

Draft Stump

I'm here today as a lame duck. At the end of June my wife, Anne, and I will return to normal life. I'll be passing on the reigns to my long valued colleague, Homer Neal, who will be interim president of the UM until the Regents appoint my successor.

Any alums here can relax. I've already passed on to Homer the big tin cup. He'll need it to beg for his living.... the real job of university presidents.

The best thing about being a lame duck is that you can once more say what you really think. Not that I've pulled many punches over the years. My natural instinct and my background as a scientist compel me to call things as I see them..... Whatever I do next, I'll never be a politician.

So today, I'd like to talk with you not about politics, or ideologies, or special interests. We're all hearing plenty of that these days.

Rather, I'd like to share what I've learned in these last seven eventful years in my life and the life of our University and our state

- Where we were when I set out;
- Where we are now, and
- An optimistic view of where we are heading.

Such much has happened.. ..is happening.

As we approach the start line for the new century we are certainly in far better shape than in 1988... We are more lean, more disciplined,

more realistic, more focused--- Well, maybe not me....but certainly the state and University are.

It's been tough. There are still many hard choices and difficult sacrifices ahead. But I believe we are on the right course.

At the Beginning

Throughout my career, as an engineer, I've been a futurist---atomic energy, mission to Mars. I've also devoted much of my time to fostering Michigan's economic development. As a result, I tried to look beyond the immediate reality to consider the fundamental reasons for Michigan's continuing economic decline. I was motivated not only its obvious impact on the UM but also by what it meant for our future.

1988, when I became President of UM, seems a lifetime ago. Starting then, in my Inaugural address, I sounded the alarm for the University of Michigan and later I went circuit riding throughout the state with the same message.. I said we were in the midst of a revolution affecting every aspect of our lives. While we all certainly felt the symptoms of change—the pain—too few grasped the cause, its scope, its breathtaking pace.

As I moved about the University and the state in the beginning, described the revolution we were experiencing as the transition to a postindustrial society as fundamental as the agrarian or industrial revolutions preceding it. I felt there was a seismic shift underway in the very foundations of our economy, society, and, indeed, our culture.

I saw the key underlying forces driving this transformation as being:

- Emergence of an economy based on knowledge—educated people and their ideas powered—by breathtakingly rapid development of new technologies;
- Globalization of the world’s economy and culture enabled by technologies of communication and travel; and
- Demographic changes in the American population bringing hitherto un or under represented groups into a majority of the workforce.

It seemed to me then that too many of our people and our institutional leaders were floundering, on the defensive, desperately clinging to the past...to the habits and expectations of an earlier era when we were a leading industrial power not just of America but of the entire world.

Many looked for scapegoats—foreign workers and industries, immigrants, business, labor, politicians universities.

Some took an “if we close our eyes and hold our breath, we can make change stop” position.

Others sought the protection of more and more public subsidies even as public expenditures climbed sky high and revenues plummeted.

Not that I want to cast blame. Economic and social upheaval of the magnitude we are living through. is unprecedented. It challenges our basic assumptions about how we live our lives, it changes the rules in mid-game. It displaces and hurts far too many..

But I feared that the certain consequence of this continuing widespread denial of , and resistance to, change would be to condemn Michigan –

both the University and the state-- to a future of decline that would soon be irreversible.

Why? Because such denial violates a fundamental law of nature that all living systems must continually adapt to their changing environment or risk extinction

To survive let alone prosper, Michigan had to summon the courage and strength to face up to reality, to see change not as a threat but to seize the opportunities it offered to make a better world for ourselves and our children..

Like our state, the UM then had its own set of challenges to overcome. During the preceding two decades, UM, and our other universities, had come through an extraordinary growth and prosperity. This led some to complacency. Others sought to continue expansion by trying to be all things to all people.... at a cost that became unsustainable when Michigan's hard times caught up with us. We took our status as a world class research university for granted. . Our administrative practices were inefficient and too costly. We were not as entrepreneurial as our private university competitors....Harvard, Stanford. Nor were we as responsive to the state's rapidly changing circumstances as we needed to be as a public institution.

