

## TALKING POINTS

## Dr. Boyer's commencement speeches

April 21 - Eastern Michigan University

May 12 - University of Missouri

May 19 - Canisius College

May 20 - Western New England College

June 10 - Wilmington College

June 17 - Union College

You and I together, along with a significant portion of the rest of the men and women on this earth, have recently gone through a profound and provocative experience. We witnessed and, in a fearful sense, participated in the drama at Three Mile Island where science, industry, and government fought to control the awesome force they had created.

Accustomed as we have become to being present at calamities -- thanks to the enterprise and the technology of our news media -- I do not feel that the events at Three Mile Island will sink into our collective memory of flood, fire, and war. The sheer dimensions of the questions we are left with assure us of a long and trying inquiry into every aspect of the failure of the Number Two reactor. I feel reasonably sure few of us will follow these inquiries closely, and that fewer still will ever fully understand the silent, invisible processes which somehow ran amok. But these are questions for experts, scientists, and engineers.

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There may be no formal inquiry into the larger questions -- questions such as "Why are we doing this?" "How far can we rely on the rational processes of science?" "What is the responsibility of government?" But I venture that these and other such questions ~~raised by the Three Mile Island acci-~~ dent have already placed in a new perspective much of what you have learned in the past four years and that the careers you are about to enter -- whether in commerce, industry, scholarship, the arts, the professions, or public service -- will reflect a new and urgent public awareness of the implications of such questions.

It is not difficult for me to imagine these past few weeks as being seen some day as a critical watershed in education. The promise and the price of nuclear power have confronted our society with the dilemma of material progress. Some would say it has been a problem recognized since Eve ate of the tree of knowledge. Many a baleful philosopher has seen disaster in each step of human progress. But in our society we have become accustomed to viewing progress as a series of technological triumphs. We may regret the passing of the steamboats and the river towns but we rejoiced in the railroads. Mistakes were made but things seemed to work out. "Back to the old drawing board," was an article of American faith. The effects of technology were

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fragmented and scattered over time and the cumulative changes wrought in the environment and in our lives were perceived dimly and usually in hindsight.

The dilemma posed by nuclear power seems to bring together every thread in the fabric of our society. And we cannot escape the certainty that the choices we make are going to affect the lives of everyone on earth and for millenia to come.

Let us not minimize the fact that the promise of nuclear power is, perhaps, as hard for us to comprehend as its mysteries. Somewhere in the atom is a source of energy which may actually be limitless in terms of human needs. Energy in such abundance that it could create a comfortable climate for all the earth's people, as it does now over the vast regions of the United States. Energy which could be used to clean the effluents of our cities and factories and restore our lakes and rivers, process our waste materials into fertile earth and precious ores.

It is not too much to imagine that such a source of energy would alter the age-old competition between nations and peoples that has shaped our societies and conditioned our concept of human nature. And thus we might escape the shadow of the dreaded other side of the atom -- the use of those weapons which may destroy us all.

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What risk will we accept against such a possibility?  
 What risk do we run by not pursuing it? How shall we make  
 the determination? What changes in our lives must we make,  
 or tolerate, to follow the course we have chosen?

Such questions are forcing a new awareness upon us and a  
 new discipline in our thinking.

It seems quite clear to me that in the social world as  
 in the physical world there is no free ride, for every  
 action there is an equal and equivalent reaction which inev-  
 itably must be faced. There may be a delayed time bomb,  
 but the equation somehow, sometime, will be balanced.

Fact is, I've developed a little tactic in my office  
 which has temporarily immobilized us. Whenever I get a prop-  
 osition which someone said will improve the system, I send  
 it back and say, "Give me the negative side of your assumed  
 progress."

For generations we have assumed that we can gain and  
 never lose. The assumption is false.

We now seem to be acquiring a Manichean ambivalence  
 about progress. E. B. White gently stated it in a story  
 written in the 1940's. He characterized a near future era --  
 about now probably -- as "a time of brilliant but disturbing  
 discoveries, such as that gold fillings cause varicose  
 veins."

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Even a future free from want -- still the dream of more than half the world's people -- has its threatening side. French students rioting in 1968 are said to have shouted the slogan, "We refuse to buy the right not to die of hunger by running the risk of dying of boredom." (It sounds French all right, but as a slogan it loses something in the translation.)

