I AM VERY GRATEFUL to President Hilton, not only for the kindness of his introduction, but more especially for the honor and privilege of participating in this significant Centennial celebration by his invitation. We have served together, he and I, to my own profit and instruction, in the work of the American Association of Land-Grant Colleges and State Universities, whose cordial greetings and congratulations I have been designated officially to bring to this distinguished occasion; in the Midwest Universities Research Association; and in other shared assignments.

My warm regard and high respect for President Hilton bring the remembrance of his two immediate predecessors, Dr. Charles E. Friley and Dr. Raymond M. Hughes, whose friendship and association I was likewise privileged to enjoy —dating back more than 30 years in the case of Dr. Hughes
whom I came to know and admire during his presidency of Miami University in Ohio, my native state.

Both of these, devoted leaders in their day and time, let me likewise salute with sincere regard and esteem.

Our minds turn back in an event such as this, and rightly so, even though the proud record of this institution’s accomplishments during its first century “is but a prologue to what lies ahead,” as President Hilton has written. The Earl of Birkenhead, high steward of Oxford, once prayed the gods in an earlier day for “one endowment, one precious gift: the bump of veneration.” I am mindful of that prayer today.

How curious the contrast between institutions and individuals! — the institution so proud of its years, the individual almost apprehensive as his birthdays continue to come.

The difference, I suppose, is in the faith of educational institutions, among all others, that their indispensible task is never done; that they must go forward eternally, yet looking back, on such an occasion as this, to keep sure and straight the line of march.

Each of our colleges and universities is inspired by its own history and traditions. I must confess to envy of the Iowa State “firsts” in its fascinating “Chronology of Important Events of the First 100 Years” which President Hilton sent me. Iowa, the first state to accept the provisions of the Land-Grant Act of 1862; this institution the pioneer of agricultural engineering as a profession and the first to establish an “experimental kitchen for home economics;” likewise the first veterinary medical school in a state-supported college; your Earle D. Ross the first authoritative historian of the land-grant system — the list is outstanding and impressive, indeed.
And that ancient "Victory Bell" of yours — the like of which we need so sorely in Minnesota athletics just now! Like several other land-grant colleges, you have a "Morrill Hall." There is none such at Minnesota, although sometime there may be if our University continues its custom of naming a building after each of its retired or deceased presidents.

Even so, the name at Minnesota could not carry the deserved honor, as it does here, of the revered author of the Land-Grant Act. It would have another meaning at Minnesota, if a suggestion I've made is accepted. We're going to build a new Chemical Storehouse on our campus. Because of the ever-present danger of an explosion in such a structure, it is being designed with one weak wall which would blow out instantly to relieve the pressure on its inmates in the event of such an accident. What with the way things happen to college presidents sometimes, it occurred to me "Morrill Hall" might be a good name for it.

* * *

The Unchanging Challenge — Lest We Forget!

It is vital in the climate of this Centennial, surely, drawing strength from the past, facing forward to the future. Our time seems a specially changing and confusing one. But this is nothing new in the history of American higher education, which has come upon crises before, and, in the land-grant instance above all others, has evolved to respond to the nation's needs.

Ten years ago, at the beginning of the post-war period, the implications of which now so much more seriously surround us, I tried to discern the larger meaning of the historic land-grant challenge.

"Institutions are society's organized response to the needs
of the time in the period of their establishment," I remember writing at that time. "The varying types of colleges and universities bear witness, historically, to this truth," I wrote — and then went on to say:

"In all the long tradition of higher education, ancient and modern, in the Western World, the land-grant college has been unique. It created what has been described as 'the most comprehensive system of scientific, technical and practical higher education the world has ever known.' American university research was an adaptation of the German genius. Commitment to the liberal arts (with the American invention of the four-year liberal arts college) was the heritage of the medieval universities and the Renaissance, transmitted to our shores through Oxford and Cambridge.

"America's needs were new and different, practical and urgently immediate to meet the requirements of an expanding democratic and economic order. They required a wider curriculum and a more democratic widening of educational opportunity. The land-grant institution provided the needed response:

"Not only 'liberal' but 'practical' education. Not only the traditional scholastic and professional subjects in the combined land-grant state universities, but workaday agriculture and the mechanic arts brought into the academic environment — gaining dignity and academic acceptance and the methodology of science and scholarship thereby, contributing the challenge of useful relevance to a concept of culture too remote from the problems of daily life and work.

