

Minority Student Welcome (9/6/90)

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 cultural,
athletic, or 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...

....it takes extraordinary effort

the 40 hour week simply doesn't apply when it comes
to studies...in fact, that won't even get you a
B at Michigan!

...it takes perseverance

particularly when your courses aren't going well
or you can't get into the courses you want
or you're homesick or you have boyfriend or
girlfriend troubles...

...and, at times, it takes a sense of humor and humility

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.

They have found that something quite remarkable
happens during your years on this campus...

...something that we still don't quite understand or
even realize

...yet something of great value and great importance
for the future lives of our students.

The Educational "Value-Added" by the Research University

The University of Michigan is very large,
very complex, and sometimes very
bewildering and challenging.

It is one of the world's great research universities...

...that is, it attempts not simply to teach

...but to advance knowledge itself through
the research of its faculty

...and to apply that knowledge to serve

society through its professional schools
You may find this multiplicity of missions very
confusing...

Indeed, you may find yourself questioning whether
you would have been better off going to a
small institution, where you could have
received more individual attention
where the faculty concentrated on teaching.

Yet, for students of your ability, we believe that
something more than simply teaching facts
is important...

Instead we seek to immerse you in an environment of learning...
...a rich, complex, and sometimes bewildering
world of fascinating people, ideas, and activities.

And it may interest you to know that this particular approach
seems to work.

An Aside:

There is very recent evidence that this approach
to education is actually the most effective,
at least for students of the quality of your
sons and daughters.

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 is 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.

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...

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 21st 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.

Clouds on the Horizon

Today, an unprecedented explosion of knowledge heralds 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 -- and indeed to harness the power of this new knowledge for the good of our planet and all of mankind.

Yet here we are in real difficulty, because we are not educating enough new people to keep our economy competitive.

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 and science literacy

Demographic Factors

Dominant factor controlling BS degree supply is the size of the college-age population, which will decline until the late 1990s

Traditional source of college students is declining
25%-30% falloff in HS graduates by 1992

Your class is at the very bottom of this shortage...

There are simply not enough of you to meet the needs of this nation...

...for doctors and lawyers

...for scientists and engineers

...for teachers and politicians

...for investment bankers???

...well, that is probably just as well

Interest in Knowledge-Intensive Majors

But there is another problem...

And that has to do with student interests.

Because the evidence is overwhelming that most students are steering away from the more rigorous and intensive majors.

For example, freshman interest in undergraduate science majors has dropped dramatically--by almost half--over the past 23 years.

Freshman interest in technology careers has also dropped over in past 6 years--engineering falling by 25%, computers falling by 75%.

Further, applications to most of the professions have

fallen off greatly...

...medicine, dentistry

...even law is beginning to drop off

(despite LA Law...)

Where have the students gone?

Business: 10.5% to 23.6%

There are now 10 times as many students majoring in accounting as in mathematics!!!

We can't all be investment bankers

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!

We're all very proud of you...

...and we look forward to learning as much from you as you do from us in the years ahead!

Let's Go Blue!