isn't a game we are talking about today, this is a deadly serious matter of raising a generation of American who will be able to hold their own in an increasingly competitive, increasingly complex, increasingly science-oriented world.

The coins of the realm in the age of knowledge will be

science, mathematics, and technology...
But most American students are simply not developing these skills.
We hear along about the 21st century, but this sounds remote.
These kids that test at the bottom of the heap in world terms will be the backbone of our labor force at the turn of the century...
...and will be running our country in 2025!

College Education

While higher education in America is the strongest in the world, we also face serious human resource problems here:
Dominant factor controlling the production of college graduates is the size of the college-age population, which will decline until the late 1990s
Traditional source of college students is declining
25%-30% falloff in HS graduates by 1992
Composition of college age population is also changing...
By 2020 30% will be composed of Blacks and hispanics...students who have not traditionally chosen S&E careers.
The fastest growing pool of youths has the lowest participation rate in college and the highest dropout rate in high schools -- not to mention the least likelihood to study science and math.
This shortfall has been compounded by the alarming recent trend for students away from knowledge-intensive majors such as science and the liberal arts to "let me get out fast so I can become an investment banker and make a bundle" majors.
Over period from 1966 to 1987, proportion of students who intended to major in physical sciences has dropped from 3% to 1.3%; in mathematics, the decline was from 4% to less than 1%; in computer careers from 8.8% to 2.2%. Even interest in engineering is declining.

Conclusions:

- i) If we couple demographics with student preferences, we have got a timebomb on our hands...
- ii) Just as we are becoming increasingly dependent on knowledge-intensive fields ...and educated people, we are facing serious shortfalls in the availability of college graduates in key areas.
- iii) It is clear that our strength as a nation will depend on our ability to attract more talented students into these fields

The Dangers of Underinvestment

Perhaps the most ominous dark cloud on the horizon of all is the increasing evidence that we as a people we have not yet recognized either the nature or the magnitude of the investments we must make to achieve prosperity in an age of knowledge.
While we all give the "age of knowledge" lip service, the evidence suggests that in reality, we long for a return to the agricultural and manufacturing economies that once made us rich...
1. Over the past several years, numerous studies have suggested that Michigan is seriously underinvesting

in its "knowledge infrastructure"...by as much as 30% to 40% relative to other states.

2. The challenges faced by K-12 education are apparent. Unfortunately, what is also apparent is our inability to agree on actions aimed at improving the quality of our schools--or equity in their financing.
3. The situation is somewhat different yet no less acute for higher education in our state.

While the quality of Michigan higher education today is very high, the long term prognosis remains guarded... Over the past two decades, the State of Michigan has dropped from the position of a national leader (ranked 6th in 1965) in its public support of higher education to among the lowest in the nation (ranked 43 th in 1989)

Indeed over the last decade, Michigan's increase in its support of higher education ranks 45th... almost dead-last among the states.

Not exactly what I would call an enlightened approach to the age of knowledge...don't you agree...

As a highly industrialized state undergoing a dramatic change to a knowledge-intensive economy, Michigan is critically dependent upon quality higher education. Yet Michigan has now fallen into the bottom ranks of industrialized states in its support of these critical resources.

We are being outspent by 30 - 40% in state support per student... Not simply by prosperous states like California...but by neighbors such as Indiana and Ohio!

That we have been able to sustain the quality of public higher education in this state at all in the face of this catastrophic loss in state support has been due in large measure to the traditional autonomy each of our public universities has in its governance.

This autonomy allowed Michigan's universities to take strong internal actions, reallocating resources, redefining priorities, and increasing tuition levels to partly compensate for reduce public support.

But in recent years, even this autonomy has been under siege...through efforts from Lansing

 - i) to constrain tuition levels to artificially low levels even as state appropriations eroded still further
 - ii) to dictate who we must admit
 - iii) even to dictate what we must teach...

Whether measured in terms of state appropriation per student or fraction of our tax dollars directed toward higher ed, it is clear that in comparison with other states, our present level of public support is simply inadequate to maintain over the long run a system of higher education that is competitive on a national basis.

