

Senate Assembly - 1990

Introduction

Ah, it all starts again...

It is always incredible how rapidly the summer disappears.

And particularly this summer!

A Time of Uncertainty and Concern

The last few months have been a time of great excitement...

...but also a time of great concern...

...a time of highs and lows...

The extraordinary political changes in the Soviet Union and Eastern Europe, the reunification of Germany, the transformation of old adversaries into new allies.

Yet, even as this new spirit of optimism surged across the country, storm clouds were building on the horizon

i) The Crisis in the Persian Gulf,

just when we thought the cold war had come to an end and peace was at hand

ii) The growing uncertainty about our nation's economy,

perhaps best reflected by our growing triad of deficits...

...in federal spending

...in foreign trade

...and in the education received by our youth

and a host of other ills ranging from the ravages of drugs and crime to environmental impact to the

plight of the poor in our society.

iii) Growing concerns closer to home as the state of Michigan

appears to be slipping once again toward a recession.

The Good News

Yet there is also reason for great optimism and confidence concerning the future.

Indeed, in terms of the fundamental

life and purposes of the University,

I believe the institution is stronger than ever.

There are many signs of this vitality,

but the events of few days in late summer

brought this home to me.

Late July is normally a low energy, even depressing, time on campus

...heat, humidity, dog days, the annual budget crunch with Lansing,

...the Ann Arbor Street Fair...

Yet during a relatively short period of a few days in late July,

- i) Francis Collin's team of medical scientists announced they had discovered the gene responsible for neurofibromatosis... the Elephant's Man disease ...incidentally the same team discovered and cloned the gene responsible for cystic fibrosis last fall.
- ii) A team of over 100 Michigan students won the solar car race from Florida to Michigan, thereby earning the right to represent the United States in the world competition in Australia this fall.
- iii) It was announced that two Michigan faculty members, Sherry Ortner and Rebecca Scott, had won MacCarther prizes--joined by a third former Michigan faculty member, Tom Holt, now a visiting faculty member at the University. No other University won more than one.
- v) Gerard Moreau's laboratory announced the development of the world's most powerful laser--with power equivalent to 40 times the electrical generating capacity of the U.S.
- vi) Phil Gingrich announced the discovery of a fossil demonstrating that whales once had hind legs and feet!
- vii) And while not much happens in athletics during the summer, one of our women engineering students won the American Gladiator competition... and one of our alumni--and a former Regent-- Bob Nederlander, succeeded George Steinbrenner as managing owner of the New York Yankees. (The second Michigan contribution to the American Baseball League this year...we lent Bo to run the Tigers last spring!!!)

Not a bad week! But then, it was rather typical for this remarkable university.

It provided a healthy and happy reminder that the real business of the University is in the very capable hands of our faculty and students and, as always, they are doing us proud.

Key Themes:

Then, too, during the late summer there was tangible evidence of the remarkable progress the University

has been making on several strategic themes...

The Michigan Mandate

Students

Freshmen: We will not have precise data until the three-week counts, but last week's final deposits received information looks very encouraging:

Black: +34%, Hispanic: +25%, NA: +17%

NOTE:

- i) over 20% of Class of '94 are students of color
- ii) largest in our history

Graduate Students: Preliminary data suggests we're up

Professional School: Only selective data available at this point--but 20% of entering MBA class are Black, 29% minority

Faculty

Total Minority: +52

+22 Black, +20 Asian, +9 Hispanic, +1 NA

NOTE:

- i) Best year in our history
- ii) On track to double in 4-5 years

Globalization of the University

Teams of Michigan students traveled to Poland and Soviet Armenia to help these rapidly changing nations in their transition to capitalism.

Bob Zaonc announced an agreement in which ISR would help Poland build a counterpart research institute in the social sciences in Warsaw.

The President lent his daughter to Hungary for two years as a Peace Corps volunteer...

The Age of Knowledge

NSFnet, the major computer network, operated by the University in collaboration with IBM and MCI, passed the milestone of linking together over one million users in the U.S. and around the world...at over 500 sites.

The next stage, the National Research and Education Network or NREN, now stands poised to continue this momentum in the year ahead with strong support building both in the White House and in Congress.

Today in Washington, UM, IBM, and MCI are announcing the formation of a new nonprofit corporation to manage this “interstate highway system” for information transfer.

The Resources for Excellence

In addition to setting out these themes and putting machinery for implementation in place, Administration has had to give priority attention to our relations with many external constituencies and this is beginning to pay off.

State Support: While this was not an exceptional year, we managed to protect higher education from the executive order cuts experienced by other state agencies and achieve a 5% increase in our appropriation--the first time in four years that we have even been even with inflation. And we didn't ever take our usual bashing from the Legislature!

