On behalf of the Board of Regents and the entire University of Michigan community, it is my very great pleasure to welcome you to the 1989 Spring Commencement.

I would like to extend a special welcome to:
...all of today's graduates
...to your families and friends
...and to our Honorary Degree recipients,

Rain comment:
Atmospheric and Oceanic Sciences...
Football stadium...
You would never think of suspending a football game for rain!
So why move a commencement indoors!!!

I would like as well to convey congratulations to the Class of 1989.

You graduates have really had a spectacular year...
...Remember Leroy Hoard's breakaway 67 yard run that sealed Michigan's exciting come-from-behind victory over USC in the Rose Bowl...
...and who will ever be able to forget Rumeal Robinson stepping to the line in Seattle with 3 seconds left in overtime and calmly sinking two free throws to win the national championship against Seton Hall.
...What about the sight of over 10,000 students and faculty marching together, arm in arm down S. University to honor the memory of Dr. Martin Luther King, Jr. and to confirm Michigan's commitment to achieving new levels of understanding, tolerance, and mutual fulfillment for peoples of diverse racial, ethnic, and cultural backgrounds.
...or the CBS Morning News, broadcast live from a luxury condo in East Quad!!!
...or Leonard Bernstein celebrating his 70th birthday in Hill Auditorium with the Vienna Philharmonic...
...or the visits of Ella Fitzgerald or Toni Morrison or Kurt Mazur and the Leipzig Gewandhaus Orchestra now performing in the May Festival...

But, as memorable as all of these events are, I suspect that for most of you today's ceremony will be a highlight of your senior year since it celebrates the culmination of many years of hard work, dedication, and achievement.

I suspect, however, that as much as this day means to you, it means even more to your families...

In fact, in a very important way, commencement is really designed to honor your families.

It has been their support...emotional, intellectual, and, or course, financial...that ultimately has made this moment possible for the graduates today.

For this reason, before we proceed any further with this ceremony, let's stop for a moment and join together in recognizing them for their contributions.

Let me first ask all of the families of today's graduates to please rise...and be recognized by the graduating students and the faculty.

Thank you very much....

COMMENCEMENT ADDRESS
How to Give a Commencement Address
Because you see, there is really only one commencement address...
Although it has been given thousands of times...
in thousands of different ways...
The basic message is still the same...
First you tell the graduates that their education
has prepared them to go forth into a
world in which they, and they alone,
will have the power to shape their
future...to control their destiny.
Then you throw in some advice on how to
go about doing this...
and, of course, it is traditional for graduates to
totally ignore this advice.

Some Personal Memories
This particular commencement brings back memories,
since it will be exactly 25 years ago this June--
a quarter of a century--that I graduated from college.
That was still a time of optimism in America...
the glow of Camelot of the Kennedy administration...
still lingered with us.
There were great causes such as
...world peace...
...the conquest of space
...the Civil Rights movement
Indeed, Martin Luther King, Jr. himself
was the commencement speaker at
my graduation...
My Class of ’64 graduated with feeling of boundless confidence in
ourselves and our country.
We each had mighty visions of changing the world.
Like many generations of Americans before us, the Class of ’64
took for granted our nation’s leadership,
our motives for good,
the virtues of science and technology,
We believed that we would live better than our parents...
...and that our children would have a life even better than ours...
that old fashioned virtues and hard work would guarantee our
own personal and our nation’s future.
But there were already clouds on the horizon even during my senior
year that suggested that things would be not quite so simple,
that dramatic changes were coming...
John F. Kennedy was assassinated during that fall...
...on the eve of the Yale-Harvard football game, a game that
was cancelled as a nation went into mourning.
The Cold War had begun to heat up with the Cuban Missile Crisis
A few people were talking about a distant war in a place called Viet Nam
Civil Rights protests were challenging racism.
The Free Speech Movement at Berkeley was revealing a new
spirit of student anger and unrest on the campuses.
But even with these warning signs, we were not prepared for
the dramatic crises and confrontations, the great changes
Americans and their institutions would face in the years
immediately following our graduation...
• the war in Vietnam that so profoundly affected all of our lives...
  ...both those who served and those who protested...
• the eruption of assassination and terrorism which robbed
  us of our heros
• the racial turmoil that tore apart our cities
• the social turbulence and seeming disintegration of
  national consensus and confidence
• the emergence of the drug culture...
  as more people turned on and tuned out...
The shock as our nation began to encounter limits for the first time...
As the environmental movement exposed the downside of technological progress
As foreign competition challenged our enterprise...
As our economic and political preeminence was challenged by new centers of power in Asia, Europe, and the Middle East

In a sense, during the decade following my graduation America lost its innocence...it lost its sense of optimism.
In many ways, my class may have represented the last generation of Americans to be truly optimistic about the future... to welcome its challenges and feel equal to them.
I can't say whether my own choice of a career would have been different if I could have foreseen the future... but perhaps it is useful this morning to engage in some futuring...to speculate a bit about the world you will be entering...