Building on the efforts of my predecessors, Robben Fleming and Harold Shapiro, my colleagues and I set forth a strategic plan and set of objectives designed to address the challenge of change. We saw it as an opportunity to revitalize our teaching, research and service mission to better serve institution, our state and nation.

At the same time I began my evangelical travels across Michigan seeking out audiences in every part of the state and every walk of life. I tried to alert them to the profound nature of the revolution we were undergoing and the dangers of continuing to deny, resist, or evade it.. I challenged my audiences to invest in education as the only way to prepare for a future in which a highly educated workforce would be the key to prosperity.

I'm sure many if not most of my listeners concluded I was at best a crank, one of those ivory tower types...perhaps not dangerous but certainly too extreme in my predictions.

That's because most grew up in a state where a few large companies – indeed, one mammoth industry, controlled Michigan's destiny, where economic growth and security were taken for granted. Where there was little call for entrepreneurship. Where the focus of government was on expanding services, regulation, entitlements..... and the taxation to pay for it all.

Since then as the ad says “We’ve come a long way, baby.”

Turning the Corner

By my estimate, we are about midway through a hundred-year transition (Eniac was born fifty years ago this February) to a postindustrial society. Rather than being dominated by a single industry, Michigan increasingly depends on tens of thousands of small dynamic companies and individuals working on their own and successfully competing in the broad array of world markets. We are well on the way from an economy based on low-skill, high pay to high

skill high-pay jobs; from a transportation industry state to a knowledge industry state.

We're learning the hard way that if we want to fully prosper in this new world, we must

Take the long view

Invest in people and learning institutions—in making available life-long education and training

Invest in research and the technological innovation it produces.

As we stand at the brink of a new century and a new millennium Michigan is learning to live with change as a fact of life. It is woven into the fabric of our daily lives, in the way we work, relate to each other, and experience the world.

The best news is that we're breaking the stranglehold of the past. I'm not saying all of us like it or that it's been easy. But most accept it and many already are taking advantage of its opportunities..

Michigan's major sectors—government, business, labor are on the way to being restructured to serve us better in the new century to come.

Government Restructuring

Until recently, Michigan was headed for fiscal collapse as we funded our current needs by shifting the cost to future generations.

State government became too large and bureaucratic. Responsive to citizens immediate desires but at the expense of longer term goals. Fortunately, while it has been painful, over the last several years Michigan now has become a model-- unique among the states in eliminating an immense deficit while holding the line on taxes, downsizing unnecessary government, and protecting education as its highest priority

Educational reform, investing in our people

We've given education the top priority, reformed the way we finance our schools. Corrected the policies holding them back from high achievement, and created remarkable opportunities for innovation and experimentation through the Charter Schools program.

Today, we are closer to designing a system in which students, teachers, and parents know what is expected of them. We are using international benchmarks to establish standards to measure results. However, we still focus more on finances than on developing a shared vision based on excellence in public education. Too many parents and citizens are still willing to accept less than the best for our children. Michigan's students now may be able to compete with children from Ohio, but they are far behind children in Tokyo and Beijing. Fundamental reform of K-12 is imperative. We should all take that message out across the state.

But even if, I prefer to say when, we are successful in our reform of K-12 education, we also must make additional investments to create the new jobs to employ these better educated graduates. So far, too few jobs of this kind—dependent on skill and knowledge-- exist in our state.

Economic Development

The old economy is gone, never to return. Furthermore, even if our traditional industries have made something of a comeback, they can never dominate our economy again.

However, the increased competitiveness of many of our industries, increased international trade, and management belt-tightening have bought us time. They have temporarily retained market share and sustained profits. Over the long term, though, they will not retain existing jobs let alone create new ones. This is because productivity gains are linked to downsizing through such efforts such as total quality management, shorter cycle times, just-in-time inventory. We see this daily as the media report on yet more lay-off.