Federal: Our faculty continues to be extraordinarily effective in attracting research support from Washington, as evidenced by the fact that for the first time in our history, our federal support exceeded our state appropriation in magnitude.

Private Fund Raising: And we had a great year in private fund-raising, receiving over \$83 million in gifts and and additional \$28 million in pledges. This represents a growth of over 18% from previous years.

Internal Mangement: I might also note that under the leadership of VP Womack, the University now ranks first among all major universities in the nation in the investment return on its endowment.

The Challenge of Leadership

A Time For Leadership

However, it is a good thing that all of the vital signs of the University seem so strong, since it is also clear that our society, our nation--indeed, the world--are becoming ever more dependent on institutions such as ours.

Just think of the challenges which cry out for attention

- the plight of our cities,
- the greenhouse effect and global change
- international competition

Pacific Rim or Europe 1992

- health care: cancer, heart disease, AIDS
- new frontiers: outer space
or spaceship Earth

But it is clear the greatest need of all is for leadership
and this, of course, is the University of Michigan's
great contribution to America...

...through its teaching, research, and service

...through its graduates and their achievements

Indeed, leadership is both
our heritage
and our destiny!

Leadership in Higher Education

But there is another arena in which leadership is
needed, and that is in higher education itself.

The winds of change are blowing...

stirring the cauldron of higher education
to create a new model of the university
for the future.

Today many are questioning whether our
present concept of the research university,
developed largely to serve a homogeneous,
domestic, industrial society...must also evolve
rapidly if we are to serve the highly pluralistic,
knowledge-intensive, world nation that will be
America of the 21st Century.

Who will determine the new paradigm for the research?
university in America?

Who will provide the leadership?

Why not the University of Michigan?

After all, in a very real sense, it was our University
that developed the paradigm of the public university
capable of responding to the needs of a rapidly
changing America of the 19th century...
as American expanded to the frontier...
as it evolved through the industrial revolution...
as it absorbed wave after wave of immigrants
a paradigm that still dominates higher education today.
In a sense, we have been throughout our history the
flagship of public higher education in America.

In a very real sense, it was in Ann Arbor that the University of the 20th Century first evolved. Perhaps it is time that we once again played that role... defining the nature of the university once again... ...a university capable of educating the citizens and serving the society of not the 20th, but rather the 21st Century.

Reinventing the University

Of course, this has been one of my themes for the past two years.

I have suggested that we should look at the decade ahead as a period during which we should accept the challenge of creating this new paradigm of the university to meet the needs of a new century--to respond to a changing nation and a changing world.

Indeed, I have suggested that perhaps it is time for Michigan to "re-invent" the University.

Of course, "re-invent" is surely the wrong word... ...although it certainly did get everyone's attention.

What I think we really need to do is take up our historic role of leadership in higher education and once again try to define a bold vision for the future of the University of Michigan and to envision the actions we must take to get there through intensive debate and discussion.

I believe we must be bold and venturesome in considering our alternatives creative and inventive in seizing opportunity and meeting challenge

Of course I am not proposing that we change our fundamental missions of teaching and scholarship.

They must always remain the core of the University's activities.

It is testimony to the strength and vitality of this mission and its importance to society that universities have endured through so many centuries and now have taken root in every society across the globe whatever the political, economic or cultural grounding.

So our task is not to reinvent the mission.

Indeed we must be concerned about
preserving what is most precious and fundamental
about our University and its scholarly life.
Rather I believe our challenge is to adapt
some aspects of what we do
to changing needs and conditions
both within and outside the academy.
And to rethink some other aspects of our work in a fundamental way.
Much of what is needed is a rebalancing
where the pendulum has swung too far
to one or another extreme
at the expense of our basic mission and values.
During the past several years we have been taking
the first steps necessary for this renewal...
...Rebuilding the University leadership team...
..Establishing new and stronger bonds
with the constituencies we serve...
...Articulating the themes of change we believe will
dominate our society in the years ahead...
...the cultural diversity of our nation
...the growing interdependence of the global village
...and our transition to a knowledge-intensive society
But now we must join together to focus our attention on
our primary endeavors of teaching and scholarship
and attempt to define the fundamental academic
mission of the University in light of the changes occurring
in our internal and external worlds.
We should use this coming decade of transition to a new century
to consider who we are and what we want to become.
We will not be alone in our deliberations.
From Harvard to Stanford, Cornell to Berkeley...
...indeed, Oxford to Cambridge...
our peers are also taking up the challenge of reflection and renewal.
And we should remind ourselves that
As institutions, universities are always changing--
probably never more so than in the past fifty years
as the modern public comprehensive research university
that we know today took shape.