Your Experience
The French poet Paul Valery once said that "The trouble with our times is that the future is not what it used to be."
We are told that the Class of 1989 will face a kinder and gentler time...
Yet we also know there are many challenges today... Racism and bigotry still poison our society...
...and impede our progress toward the pluralistic, multicultural world nation that is our future...
The earth is still in trouble...
Greenhouse effect and global warming
Biodiversity, with predictions that over half of the animal and plant species on earth will become extinct during the next several decades
Toxic waste pollution and Chernobyl
The loss of our economic pre-eminence to the Pacific Rim...
...and the economic challenge of a united Europe in 1992.

Possible Futures
If my experience is any guide, your future will be a time of greater change and transformation than any experienced before in our nation's history.
You are graduating at a truly extraordinary time...
Think about it for a moment...
While you were born and educated in the 20th Century, you will be spending the majority of your life in the 21st Century...
You will inherit a future of great change, challenge, and opportunity
i) It will be future in which our nation becomes a truly multicultural society, with a cultural, racial, and ethnic diversity that will be extraordinary in our history
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...
iii) The Age of Knowledge
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.

The Challenge of Change
There is yet a fourth theme that I can predict with some certainty, and that is a future of ever-accelerating change...that the future will never again be what it used to be...
Indeed, in many fields, the knowledge base is doubling every few years... in more and more fields the knowledge taught undergraduates becomes obsolete even before they graduate!

As the pace of the creation of new knowledge accelerates, it seems apparent that we are entering a period in which permanence and stability become less valued than flexibility and creativity... in which the only certainty will be the presence of continual change... and the capacity to relish, stimulate, and manage change will be one of the most critical abilities of all.

**Implications for You as Graduates**

If indeed, your future will be one characterized by rapid, unpredictable, and dramatic change, then it becomes apparent that your capacity for continual renewal and personal development will become increasingly important.

Has your education here at Michigan helped you to value, welcome and control change?

I hope so.

While we have recognized your interests in being prepared for careers... as doctors, lawyers, engineers, teachers, artists, musicians... or even investment bankers...

The eminent philosopher Alfred North Whitehead once stated that the purpose of a college education was "to learn the art of life".

Well, in a very real sense, that is what we have tried to do at Michigan.

Our real objective has been to stimulate in each of you a spirit of liberal learning...a spirit that would enrich your lives and through you, the lives of your families, friends, and colleagues.

But I suspect we have not done as good a job of educating you for the future as either you or we would have hoped.

But not to worry...

Your college education was intended only as a stepping stone to a process of lifelong education...

Indeed, most college graduates of your generation will find themselves changing careers several times during their lives.

Hence you will find yourselves continuing to learn--and relearn--and relearn yet again through self study and returning to school on occasion, as you attempt to adapt to a world of change.

**A Future of Hope**

Clearly the modern view of change suggests that the future is indeed not what it used to be... or at least as it has traditionally been portrayed, as a time of gradual, predictable change, rigidly moored to the past.

Rather, my crystal ball suggests a future characterized by rapid, unpredictable, and frequently dramatic change... a future of great challenge and responsibility...

But it will also be a future of great opportunity and excitement. Let me dwell on this final point for a moment, because all too often we tend to press the panic button when we face the future, particularly by simply extrapolating the events of the past.

We must take care not to lose perspective--to lose the sense of excitement about the future, the optimism and confidence in ourselves and in each other.

