

+Senate Assembly - 1990

+Introduction

- +Let me first welcome all of you back for the new academic year.
- +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 think the State of the University has never been better.

+I base my assertion on many things

- +but the events of just a few days in late summer

- +illustrate my point quite effectively.

+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: Minority +35%, Black +30%, Hispanic +
 - +Graduate Students
 - +Professional School:
 - +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 Zaconc 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.
- +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
 - +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 grown 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
 - +While many concerns swirl about higher education these days,
 - +it is also clear that our nation and our world are becoming
 - +ever more dependent on the research university.
 - +Just think of the challenges which cry out for attention
 - +• the plight of our cities,
 - +the development of an underclass
 - +polarization of American society
 - +• 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 the greatest need of all is for leadership
 - +and this 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 we have an even more ambitious
 - +mission of leadership:
 - +The winds of change are blowing...
 - +stirring the cauldron of higher education
 - +to create a new model of the university
 - +for the future.
 - +Hence, is it not appropriate to question 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 the University of Michigan
- +which invented the University of the 20th Century.
- +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
- +Now it is time for us as a faculty 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 Texas,
- +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
 - +This most recent and radical change
 - +was 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.
 - +And this was made much easier by unprecedented growth and prosperity.
 - +during the past half century
 - +In these postWorld War II years we have come
 - +to be a central institution of our society.
 - +with new roles and responsibilities for everything
 - +from economic development .
 - +to home for creative artists, to national security,
 - +policy analysis, community development,

- +remedial educators, producers of ever more professionals.
- +Until by now, we are surrounded by multiplying expectations,
 - +ofttimes 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.
- +But this 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.
- +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 all said before--many new demands and most of them
 - +met and surpassed.
- +Getting the Critic's Message
 - +But in more recent years academia is hearing
 - +a different kind of judgment from the public
 - +and from the powers, not divine, but governmental.
 - +We are hearing harsh criticism, some of it stinging, from
 - +government, business, the public
 - +and from within our own house of intellect.
 - +Just hear some of the titles from books by academics:

- +Tenured Radicals, The Moral Collapse of the University,
- +Profscam, Killing the Spirit...
- +There are plenty more where these came from,.
- +we can be sure.
- +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.
 - +To smugly proceed as though we had nothing to learn from them.
 - +If nothing else, we can thank them for questioning us in ways
 - +that should force us to question ourselves.
- +One thing I believe most of our critics have in common
 - +is a questioning of our academic values.
- +I think we should pay attention to what they say.
- +Besides, the truth is we can no longer ignore them.
- +They will not go away.
- +They don't by any means agree among themselves
 - +about what is wrong or missing from our values.
- +But perhaps we can grant them a hearing
 - +especially since we also are experiencing growing
 - +unease about our values and purposes.
- +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.
- +In this way, we will prepare ourselves and our University
 - +to meet the future--probably not with consensus
 - +about every aspect of our collective life
 - +but I hope with a stronger campus compact as
 - +the recent Carnegie Commission advocates.
- +University at Crossroads
 - +We should not leave the questioning to others
 - +but rather take the initiative
 - +to reflect and take stock
 - +to consider priorities and choices
 - +use this period of transition
 - +to question ourselves.
 - +to reason together about our future.
 - +to ask what we are and what we must become.

- +We face these questions not only in a time of heightened criticism,
+but in a period of growing scarcity.
- +I won't be so foolish to suggest, as some have done,
+that we ought to be grateful for scarcity
+for imposing the need to make informed choice,
+to go back to first principles in order to set more thoughtful priorities.
- +Believe me, I don't feel grateful to see our resources
+constrained when I know how many important
+educational and scholarly needs are unmet..
- +The problem as we all know, is that it is easy
+to have ideals when there is no price tag.
+Now we will have to sort out our ideals, values and priorities
+and make painful decisions.
- +We will have to sort out our special interests
+and perhaps for the first time in a while
+we might have to consider sacrificing our individual or special interests
+for the good of the whole--for some larger common
+purpose we hold dearer .
+than our individual interests.
- +For us to do that, we will have to build a compelling vision
+and sense of commitment to community, renew our faith
+in enduring values of scholarship, and commitment to
+the future.
- +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.
- +We will not be alone in our deliberations
+or in making the hard choices and sacrifices needed for renewal.
+Our peers are also pausing to reflect and debate the future.
+It is a healthy sign.
- +Role of President
+to ask the questions, pose the challenges
+I have not come here today with answers.
+I don't have answers.
+All I have for you is questions.
+What questions should we be asking ourselves here at Michigan?
+I hope we will all engage in questioning ourselves about our future.
+Not just faculty, but also students and administrators and staff.
+We are at a crossroads in our history.
+This is a remarkable time when, for a number of reasons,
+we are in a position to shape our future.
+We can deny or delay this chance to reflect
+and act to shape our future, but if we do that