The Changing Nature of Higher Education

These radical changes in the very nature of

the university were driven by economic, social, political and technological forces in part generated within the academy and, at the same time, transforming it.

These accelerating forces for change swept over and through us with little systematic effort on our part to self-consciously assess, resist, dissent or control them.

In essence, we adapted.

Of course this was made much easier by unprecedented growth and prosperity during the past half century

In the postWorld War II years we have become a central institution of our society with new roles and responsibilities for everything from economic development to national security, ...community development to remedial education, ...health care to the exploration of space, ...the preservation of our culture to triggering of social change.

Until by now, we are surrounded by multiplying expectations, oftentimes conflicting about our purposes, goals, traditions.

For intellectuals, historically consigned to the sidelines during America's formative years,

it has been a heady experience to find ourselves admired, flattered, needed and, best of all, funded at levels undreamt of only a little over a generation ago.

For much of their history, America's universities were protected enclaves respected well enough but mostly unnoticed and allowed .

to go about our business unchallenged and largely unfettered.

What a contrast today, when we find ourselves considered a key social economic, political, social and cultural institution.

Divisions abound based on disciplines, professions, gender, race, ethnicity, generation, class, belief.

Today people ;in the academy and outside it define themselves more on the basis of what makes them different than what we share in common--our shared fate as human beings.

Demand priority for countless needs, large and small,
and for proliferating special interest agendas
threaten to overwhelm our larger institutional purposes.

And this is occurring in a period of scarcity.
have reached the upper limits of budgetary growth
for the foreseeable future.
and demographic slump in student population
coupled with an near unprecedented need
to replace our aging faculty.

How did we get into all this challenge and controversy?

Our recent history is obviously far too complex to offer easy answers---
or identifiable villains--although some might point an accusing finger
at past and present administrations just out of habit.

We have been acted upon by powerful forces.
been part of powerful change and movement
not just in national but in world society.

And not only is transformation not over, it has become
a permanent feature of modern life.

Some of the changes these transformations have wrought
in the academy have been positive, some not.

But most of them have not been the result of reasoned deliberate choice
fully debated by faculty and entered into self confidently.

More often changes have been the result of the accumulated effect
of countless day to day decisions most of them
leading to unquestioned incremental growth
and unexamined adaptation to external and internal forces.

During much of the post war era it has been easy to drift forward
in this fashion with relative ease because the effects
appeared to so benign--

that is we have experienced unprecedented growth
and relative prosperity
through much of this period until the eighties

And in such prosperous times it is easy --

and perhaps especially easy for us Americans--
to believe that growth and prosperity are the sign
of virtue rewarded if not by Divine Providence
then by a public that has until recently given
so much support and respect to our universities and colleges.

For quite a while we enjoyed immense public confidence
always near the top in opinion polls, popular and respected.

And let me be clear that I believe that
on the whole our nations' universities and colleges
deserved this respect and esteem.

We have much for which we can feel proud.

The tremendous explosion of knowledge
The unprecedented extension of educational opportunity
the new connections between theory and practice
that energize and inspire so much creativity and innovation.

The connections within the academy between and among
disciplines and professions.

Much of the technology and ideas and the people educated
to use them are products of the academy.

The Universities have met so many new social needs,
medical care, entertainment, economic development--
as well as before--many new demands and most of them
met and surpassed.

But, ironically enough, our increasingly critical role has
not brought with it increased prestige,
public confidence or respect.

Instead, like so many other institutions
we are roundly criticized by right, left and center
and from even from within
by many faculty, students and staff
for flaws large and small, fundamental and trivial.

The titles of the books by some of our critics reveal this:

... "The Moral Collapse of the University"

... "Tenured Radicals"

... "Killing the Spirit"

... "Profscam"

...and, yes, Virginia, "The Closing of the American Mind"

It might be easy to answer and dismiss these critics one by one
with logic, or a righteous dismissal of any
who would question our purposes and privileges.

And of course, there there is much that is refutable
in the recent spate of books and articles from the right and the left
that question our performance
and even reject the very foundation of what we do.

But I believe it is a mistake to simply dismiss our critics.

Rather we should pay attention to what they say,
since what they all appear to have in common is

a question of our commitment to fundamental academic values.
Besides, the truth is that we can no longer ignore them even
if we wanted to.

They will not go away.

To the extent their criticism is constructive, we should try to hear it.

To the extent they are wrong, we should try to answer them

with a compelling affirmation,
a renewal of our vision and purposes, a confirmation
of our unique community rights and responsibilities
arrived at through extensive debate and discussion
among ourselves and with our many constituents.

The Role of the President

But we should not leave the questioning to others

but rather take the initiative

...to reflect and take stock

...to consider priorities and choices

to use this period of transition

...to question ourselves

...to reason together about our future.

...to ask what we are and what we must become.