At the same time we are beginning to confront the fact that our world is in a sense a global village. We are beginning to recognize that the human race is expanding at the rate of 200,000 people every day -- 73 million people every year. Painfully we are now reminded that our gas pumps are somehow connected to the Middle East; that American industry is almost wholly dependent on foreign sources for chromium, for cobalt, for bauxite, for magnesium, and for tin; that 40 percent to 95 percent of our precious metals are imported from Third World countries; that about one-third of the profits of American corporations come from exports or from foreign investments; that one out of every six factory workers in this country is making something for export; and that two million Americans are employed in foreign trade. We are beginning to comprehend the fact that a child born today into a world of four billion people will, if he attains age 60, be sharing the earth with three times as many human beings.

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The point of all of this is crystal clear, and for just a few moments I should like to talk about what I think to be several implications for those of us who care about our colleges and schools.

We urgently need a new curriculum, especially a new notion of the curriculum at the elementary and secondary school -- a curriculum in which students begin to understand the unity of our world, not just in a physical sense but in a social sense as well. Students must be taught that all our actions on this planet, whether physical or social, are inextricably interlocked. And I'm convinced that an international education curriculum must be a top-priority in the schools.

Now, let me here insert a modest caveat. I recognize that international education may not be quite the term. And I also recognize that my search for alternate nomenclature has left me quite dissatisfied. The point is, however, that national boundaries tell us something about this world, but the urgent new agenda requires that we focus not just on political boundaries -- although their realities are essential -- but also on what one might call the agenda of humanity itself.

What kinds of labels do we assign to this new academic search? Should we consider defining the new curriculum as "global" or "interdependence" education?

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On one occasion I spoke of the "Fourth R," which momentarily held the audience at bay, and while they waited for the fourth shoe to drop, so to speak, I suggested that reading, 'riting, and 'rithmetic might also require something called relationships -- the interconnections that enable us to see totalities across the categories that break up our world. In any event, regardless of the nomenclature we select, I'm convinced we do need new notions about the curriculum that reflect our dependence on each other.

Now, to build this new curriculum, knowledge about other cultures and other countries obviously is not enough. The goal must be to confront attitudes as well. President Sadat observed that the misunderstandings between his country and Israel were "70 percent psychological"; that is, 70 percent a state of mind. In the future, the curriculum may confront questions such as these:

"Where will we get our food, and how can it be appropriately distributed?"

"What about our energy supply, and how can it be equitably shared?"

"How can we reduce the poisons in the atmosphere?"

"Can we have a proper balance between the population and the life support system of the planet earth?"

And most profoundly . . . .

"How can we live together, with civility, in a climate of constraint?"

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These may in fact be the transcendent issues in the curriculum of tomorrow.

Now coming very precisely to the federal role in all of this, I want you to know that I intend, during my tenure in office, to give clear priority to this search for a new curriculum.

For the first time in the history of one of our laws (Section 603 of Title VI), we have been funded -- modestly to be sure. The amount is three million dollars, but it is three million dollars.

I intend to use those dollars almost exclusively at the elementary and secondary level, where the job must begin. I hope we can target those funds in a way where the impact will be most effective. I do not intend to dribble out grants across this country like water in a sand box, so that after 10 years you know you've gotten rid of the money but you have no idea where it went.

What I would like to do, if the law permits, is to select exciting elementary and secondary programs now in force; identify the good things now going on; have a selected number of grants awarded for classroom activities in schools and colleges in each of our 10 regions; have regional conferences through the state education departments



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that will highlight those successes, give monies to those projects to enrich and publicize what they're doing; and hold conferences with teachers throughout the state.

Then, before this calendar year ends, I intend to have the Office of Education's second annual International Education Forum. The Forum will bring to Washington samples of exciting international education activities in the schools that hopefully can be used as models all across the country. We must help our students understand the nature of our world. This understanding must begin in the elementary and secondary schools. We must target on the exciting projects now going on. We must find ways to give multiple visibility to those activities that show us the way to the future.

In a monograph published by the world Affairs Council of Philadelpha, Robert Muller said, "A child born today . . . will be both an actor and a beneficiary or a victim in the total world fabric and he may rightly ask, 'Why was I not warned? Why was I not better educated? Why did my teachers not tell me about these problems and indicate my behavior as a member of an interdependent human race?'"

I believe classroom teachers do have an obligation to educate children about our interdependent world, so the surprises in later life may at least be modestly reduced.

