## COMMENCEMENT ADDRESS

## SPRING QUARTER COMMENCEMENT JUNE 12, 1992

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Well, now you've done it. Not only have you graduated. You have graduated from a fabled center of excellence in America's heartland, Ohio State. You have changed your life and now you have a chance to help change other's. Congratulations!

You've worked so hard and waited so long. I'm not going to prolong the day with a long speech.

I'm just going to share with you a few ideas about life with the hope there might be something in these thoughts some of you will find useful. There's an old Spanish greeting that says, "Tell me your life and miracle." I think that's a fitting sentiment for this occasion. Obviously, for all of you, Ohio State has been part of your life. For at least some of you graduation is a miracle.

Of course, life itself is a miracle. And, if not continuously miraculous, at least frequently surprizing. Now that your life is changing, let me suggest to you a few of the changes you'll notice fairly soon. If you're going into business, you'll find that the technique of giving the answer you memorized for a blue book exam regardless of what the questions is will no long work. In business you'll find that no matter what answer you give there's a pretty good chance your boss will say it's wrong anyway.

If you're a male you will most certainly need at least two pairs of socks. One pair should be black. It would be nice if the other pair was something other than green but matching colors are better than nothing. And both pairs should be laundered more frequently than the phases of the moon.

If you are female you will no longer to be able to wear a pair of nylons with a run in them until you have time to get a new pair.

And regardless of where you work, no matter how great the temptation, you will not be allowed to hang profane slogans on your office wall about the geography of Ann Arbor or the geneology of a Wolverine. The fact is, John Cougar Mellencamp not withstanding, you are no longer Jack and Diane outside the Tasty Freeze with a chili dog. You are graduates with at least some obligation, and I admit it is not easy, to begin masquerading as responsible adults. Mr. Mellencamp would

put it this way, "Life goes on long after the thrill of living has gone." He would not only put it that way, he has put it that way. But you know, he's wrong. My message to you today is that life indeed goes on but it will be as thrilling as you want to make it.

When you get that diploma in your hand some of you will look at it and wonder, "What good does it do me?" That's another one of those things about life. It depends upon how you look at things.

I'll give you an example. There's a story about a composer from Brazil. Whenever he was in need of inspiration he would fling open the windows of his studio and look at the mountains around Rio. Then he would draw the outline of the mountains on his blank sheet music tracing, the shape of the mountains with the notes of the scale and he created his music that way. Look at your diploma the same way. Even with the writing on it and all that is behind it, the time, the money, the ideas, the silly opinions and brilliant insights, it is essentially a blank sheet. But there's inspiration in that document -- a certificate that you've been given a chance to see the world differently. So look at it. Besides you may not see it again until your spouse gets it framed for you on your fifteenth wedding anniversary.

You have learned a lot at Ohio State and learned quite a bit about life. One thing you learned soon, and perhaps to your great surprise, is the relevance of your life within the university to what you do do next. Great as this university is, one of its greatest attibutes is that it is well connected to the society at large. Well over a century ago Charles Dickens came to this country and he didn't much care for what he saw. But when it came to one special brand of institution, he said this, "Whatever the defects of American universities may be, in their whole course of study and instruction they recognize a world, and a broad one, lying beyond the college walls." The fact is the genious of the contemporary American university is that there really are no walls at all. This university is not only connected within its environment, it's part of it, conducting a commerce of service and ideas that shape the society around it and then reshape the university.

And that's another feature of life. You are in it all the way. People will put demands on you. You will be pressed, harried, questioned, challenged, and sometimes admired, praised and thanked. It may not always be what you expect nor unfold as quickly as you want but you can do thrilling things with it with fascinating people. You will ultimately have an impact purely as a result of what you do. So do well. Arthur Fried was a famous theatrical producer and he once gave this advice to Allen Jay Lerner, the man who co-wrote the

Broadway version of "Camelot." He said, "Stop trying to be different. You don't have to be different to be good. To be good is different enough." So whatever you do be good at what you do.

And be proud of it. Joseph Campbell quoted in the book, "The Power of Myths," recalled his Catholic childhood somewhat ruefully. He remembered having to confess his sins and the apology that was always required first. Looking back, he thought the whole thing should have been turned around to read this way, "Bless me, Father, for have been great. These are the good things I have done this week." I'm no theologen but I can tell you for sure that a positive outlook, as long as it doesn't become arrogant, can go a long way.

You are privileged people. You have been given the chance to encounter the backbone of civilization and its history as well the backbone of modern society and how it's evolving. Now you have a still greater privilege. You will become the backbone itself. You are it. You are the ones presented as leaders in transit at a cultural junction previously unexplored in this country. The United States is finally at peace with what used to be its greatest adversary. We are looking inward and we see much that needs to be done. Much of the doing will be up to you and the people who join you in commencement ceremonies across the country today.

I am a physician. From my perspective I can see us crossing a junction between conventional medicine of our ancestors and the medicine of tomorrow. We are acquiring new tools, raising new questions, opening new possibilities for both life and livelihood. And with world tensions reduced we are at a point in history where, after many decades of world-wide anguish and conflict, it finally may be possible to turn science to the permanent service of life itself.