And, of course, that is, in part, the role of the President
of a University.

To ask the questions, to pose the challenges.

In fact, I'm afraid that is all that most presidents

have to offer...lots and lots of questions

...with very, very few answers.

To be sure, the administration can lay the foundation
for these discussions...

...we can also help to secure the resources

...build the necessary public support

...in addition to keeping the buildings heated

...and the parking lots repaired

But when it comes to renewal, to redirection,

to revitalization, it is our faculty who must

lead the way.

But the faculty determine the curriculum, the professional rewards,

the balance of responsibilities, the education of graduate

students who will soon be leaders of the world's universities,

and it is faculty who will hire indeed are already hiring

the faculty of our future who will provide the leadership

and direction for Michigan long after I and many of you are gone from here.

They not only have the means, they have the duty.

Alfred North Whitehead

“Duty arises from our potential control over events..... the present holds within itself the complete sum of existence, backwards and forwards, that whole amplitude of time which is eternity.”

Over the course of the year ahead I intend to move into this role of questioning and challenging ...stimulating our consideration of a wide array of issues concerned with academic life.

As a preview of coming attractions, let me give you several examples of issues I believe we must discuss.

Q1: What is the fundamental role of the university in modern society?

What is our core value to society?

Obviously there is no simple answer.

But Sir Eric Ashby offered the following definition that might give us a beginning point.

“The University is a social instrument for investment in man”.

(He said this in 1974 so perhaps today we would say for investment in humanity, but the point is powerful.

“Consider the remarkable ecology of universities.

Universities date back to the middle ages and the girdle the earth.

From the plains of Lombardy they have been transplanted to the grey climes of northern Europe, to the African bush, to the American cities.” They have adapted themselves to totalitarian and democratic societies, to rural communities and to urban technologies. but through time and space they have preserved something resembling a genetic identity, they remain unique instruments for investment in man.

I cannot define this identity but I can describe its products.

At their best, universities endow the men and women who pass through them with a characteristic intellectual equipment: the capacity to reconcile orthodoxy and dissent.

Intellectual life demands a respect for what has gone before and acceptance of a rigorous discipline to a tradition of learning.

To this extent, universities are a point of stability in society: they anchor a society to its past. but orthodoxy is celibate;

it breeds no fresh ideas; unless tradition is constantly reexamined, it becomes oppressive. So in the course of their evolution universities have learnt not only to pass on a body of knowledge and ideas but to train students to expose errors in knowledge and question ideas. "To train young people in this dialectic between orthodoxy and dissent is the unique contribution which universities make to society.

If the issue is to get back to fundamentals, to reorganize around our basic values, then how and where do we begin?

Q2: The production of leaders

Michigan's historical role has been to educate leaders for our society. But what kind of education should we provide to our students today to equip them for leadership roles in a very different nation and world that we, ourselves, have known?

What should we pass on and what should we renew or reshape or rebalance?

What has been appropriate for an industrial, domestic, hierarchical society does not seem appropriate in all aspects for the future.

Q2: Undergraduate Education

There is a growing national consensus that we have lost our balance and direction when it comes to undergraduate education.

Recently, Professor Weisbuch and his colleagues in LS&A have produced an extraordinary report on the quality of the undergraduate experience--going far beyond the role of merely questing and instead suggesting a broad array of actions.

I think their report offers the kind of creative vision we need and I hope that every member of the faculty will read it engage in the debate about its recommendations and help us refashion our teaching and curriculum

It can serve as an excellent vehicle for the University to address its commitment to undergraduate education.

There is also a recognition that we need to consider the curriculum :
Hannah Gray

"To think about education, then, (she says) is to think about the major issues of human life and social purpose with a view that looks not only to the heritage of the past and the clamorous problem of the present, but to the

uncertainties and possibilities of the future.
To think about the aims of education is to ask what kind of person, what kind of human competence, what kind of goals might be the most desirable for the social order and the quality of civilized existence. How should people be educated toward becoming such individuals and possessed of such goals and competences?" As president Gray goes on to say, these are not simple questions, or abstract ones either.

"For to wrestle with them is also to confront complex issues of individual and public choice."

As we do so, I hope we will hear President Gray's questions in the back of our minds.

What kind of education prepares a citizen of tomorrow? Historically, universities were concerned with development of whole person, with character, values, citizenship.

We have long since abandoned concern for development of character but do we need to revisit this idea in a time when moral and ethical issues and responsibilities are clearly so critical to our society's future?

In a heterogeneous society such as ours, we obviously cannot expect that all of our students can or should share all the same values, but should we not be concerned that they leave with an understanding not just of our differences but also of our common humanity, our obligations and responsibilities to each other as well as our individual rights?