"Education not only for men but equally for women. The opportunity of learning, not just for a well-to-do or intellectual elite but for all who must carry the burdens of
citizenship and productive service in a great and growing nation.

"These," I said then and would now repeat, "have been the goals of the 'land-grant idea,' richly realized, changing the whole character of American higher education, enriching the strength of the democratic ideal."

And 10 years ago I raised the question which seems to me today ever more significant than then:

"Has the land-grant college any longer a special function—other than in agriculture, perhaps? Has it still the opportunity to pioneer? Because of widespread acceptance and imitation of the land-grant idea and philosophy, have our institutions fulfilled the ancient admonition to find themselves by losing themselves? Do we still have the opportunity and the need for leadership, the land-grant leadership that historically was 'unique, distinct and indispensable?'"

The pendulum swings: for every action, a reaction; for most trends, a counter-trend.

You remember the trends that brought our institutions into being: the rise of Jacksonian democracy, with what our latest land-grant historian, Dr. Edward D. Eddy, Jr., has called the "political credo" of "the supreme worth and dignity of the individual" and the plea of old Jonathan Turner of Illinois in the 1850's for a "Common Man's Educational Bill of Rights."

Along with these, as Dr. Eddy says, "across the country the free school movement had begun," and "in this period, too, came the important assumption that education was a public obligation."

Do you discern counter-trends today in the spurious hysteria over the Soviet satellites with its overwhelming emphasis on science and technology which a good many poli-
ticians with no previously evinced interest in educational support are now competing to capitalize — the counter-trend, in the face of inevitably rising costs which will be required to continue the provision for widespread educational opportunity for the larger numbers of American youth and to face up educationally through teaching and research to the incredible post-war explosion of knowledge — the counter-trend, arising from these exigencies toward enforced tuition increases in the public institutions?

The trend toward more restrictive admissions? The idea that, after all, "mass education" has been a mistake and that quality and quantity in American higher education are incompatibles? The actual notion, revived in some quarters, that the time has come for a partial retreat to the ancient academic tradition of the "ivory tower" — argued more especially just now in the demand for secondary school reforms?

Science and technology, to be sure, have been mainstays of the land-grant program, but our job has always been more than that. It has been all these years the mandate of the Land-Grant Act "to promote" — without excluding other scientific and classical studies (beyond agriculture and the mechanic arts, and including military tactics) — "to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

That mission has been accomplished magnificently, and its challenge is unchanging! More than half of all World War II officers for the nation’s defense, for example, were commissioned through the land-grant R.O.T.C.’s.

In 1955 — the latest statistics I could locate — 38.4 percent of all doctoral degrees awarded in the social sciences by all American institutions were granted by the land-grant
colleges and universities; 26 percent of all the doctorates in English; 30 percent of all those in the fine arts; 20 percent of all those in foreign languages, modern and classical.

Far more than a third of all students in land-grant institutions are enrolled in the colleges and divisions of liberal arts and sciences, as they should be in a society with its need of skills and leadership in all "the several pursuits and professions of life."

The current craze for just more scientists and technologists worries me, I must confess — remembering so well that less than 10 years ago government statisticians warned us we were training too many. The more so, with business and industrial employment still declining and our memories of the unemployed engineers in the 1930's.

Today the fastest-rising enrollments in most of our institutions are in science and engineering, as you know. Dr. Ralph F. Berdie of our Minnesota staff testified recently before a Congressional committee:

"In 1930," he told the Congress, "the American population was 123 million. In 1950 it was 151 million, an increase of 23 percent. In those same 20 years the number of undergraduates earning the bachelor's degree in engineering increased 575 percent! In 1930 we had only 12,000 scientists in this country with Ph.D.'s. Twenty years later, as compared with a 23 percent increase in population, we had 39,000 Ph.D. scientists — an increase of 225 percent."

But this country needs more than scientists and engineers. It needs all kinds of educated citizens. Striking indeed is the measure of what generous higher educational opportunity has meant to qualified American youth trained for all "the several pursuits and professions of life." As between the periods 1926–30 and 1946–50, with its popu-
lation increase of a little over 20 percent, the numbers of bachelor's degrees given by all the colleges and universities of the country increased from 551,000 to 1,421,000 — an increase of 158 percent.