At best management reform, can only preserve some existing jobs for a while longer giving us valuable time to position ourselves for the new economy..

Thus our long term goal must be to create and attract new jobs, new commerce, and industries.

These new jobs clearly will be created by innovation based on a solid base of research and development, e.g., genetic medicine, biotechnology, information technology and computer networking, optics, lasers, ultra-high-speed technology, and automated manufacturing.

In my perspective, then, the most powerful economic engine we have to drive future growth will be technology-based economic development which requires
technological innovation,
technical manpower, and
entrepreneurs.

Research universities are the principal source of all three. Through their on-campus research, they generate the creativity and ideas necessary for

innovation. Through their faculty efforts, they attract the necessary "risk capital" through massive federal R&D support. Through their education programs they produce the scientists, engineers, and entrepreneurs to implement new knowledge. And they are also the key to knowledge transfer, both through traditional mechanisms, such as graduates and publications, as well as through more direct contributions such as faculty/staff entrepreneurs, the formation of start-up companies, strategic partnerships, and so on.

Fortunately for us, no state or nation has a better chance to thrive in this new world.

What gives us this leading edge?

In an age of knowledge, two key ingredients for new jobs and greater prosperity are

- Educated people,
- Our system of independent higher education that produces educated people and the ideas and technology that can be put to productive use.

Michigan is abundantly rich in both.

Michigan's People:

By far, our greatest wealth is the quality and diversity of our people. Why? From our forebears, we inherit a priceless legacy of pioneering spirit, gritty courage, and self reliance They made our farms and factories the best in the world in earlier times. If we believe in them and invest in their education and training, we can rely on them to once again put us at the forefront of innovation, productivity and trade. (.Coming to us now from every part of the world they also give Michigan a link on which to build trade partnerships).

Today and in the future, it is people. their character, their knowledge skill, and ability to innovate that, when allied with developing technologies, gives us the competitive edge in the world economy.

Our other key strength--Michigan's Universities

Michigan also is rich in the other key asset on which to base our future. We are rich in having world class public universities committed to excellence and to serving our citizens. UM, MSU, WSU (and the other institutions ?) are each in their own way the best at what they do. Taken together, they complement one another and are a the foundation for Michigan's future prosperity.. O such top research universities can assemble the breadth and depth of talent, resources and funding to make a significant contribution..

Today they are well on the way to creating knowledge and developing professional practice to drive our economic development--- genetic medicine, biotechnology, optics, lasers, ultra-high-speed technology, and automated manufacturing. These new areas of knowledge are creating Michigan's new jobs.

Did you know that this year, UM became the leading recipient of competitively awarded federal research dollars surpassing even MIT? The total is an astonishing ---\$450 million.(?Can we insert here the total amount for UM, MSU, Wayne?) Not only do these dollars yield long term benefits. They also are spent here in Michigan for goods and services.

Universities are also the key to transferring their knowledge through traditional ways—graduates, publications, on-line services, outreach, as

well as ;through more direct contributions such as faculty staff entrepreneurs, formation of start-up companies, strategic partnerships.

(Any examples?)

UM achievements

Proud to report that the UM has never been better. We have renewed ourselves, focused our mission, rebuilt our campus. Restructured our financing. Streamlined our administration.

Commitment to Excellence

The thing that hasn't changed is our commitment to be the best at what we do. Successfully competing head to head with Berkeley, Stanford, Harvard, MIT.

Consistently rank in the top ten in professional schools.

Undergraduate Ed

Information Technology Leadership

Michigan Mandate

Fiscal and Management Reform

Fundamental to the substantive changes we've been making has been

our own fiscal restructuring. Though our state once ranked among national leaders in its support for quality public higher education, during the 70's and 80's we fell to the bottom third. To preserve our institution, we had to make tough choices and changes, find ways to compensate for the continuing loss of state support.

First public university to set a \$billion dollar private fundraising campaign, now \$750k and nearly to its goal.

We invested our endowment more aggressively, bringing a XX % increase in earned income.

We instituted broad based cost savings programs and reformed our management.