An aside: What is the role of the University in K-12 education?

It is clear that we must view education as a whole--a seamless web, a continuum. How can we most appropriately couple undergraduate education both to later graduate and professional education--and to primary and secondary education?

Gray puts her finger on the fundamental question:

What do we think our students need to know to function in a new century.

Education that has served industrial, hierarchical, homogeneous, domestic society, will not serve us today let alone tomorrow.

What should we aim for .

Here we have some sense of consensus, since certain common themes are found in almost every discussion of curriculum.

Critical skills

Inspiration to lifelong learning

Awaken and inform humanistic spirit

Scientific, technological computer and mathematical literacy

Balance of specialized and general knowledge--

Ability to understand and apply knowledge

in broader intellectual and social context

Ability to collaborate and work in teams/has our focus

been too much on individual competitive learning

Personal character and civic values.

Hannah Gray

“And so I come back to the point that the quality of education and of the effects which it may have has to do not with

the curriculum alone, important thought that is,

but with the purposeful spirit that animates the curriculum

and its teaching. A curriculum represents an expression

of aims that have no life if that spirit dies or fades.

It needs constant revitalization. Excellence in education

requires continuing reflection and debate in the light of the

questions and opportunities created by new knowledge

and new conditions, new needs, new generations of students

and teachers alike. And if the questions and dilemmas

turn out to be old, we need to make them our own,

to identify the enduring questions in the context of their existence for us.

Q4: Quality of Teaching

And what about the age-old questions surrounding a proper balance between teaching and research?

Here, I must confess a very special interest, since

I have just agreed to a two-year term as chair of

standing committee of the National Science Board

concerned with Education and Human Resources.

We are in the midst of a very major effort to examine

the impact of research on the quality of

undergraduate education.

An Aside: NSF Studies

Incidentally, I should note that our preliminary studies

are suggesting something rather surprising--

that the learning environment provided by

the large research university may be a significant advantage for undergraduate education.

Study

Sample: Over 50,000 students majoring in S&E whose 1987 GRE score (quantitative and verbal) could be matched by ETS with SAT score

Variables: GRE, SAT, gender, race, UG major, UG school

Value Added: Average addition to a student's total GRE score associated with going to a particular school, irrespective of SAT, gender, minority, or UG major.

Results:

1. The top 20 research universities scored far higher in the "value added" than any other institutional type...even better than the small, prestigious liberal arts colleges to renown for their teaching focus.
2. The educational value added was highest in those institutions doing the most research.
3. It was also highest in the largest institutions.

Hence, it is clear that both the size and intellectual excitement of major research universities such as Michigan, Berkeley, Harvard, and Stanford create the most effective learning environment--at least for students such as yours.

For that reason, there may be no reason to be apologetic about the research performed by our faculty--or the services performed by our professional schools. They all add to the educational experience of our undergraduates.

Not to say we cannot do far better...

...but we should take care not to throw out the baby with the bathwater...

Shapiro

"..increased disciplinary specialization of the faculty also has an important impact on the structure of our educational programs....."The predicament is that they are transmitting what they know--and love--with little awareness of what the student needs to learn.

Indeed, we could almost say that the real problem is that teaching and research are too closely related.

At the root of our unmet challenge in undergraduate education is the failure to distinguish between the transmission

of knowledge and the development of a capacity for inquiry, discovery and continued learning.

Q5: Intellectual Questions

The balance between disciplinary and interdisciplinary activities

Many believe that the most exciting work today is occurring not within the disciplines, but at the interfaces between them where there is a collision of ideas that leads to new knowledge.

Some would even contend that this deification of the disciplines may be leading the academy toward intellectual stagnation, trapped in the sterile pursuits of increasingly specialized studies.

But there are also those who believe that there is a certain faddish nature to interdisciplinary work... and that efforts to stimulate this activity are, in reality, just causing people to staple together unrelated projects into proposals so that they smell more interdisciplinary...

It is certainly true that the academic disciplines today tend to dominate the modern university...whether in the areas of curriculum, resource flow, administration, or rewards.

Further, it also seems clear that increasing specialization has led many of our colleagues to focus their loyalties more on their disciplines than the institution, thereby losing that sense of a community of scholars so important to a University.

As we attempt to build stronger and stronger programs in the traditional disciplines, we also tend to create strong centrifugal forces which tend to push the various components of the University to the periphery.

On the other hand, we can also diminish the intellectual core of the institution by forcing interdisciplinary activity where it is not really appropriate, thereby perhaps diverting badly needed resources from the disciplines and starving the core of the University.

Achieving the appropriate balance between the disciplines and interdisciplinary teaching and scholarship is one of the major challenges before

institutions such as ours...just as it is before
the nation's research establishment.

