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ABSTRACT

This proceedings presents the discussions, business meetings, lectures, and speeches delivered at the 104th Annual Meeting of The National Association of State Universities and Land-Grant Colleges, including the organization's financial statements for December 31, 1990 and 1989. In addition, the proceedings lists the past elected heads of the association, names of the member institutions as of 1991, and the association's constitution and by-laws. The purpose of the meeting was to discuss some of the issues confronting higher education today, such as institutional autonomy and integrity and the public's crisis of confidence in its institutions of higher education. Specific presentations at the meeting were "A Failure of Communication: Universities and the Media" by Newsweek Magazine's Jerrold K. Footlick, and "American Agriculture: Challenged by a Changing World" by Gerald W. Thomas, President Emeritus of New Mexico State University. Additionally provided are two joint session addresses, one delivered by Bernadine P. Healy of the National Institutes of Health and the other delivered by D. Allan Bromley, Assistant to the President for Science and Technology, Office of Science and Technology Policy. (GLR)

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Proceedings

of the

104th Annual Meeting

**The National Association of State Universities
and Land-Grant Colleges**

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November 10-12, 1991

Washington, D.C.

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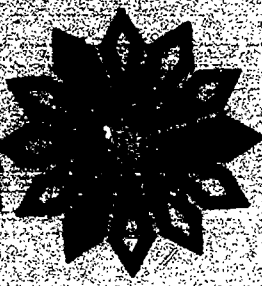
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Table of Contents

Opening General Session: Remarks by Clifton R. Wharton, Jr., Chairman and Chief Executive Officer, TIAA-CREF.....	1
Second General Session: Remarks by Jerrold K. Footlick, Former Senior Editor, <u>Newsweek Magazine</u>	11
The Senate.....	23
Treasurer's Report.....	34
Joint Session: Council of 1890 Presidents, Council on Academic Affairs, Council on Research Policy and Graduate Education, and Federal Relations Network: Remarks by Bernadine P. Healy, Director, National Institute of Health.....	47
Seaman A. Knapp Memorial Lecture: Remarks by Gerald W. Thomas, President Emeritus, New Mexico State University.....	58
Joint Session: Council on Research Policy and Graduate Education and Federal Relations Network: Remarks by D. Allan Bromley, Assistant to the President for Science and Technology, Office of Science and Technology Policy.....	74
Elected Heads of the Association.....	83
Member Institutions, 1991.....	86
Constitution.....	90
Bylaws.....	93

General Sessions

Two general sessions were held at the 104th Annual Meeting of the National Association of State Universities and Land-Grant Colleges: the first on Sunday, November 10, at 4:30 p.m.; the second on Tuesday, November 12, at 9:00 a.m.

Opening General Session

MR. LANGENBERG: Welcome, all of you, to this Annual Meeting of the National Association of State Universities and Land-Grant Colleges. I'm Don Langenberg, for a couple of days, still, the chairman of the Association's Executive Committee. It is my honor and privilege to introduce our speaker this afternoon.

This is something of a homecoming for our speaker. Clif Wharton has served this Association for many years as a participating and very active chief executive officer of two of our Association's member universities. He has also served as chairman of the Association's Executive Committee. He is now the chief executive officer of TIAA-CREF, the world's largest pension fund and one that is of intense interest to many of us, including me, because they've got my retirement bucks.

He is a former chancellor of the State University of New York System, and he is also former president of Michigan State University. He is a director of the Ford Motor Company and of the New York Stock Exchange. He is an economist and has an extensive background of service in foreign economic development, in business as well as in higher education. He holds his bachelor's degree in history from Harvard and his MA and PhD degrees in economics from the University of Chicago.

It is my great pleasure to introduce to you today Clifton R. Wharton. I don't know what Clif is going to talk about today. He will tell you what his title will be.

Thank you.

Annual Meeting Keynote Address

From the Garden of Eden to the Groves of Academe: Autonomy, Integrity, and the Serpent

Clifton R. Wharton, Jr.
Chairman and Chief Executive Officer
TIAA-CREF

Ladies and gentlemen, it is a pleasure to be in Washington to talk about something besides ERISA, insurance guaranty funds, Standard & Poor's ratings, spousal rights, and pension simplification!

Beyond that, it is wonderful to see so many old friends and colleagues. I can scarcely believe 22 years have passed since my first participation in the Land-Grant Association. Being here today reminds me how much I enjoyed in times past the purposeful camaraderie that has always flavored this organization's work. It is a delight to be here again. My warmest thanks for inviting me.

I. Introduction

Having said that, I also cannot help wondering whether the main reason I am up here this afternoon is because the other candidates were smart enough to say no.

Autonomy and integrity in higher education: you would be hard put to pick a touchier set of issues these days. Pity, then, the well-meaning speaker, who would prefer to offer only a kind of verbal after-dinner mint: something light, elegant, agreeable to every palate.

The problem is that if you roll up your sleeves and take a serious hold of the subject matter, you may well yank forth into the light some troubling exhibits: cases of questionable institutional financial practices, for example, or scholarly plagiarism, or fraud in academic research. And if, against your better judgment, you continue tugging away to expose the twisting roots of the thing, they may turn out to penetrate all sorts of unexpected soils: accreditation and academic freedom...the issue of how to ensure civility on campus...even the whole media morass of political correctness.

