

Minority Student Welcome

Welcome to Michigan

On behalf of the faculty of the University, I
would like to welcome you to Michigan...
and to our family of the maize and blue!
I suspect this has been a hectic and confusing
week for many of you...
and the last thing you probably need at this
point is more advice...particularly from
a University President.
So I won't attempt to give you much advice...
rather I want to convey to you a sense
of the pride we take in your achievements
that brought you to Michigan...
But I would also like to convey a sense of the time of enormous
challenge, opportunity, and responsibility
at which you have entered the University.

A Sense of Pride

Let me first congratulate you on the distinguished records
each of you have brought to Michigan...
We therefore had the luxury to build a class drawn
from the best students drawn from across
the nation...
...the best scholars...
...the best musicians...
...the best artists
...the best mathematicians...
...the best athletes
...and the best leaders...
Each of you has accomplished something very
special to get into this place...and I must
admit that we are already very proud of
you.

The Challenge of a Michigan Education

But, despite your obvious academic talents,
you, like all generations of Michigan students
before, will find this University a very
challenging experience.
...to some it will be through formal courses
...to others, the size and complexity of the university

...others of you will face challenges through athletics,
social activities...

...even challenges to your most fundamental beliefs

But, of course, that is what a college education is all
about...

A college education is a time of challenge
and discovery, of curiosity and intellectual growth,
of learning about yourself, your talents and your
limits.

Nobody ever said a Michigan education was easy...
but the generations of students who have had the
determination to meet the challenge have demonstrated
the value of this experience through their achievements
later in life and the contributions they make to our
society.

A Time of Unusual Opportunity

There is another reason why meeting the challenge of
a Michigan education is important

You are starting your college education at a very unusual
time in the history of our nation...

Never before in our history has there been more
opportunity for students willing to make the
commitments and sacrifices necessary for
an outstanding education.

Let me explain...

A Vision of the Future

First, it is important to realize that while you and your classmates
were born in the 20th Century, you will in fact spend the
majority of your lives in the 21st Century.

Hence it is very interesting to look ahead for a moment
to speculate on what will be some of the key characteristics
of your future...and the manner in which this future should
come to bear on your education at Michigan.

You will inherit a much different America than I have known...

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

In which those groups we refer to today as
minorities will become the majority population of

- our nation in the century ahead...
In which women take their rightful place as leaders
of America...
- ii) It will be a future in which America will become "internationalized"...
in which every one of our activities must be viewed within
the broader context of participation in the global community...
Whether through travel and communication, the arts and
culture, the internationalization of commerce, capital,
and labor, we will become increasingly interdependent on
other nations and other peoples.
Further, as the destination of roughly half the world's
immigrants, the United States is rapidly becoming a "world
nation"
with not simply economic and political but strong ethnic
ties to all parts of the globe.
- iii) The Age of Knowledge
But there are even more profound changes underway...
Looking back over history, one can identify certain
abrupt changes, discontinuities, in the nature,
the very fabric of our civilization...
The Renaissance, the Age
of Discovery, the Industrial Revolution
There are many who contend that our society is
once again undergoing such a dramatic shift in
fundamental perspective and structure.
Today we are evolving rapidly to a new post-industrial,
knowledge-based society, just as a century ago our
agrarian society evolved through the Industrial Revolution.
In a sense, we are entering a new age, an age of knowledge,
in which the key strategic resource necessary for our
prosperity, security, and social well-being has become
knowledge--educated people and their ideas.

Themes of Change...

- The America of the 20th Century that I have known...
was a nation characterized by a rather homogeneous,
domestic, industrialized society...
But that is an America of the past.
You will inherit a far different nation...
a highly pluralistic, knowledge-intensive, world nation
that will be the America of the 21th century

These themes of your future,
the changing nature of the American population...
our increasing interdependence with other nations and other peoples...
and the shift to a knowledge-intensive, post-industrial society.
Are actually not themes of the future...but rather themes of today...
...in a sense, I have simply been reading the handwriting on the wall...
Yet I also fear that few have realized the enormous
changes that our society is going through as it
approaches the 21st Century.
Indeed, I am personally convinced that our nation faces a very unusual
period of challenge in the decade ahead...a watershed,
in a sense, from which we can either emerge as a
world leader...or as an also run...an economic backwater
My central theme is that education, broadly defined, will
be the pivotal issue in determining which of these two
alternative futures will be America's.