Alfred North Whitehead

“We must beware of what I call inert ideas, that is to say, ideas that are merely received into the mind without being utilized or tested or thrown into fresh combinations. Every revolution which has ever stirred humanity into greatness has been a passionate protest against inert ideas. Then, alas, it has proceeded by some educational scheme to bind humanity afresh with inert ideas of its own fashion.”

Given the wonderful fertility of so much teaching and research here, we might think that Whitehead's warning does not apply to Michigan.

But we should never be complaisant.

There is reason to reflect on some fundamentals of the way we organize ourselves and our work into disciplinary compartments.

Evidence of hardening of intellectual arteries

Parting warning from Billy Frye

Acknowledging the importance and strengths of the disciplines in university life he said,....” the disciplines have come to be the foundation, in some ways almost the very essence of the University, and they are supported and valued accordingly.”

But, he points out, “as is so often the case, a source of great strength can also be a source of great vulnerability. ...and unwanted side effects, as well”

He goes on to note some of the invidious effects of disciplinary dominance in University life.

1. Tendency to conformity and conservatism in scholarship
2. tendency towards specialized or discipline or task oriented scholarship in preference to conceptually “larger” and more synthetic and integrative work.
3. inhibiting effect on interactions of scholars across disciplines and impediments to involvement in emerging new and unproven fields.

I would add to this list, the orientation of faculty to national disciplinary

community perhaps sometimes at the expense of institutional citizenship.

And, dare I say it, but does the narrowness of disciplinary perspective

sometimes lead us to a smugness, miscommunication, even arrogance among faculty, departments, and schools even here at Michigan?

I sometimes think I detect it when I hear humanists

--perhaps with a touch of self righteousness--berate colleagues in the sciences and professions.

for lack of humanistic values.

I might point out that it is the rare scientist or professional

who has not in his education learned something of history, literature and philosophy.

But it is the rare scholar in the humanities who is

mathematically literate

or conversant with the methods and principles of knowledge in the sciences and technology

even though these are the driving forces transforming our world.

and, in fact, clearly influencing important cultural expression.

And lest I be accused of favoritism, let me ask my colleagues

in the sciences and professions

whether their work is animated by spirit of humanistic values that illuminates the context,

meaning and impact of what they do on human life and our earth.

Do we always make room for the expression of heart

as well as art in our practice and teaching of science and professions?

I don't raise these questions as a criticism of any group.

Rather I point to the gulf that C. P. Snow saw opening

now over 40 years ago, an intellectual world divided

into two cultures--Scientists and technologists on one side and humanists on the other,

That gulf of ignorance, misunderstanding and even hostility

has in many ways widened in the years since Snow first pointed to it and we see its debilitating effects in our teaching,

research

and community life.

We need to try to bridge this gap that is so artificial

and damaging

and we might begin
by adopting a little intellectual humility
as we approach and engage one another in debate.

Debate not just about the complex and difficult issues
of building interdisciplinary bridges but as well about
the of the future of our University, of teaching, scholarship
and of academi itself.

We will need good will, mutual respect, open minds and
commitment to reasoned discourse.

Otherwise what should be a rich intellectual debate
can quickly lead to divisiveness and recrimination,
of which we already have a more than sufficient supply.
which are not likely to lead us very far towards an enlightened
vision

Given our present disciplinary compartmentalizaiton,
what are implicaitons for future?

How can we sustain the strenght of disciplinary rigor
while at the same time encouraging more interconnection
and concern for higher levels of generalization.

- interdisciplinary

UM noted for openness to interdisciplinary initiative,
witness the XX centers and institutes,
but is this enough?

What can we do to encourage more interchange,
a better balance between generality and speciality.

- International and comparative perspectives

“outsider” perspectives and experiences--MacAruthurs
recognized the wonderful fertility of new and
comparative

perspectives of the Post Emancipation project which
includes comparisons of experience both across
political
and cultural boundaries and as well as across time.

The Global Warming project that brings together sciences,
professions and humanists to understand immense
cplexities of human interaction with the earth,
exemplifies the ways that Michigan’s intllectual breadth
and depth can be brought to bear on problems of
critical
social importance--advancing our theoretical

understanding as well as our capacity to survive and improve our conditions of life.

Question is can we identify and reward scholars on cutting edge

and advance their success within the current disciplinary framework?

Or are other arrangements needed?

And then how do we measure and sustain the quality of what we do?

Specifically, can departments seek out, hire, evaluate and promote real brilliance which does not fit any preordained mold? Or even those who work on the frontiers where disciplines or professions and practice intersect?

It has been noted that truly creative breakthroughs are accomplished by outsiders, people new to a field who see it with fresh eyes.

How can we bring more fresh eyes in to the academy?

Or how can we each open our eyes to see afresh?