Our autonomy has allowed us to continue to move forward ...even though the gas tank is running on empty... ...but now state government threatens to challenge even about ability to manage our institutions during a period of great financial difficulty...

And threatens to slam the brakes on quality education in Michigan.

Governor's Higher Ed Taskforce

Interestingly enough, this alarming situation has not gone unnoticed by public leaders...

A loud warning was voiced in 1985 by the Governor's Commission on the Future of Higher Education in Michigan

The Commission clearly identified the fact that "public higher education in Michigan is at a crossroads".

It noted that per capita support had fallen from 1979 to 1983 from 14th to 37th.

Further, it noted that Executive Order cuts had played havoc with planning, resulting in maintenance deferrals, equipment purchase cuts, and eroded support for fundamental activities--all at a time when other states were increasing support for their systems of higher education.

It also credited Michigan's universities with launching a systematic process of improving efficiency and redirecting the system. In particular, it noted that from 1980 to 1984, over 100 programs were eliminated, thereby indicating the creativity and adaptability of the system.

It concluded that if nothing was done, higher ed in Michigan was likely to face a future in which mediocrity is coupled with inaccessibility, a totally unacceptable result for Michigan's citizens. "To provide wide access to a higher education system of mediocre quality is to perpetuate a hoax on Michigan's citizens".

And what has happened over the ensuing years?

The increase in Michigan's support of higher education in each of the past three years has not only fallen below inflation...but ranked among the very lowest in the nation.

What has happened to our priorities?

What is wrong here???

Who is to blame???

Our schools and colleges???

Certainly they must take stronger actions to improve quality...and strive harder to operate in a more cost-effective manner...

But their present situation reflects as much as anything else our own personal priorities...

...as parents

...as volunteers...

...as citizens and voters...

What about our elected public officials???

It is certainly not their fault!!

It is clear that our elected leaders, whether in Washington or Lansing or our local communities...

Would like nothing better than to make education their highest priority.

To become

...the Education Governor

...or the Education Party

...or the Education President

They understand clearly the importance of investing in our human resources, and they are searching valiantly for creative ways to improve the quality of our schools and provide adequate and equitable financial support.

But they also face formidable constraints, since in the end they must be responsive to the wishes of the electorate...and face it, gang...the electorate today says:

- i) no more taxes...
- ii) no more crime...
- iii) no more cuts in social services or national defense...

and our public officials have no choice but to respond.

No, the real finger of blame for the crisis we face in education should be pointed, as Michael Jackson would say, at "The Man in the Mirror"... ..at you and at me...

We are the ones who fail to demand the highest quality in our educational institutions in Michigan...

We are the ones who steadfastly resist a tax base adequate to support both our needs and desires...and provide an adequate level of support for quality education in this state.

We are the ones who block any effective efforts to achieve equitable financing of education in Michigan.

We are the ones who generally are too busy to help our own children in their studies or participate in their activities.

And we are the ones who insist on building more and more prisons, even when we know that this investment comes out of the hide of education and social services-- which are, of course, the only true long term solutions to crime!

We have become consumers of education, not investors in the future.

What's Going On Here?

Something has changed in America...

You know, I was brought up in a long tradition in which one's first responsibility was to one's children
My parents scrimped and saved for my college education...
...and my wife and I have done the same for our daughters (who, since they attended eastern private universities, have taken essentially all of the savings we have been able to muster over the past 20 years)

Saving for a college education came first...

...before a house, before a fancy car, before an exotic vacation

But today's generation is different...

...the "me generation" of the 1960s has grown up into comfortable Yuppieshood...

...it is bad enough that they have not saved for their children's college education

...and not supported adequate tax programs to support higher education

...but they have actively encouraged government at both the state and federal level to intervene in an effort to hold tuition levels to unrealistic low levels...