We became far more competitive in gaining research support from government and other sources. As I've already mentioned now \$450 million.

Sorry to say that we've also had to raise tuition to compensate for loss of state funds-- but we are at the same time increasing scholarship aid for those students who need it --Currently XX \$.

No otherwise qualified Michigan student is denied a Michigan education because of lack of funds.

This new funding is what has allowed us to sustain our standing as a world class university in the face of diminishing state allocations.

What Next?

Still a distance to go—for state, universities, every one of us.

You are probably asking yourselves, “if we have so many strengths, so much reason for confidence in our ability to master change and come out on top, what still stands in our way?”

I think only one truly serious threat stands on the way of our continued progress.

As the cartoon character, Pogo, once said: “I have seen the enemy and he is us!”

Along with our strengths, have some serious weaknesses—some embedded in our history. Others new and potentially deadly.

Let me cite those that have had the greatest impact on my job as UM President.:

Deteriorating social foundations. In a period of intense change, all of us, and especially our children, need the security of strong families and communities. Yet these foundations continue to erode and we see the effects in our classrooms and dorms as well as in all the youth who fall by the wayside, their mindpower gone to waste..

Social Divisions—Nothing is more corrosive of our way of life than the growing divisions in our society—race ethnicity, class, age, religion. These are taking an increasing toll on our ability to study, work and live together and to take part in productive civil discourse.

If we do not address continuing inequality, persistent poverty, mutual distrust, nothing else we do can possibly succeed.

Furthermore, at a time when are engaged in an historic debate about America’s and Michigan’s future, our public discussion too often is distorted by noise blame, paranoia, wishful thinking, stridency, unreasoning rage, and even, I’m sorry to say, pure hate.. . If we want to make sound and reasoned decisions, we have to lower our voices and restore mutual trust.

Commitment to excellence,

Americans are addicted to a pernicious vice. especially in hard times. Too often we are suspicious of, even hostile to, excellence/high achievement, particularly intellectual achievement. We settle for the lowest common denominator rather than honoring and supporting achievement

Let me give you just one example from my own experience. When I first took office, a State official actually said to me that “quality” was something students had no right to expect from a public university. Students in search of quality can go to Harvard or Yale, he went on.. ---Of course, he, himself, had gone to Harvard.

This is a long way from the Jeffersonian ideals of our founders, who believed that only the best was good enough for their children whatever their background or social status so long as they had the ability and will to achieve.

We can no longer afford the luxury of mediocrity in anything we do. Our competitors in the world’s economy –Germany, Japan, Singapore---Soon China—will cut us no slack!

We’ve learned the lesson of quality in industrial production and service delivery. Isn’t it time, as the Ford ad says, we make quality/, “number one” in other critical aspects of life such as in educating our children.

Strategic Investment in the Future

One deadly habit for which we can blame no one but ourselves. We have adopted an attitude that says “Eat dessert first, life is uncertain.” We are consuming today, the resources of the future. We’ve made progress in that

last few years in reducing state debt but too few are willing to make the sacrifices necessary to secure our future.

.I cope with this every day, as I've watched state funding dwindle from 75% of UM's budget to some 10% today. Our sister universities have suffered equally.

Our state once ranked among the national leaders in its support of higher education. During the 1970s and 1980s, Michigan fell to the bottom third of the states. In the early 1990s we moved up slightly--rather other states such as California plummeted past us as they struggled with economic crises of their own. More recently, these other states are moving back up, restoring their support of their universities, while Michigan is once again falling.

More specifically, in each of the past five years, our major research universities have experienced either frozen or sub-inflationary state appropriations, losing roughly 15% of its purchasing power. For the University of Michigan, a loss of \$35 million in annual support.

Estimates of deferred maintenance on the 15 four-year campuses now exceed half a billion dollars.

Ironically, During that same period, state support of our prison system has exploded and will pass the total dollars invested in higher education in the next year or so. WSU President, David Adamany, notes that 10 years ago we had 15 public universities and 8 prisons. Today we still have 15 universities...but 35 prisons.