I ask you: What sensible speaker wants to expose an unpleasantness so potentially unsettling to the digestion of an assembly of friends and colleagues? On the other hand, if you take refuge in a barrage of harmless bromides, you risk being accused of courting prudence too well. You may even skirt the edges of that most disappointing academic faux pas, the irrelevancy.

As I stand here, in other words, I have the uneasy feeling of having forsaken the much-yearned-for "win-win" position.

Much the contrary, in fact. No matter how I proceed, I will probably go too far for some and not far enough for others. So, let me confess at the outset to having little more than a few hesitant first words to offer on this subject. I console myself with the thought that if the last word was what you wanted from me, you would have scheduled my talk at the end of the conference, not the beginning.

II. The End of Autonomy

"Autonomy and integrity": basic values throughout the history of higher education. But have they always meant exactly the same thing?

Many generations ago, when the image of an ivory tower fit most colleges and universities fairly well, the meanings were perhaps clearer. An institution's autonomy could be understood as its insulation from the headlong rush of contemporary events and the intrusive control of contending interests and ideologies. An institution's integrity lay in its loyalty to the timeless values of scrupulous, impartial, selfless scholarship. Autonomy and integrity together were the foundation ensuring the pursuit of truth for its own sake -- truth grounded in tradition but unfettered by orthodoxy, untainted by the exigencies of utility, ownership, or advocacy.

Am I saying that academic life was ever really like that? Well...no. Probably not. Even a century ago, when higher education may in retrospect seem to have been comparatively a Garden of Eden, I suppose the snake already knew his way around the groves of academe.

But I do think that those are roughly the terms in which educators would have discussed integrity and autonomy not so terribly long ago. Naïve as description? To be sure. But that does not mean they were not at the time workable prescriptions -- larger guiding ideals for most colleges and universities.

Well, times have changed, of course. And perhaps not entirely for the better.

Colleges and universities certainly are not ivory towers any more. We long ago relinquished our right to stand apart from the world around us. Perhaps it was taken away from us, so adroit we hardly knew at the time what was happening. We may even have given it away knowingly and eagerly. That hardly matters. What does matter is that higher education, which had occupied a space of privilege removed from the temporal, gave up or lost much of its distance from immediate issues, events, and needs.

In one sense this happened very gradually, beginning some centuries ago and gaining momentum increasingly into our own era. Viewed from that vantage, of course, no single theme would be more important than the land-grant movement. From the mid-nineteenth through the mid-twentieth century, it was the land-grant colleges and universities that pioneered and built many of the models in whose image higher education as a whole would later be shaped. Agricultural experiment stations, for instance, became a model for public encouragement of scientific research. The Cooperative Extension Service became the prototype for extending and applying research findings to tangible, practical problems. The university was transformed into a catalyst for public service, thereby becoming an unrivaled engine for change.

In another sense, however, the collapse of the ivory tower was more abrupt, taking place mainly in the years since the end of World War II. In that brief half-century, American higher education changed more dramatically perhaps than in all its prior history. From something available to -- even desired by -- the very few, it became something practically required -- indeed demanded -- by a majority of citizens. Its content was transformed from a very stable, narrowly defined body of largely humanistic and professional teachings to an ever-fluid, ever-expanding multiverse of disciplines. Many of these were scientific, social-scientific, business, and professional fields no one had even heard of in the 1930s or 40s -- much less thought to put in the curriculum.

At the same time, our colleges and universities increasingly came to reflect the true diversity of our general population by class, gender, race, and ethnicity. Our admissions policies were changed to reflect a changed mission which accepted the challenge to meet the educational needs of all groups in our society. And with this broadening and widening of our human service mission came the inevitable greater diversity in our curricular and non-curricular responses.

Thus, in several crucial ways, higher education has come to matter more, and to matter differently, than ever before in our society.

It has moved from the periphery to a new place much nearer the center. Simultaneously, it has been forced to exchange its insularity for a new integration with many other key social institutions.

One is government. In the nineteenth century the rise of public higher education was nurtured by government as a patron. In the twentieth century, and especially during and after World War II, government increasingly became higher education's client -- our customer, if you will, for sponsored research projects and socioeconomic "interventions," including both domestic and overseas economic development.

At about the same time, many colleges and universities began to engage with nonagricultural business in earnest and on a large scale. Today we have reached a point where university-business collaboration drives the development of one key product after another: computer hardware and software, medical technology, biotechnology, pharmaceuticals, and many more. We also play a large part in professional training and retraining, technology transfer, and small business development.

So let us say that between 1940 and 1970 or so, academia found its modern vocation, a broader mission that has become almost universal in higher education today.

Yes, there have been some cul-de-sacs, if not dead-ends, along the way. In the 1960s and 70s, for example, we saw institutions of higher learning being politicized or pushed to become social reform agencies and even political advocates. Many of us recall the consequences with some weariness.

Today it is increasingly pertinent to question the value -- to society and to itself -- of a college's or university's role as a resource for public recreation and leisure. And if we are not well suited to act as social change agents, it may eventually turn out that colleges and universities may be less than suitable agents of direct economic change, too. That is a thought to keep in mind as we try to reconcile our autonomy and integrity with ever-closer ties to business and government in the years ahead.

Why rehearse these facts, so well-known to us all?