(either not realizing or perhaps not caring that they were undermining the quality of the education their children would receive at these bargain-basement prices--and depriving many others from less fortunate backgrounds of the opportunity for a college education because of the erosion of financial aid programs in the face of inadequate tuition revenue).j

Our approach to education...like to so much else in life these days...can be summarized by that T-shirt slogan:

"Eat dessert first, life is uncertain"

We see ourselves caring about the future, but we are

not preparing for it.
“American’s look ahead 10 minutes while
Japanese look ahead 10 years...” (Morita, Sony)
Yet the writing on the wall could not be clearer:
As we prepare to enter the Age of Knowledge,
our ability to sustain the strength of our state
and our nation...to achieve the quality of life for our
citizens...will be determined, more than any other factor,
by how we develop, nurture, and educate that
most precious of resources, our people.
Hence, let me conclude my brief remarks by tossing at you--
and at me-- several challenges:

Concluding Remarks

To Us...

In a very real sense, our state has entrusted to us its most
valuable resources...its youth...and its future.
To be responsible stewards of the public trust, it is clear
that we must strive to achieve greater
cost-effectiveness in our use of public funds...
and I can assure you that we intend to do just that.
But even beyond this, we must become staunch guardians
for the quality of our institutions...
For in education, as in every other aspect of American life,
quality will be the key to our future.
Hence, to us falls the responsibility of taking the forceful and
courageous actions necessary to sustain and enhance
this quality...in the long run the people of this state
both demand and deserve nothing less!

To You...

Higher education represents one of the most important
investments a society can make in its future...since
it is an investment in its people...
It is indeed the case that our state and our nation
have developed the finest systems of higher education
in the world...
But we must also remember this resulted from the willingness
of past generations to look beyond the needs
and desires of the present and to invest in the future
by building and sustaining educational institutions
of exceptional quality--
Institutions that have provided those of us in this gathering
today with unsurpassed educational opportunities.
We have inherited these marvelous institutions because
of the commitments and the sacrifices of previous
generations...and it is our obligation as responsible
stewards--not to mention as responsible parents--to
sustain them to serve our own children and
grandchildren.
It seems clear that if we are to honor this responsibility
to future generations, we must re-establish the priority
of both our **personal** and our **public** investments
in education, in the future of our children
...and hence in the future of our
state and our nation.

To our elected leaders...and those aspiring to public office

1. Our public leaders must develop and implement
a strategy to restore an adequate level of public
support for higher education to raise Michigan
--that raises us from among the very bottom among
the states to a position of national leadership

- once again.
2. They must bring to an end the present freeze on capital outlay appropriations for higher education (now entering its fourth year) and begin to deal with the seriously deteriorating facilities on our campuses.
 3. They must cease their efforts to interfere with the capacity of Michigan's public universities to govern themselves--particularly during a period of serious financial stress caused by inadequate state support.
 4. And most of all, our public leaders must come to understand that they are stewards for the moment of an extraordinary resource for our state--one of the world's finest systems of higher education--a system that has resulted from the commitment and sacrifices of eight generations of Michigan citizens. They will be judged by future historians by how wisely and effectively they protect and sustain this great resource, so critical to our future.

The Challenge to Us All...

Today Michigan faces serious challenges that will clearly determine its future prosperity and well being...

- the challenge of pluralism...
- the challenge of participation in a global community...
- the challenge of the Age of Knowledge
- the challenge of change itself...

As we approach a new century, our state is undergoing a profound and difficult transition to a new economic order...

Our fabulously prosperous industrial economy...
 an economy that allowed us to build some of the world's great institutions---including some of its finest universities--

But that economy is rapidly disappearing...
 ...and our challenge for the next decade is to take the steps necessary to build a new knowledge-based economy which will be competitive in a world marketplace.

This will not be easy...
 It will take sacrifice on all of our parts...
 It will take renewed commitment to that most fundamental of all characteristics in the new economic order: quality
 And it will take renewed investment!

If we are to respond, we simply must reorder the priorities of this state...
 We must shift away from the temptation to address only the needs and desires of the moment
 And, instead, we must begin to make some of the key investments necessary for the long term...
 The key investments in our people...
 in our children...

Michigan continues to be blessed with abundant natural resources, a people of great strength, and a system of higher education of a quality envied by the rest of the nation...indeed the world!