It was the "land-grant idea" that long since had opened the doors! — the idea which former President Edmund J. James of Illinois declared to be "the beginning of one of the most comprehensive, far-reaching... schemes for the endowment of higher education ever adopted by any civilized nation."

No American college or university of importance and integrity, unless forced by failure of financial support, will abandon the "idea of excellence" or the "pursuit of the first-rate" in the effort to serve larger numbers. They will cling to standards and strive to upgrade them.

But the land-grant colleges especially will remember, too, the words of one of the "giants" of their tradition, Dr. William Oxley Thompson, the beloved president of the Ohio State University in my undergraduate days who served for 10 years as president and chairman of the Executive Committee of the Land-Grant Association.

"The tendency... to operate an institution for the sake of maintaining standards is all wrong as I see it," he said somewhat testily one time when the charge of low standards was hurled against the "cow colleges" in the earlier days. "An institution," he said, "is to be operated for the good it can do; for the people it can serve; for the science it can promote; and for the civilization it can advance."

That purpose, too, we will not abandon without peril!

Actually, "the true greatness of American higher education is held aloft on the two pillars of quality and quantity," President C. W. de Kiewiet of the privately-
supported University of Rochester (well-remembered, I am sure, as a distinguished former teacher and historian at your sister State University of Iowa) told an American Council on Education audience not long ago.

Dr. de Kiewiet went further to warn against any imitation by this country of the restrictive and selective philosophy of higher education in Great Britain and the Continental countries. The infiltration of communism in French political life and of socialism in British liberal politics he attributed in significant measure to the disappointment and sense of frustration among the youth of those nations, deprived of the opportunity for advanced education, without hope of finding a place in society suited to their talents.

"What is missing in those countries," he said, "is the acceptance by universities of a proper responsibility to help in the training of the student of good but not (necessarily) first-rate ability. The ordinary American graduate, not the first-class man who is headed for the top professions, but the rank-and-file student, is the foundation upon which American industry is built. . . The American system of education from top to bottom is the costliest in the world. It is wasteful of time and money, but as a great solvent which smooths out incompatible social differences—and as a principal architect of national coherence—time and money have been cheap prices to pay."

But this matter of money is critical for the citizens and taxpayers of our states, we fully realize. For our institutions this will be, increasingly, a time of test and trial in our Congress and the state legislatures. It will also test the understanding of our people; their understanding of the indispensably productive meaning of higher education in
Commemorative Papers

the American social and economic order; the meaning of 100 years of Iowa investment in the land-grant enterprise.

President Eisenhower's Committee on Education Beyond the High School has spelled out the hard fact that the present three-quarters of one percent of the nation's gross national product for the current annual support of higher education won't do the job for the predicted doubled enrollments 10 or 12 years hence. The Committee has said to the American people that unless we are to retreat from the American guaranty of educational opportunity, there is no escape from a higher priority in private giving and public expenditure for higher education: a higher percentage of the gross national product.

What with a presently reduced agricultural and industrial economy, the tendency of some state legislatures to expect or enforce higher tuitions in the publicly-supported institutions is understandable. But we need the reminder that vast expenditures for federal and state scholarships, which in some measure I believe to be socially sound, will require still greater institutional costs, because in neither the public nor private institutions can tuition be made to cover the costs of teaching, research and required new capital outlay for the oncoming larger numbers.

And we need everlastingly to remember that the greatest and the primary factor in making higher educational opportunity widely available "has been that the people have built and maintained public colleges and universities in every state which young people can attend at comparatively low cost," as our Land-Grant Association Executive Secretary, Mr. Russell I. Thackrey, wrote recently.

The land-grant challenge is unchanging. It is the new and varied response which we must discern and contrive in
the changing educational scene. No large aim is ever fully accomplished. Persistence in old patterns—however valid and resourceful in their day—is never sufficient for a future which all too soon becomes the pressing present. This, surely, is the land-grant lesson we have long since learned.