For one reason, because integrity and autonomy may not be quite as simple in the 90s for the engaged multiversity, in Clark Kerr's still-useful term, as for the traditional ivory tower.

Take for a moment the collaborative research I just mentioned, and think of its ramifications for some basic academic values. First, there is the question of who "owns" the results of the research. Is it the company that sponsored it? What about the university whose faculty, graduate students, and facilities were involved? Is an overhead allowance sufficient to dispose of all the institution's claims? What about the claims of the taxpayers, if it is a public institution? What about the rights of the scholar to disseminate findings freely to colleagues and students -- not to mention the right-to-know of the colleagues and students themselves?

Where is the autonomy in doing research solely for another organization's purpose, supported solely by another organization's resources? Where is the

integrity in research disseminated restrictively under another organization's control?

Of course, it is never solely the purpose, resources, or control of the other organization. Collaborative research is precisely that, and its basic precondition is always that ways can be found to accommodate the basic needs of both parties. My point is simply this: The old ivory tower trinity of autonomy, integrity, and truth is not enough any more. There is another term in the equation now: accountability. Obvious, commonsensical, but all too easy to forget: Today's multiversity is not responsible solely to itself and its own values. Autonomy, integrity, and truth no longer exist in a vacuum; accountability tempers them, undermines them as absolutes.

III. Assaults on Integrity

Naturally, everyone is shocked when we hear charges of, say, outrageous padding of overhead or indirect cost chargebacks under corporate- or government sponsored research agreements. Such conduct probably is more misfeasance than malfeasance and can result from slipping too easily into a pattern of loose accounting encouraged by the generous flow of "soft" money and especially ambiguous accounting definitions.

It is neither accurate nor fair to say, however, that government and corporations are the serpents in our garden, seducing innocent academics with all sorts of corrupting fruit. But it is certainly the case that they often offer temptations that might not otherwise be posed. Outside funds somehow seem more susceptible to excesses of zeal in valid pursuit and management, but other problems may not be material, or directly material, in nature. When reputations or careers are on the line, pressures may be great to get successful research results. Hence the temptation to look at data selectively, to be too confident that the flaw was in the experiment rather than in the theory...even to appropriate another scholar's work or fabricate your own to order.

How often do academic personnel give in to such temptations? The conventional wisdom is still that it is very, very rare. If true, well and good. But even if fiscal malfeasance, scholarly fraud, and other kinds of misconduct are actually as rare as the proverbial hens' teeth, they should not be mistaken for aberrations. We cannot just dismiss them as wild departures from the norm.

What I have been arguing up to now, in fact, is that there is much about higher education's very mission today that prepares a fertile ground for certain kinds of abuses. That is not to say that our mission makes them inevitable. But it is to say that our newer, broader mission increasingly presents opportunities and exerts pressures to which people may well respond in ways that call into question not

only their personal integrity but also that of the academic community as a whole. Therein lies the danger.

IV. A Crisis of Confidence?

Should we be worrying about an impending crisis of public confidence in the integrity of higher education?

Well, why not? The public has repeatedly had its confidence shaken in the integrity of other key social institutions. The scars of Watergate still disfigure the American political landscape, even without "Irangate" and all the other lesser scandals that came in its wake. Likewise, with all the skullduggery on Wall Street and in the corporate world over the last several years, it is a safe bet that today's public holds the business and finance community in lower esteem.

Especially given our ties nowadays with these very sectors, the public would probably have to be very nearly catatonic not to be susceptible to concern about academia as well. Nor does it help when higher education itself engages in expedient but deeply unseemly political activities, such as pushing Congress to direct funding to specific states or institutions, thus bypassing traditional review processes.

And we compound it all with an irony that is hard to miss: When academics themselves behave in these ways, how valid can higher education's claim be as the repository and channel for passing on the highest values of our culture? When we compromise our adherence to codes of ethical and moral behavior, haven't we tarnished and weakened our credibility as the central institutional seeker of truth?

Certainly the public has to wonder. And all the recent hubbub over political correctness and censorship has done nothing to reduce the perplexity. Why don't we clarify the differences between freedom of speech as a right of all citizens and academic freedom which is rooted in the right of a professional to pursue truth in the specific disciplinary area of his or her competency? Why is it that we cannot seem to distinguish between what may be objectionable ideas, for which the university must serve as a haven, and uncivil behavior, which is antithetical to the very nature of a university as a forum for free expression? For example, virtually all of us would take deep exception to race-based theories of intelligence or academic performance. But I would argue that the university is precisely where such theories are best aired, as long as it is done in scholarly fashion and not as a polemic. It is in the university, after all, that such theories can be definitively refuted on the evidence. But few if any of us would grant anyone, no matter how much on the side of the angels, the right to threaten or harass others who disagree.

There are, of course, grey areas between unpopular expression and unacceptable behavior. But institutions of higher learning, which are supposed to be where our society thinks most carefully about ideas and values, seem today to be having an inordinate amount of difficulty in sorting these problems out, and the public has some right to be concerned.

As long as I am talking about assaults on integrity, I would be remiss if I failed to mention intercollegiate athletics. I thought I had left that topic behind when I went to SUNY, where there is no division-one football or basketball. It did not work out that way. Then I was sure I was safe when I went to TIAA-CREF! But lo and behold, I found myself on the Knight Commission, revisiting all the evils and ambiguities of big-time college sports. And what greeted our report? Some praise that we had charted a workable road map out of the morass, some criticism that we had not prescribed strong enough medicine, and far too many shrugs of "so-what-else-is-new?"