- +we can be sure that others will make choices for us,
- +that external forces will shape much of our direction.
- +But now, today, we still have the chance
 - +to envision and create a University to serve the future.
- +I cannot tell you what the university of the future should look like.
- +Much less can I bring it about..
- +The administration can help lay the foundation
 - +secure the resources, help build the public support and
 - +keep the buildings heated--
 - +but when it comes to renewal, to redirection, to revitalization,
 - +it is our faculty who lead the way.
- +So I can and will raise the questions,
 - +even issue some challenges to our community
 - +but it is only the faculty who hold the means to envision a bold future
 - +for the University and to make the vision a reality.
- +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.”
- +We need to see a vision of Michigan for 21st century
- +Q1: What is the fundamental role of Universities?
 - +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 future?
- +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.
- +From Stanford, from Harvard, from universities and colleges
- +across the land comes growing
- +concern to rebalance the importance of teaching in our universities
- +and in faculty careers.
- +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.”
- +Recently, Professor Weisbuch and his colleagues have reflected deeply
 - +about undergraduate education at Michigan.
- +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
- +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?
- +Q3: Curriculum
 - +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.
- +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.
- +Q4: Quality of Teaching
 - +Are we doing all that we can to bring the advantages of
 - +new technology to teaching?
 - +There are a number of examples on our own campus i
 - +n which a thoughtful teacher has used technology
 - +to improve teaching with dramatic results.
 - +Are we applying what we know about cognition and learning?
 - +Are the disciplines an impediment to renewal of teaching?
- +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: Deification of the Disciplines
 - +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 compartmentalization,
- +what are implications for future?
- +How can we sustain the strength 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--MacArthur
- +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 complexities of human interaction with the earth, exemplifies the ways that Michigan's intellectual 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?

+Q6: Graduate Education

- +We have an unparalleled opportunity to shape the academy for the future through our graduate students.
- +What do we need to do to meet this responsibility?
- +Do we need to identify the existing graduate education culture?
 - +Flexibility
 - +Interdisciplinary focus
 - +Values and socialization
 - +Teaching skills and commitment
 - +Context
- +How can we balance specialization with more interdisciplinary work?
- +As Dean D'Arms is asking, how can we speed up the process of graduate education.

- +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?
- +Have we gone too far in the length of time needed to complete
 - +a degree?
- +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. (add Hollinger quote)
- +Whether we shorten the length of graduate education or not,
 - +I do know that what we are doing in graduate education
 - +will have an impact on America's universities until
 - +the middle of the next century and beyond.
- +We know that in just a few years, in fact, starting now in some fields,
 - +we will see faculty turnover that will create an opportunity
 - +not seen since the early sixties to shape the academy
 - +through a new generation of faculty who will define scholarship
 - +and the very nature of our enterprise for the next half century
 - +and even beyond..
- +This is an extraordinary moment to make a difference.

+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?
- +Can we rebalance the balance between quality and sheer quantity
 - +of research productivity ?
- +What does service mean for the research university?
- +This would imply more institutional latitude in time and resources,

- +in “fault tolerance”, that is we would have to accept
- +failure--sometimes on a formidable scale in terms of our investment.
- +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
- +I have raised many questions about our work as
- +researchers and teachers.
- +But 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.
- +Themes for the year
- +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
 - +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 skapegoats
 - +and seeek expalnations 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.
- +Conclusion
 - +As I warned you, I do not have answers to the many questions
 - +we need to ask aobut 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.
 - +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.
 - +Our history and tradition give us a solid foundation
 - +on which to build a Unviersity for the new century.
 - +We have always been pioneers
 - +and there is every reason to have faith in our University
 - +and in each other.-
 - +This could be one of the most exciting times in the history of our University.
 - +We can make a difference.
 - +Working together, I believe we will make a difference,
 - +not onlyu for our University but for our State and our country and the world.
 - +that is both our heritage and our destiny.
- +Concluding Remarks
 - +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 just about 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.
- +We 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 stand on the threshold of this
 - +great adventure of re-inventing the
 - +University for the 21st Century,
- +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.