What new balances can we strike between demands of discipline and possibilities of genius, synthesis and generality?

Do we need to consider more openness to bringing people into faculty teaching and or research from government, the arts or other walks of life for short or long term appointments?

Venturesome scholarship

Intellectual leadership...

demands pushing to the forefront of discovery

One of the great challenges of research universities

is how we can encourage more people to work down in the high-risk, exponential part of the knowledge curve... without unduly jeopardizing their academic careers.,

We must stimulate more of a risk-taking intellectual culture in which people are encouraged to take bold initiatives.

Q6: Graduate Education

We have an unparalleled opportunity to shape the academy for the future through our graduate students.

How do we meet this responsibility?

Oh, yes, and another pet peeve...

Why does it take so damn long to earn the PhD in some fields.

It may interest you to know that the average length of time from the B.A. to the PhD across all disciplines now approaches 10 years!

I find this not only puzzling--but perhaps a bit feudal as well!

Why should it take so many more years to produce a PH.D than a medical doctor who will hold human life in the balance?

We all know that it isn't the facts or sheer bulk of information that prepares a Ph.D. for her roles as teacher and researcher.

The key is preparing students to keep on learning as well as to give a thorough grounding in their field.

But are we taking too long and perhaps giving more weight to perseverance than creativity and imagination?

Does it make sense for all of young adulthood, one of the most vigorous and productive periods in one's life, to be spent as a student?

Perhaps we need to rethink the very nature of graduate education to find those fundamental principles and methods that are needed by a scholar and just scrap some of the drudgery we are insisting on now.

Q7: Faculty

Nowhere is the opportunity to shape the future of Michigan greater than in the hiring of young faculty that we are doing now and will do in increasing numbers over the next decade and more.

Can we keep faculty initiative in setting agenda for research, keeping our focus on genuinely important intellectual issues in face of competitive xx and funding pressures?

How can faculty do what they consider important research as opposed to that dictated by external agencies and their disciplines?

How do we select for brilliance and creativity?

Indeed, do our present traditions and practices in faculty selection allow us to select genius?

How do we assess and enhance teaching ability?

How do we evaluate and reward service activities?

Indeed, what is the appropriate form of service in the research university?

Given the dominance--albeit now drawing to a close--of the early sixties generation in the present senior rank

of the professoriate, how do we assure a strong voice
for younger colleagues
in determining our future?

After all, they will soon assume leadership and we need
their experience and vision--

Do we need to open up to them more and relinquish some of
the privileges of senior numbers and rank.

Departments cannot cover all areas of their field
but do we need to look at rebalancing breadth and depth?

Q8: Issues of Values, Community, Civility, Collegiality

And what of our institution as a community?

What are the values that ought to guide us in our relations
with one another and to our society.

These trigger a very complex--yet very important--array
of questions I would like to place within a broader context
for the moment.

Themes for the year ahead

Inventing the Future

One of characteristic traits of scientists is our
excessive preoccupation with long range planning.

We spend a great deal of time thinking about the
future...not simply in an effort to understand it,
...but to see if we can actually create it...

In a sense, our key spirit is best described by the motto:
"The best way to predict the future is to invent it!"

Themes of Past Years

It was in this spirit that in each of the past several
years we have attempted to select key
strategic themes and focus our attention on
these.

For example, in 1987-88, the key theme was transition...
...a transition in the leadership of the University
with a new president, provost, chief financial officer,
...even a new athletic director!

During 1988-89, we attempted to set out several of the
key themes we believed would dictate change
in higher education during the 1990s...
the themes of:

...demographic change and cultural diversity
...the evolution of the United States into a

world nation in an ever more
interdependent global community
...and the age of knowledge we see ahead
in which the key strategic resource
necessary for prosperity and social
well-being becomes knowledge itself--
that is, educated people and their ideas
Last year, 1989-90, we focus our attention on rebuilding
and strengthening the bonds between the University
and several of its key external constituencies...

State relations

Federal relations

Media relations

Community relations

Alumni relations

The Campaign for the 1990s

In a similar spirit we have chosen yet another key strategic
theme for the year ahead: the theme of community...

The Theme of Community

In any institution, particularly large, complex, and rapidly
changing institutions such as universities,
there is always a litany of commonly mentioned concerns...

1. Described in part by terms such as:

Malaise

Morale

Separatism

Fragmentation

2. Or in terms of behavioral issues such as:

Substance abuse,

Crime

Racism, Sexism,

Vandalism

3. So too, do concerns stimulated by other issues drive us apart...

Budgets...

Salaries

Special interest agendas

Parking

4. The perceived conflict between

Students vs.

Faculty vs.

Staff vs.

Regents vs.