Put another way, this year the state will spend \$1.4 billion for the education of 250,000 college students, and essentially the same amount (\$1.4 billion) for the incarceration of 40,000 inmates.

Most states are struggling to build world-class research universities of the quality of MSU and UM. Yet, our state, for almost two decades let its investment in higher education languish.

We can still reverse this trend and be a leader among the states in support of higher education. It would require sacrifice on all parts. It might even mean the T-Word—. We ourselves won't reap all the benefits----but our children and their children will.

We also need to consider new social arrangements to encourage our institutions to work together.

Not long ago, I made a radical proposal. Why don't we create Enterprise Zone in Ann Arbor East Lansing Detroit to go all out to stimulate knowledge transfer and convert it into forms that benefit society--new companies, new jobs, new prosperity.

This would mean forming a new kind of partnership linking the Universities; local, state, and federal government; business and industry; organized labor; and our financial institutions. All would commit themselves to adopting the best practices learned from other successful regions across the nation or around the world----from Portland to Austin to Route 128, from Hong Kong to Singapore, to Cambridge to Stuttgart.

This concept of a "University Enterprise Zone" is really a challenge to all our institutions, including the universities, to think and act more strategically, to work together for the common good of our state. It is a challenge to position Ann Arbor/East Lansing/Detroit as the economic engine of the Midwestern United States.

Nourish and protect universities

Not only do our universities need the state's financial support. The quality and strength of Michigan's universities is built on the Constitutional foundation of independence from the pressures of the political realm. Our status as a separate branch of government is unique. I believe it is what has allowed our institutions to excel.

In recent months my colleagues in higher education and I have been dismayed by the intrusion of political considerations into the admissions policies of the University of California—our only equal among public institutions. This sets a frightening precedent. Those other state education systems where politics rule, are mediocre systems. I trust Michigan citizens will be alert to and oppose any efforts to compromise the indispensable independence that protects education from the ebb and flow of political passion.

Conclusion

America---and Michigan---have called on some generations more than others for exceptional service and sacrifice---Frontier, Revolution, Civil War, Suffrage World Wars I and II. Civil Rights Movements. --to defend and preserve our way of life for future generations. And Americans have always answered the call.. Now no less than in those earlier struggles, our generation must rise to the challenge to serve. This time there are no foreign enemies . Our battlefield is at home and with ourselves. I've no doubt that in the end we will prevail through our collective wisdom and resolve.

After all, as a colleague of mine says: "Democracies always do the right thing.....after they've tried everything else."

Closing

My time is more than up but I cannot leave without thanking you for your support of me and the UM over the years. The University could not achieved so much in such a short time without you and people like you throughout our state. No institution has more loyal alumni or citizen support. Your pride in us, commitment to our values and goals makes and keeps us strong.

You send us your children to educate. You come yourselves for continuing education, for cultural events, for help in starting new businesses and careers, the professional community relies on us to help them stay ahead of the curve of new knowledge and best practice; young and old alike reach out to us through the internet seeking information, counsel, access to resources such as our vast libraries and databases. You use our libraries on line, Your businesses rely on us for the research on which to found whole new industries. You come to our hospitals for the latest treatments. When our teams take to the field, I'm convinced it's your enthusiasm that gives them the competitive edge (You might have tried a bit harder this year).

As President, I have called for help from so many of you and you have never failed to come through.

Anne and I are Michiganders to the core We arrived in Ann Arbor in 1967 with two young daughters and we found a home. We never seriously thought of leaving Michigan—the state or the University.

In these seven years, I've tried to give something back to my adopted state and to the UM . The extent to which I have succeeded is thanks to you, citizens and leaders, and to the University's extraordinary faculty

and staff who carry on Michigan's historic commitment to excellence in public higher education.

Although I am leaving the Presidency, you can count on me to continue working to help our state and the UM prosper. I expect to be very active in coming years putting the UM's strengths to work for you to build a better future for Michigan.

Thank you.