Truly there will be no retreat to any “ivory tower” of the kind inhabited by that ancient Oxford don who proclaimed that the worth of knowledge lies in the degree of its uselessness. Rather, we shall continue to believe that “education is the acquisition of the art of the utilization of knowledge” and that essentially “culture should be for action, and knowledge for use,” as the philosopher Whitehead said.

And surely we shall not draw back from the fight for the same chance for our children and their children that the youth of this generation enjoy.

The continuing shift from rural to urban and industrial occupations inevitably will shift our earlier aims and service. The enormous impact of science and technology may require more scientists and engineers for the national defense. But even more, I deeply believe, it calls for a clearer interpretation of their meaning socially and politically, in the democratic process of decision-making for peace or war. It calls for a closure of the cleavage between science and the humanities which is of such concern in British higher education, for example, and which in this moment of overemphasis could become critical in our own country.

The trend toward intense specialization in every kind of subject matter, the increasing abandonment of “general education,” so called, of which earlier we had such great hope—these are more evident than at any time in my own experience. In part they account for what has been called
"the flight from the undergraduate," the discouraging divorce of science from the humane values taught in a meaningful social context at the undergraduate level.

Our institutions are challenged, and are responding generously and patriotically, to the wider dimensions of international relations, and that is an encouraging example of flexibility. More than half of the American colleges and universities engaged in technical assistance and training in foreign countries, sponsored by the federal International Cooperation Administration, are land-grant institutions which manage far more than half of the staffs and expenditures overseas involved. This is understandable, considering how vital to the underdeveloped countries is the upgrading of their agricultural and industrial resources and what the land-grant example of teaching, research and extension has meant to our own.

The by-products of international understanding with its prospect for a more peaceable and prosperous world are incalculable. Here, too, our institutions have risen to meet the new and broader challenge of their time.

It is this flexibility of response to national and international needs that has been the land-grant heritage, and its hostage to a larger destiny. It is the unperishable identity of our tradition.

Let me quote to you the testimony of a discerning observer:

"Great as the contribution of the land-grant institutions has been in the past three generations, I venture two predictions. First, it is inevitable that in the immediate and continuing future the responsibilities and scope of these institutions are going to be immeasurably larger than they
ever have been—not only actually but also in relation to the other segments of our over-all educational system.

"Second, if the land-grant institutions should fail, quantitatively or qualitatively, to play to the full the role which destiny is assigning them, I doubt that we will have a free society and a democratic form of government in the United States a century hence."

The speaker I have quoted is a native son of Iowa, the perceptive publisher of our newspapers in Minneapolis, Mr. John Cowles, speaking at the Pennsylvania State University Centennial.

* * *

Our land-grant colleges are no longer a group apart from the great and larger company of splendid institutions, public and private, with whom we share the burden of the day, we fully understand. Together, as partners with these, we paint the glorious picture of "a whole land aglow with colleges and universities, like a field with the campfires of an army on the march," in former Harvard President Abbott Lawrence Lowell's inspiring phrase.

We are but one current in the broad mainstream of this country's higher education, but it is a current deep and strong. Our identity in the years ahead will be—as uniquely as it has been historically—an identity of purpose and service. It will be the precious purpose implicit in our heritage.

All honor to the Founders on this day!—those pioneers who saw so clearly the challenge to build for a better day. From that unending commitment surely we are not relieved today, despite the progress of a century.

And when we build, as John Ruskin once wrote im-
Commemorative Papers

mortally, "let us think that we build forever. Let it be such work as our descendants will thank us for.

"And let us think, as we lay stone on stone, a time is to come when these stones are held sacred because our hands have touched them — and that men will say, as they look upon the labor and wrought substance of them — see, this our fathers did for us!"
Recipients of Honorary Degrees

James Lewis Morrill
educational statesman, journalist

Robert Earle Buchanan
scientist, administrator

John Walter Coverdale
agriculturist, civic leader

Gertrude Mary Cox
statistician, teacher

Edward Bertram Evans
veterinarian, agricultural educator

Theodore V. Houser
business executive, humanitarian

Herbert Henry Kildee
educator, livestock authority

Allan Blair Kline
agricultural leader, farmer

Beth Bailey McLean
home economist, business woman

George Waddel Snedecor
statistician, teacher

Fred Ray White
highway engineer, servant of Iowa