So while the jury is still out on how much reform our recommendations will really produce, I would say this to my friends in the academic community: Until some serious, good-faith attempt is made really to address the abuses in intercollegiate athletics, defending the integrity of higher education is going to be an uphill battle.

And then there is a crisis of confidence at another level that higher education had better take equally seriously. That is the growing worry among many public and private decision makers that colleges and universities cannot be relied on to prevent or punish transgressions on their own.

Most of us have always argued that the academic community is its own best judge, if only because the judgments involved often require specialized knowledge that only the academic community possesses. A somewhat circular argument, though not entirely unpersuasive: David Goodstein sets it forth with more detail and subtlety than I can in the current issue of The American Scholar.¹

But with each new infraction, a few more voices join the chorus of those who feel otherwise. For them, malfeasance is malfeasance and fraud is fraud, and the proper places to address such problems are funding agencies, legislatures, and regulatory bodies, even the courts.

I imagine most of us incline considerably more toward the former position, although this is probably something that will come up often during the rest of this conference. I will say one thing, however. It is clear that many of academia's "constituencies," as we call them, are less willing these days to take us at face value when we claim that we alone can judge ourselves. The more

problems that come to light, the tougher that claim is going to be to defend. Our credibility has been weakened.

V. Integrity, Mission, and Values

In passing a few minutes ago, I mentioned the irony of ethical breakdowns by the very institution that society has entrusted to guard its deepest values and transmit them between generations.

In passing...and yet is not that, in the last analysis, the most disturbing part of the whole problem?

Because for all our greater breadth of service, all our collaborative research and community outreach, all our technology transfer and economic development, aren't sustaining and passing on humane knowledge and values still the very essence of higher education's mission?

I for one believe they are. And as a consequence I cannot help but believe that the real "sins" in these unfortunate incidents are not so much the immediate losses or deceptions, but rather their cumulative corrosion of the university's moral standing.

Is it a coincidence that the academy's role as a haven for both discourse and dissent is eroding at the same time when our success in teaching values, civility, and humaneness is at an ebb?

Is it more happenstance that fiscal accountability, scholarly rigor, and intellectual honesty appear to be waning at the same moment when the ideological idiocies of the politically correct and incorrect are on the rise?

I strongly suspect these things are not coincidences at all. I suspect, indeed, that they arise from a common failing -- the academy's failure to reconcile our changing mission with what should be our enduring deeper identity.

Maybe the ivory tower image never really fit. Whether it did or not, colleges and universities are not going to go back to it. On the other hand, institutions are in some ways like people. Understanding where they are means understanding where they came from.

If we cannot ourselves abide by the standards we uphold, how can we possibly expect to go on transmitting those standards to others?

More times than not, it is when we forget who and what we are -- when we try too hard to act like someone or something else -- that we start to get into trouble.

In that sense, the ultimate gauge of integrity for higher education may be whether we have the courage, the next time society asks us to become something we are not, to say no. Knowing what we are -- and what we are not -- may not be enough, as the kids say, to "keep us honest." But without that, nothing else will be enough, either.

State universities and land-grant colleges are uniquely equipped by pioneering tradition and experience to confront these issues. You have had a longer interaction with federal, state and local governments as well as business in the pursuit of a broader educational mission of service. You have dealt with the issues of student diversity for a longer period. You have pioneered the broader curriculum for greater economic and social relevance. Thus, I would argue that you have a special competence to review more closely what that experience has been -- what has worked and what has not, and especially how you have protected and maintained the integrity of the academic mission of the university.

These lessons will be of value to all of higher education as we face the crisis of confidence confronting us.

The stakes are high. Universities are too important to our society as bastions of rationality and civility. Defending our integrity and our autonomy requires that we clarify and reaffirm that which we must cherish and wish to protect.

Given the forces and pressures at work, it is no easy task. But it is a task we must all shoulder.

Protecting and defending the integrity and autonomy of the university is crucial, not just for ourselves but for society as a whole. Higher education is the greatest human archive of the best that man has thought and discovered in the past. Even more important, it is society's principal hope to meet the new needs and challenges of tomorrow.

Thank you.

¹ David Goodstein, "Scientific Fraud," The American Scholar, Autumn 1991.

Second General Session

MR. COOR: It is a pleasure to welcome you to the second and final general assembly of this year's Annual Meeting. I am Lattie Coor from Arizona State University, elected yesterday afternoon as chairman for the coming year.

If there is one thing we all spend a lot of time being advised about and trying to do, it is to communicate. If there is any part of the world with which we spend increasing amounts of time, it is the media -- vexing, helpful, frustrating at times, leading us to despair. But nevertheless a topic that requires considerable attention. That has been your planning committee's charge for this meeting.

We have with us Jerrold Footlick, who has not only had a long career in the media, but currently is trying to bring wisdom to a number in his new role as a counselor on media and public affairs and has served, among others, several chief executive officers of our member institutions in NASULGC.

Jerrold Footlick spent 20 years at Newsweek, which he joined in 1970 as Education Editor. He then created the Justice Department section at Newsweek in 1973, and in 1978 was named Senior Editor, supervising the Education, Justice, Science, Medicine, Sports and Periscope departments of the magazine. He attended Northwestern University and was graduated as a history major from the College of Wooster. He earned a law degree from the Harvard Law School and is a member of the Ohio Bar.