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And we must not fund the entire venture through the federal government -- it cannot be done -- but use our narrow and limited resources to highlight exemplary models of the directions our schools must take and give legitimacy and some financial relief to those selected as the best.

Second point. I believe we must also place increased emphasis on foreign languages. Now I know that from a world viewpoint the idea of multiple languages seems like a contradiction. But it seems to me that we have to realistically understand that language is something very special in the lexicon of human existence. It's the process by which individual identities are established, social connections are cemented, national cultures are sustained, and international continuity is assured. Somehow we must develop respect for the rich tapestry of languages all around the world, to see them not so much as inhibitions to connectedness but as validations of the family diversity we share.

I was delighted that last year President Carter, urged on by Congressman Simon, asked if I would join with a congressional committee in fulfilling one of the mandates of an international agreement: the formation of a Presidential Commission on Foreign Languages and International Studies. I think that most of you know that after nine months of

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pregnancy, a Presidential Commission was born. Jim Perkins chairs it with great distinction, and some 25 members are working diligently. They have a very short deadline, but I am convinced that before this calendar year is out they will report not only to the President and to the Congress, but to all of us across the nation, with recommendations that will highlight and give much needed press visibility and new vitality, not just to the policies governing foreign languages in our schools, but more importantly to the fact that this is an interconnected world. We can look to the work of this Presidential commission with much hope and inspiration. I believe that through the media we will begin to educate not only educators but the public at large that we must change our way of thinking.

Third point. I believe also that if we are going to realistically deal with the business of re-educating our society, we have to understand the connections between television and the classroom. I am increasingly convinced that television has become the most important and influential teacher in our culture. It is absolutely impossible for those of us in public education to assume that the classroom is the centerpiece of value formation. Children watch television 11,000 hours before they go to school, and 15,000

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hours before they graduate. During their formal education they spend only about 11,000 hours before the classroom teacher.

Television is winning hands down. Studies have shown that if there is any conflict of opinion between television and the teacher, the credibility of television wins every single time. Now, this is not something to be ignored; this is not something to be attacked; it's something to be joined. There is endless trash on television, but there are endless opportunities as well. I believe we must bring television into the mission of global education and integrate it with what classroom teachers can and must be doing.

It's for this reason I joined with Joan Gantz Cooney several months ago, and with the National Science Foundation we announced a new television program, which is now being produced, that will focus on science technology and the environment. It's going to be targeted to junior high school children, 10 to 12. It's going to be offered in the middle of the school day so it can be shown in classrooms. And it will be offered in the late afternoon and evenings so parents and children can watch it. We're also financing the preparation of teaching materials -- teachers' guides and

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student materials -- so that what is presented on TV with all of the power and imagination it can provide can also have followup studies which only classroom teachers can do well.

Television, you see, can take you to the bottom of the ocean, it can have you listen to whales, it can take you to the top of the Himalayas, it can do for you what no classroom teacher, regardless of his or her imagination, can ever do. On the other hand, the classroom teacher can deal with the nuances of a subject, can stimulate additional research and ask students to write about what they learn. Television can't do that.

We need each other. I am convinced that this new television program, which is being produced by the Children's Television Workshop, the same people who brought us Sesame Street and the Electric Company, can have a powerful impact -- helping us to understand the nature of our world, the interrelationships, and the impact between the technological world and human survival.

Incidentally, Joan sent me some disturbing findings the other day. In doing some of their preproduction research -- and they always carefully analyze the population they seek to reach (they had just completed a survey in New York

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City) -- they tried to find out what relationships students at the age level in question understand. She found that some children when asked, "Where does electricity come from?" said "the switch." When asked, "Where does the water come from?" they said "the faucet." "Where does the garbage go?" You guessed it . . . "down the chute."

A bit humorous, perhaps, but startling in that we have increasingly developed a culture in which we are limited in our sense of connectedness to that which we can see, and feel, and touch.

Now there was a day when young children living in the harsh realities of survival understood a little more about where water came from and where light came from, but we have insulated ourselves and somehow assumed the sugar-daddy of supply is as close as the switch itself.

The power of the media was illustrated just a little over a year ago when Persident Sadat of Egypt said he'd like to address the Israeli Parliament. Hours later, after he made that statement, the satellites beamed his commitment all around the world. Television played and replayed it, and held him to it almost as a dare. Days later Barbara Walters and John Chancellor and Walter Cronkite arrived in Cairo to give official certification and a kind of divine

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blessing to the trip; and millions of people sat and watched, transfixed, as an Egyptian plane touched down on Israeli soil.