But, the writing is on the wall...
 If Michigan is to prosper in the age of knowledge that is almost certainly our future, we must join together

now to restore both our public and
personal investments in education...
...in our people and their ideas...
...in our children...
...and in our future

Appendix: The Costs of Education

Let me give you a very concrete example of the way in which
this rampant consumerism now threatens higher education...
...and that has to do with the efforts to artificially
constrain the costs of tuition.

Today, both across this state and across the nation,
we find a rising tide of resistance to college tuition levels.

In fact, there are strong forces encouraging government
at both the state and federal level to intervene and
essentially fix tuition
...to fix prices and control the marketplace,
you will...

So what is so dangerous about this trend?

Won't it keep those greedy colleges from gouging
students and their parents?

Won't it keep a college education affordable for
those of limited means?

Let me destroy a few popular myths....

Myth1. Tuition levels in Michigan's public universities are high?

Absolute rubbish:

Reality: Tuition levels in Michigan's public universities are quite
low and comparable to those of most other public institutions
throughout the nation.

Background:

1. The roughly \$2,000 to \$3,000 of annual tuition and fees charged
to instate undergraduates in Michigan's public institutions represents
an incredible bargain when compared to all other alternatives--public
or private education, in Michigan or across the nation.
For example, it costs more to attend Cleary College (\$4,163) to learn
secretarial skills than to attend the University of Michigan (\$2,876)!
Michigan students face far higher tuition levels at peer public institutions
(UC-Berkeley tuition runs \$9,000 - \$10,000) and at peer privates
(Harvard, Stanford, and Cornell tuition run \$14,000 - \$15,000).
Another calibration: The cost of a degree at a public institution
in this state is less than the cost of a new car!...
Further, this investment will be paid off in only a couple of years
following graduation because of the very high earning capacity
of our graduates.
2. Because the absolute tuition levels at public institutions are so low,
it is very misleading to attempt to compare costs through tuition increase
percentages. (A large percentage of a small number is still a small number...)
Further, the real cost of higher education at public institutions is NOT tuition.
Rather the primary costs of public education in Michigan are attributable
to room, board, books, travel, and other expenses. Indeed, tuition
represents less than 25% to 30% of cost of a college education to
Michigan residents.

Myth 2. The increasing tuitions at Michigan's public universities are pricing them out of the reach of all but the very wealthy

T or F: Again, absolute rubbish!

The reason, of course, is the presence of effective financial aid programs.

For example, at U of M, we have a policy that
guarantees that ALL MICHIGAN RESIDENTS ARE
PROVIDED WITH ADEQUATE FINANCIAL AID TO
MEET THEIR NEEDS UNTIL THEY GRADUATE.

In fact, roughly 65% of our Michigan resident students

receive some form of financial aid
(amounting to \$140 M last year.)

Further, families with incomes up to \$60,000 are
eligible for some form of financial aid.

(In fact, if you have 3 kids, up to \$80,000 is eligible.)

Myth 3: Surely the fact that tuition rates are increasing faster than the CPI reveals that universities are not cost-effective and are exploiting the marketplace.

1. While it is true that tuition has increased more rapidly than the CPI, it is important to note that resident tuition levels at public institutions throughout the nation were essentially at token levels until the late 1970s when public support began to wane. It has been clear public policy that the nominal tuition levels charged to resident students at public institutions should be increased somewhat to reflect a shift in support from general tax dollars to those who benefit the most--and who most can afford to pay. Nevertheless, in absolute terms, these tuition levels are still extraordinarily low (\$2,000 to \$3,000 per year at public institutions, compared to \$10,000 to \$15,000 per year at private institutions). Hence percentage increases are misleading because of the unusually low absolute level of public university tuitions.
2. Several other points:
 - The CPI measures things like the costs of housing, food, etc.
 - But suppose you were required to live in a bigger and bigger house each year...
 - then, don't you think that your costs would increase more rapidly?
 - Well, that is just what is happening in higher ed since in many fields, the amount of new knowledge doubles every five years or less.
 - Is it not understandable, therefore, that both the amount of education...and the costs of that education...should similarly increase in real terms...
 - Computers, laboratory instrumentation, medical devices,...all so very necessary to the education and training of tomorrows professionals...all cost money...
3. Further, even the percentage increases in tuition have lagged the percentage increases in disposable family income over the past two decades. For example, over the past 15 years, tuition has increased 232% while personal income has risen 252%. Hence, there has been very little change in the percentage of income required to meet tuition costs. In fact, college expenses have risen far more slowly than many other costs, such as housing, health care, automobiles.
4. Furthermore, dramatic increases in financial aid have extended educational opportunities to many who could never have afforded a college education in years past. Hence, in a very real sense, a college education at the UM is more affordable today than it has ever been before.
5. In Michigan state appropriations have exceeded the CPI in only 3 of the past 10 years. Indeed, over the past decade, the State of Michigan ranks 40th nationally in appropriation increases--and last