Please join me in welcoming Jerrold Footlick, who will speak to us today on "A Failure of Communication: Universities and the Media."

A Failure of Communication: Universities and the Media

Jerrold K. Footlick

You have heard about my career at Newsweek, and you have heard that I am taking on new assignments, which lead me to spend a lot of time speaking with college and university presidents and other administrators. The earlier part, the pure journalism part, is easy to explain to people. What I do now is somewhat harder to describe.

Some of what I do now may be illustrated by the story of a man and his beautiful, black cat, who, inevitably, was named Tom. Tom was handsome and proud, and each evening he would lick his fur into a glorious shine, put on his

black tie, and prance into the alley behind his master's house. Soon there would be the sound of little purrs up and down the alley, and as the night wore on, the purrs would get louder and more expressive. And as the night ended, Tom would prance back into the house, a little the worse for wear, his fur a little disheveled, a little cut around the face, but, clearly, very pleased with himself.

This went on regularly, until, after awhile, the neighbors began to complain about the noise and the fuss. So, his master said to him: "Tom, you're going to have to stop this. If you don't, I'm going to have to take you to the vets and have you fixed."

That didn't stop Tom. Each night he would still shine up his fur, put on his black tie, and prance back into the alley. There was noise, and before long, kittens were being born all over the neighborhood, and now the neighbors really were complaining. So Tom's master took him to the vets and got him fixed.

Poor Tom. He just lay around the house, and night would come, and Tom would mope. Until one evening, almost out of a sense of curiosity, Tom got himself ready, got his fur shiny, put on his black tie, and strolled out into the alley.

The next morning, when Tom came back in, he wasn't disheveled or cut, but he looked very satisfied, as if he had accomplished something and really enjoyed himself. His master said, "Tom, how could you be so pleased with yourself? I had you fixed." And Tom said, "Now I'm a consultant."

That's a reason I don't much like to describe myself as a consultant.

It doesn't take me to reconfirm, in this setting, the importance of the Morrill Act, but if I consider it to be the most important piece of education legislation ever produced in this country, that view may well be reinforced by the fact that I am from the Midwest. I must address here the issue of being an Ohioan because it says something about how I look at things. I still think of myself as an Ohioan, although I haven't lived there for more than 30 years. I have been in New York now for more than 20 years, which is about my stay in Ohio. But it is inconceivable that I could ever think of myself as a New Yorker.

Easterners have always given Ohioans a hard time, but not just Easterners. Real Midwesterners -- Kansans, Nebraskans, Iowans -- tend to think of Ohio as the East. No one wants to claim Ohio.

But I have been a sports fan all my life, and I started, like a lot of people in my business, as a sportswriter. So I knew absolutely that Ohio was in the Midwest because Ohio State was in the Big Ten, and the Big Ten was the Midwest. How

was I to know that years would go by, and one day the Midwest would begin in State College, Pennsylvania?

What kind of backgrounds we come from, what kind of people we are, make a difference in how we look at things, and how we do things. Over the years, for example, I have frequently discussed, both informally with friends and at public gatherings, the relationship between lawyers and journalists. Having attended law school, and actually become a lawyer, yet having been a journalist most of my life, I have a sense of how they are alike, and how different, mainly alike.

Lawyers as a group are better educated. But the kind of people who become journalists, like those who become lawyers, are, in general, smart, curious, well-informed, unusually interested in public affairs, good writers and talkers, eager to debate and argue. In a sense, lawyers and journalists are intellectual siblings, which is one of the important reasons they clash so often.

There is something similar in the relationship between academics and journalists. They are much alike, yet at the same time, there are significant differences between them. That helps explain why these two groups of smart, educated people -- both groups important to the well-being of the nation -- so often misunderstand each other.

Start with the overwhelmingly important thing that journalism and higher education have in common: A constitutionally protected freedom from government interference almost beyond the imaginations of our colleagues around the world. We call it the First Amendment. Freedom of the press serves as a bastion for the media. Freedom of speech underlies the academic freedom of the universities.

At the same time, might I add, both journalists and academics sometimes wrap themselves in the First Amendment in unseemly ways -- the journalists screaming violation of freedom of the press in the face of legitimate questioning of their methods, and academics screaming violation of academic freedom to legitimate questions about accountability and intellectual integrity. In the public's mind, I suggest, both the media and higher education burn up valuable currency by doing so.

Perhaps it is a responsibility derived from the First Amendment, or the fruits of our history, but in different, yet complementary ways, our press and our universities, especially our public universities, also share an American tradition of education. We help not just an elite, but a large public to be enlightened and concerned citizens in a democratic society.

Then there are the differences. The career of an academic revolves around scholarship. And as scholarship is judged, journalism looks too easy. What academics write professionally is usually read only by other academics, and often only by those who must read it. So they have little sense of how difficult it is to produce a piece of work that someone might find intrinsically interesting.

Academics may sneer at one of their number -- a Paul Samuelson type -- who writes too often or too successfully for the popular audience (at least until he wins the Nobel Prize). Perhaps the most devastating opprobrium that can be applied to a piece of scholarship is, "This is not a bad piece, but it's 'journalistic.'" To say this is to condemn the work as glib, shallow, lacking in serious meaning.