Administration

(Everybody is in conflict with the administration, of course)

5. All too often the mottos in such complex institutions are:

“What’s in it for me?”

“What have you done for me lately?”

I believe that these concerns and issues, while deserving of attention, to be sure, also can serve to fragment the University even further.

I also believe we must strive to balance them with other objectives, perhaps best expressed by the so-called “C” words:

Community

Communication

Comity

Collegiality

Collaboration

Cooperation

Coherence

Concern

Caring

(My wife also suggests cleanliness and chastity)

(These stand in sharp contrast to our present preoccupation with the “p-words”...

politics, parking, Penn State, provost, and President!)

These are the “glue words”, the values and principles which serve to bind us together as a community.

In the year ahead I believe we must strive to understand better and take the actions which can bring us closer together as an intellectual and moral community...

that we seek to articulate and adhere to our most fundamental academic and civic values

and that we all strive harder to balance our passions to protect our rights with our obligations to accept our responsibilities

...for ourselves

...to each other

...to our community

and to the future

It is my belief that we must all strive to create more of a sense of

...pride in...
...respect for...
...excitement about...
...and loyalty to...
...this great University!

And I am committed to doing all I can to build this level of
commitment!

Conclusion

As I warned you, I do not have answers to the many questions
we need to ask about our future.

As you have now heard, I don't even begin to have all the questions.

But I hope each of you and all of your colleagues
will take up the challenge of my questions
and that you will come forward with
even more critical ones of your own.

Our task is to sustain and build a University
that represents the very best legacy we can pass
on to coming generations.

We have an unparalleled opportunity to shape the future
of our own University and because of our tradition
of leadership to shape the academy for generations to come.

Now time is ripe for taking up a much larger
and more basic challenge to the University community.
more especially to the faculty, for you more than any others,
hold our future in your hands.

A Personal Remark

You know, 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.

A personal note here:

It was some 20 years ago that Anne and I left
the warmth and sunshine of Pasadena to come to
Michigan.

We did so, in part, because Michigan had what was
clearly the best department in the world in my
particular field of interest, nuclear engineering.

And throughout almost two decades on this campus,
I have found myself surrounded by faculty and
students who have arrived on this campus because

they wanted to be associated with the very best...
...the world leader...in education and research.
These linked themes of leadership and excellence
are what have kept me here...and what make
this University so very special.
I believe the challenge of re-inventing
the American university for the 21st Century
...is not only an exciting and
challenging mission for the 1990s
...but it is also a mission befitting
UM's long heritage of leadership
The 1990s will be a time of great challenge
opportunity, and responsibility for your university.
But they will also be years of great excitement.
As we begin this great adventure of determining
the nature of the university capable of
serving a new century.

Other Possible Add-Ins

Bad News

Uncertainty

For world, as we face the bitter disappointment
of renewed international conflict
just at first moments of the post-Cold War era
so full of the promise of peace and all its hope for renewal.
in American life

It is a time of uncertainty in our country's economy
and in our society that is struggling with questioning and
with the divisions of ethnicity, class and region.

And uncertainty as our society experiences the transformations.
of our population, economy and society
that University has been preparing for these past few years.

Increasing pluralism, internationalization
and shift to age of knowledge.

And it is a time of uncertainty for the State of Michigan
that sees national problems magnified here and across the Rust
Belt

placing our State "at a crossroads"
with important implications for the future of the UM.

Indeed, it is a time of uncertainty for many of our our institutions
however venerable

questioned and criticised, and suffering
a loss of confidence and authority.

Looking for scapegoats...

As we humans too often do, when we are uncertain,
we look for scapegoats
and seek explanations for our problems and confusions
everywhere but with ourselves.

America has been doing a lot of this in recent years

and here on campus, we have seen some of it, too.

This has been damaging and has lost us valuable time.

But we should not let preoccupations with uncertainties of the
moment

keep us from envisioning the larger and longer term
challenges and opportunities of our future.

Michigan at a Turning Point

I believe the University has come to
an important turning point in its history.

We face unparalleled opportunities but also difficult challenges.

The choices, large and small, we make in next few years,

will determine not just our own future

but, if we choose the difficult path of leadership,

that of American higher education.

Historically, we have been leaders.

At critical turning points in the evolution of higher education in America,

our peers and the nation have looked to us

as an innovator and guide.

Few institutions have been given the opportunity to have so

major an influence on higher education and society at large.

Once again, I think the nation needs our vision and commitment

if our University and all of higher education is to play

the pivotal role in preparing our society

to use the fundamental transformations positively

to build a better future for all our people.

I believe we must accept the responsibility of leadership

because it is our heritage

because, as a public institution, we have been privileged

and supported by the public

and this brings the obligation to serve

the people of our state and nation

when they need us most.