Certainly events of the past 25 years have been both trying and traumatic.
But this has also been one of the most intellectually productive times in human history.
Knowledge continues to grow exponentially...the more we learn the more we are capable of learning.
Science and technology are now capable of fulfilling the age old promise of delivering us from the drudgery of labor.
Information technology now extends the span of our intelligence by orders of magnitude and transcends the distances that divide us.
On the whole, the world is becoming more connected and more democratic.
   From the moment when we first saw ourselves reflected as one world from the moon’s surface back in 1969, we have been increasingly bound together through commerce, culture, arts, literature, travel, and communications.
And, to paraphrase Mark Twain, the decline and fall of America has been greatly exaggerated.
Our nation continues to be nourished and revitalized by the extraordinary diversity of our population--particularly those formerly excluded such as minorities and women and by our immigrants--as it has been throughout its history.
Indeed, it is the continuing fluidity of society that is our greatest asset and our primary defense against the doom and gloom prophecies of America's decline.
And leaders throughout the world continue to look to America for leadership--political, cultural, economic, and social!
Most agree with an eminent Japanese political scientist who recently stated:
"The 20th Century was the American century."
"And the 21st Century will also be the American century!"
That is, if we wish it to be... if we will it to be... and if we stay true to our ideals.
As we stand on the threshold of a new century, it is true that we face problems and challenges of a magnitude that would have been incomprehensible a century ago.
I believe that our nation has the same imagination and wisdom, daring and energy that characterized earlier ages and enabled them to achieve greatness...
But, beyond that, we have the powerful tools of modern science and technology, the rich heritage of culture and art and experience from past generations, that will provide the knowledge base to enable us to shape our own future.
True, in the immediate future there will be less security than in the immediate past, less stability, more unpredictability.
But, as the philosopher Whitehead has noted, "The great ages have been unstable ages!"

Concluding Remarks
My remarks this morning reveal me to be a certain contradiction in terms... as a scientist I am certainly a futurist... but I also tend to be an optimist...
Unfortunately, neither point of view is very fashionable these days.
People tend to focus on the present, not on the future... and they endlessly deplore all of the ills that we have inherited.
But I believe that we can be masters of our fate. That we can seize control of forces around us and bring progress to the world. I even think that each individual has the possibility to change the world.
Emerson once noted that the wisest council of all to the young was to "always do what you are afraid to do."
We should approach life as a true adventure of opportunity and risk. We are made for risk. We thrive on it.
But whether you accept my optimistic perspective or not, one thing is clear to me. Whether we like it or not, change, massive transformations, in our societies our culture, our way of life, is what you can expect. The fear or denial of change isn't going to keep it from happening. It just will keep you from influencing the direction it will take.

There is an old saying that...
"The best way to predict the future is to invent it!"...
That is the real challenge before you!
We hope your education has prepared you to now assume the roles of leadership that is your heritage, your destiny, as graduates of the University of Michigan...
To go out into that exciting world full of challenge and opportunity...
...and to invent the future!

CLOSING REMARKS

Before we conclude our program, I would like to address a few final words to the graduates.

There is little doubt that college has as much impact as anything in our lives...
It sets us on a career course...
Many of your college friends will remain close throughout your lives.
Many of us meet our lifetime companions in college...
roughly one-third of Michigan graduates meet their spouses at Michigan
Throughout our career and our lives our college experience provides us with an anchor, a tie to the values and understanding that guide our lives...
And, of course, provides us with something to do on Saturday afternoons in the fall...
...and on New Year's Day!!!
Although most of you will be leaving Ann Arbor following your graduation, I suspect you will find yourself returning time and time again.
You know, one of the most meaningful moments on this campus occurs in early September when the Ann Arbor merchants put up banners along State Street and South University welcoming back students at the beginning of the fall term with the simple phrase: "Welcome home"...
In a very real sense, this University has become your home...you will forever be a member of the Michigan family.
Today you are joining that long line of maize and blue alumni...over 300,000 strong, one out of every thousand Americans...
And if there is single common theme that seems to characterize the lives of Michigan graduates, it is the theme of leadership...
And an unusual commitment to both intellectual and humane values while achieving excellence that we are proud to see governing the lives of our graduates as they take up leadership roles in our society.
As a Michigan graduate, as a leader, you will face a future of great challenge and responsibility...but it will also be a future of great opportunity and excitement.
Today we celebrate your accomplishments...but even more, we look forward with great anticipation to your achievements in the years ahead.
We welcome you to the Michigan family.
We wish you health, happiness, and the satisfaction of a rewarding and meaningful life...
You know, I have always believed there are really only two types of folks in this world:
Those who always say "Why?"
And those who always say "Why not!"
I hope that your years have Michigan have prepared you to always answer in the latter spirit...
the "let's go for it" spirit of the Maize and Blue.
Congratulations...
Godspeed...
...and Go-Blue...