Although they both work with thought and language, in an important sense what academics and journalists do differs fundamentally. It is one of the conceits of journalism that a good reporter can learn enough about a subject in twenty-five minutes to write a story about it. This skill relates directly to the pace of journalism. Journalists are intellectual sprinters. They deal with assignments rapidly. They have a low threshold of boredom. They are eager to move from one task to another.

It is a style that annoys many academics, flying in the face of their training and responsibility. Academics are more the long-distance runners. An academic may spend months or years working on a problem, turning it over and over in his mind, examining every facet, searching for any nugget of information which will add to knowledge. This effort may lead to an important finding, or it may lead nowhere at all. But it is what scholars do.

The difference between these approaches, as Duke political scientist James David Barber once put it, is that the journalist wants to tell the most important information by the end of the first paragraph of the story and the scholar by the end of the last lecture of the semester. They both get the story told. It is a matter of pace.

Journalists fancy themselves as tough-minded, skeptical, incredibly hard to fool, with a touch of "The Front Page" in them, but in this day and age, well-educated and sophisticated enough to use the proper fork. Their sense about academics is of people who are smart, but often fairly boring, who take too long to get to the point, orally or in print.

The view commonly held by journalists is that campus events tend to meander along and resolutions come slowly. Actually, I suspect you might agree. That often leads, however, to an assumption that campus politics is child's play for tweedy amateurs. Journalists believe that they are so savvy, so accustomed to

dealing with shrewd politicians, that they can spot and protect themselves against manipulation. They don't understand how brutal can be the politics on which academics cut their tenure teeth -- the style that led the late Columbia political scientist Wallace Sayre to say, "The reason academic politics is so vicious it that the stakes are so low."

Given the tone of distrust or patronizing tolerance that journalists and academics frequently exhibit toward each other, it is ironic how easily each can be flattered by the other's attention. Journalists are pleased to be invited to speak on campuses and to participate in university symposia. At the same time, many professors -- and do I dare say university presidents -- love to be quoted in newspapers or interviewed on television, or to publish Op Ed essays. Dozens of universities now distribute "experts books" to encourage reporters to call members of their faculties for views on particular subjects.

It is uncommon, however, to find a mutually beneficial public affairs relationship between universities and the media. They can exist, however. Let me cite one example of what might almost be called media-higher-education synergy -- concerning a research university that presumably is not represented here because it is private.

The institution is Duke, which as you know, is now widely regarded as one of the great universities of the nation. I do not gainsay its quality. My daughter went to Duke. But I suggest that the ascendance of Duke from a leading regional university to a leading national one, roughly over the past two decades, is more than Stanley Fish and his deconstructionists, or John Hope Franklin or Bob Lentriccia and Reynolds Price -- even though academic stars are important.

It starts with Terry Sanford, not merely because he was a leader, which he was, but because of his good sense of public affairs and that of his chief public affairs advisor, Bill Green. Duke did not send out press releases telling people how good it was. Rather, it invited journalists -- important journalists from important publications -- to witness its quality.

For 15 years or so, reporters, writers, and editors from Time Magazine and The Washington Post have been going to Durham for month-long stays: Six from each publication in an academic year; the news organization pays their salary; Duke gives them accommodations. They can attend whatever classes they want, do research in the library, or just read. In recent years, this program has been extended to other newspapers, domestic and foreign, and broadcasters. In addition, some guest writers and editors have spent a semester at a time as teachers, journalists in residence.

What this means is that a large number of journalists from some of the most influential news organizations in the country know Duke well. You have to be very secure, of course, because you can't control those journalists as they roam the campus, so that the problems you have, and the people who want to complain about the president, or the curriculum, can't be hidden.

Nor does this arrangement shield you from uncomfortable attention. The Wall Street Journal and The New Republic, among others, have burned Duke over the issue of so-called political correctness. But journalists who spend time at a university become familiar with it. They are comfortable with it. They understand the human beings who are there and the difficulties they face. And that makes a difference when you have a story to tell.

Some of this you surely understand, as leading administrators in higher education. Yet it is astonishing to me how relatively little even leading educators understand about journalism, and, just as bad, how little leading journalists understand about education. Worse yet, what they think they know is often wrong.

Think of higher education: One huge, monolithic entity. That's ridiculous, you respond. We have large research universities, small liberal arts colleges, community colleges, post-secondary vocational school. We have private colleges and universities, large and small, public colleges and universities, large and small. Countless variations, with different aspirations, serving different needs. Yet much too often the media reports on higher education as if it were one entity.

Now think about how many times you have referred to the media, or the press, as if it were one huge, monolithic entity. The media, from my perspective, is Newsweek and Forbes, ABC News and CNN, The Wall Street Journal and The Washington Post, Nightline and The McLaughlin Group, The National Inquirer and The Star, The Herald-Times in Bloomington, Indiana, and The Herald-Leader in Lexington, Kentucky, Financial News Network and ESPN, People and Playboy, Good Morning, America and Eyewitness News, The American Statesman in Austin and The News and Observer in Raleigh, Vanity Fair and Vogue, The MacNeil-Lehrer Report and The Geraldo Rivero Show, Reader's Digest and Grit. To say nothing of 1,500 other daily newspapers, and thousands of weeklies, and magazines, and radio and television stations. Large and small. Countless variations, with different aspirations, serving different needs.