among the large industrial states. In recent years, our state has continued to sink further below the national average in its support of higher education. Hence, a combination of tuition increases and program cuts has been required to balance budgets. Without tuition increases to offset the erosion in tax support, the quality of higher education in Michigan would have been seriously damaged.

Myth 4: The price of a college education is no longer worth it.

Wow!!! Absolute nonsense

The money invested in a college education results in about a 10% return annually due to higher salaries commanded by college graduates.

That amounts to over \$500 K in constant dollars...and in the knowledge intensive professions it is far higher

Further, at a leading university such as UM, we are investing roughly \$25 K per year per student in creating the type of learning environment necessary to prepare our graduates for the 21st Century.

By way of calibration, our present instate tuition levels are \$3,300.

We ask parents to contribute 12 cents on the dollar!

Not a bad deal, I'd say!

Myth 5: Hold on now! My taxes pay for the college education of my children...

Balony!!!

i) UM share of state tax revenue has dropped by 42% over past 20 years (from 3.74% to 2.15%)

ii) Hence, today, only about 2 cents of each tax dollar goes to UM
In other words, someone paying \$5,000 per year in state taxes will be paying only about \$100 for UM

More specifically, the typical parent over their entire earning career, will pay less than \$3,000 of taxes for the UM (assuming 30 years of earnings)...

(NOTE: We can scale this for all of higher education using the 23% UM share...

...hence this implies \$400 per year and \$12,000 per career

...a bit closer to the tuition...but a long shot from real cost

By way of comparison, the cost of a Michigan education is

UG Tuition: \$12,000

UG Cost: \$50,000 to \$80,000 (depending on how one counts)

Hence it is clear that others must be shouldering the real costs for educating one's kids in a Michigan public university...not the taxpayer himself

iii) And, as I noted earlier, over the past 20 years, Michigan has fallen from 5th in the nation to the bottom third in its support of higher education.

Hence, while you may be paying lots of tax, not much of it is going to support higher education!

The Bottom Line

Question 1: How good do you want your institutions to be?

Higher education is one of the most competitive industries in America, with over 3,500 institutions competing for students, faculty, funds...not to mention the international marketplace.

(We not only compete against

Hence, if you tell me how good you want an institution to be, then I can give you a pretty accurate idea of how much you will have to invest.

Then that determines an investment per student and per faculty that we will have to make.

Do you want the University of Michigan to be as good as:

...Harvard or Stanford?
...then it will take about
...\$50 K per year per student
...Berkeley or UCLA
...about \$30 K per year
...Ohio State or Minnesota
...about \$18 K per year
...Mississippi or Montana
...about \$10 K per year
...or Southern North Dakota State at Hoople...

Incidentally, it is clear that if you want to pay
only bargain-basement prices, then you are
going to end up with bargain-basement quality.

Question 2: Who is going to pay for this quality?

The state taxpayer?

The federal taxpayer?

Parents?

The student (through loans and deferred payments)?

Private philanthropy from

industry, foundations, alumni, friends?

Unfortunately, there are no other options.

Someone has to pay.

But it seems clear that nobody is willing to step up and
accept this responsibility.