Chances are this will occur here in the United States first. Flagwaving hasn't been waving popular pasttime at universities for a long time. But perhaps it should be.

Let me tell you a story. Recently I saw a report on CNN about a mental hospital for children and adolescents in Moscow. Under glastnost cameras were allowed to film these goodlooking kids docilely lining up to get their heavy doses of tranquilisers and other neuropharmaceuticals three times a day. The head of the Russian hospital acknowledged that most of these kids were there for relatively minor behavioral infractions that we might call here "being a teenager" -- infractions like running away from home, not going to school or sniffing glue. Very few had medically defined

psychiatric illnesses. The reporter asked the head of the mental hospital, who himself was critical of the practice, how this could possibly be tolerated. He replied, "You must understand that in our system of government we do not value the individual, only the group. This treatment does not harm the group." In the United States we take so utterly for granted the fact that we place as much value on the rights and wellbeing of the individual as of the group.

The National Institutes of Health is a public institution in our democratic society and we value the well-being and the contributions of the individual. At the NIH we never forget that death and disease don't happen to a nation, they happen to individuals, one by one. And the life of the individual is paramont. At the NIH life is what we do. To safeguard the lives of the individuals in our society we are developing and using now genetically engineered cancer vaccines. We are engaged in a work of discovery more adventurous and more promising that any explorer has ever dreamed. We are mapping the human geno -- the complex, genetic code that makes us the individuals that we are, from the color of our hair to the way our bodies work and why and how they fail. NIH is all about people, dedicated investigators working long, hard days and nights to advance the quality of life. Of your life. We need young, brilliant minds to join us. We need young people in science to make the choice today that can make a difference tomorrow. next generation of science in this country is the heir to the medicine of discovery. The next generation, you, will determine medicine ahead. We are in the midst of a revolution in biotechnology and the changes it makes in the laboratory will make comparable changes in the workplace. It's not possible to overstate the importance of rapidly transferring medical technology from the lab to the community.

As you enter the current job market you see uncertainty. But look closer. You will see opportunity as well. Think back a little. Industry reworked the employment profile of this nation moving from the farm to the factory. National defense in World War II not only expanded the need for industrial workers, it opened the doors to women in the work force. Computer technology has taken people from the assembly line and put them into the office. It's true that disruption and uncertainty were part of each of those incredible transitions but those same abrasive but beneficial forces that have reconfigured the American work force will do so again.

And biotechnology will produce a whole new range of career possiblities. We already know that pharmaceuticals, laboratory testing, medical technologies and development have opened new employment doors to you.

I'm talking about employment in a whole new industry that will take up as a source of national economic strength the next dimension of manufacturing.

But even as all the advances are under way in the sciences of life, we are addressing the question life raises about science. Those of you who may have read "Juraissic Park" were exposed to the fiction of genetics gone mad. In fact one of the characters is made to say, "We are witnessing the end of the scientific era." We are not. We are witnessing the beginning of a new era in science where the focus is life, not destruction. Where ethics and public interest are companions wherever science goes. Those of you who choose to go along as scientists, physicians or as active, interested and informed members of the public will make science and our nation better.

Science really does understand how precious life is and the responsibility that science has to the future. A month ago newspapers carried a story of four scientists at the Vasolov Institute during the cruel winter of 1941 at what is now St. Petersburg. The temperature dropped to 40 below. They were under continuous bombardment by Nazi forces and they were starving to death. But those scientists died preserving seeds, seeds of more than 40,000 food crops so that they would be available to future generations. They were called martyrs for biodiversity. They understood science. They understood life. And they put all they had into life.

I know the Ohio State family also has reason recently to look at science, to look at life, and how much a person could put into it. Elizabeth Gee had all the courage and more than any one could ask. She was a wonderful person, lovely, witty and strong. The chairman of the Board of Trustees said at her death last December, "She has taught us a lot about life." As I said earlier life is what we are all about at NIH. Our work was not yet advanced enough to save her. But we will save others. When you understand that NIH is all about the Elizabeth Gees, that is, saving a precious human life, then you really understand the NIH and our noble mission. Some 18 months ago she told an interviewer, "If you don't accept the challenge, you become a victim." Elizabeth Gee accepted the challenge. Her life ended before science could solve her problem but she was not a victim. She filled her life with affirmation, with love and with advancement. The thrill of living never stopped until her time for living did.

As you graduate no doubt you are filled with anxieties about living. You life, your career, your loves and your aspirations. As a physician who has been deeply privileged to share the profound moments of

people's lives, in closing let me propose to you the ultimate measure of living. When you are at your last hour on the world's stage, as Shakespeare put it, no matter who you are or what you may have achieved, what will be on your mind will be the people you have loved and the lives you have touched and those who have loved you. That is the ultimate measure of a worthy life and, indeed, that is truly how life goes on.

Great life to each of you.