It is not to diminish the political impact of that visit to say that I believe none of the words that were exchanged, none of the speeches, none of the documents, none of the private meetings, and none of the toasts -- none of these were as significant as the riveting of the whole world's attention on one single, breathtaking symbolic image when two former enemies shook hands.

Instantly, 500 million people -- and they tell me that's how many saw that encounter -- 500 million people felt the connectedness. Instantly their perspective was expanded and, momentarily at least, the world was brought together in a grand gesture on behalf of peace.

I submit to you that all that we do in the classroom, and it is essential, cannot begin to compare with the powerful acts of symbolism that can say something about the integration or the disintegration of this world.

Since that event 12 months ago -- it seems almost an eternity -- we have sat and watched a dynasty topple in Iran, and on the evening news we've watched Hanoi bombed, this time by Chinese planes.

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I was fortunate last January during an international visit to have spent an hour with Mr. Begin. I told him that I have been rarely moved as I had been at the joint session of Congress following the Camp David meeting -- when I sat in our kitchen and watched the President of the United States greeting the head of Israel and the head of Egypt who were sitting in the gallery; and somehow, somehow, that interconnection once again came vividly home to me.

Whether we like it or not, and I think we should, the medium to some extent is the message; and I'm suggesting that those of us who care about relationships have to understand we have here a potential for great good if we can somehow make it one of the educational partners in the realities of a culture controlled and even enslaved by the mass media.

One final note. We must do more than look at the nature of our curriculum and at the understanding of international languages and at the relationship between the media and formal education. The whole field of bridging scholarship and the arts must be enriched as well.

In 1976 I sat in the office of Rector Koklov in Moscow State University and signed with him the first university-to-university agreement between an American and a Soviet



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institution, and the feelings that I had at that time, in which I was trying to sort out all of the international political issues and at the same time give authenticity to what I thought were the connections of scholarship, deepened my conviction that those of us in education have an international agenda to pursue that transcends the political agenda of our time.

And when I was happily able to be one of the partners that negotiated the exchange with the Chinese delegation several months ago and tried to find ways for those who care about ideas in the world of the arts to define the commonness and keep those connections -- fragile as they are -- alive, I deepened my own belief that that kind of encounter must be pursued vigorously and at all costs. And that kind of encounter can be made authentic, politics notwithstanding.

It was just about a year ago when I attended a reception at the Swedish Embassy. I looked across the room and saw Senator Fulbright and chatted with him. He said he had just come back from Sweden. There they had honored him on the 25th celebration of the Fulbright Exchange Program between the United States and that country. And I thought that was nice. On the way home, I thought to myself and then said to my wife, "I don't remember that anyone has celebrated the Fulbright program in America."

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The next morning I called his office. He seemed very busy, and I told his secretary I was calling about the Fulbright program -- and he came on right away. I asked him straightforwardly and he said, "No, they haven't celebrated it -- but then, this is a big country." I allowed it was a big country but hoped it wasn't a calloused country. The upshot was that within four months we had in this city a moment -- one I shall cherish -- when a number of Senators and academic leaders gathered at the Smithsonian for a special celebration in honor of the 30th year of America's participation in the Fulbright program. To celebrate we had Fulbright scholars, musicians, and scientists tell what the program had meant to them.

Senator Fulbright has said since that it was one of the most important moments in his life when his own country paused to note the power of that message. The Fulbright program, as he says, is merely a fractional footnote to a \$500 billion budget.

But you can't tell me that it has not made a profound -- a staggeringly profound -- difference on the nature of this world, not only symbolically but actually.

I think the important thing for us to remember is that it is not money, it is ideas; it's not fighting for budgets alone, it's affirming convictions; it's not getting caught

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in the nuances of vocabulary, it's understanding the importance of relationships. These, too, are a part of the agenda that brings us here today.

After our first astronaut orbited into space, Archibald MacLeish wrote: "To see the earth as it truly is, small and blue -- beautiful in that eternal silence where it floats -- is to see ourselves as riders on the Earth together -- brothers."

Well, I don't believe, in spite of MacLeish's inspired verse, that we know yet that we are truly brothers and truly sisters. Yet, as we better educate ourselves, work seriously at the nature of our curriculum, understand the tapestry of language, understand the power of the media, and understand the importance of maintaining international scholarship connections, I am confident that we may still be able to prevent this angry, frightening world from self-destruction.