The media is no more monolithic than higher education. And it is in your interest that you not think of it as one entity.

Something else needs to be mentioned that higher education and the media have in common -- a significant lessening in faith from the American people.

Over the past two or three decades, every kind of national survey has indicated a dwindling of respect for vocations and values that were once treated with great respect, or sometimes with a degree of awe. Doctors are an obvious example; lawyers are another, and judges, and police officers. The family. Why should the press or higher education be excluded?

Historically, of course, there have been complaints about the press -- my favorites are from Thomas Jefferson, who can be, and frequently is, quoted on both sides of the free press issue -- but I suggest that the prevailing attitude among Americans, until a few years ago, was that journalists were people who didn't make much money, but had a dedication to their calling, a sense of fairness about what they did. And they were essential to anyone's knowing what was going on. Something like elementary school teachers.

Then came Ted Agnew's attacks on the "nattering nabobs of negativism," which changed the atmosphere. Now, multi-million-dollar salaries for television newscasters are a subject of everyday discussion. Miss America contestants who used to want to be movie stars now say they want to be television anchors, often without any notion about what it means to be a reporter. This applies not just to electronic journalism; the line between journalism generally and entertainment has blurred.

And if journalists are still understood to be essential to anyone's knowing what is happening in the world, their sense of fairness is far more often called into question.

Which brings me to higher education.

For a couple of decades after World War II, higher education grew in almost every way -- in numbers of students, and research dollars, and in respect from the American people. Besides that, it seemed like fun. We can date the change in a variety of ways. It could be that moment in September, 1964, when Mario Savio first preached from the steps of Sproul Hall at Berkeley.

Student protest, which began as a plea for more student rights -- a free speech movement, it was called, not entirely inaccurately -- changed universities monumentally, for the better in my judgment. But the student movement also changed the perception of good old campus days. It helped make people uncomfortable about higher education.

Another critical factor, as you well know, was the more recent tenure as Secretary of Education of Bill Bennett. Perhaps I shouldn't dwell on Bennett -- you all have spent enough time talking about him -- but he is certainly important to the issue of public perception of higher education. Bill Bennett put higher education on the defensive. And he helped set the agenda for future skepticism.

But if Bennett is one of the reasons for the continuing public troubles of higher education, he is part of the solution. If it had not been for him, would you in higher education have realized, as you clearly came to realize, that you were not beloved by all America.

So far, I have blamed students for higher education's troubles, and blamed Bill Bennett. We could blame some politicians; the inflation of the 1970s, when faculty salary increases couldn't keep up with the rise in the cost of living, and campus maintenance had to be deferred; federal regulations that require so much paperwork that university bureaucracies are almost out of hand; and a dozen other things.

Of course, it's even possible that some of the wounds of higher education are self-inflicted. Some of these problems are real; some are image; some are a combination of the two. I want to cite a few of these problems: Not necessarily the most important; rather, among the most visible. They stand at the interface between universities and the media.

Let's talk about athletics.

In defense of college sports, first of all, I note here the fact that, at many universities, major sports events are an important source of local and state entertainment and pride. Sports deserves more consideration for that role than it is given. I don't think universities make that point strongly enough.

Nonetheless, whether or not your institution runs a big-time athletic program, and whether or not your institution cheats, you cannot escape being tarred with the corruption of inter-collegiate athletics today. How can it have taken the leadership of higher education so long to grasp the impact of that corruption -- and how apparent was the lack of will or lack of capacity to come to grips with it? The President's Commission has helped. But higher education has a long way to go.

Inter-collegiate athletics is a singular case in which universities can look sincere or phony. You know how excited alumni, and legislators and your friends and neighbors can get about sports. Those people can make it hard if the institution doesn't seem to care about winning. But there are a lot of less vocal people out there -- alumni and friends -- who usually ignore inter-collegiate athletics or are

antipathetic to it. The corruption has become so well known by now that even disinterested people are aware of it.

This corruption has damaged the relationship between higher education and the public. How colleges and universities behave toward inter-collegiate athletics in the next few years will make a great difference in public attitudes.

Now, to the matter of teaching and research. University faculty seem invariably to refer to their "teaching loads" and their "research opportunities." It tells us something, doesn't it, that they almost never say "research loads" and "teaching opportunities."

As nearly as I can tell, the balance, such as it is, between teaching and research may not have altered tremendously over the past few years. But people are paying attention more.

I feel as strongly as anyone that more important research is done in American universities than in any comparable venue in the world. We start with that. Yet let's not kid ourselves. Much of what passes for research is redundant, boring, and unimportant. It exists only to keep an academic community functioning in ways that it has functioned for years.

Too many faculty stars are almost never in the classroom. They are often recruited with promises of labs and their choice of graduate students and little or no undergraduate teaching.

Administrators say they cannot tell the faculty what to do. I understand that faculties are impossible to deal with. Yet someone -- whether it be university presidents, deans, leaders in the faculty or leaders in the academic disciplines -- must put some teeth into efforts to make faculty, especially tenured faculty, devote more time to teaching.

Some form must be established in which teaching truly becomes a significant part of tenure decisions, instead of a lip-service part as it often is. Some form must be created in which real research counts, not make-work or make-tenure research as it often is.