The "Pipeline Problem"

But here we face very serious challenges...
...clouds on the horizon...
and it involves the knowledge and skills of our people
Today, an unprecedented explosion of knowledge marks
the onset of a new era. Since people are the source of new
knowledge, we will rely increasingly on a well-educated and
trained work force to maintain our competitive position
in the world and our standard of living at home.
Yet here we are in real difficulty, because we are not
educating enough new people to maintain the
strength and prosperity of our nation.
This has become known as the "pipeline problem", since
it involves the full spectrum of education,
from preschool through K-12 through higher education
to lifelong education.

K-12 Education

By any measure, K-12 is in serious trouble.
We are "A Nation At Risk"...
Our education system simply has not responded to the
challenges of the age of knowledge...
We desperately need energetic and talented teachers to
rebuild our educational system.

College Education

While higher education in America is the strongest in the world,
we also face serious human resource problems here:
But things are going to get MUCH rougher: NSF Study
Dominant factor controlling the production of college graduates is the
size of
the college-age population, which will decline until the late
1990s
Traditional source of S&E college students is declining
25%-30% falloff in HS graduates by 1992
Annual Freshman Survey: K. C. Green (UCLA)
Overall interest in science majors has dropped by half
between 1966 and 1988, from 11.5% to 5.8%
Decline in physical sciences from 3.8% to 1.6%!!!
Largest decline has occurred in mathematics:
Dramatic decline in freshman interest in math majors.
From 1966 to 1988, dropped from 4.6% to 0.6%,
almost a factor of 10!!!
Freshman plans to pursue computing careers is down more
than two-thirds since 1982, from 8.8% down to 2.2%.
After recording big increases during late 70s and
early 80s (increasing to 12%), engineering has dropped
by almost one-third since 1982 (now down to 8.6%).
Humanities majors have increased 10% over past decade...
...social science is up 20%

Graduate Education

Over the next two decades, PhD replacement needs will
double in all sectors (academic, industry, government)
For example, 25% of engineering faculty will retire in next 6 years
On the basis of BS production alone, PhD production will
decline by 20% in the decade after the mid-1990s.
Already symptoms: PhD shortage in faculty...
Compensation (in constant dollars) was constant from 1964 to
1984
It has gone up by 21% in past 5 years and will accelerate even
more rapidly as the real PhD shortages appear late in the
1990s

Conclusions:

- i) If we couple demographics with student preferences, we have
got a timebomb on our hands...

ii) Just as we are becoming increasingly dependent on knowledge-intensive

fields...and educated people, we are facing serious shortfalls in the availability of college graduates in key areas.

iii) It is clear that our strength as a nation will depend on our ability to attract more talented students into these fields

I hope that you will reflect on these issues and consider your own future within this context.

Our future leadership as a nation must be recruited from among you and your generation.

I hope you each will consider challenging careers... as doctors, lawyers, scientists, teachers,...
...investment bankers...

and perhaps even as college professors.

There is extraordinary opportunity for fulfillment and service to society for your generation...and your talents are desperately needed.

A Time of Unusual Responsibility

It is within this context...of the age of knowledge that is your future...and its dependence upon educated people and their ideas... that both your opportunities and your responsibilities assume such an unusual magnitude.

As I noted earlier, you are an extraordinarily talented group of individuals...

It is likely that regardless of what happens during your college education, you will go on to become leaders of our society...

Hence, we believe it important that you prepare for this life of leadership now by taking advantage of all that this University has to offer.

In a sense, you not only have an obligation to yourself...but to your nation and the world to prepare for the mantle of leadership you will be asked to assume following your graduation.

Sorry to lay such a heavy burden on you, particularly during your first week on campus.

But I felt it important to stress what an extraordinary future of opportunity, responsibility, and excitement you will have ahead of you.

Once again, welcome to Michigan.

and welcome as our newest members of the family of
the maize and blue!