The worst part of all this, in my judgment, is the number of teaching assistants, especially foreign teaching assistants, whom the students cannot even understand. Students feel cheated in classes where they simply don't understand the teacher's speech -- and they tell their parents and friends about it.

I couldn't count the times -- especially in the past year or two -- that I have read or heard university officials speak of how they are improving undergraduate

teaching. If every university that claims to have improved teaching actually had, American undergraduates would surely be learning more than they are now, whether they wanted to or not.

Let me add one other item. I fear that a perception has taken hold among the public, and that includes your friends, that higher education is made up of whiners -- that you don't accept blame for your faults, that everything is someone else's fault, that everyone is against you.

One small illustration. Not long ago, there was a news story saying that donations to charitable causes had increased last year, but that representatives of 501 (c) (3) organizations in general, and universities in particular, were still worried about the future impact of the 1986 Tax Reform Act.

That's a legitimate worry, of course. But an impression it helps create is that of people who say, well, the sky didn't fall when we said it would, and in fact the sky is just as blue as it has been for years, but it still will probably fall soon.

Finally, one suggestion on a subject that perhaps should not be considered one of your problems: Elementary and secondary education -- K through 12. It is one of your problems, if the quality of your students deteriorates because of their previous education, and you have to waste time and funds of your institutions providing what amounts to remedial education for two years.

The abominable state of elementary-secondary education has begun to sink in. The public is concerned. Colleges and universities can help bring improvement. Better teacher education, of course. But they can create programs in cooperation with secondary schools and elementary schools, imaginative new ways to look at education. If I were a university administrator, anywhere, I would do everything I could to make certain my institution was working with the K-12 schools -- and that the whole state knew it.

Those are issues that people talk about, and don't understand as well as they should.

I have said, and I reiterate, that high-level university officials do not understand enough about how the media operate. And it is in your best interest to learn. I say this not, of course, because you owe anything to the media. You must go further than halfway because the media isn't getting better. I think that in many respects, the media is getting worse.

I am disheartened by a decrease in seriousness of coverage, trivialization, blurring of entertainment and news, a supermarket-tabloid-style approach to personal lives sweeping through the mainstream media, what one new book calls

a "Feeding Frenzy." And none of this counts the simple matter of errors and inaccuracies.

In my three decades of experience as a journalist, I have never known more anxiety in the business; never known managers more worried about dwindling advertising; never known editors more anxious about how to respond to the competition and serve their readers and viewers; never known of fewer good career opportunities for bright young people.

It's a tough time for the media. But then it's tough everywhere. The media have adjusted in some respects and not in others.

In the last two decades or so, I believe that media have vastly improved their coverage of business, medicine, science, and the arts. But in that same period, I think the quality of coverage of education has diminished.

In the decade roughly of the '60s, education was a hot topic with the media -- not just higher education, but all education. We reported seriously on early childhood education; we tried to explain the New Math. Those days are gone.

You know by just looking at the newsmagazines that they devote less space to education than they once did. With rare exceptions, 1,500 words is the longest story that most major newspapers will run on higher education. In that 1,500 words, the reporter must include enough background and exposition so that every reader will get some sense of what the story is about. How much justice can you do to a subject like diversity, or research integrity, or political correctness, or deconstruction, in something less than 1,500 words.

As you can see, I am not sanguine about prospects for improved coverage of education. That's why I suggest you have to work harder.

This is not an appropriate venue in which to offer many precise recommendations about how to deal with the media, but I am going to make one final general suggestion.

The idea seems to me to be so obvious that I cannot imagine sophisticated university administrators failing to grasp it. Yet repeatedly over the years, public information officers have said to me things like, "I could never get my president to agree to that," or "They would never let us do that."

The suggestion is that you be absolutely as open with the media as you possibly can. And the more controversial the story, the more open you should try to be.

Instead of being unavailable, or trying to withhold information, or worse, misleading reporters, administrators should be ready to speak with reporters, and help them gather information in any way possible. For example, on a tough campus issue, if certain faculty members disagreed with the administration, let reporters know who they are.

You surely know why I recommend this policy, and it is not to make journalists' lives easier. The theory is no more than taking advantage of circumstances and human nature.

First, reporters will almost always find on their own most of the people they want to interview, and most of the information they want. The risks you take are relatively slim. If you don't tell your side of the story, in as detailed a way as possible, reporters are more likely to get your side wrong, or worse, get someone else's version of what purports to be your side.

Second, believe it or not, most journalists are human beings. If you cooperate with them, are helpful to them, they are far more likely to write an understanding piece this time, and treat you in a more positive light in the future.

In short, I am recommending that you co-opt the press.

Now, if I had another three hours, or thirty hours, I would have the time to tell you about a few more of the weaknesses of newspapers, magazines, and television news divisions, and what we ought to be doing to change the public perception of the press.

Actually, that's a dangerous thing to do. The media are more thin-skinned about criticism than almost any group of professionals I know. University administrators, I trust, are more secure.

So I will thank you for your attention and your patience.

**National Association of State Universities
and Land-Grant Colleges**

Senate Meeting

Grand Hyatt Hotel

Washington, D.C.

November 11, 1991

MR LANGENBERG: I'd like to welcome you all to this meeting of the Senate of the National Association of State Universities and Land-Grant Colleges. I would note that there is a roll call list being circulated, and I trust you will all sign it. Also, there is a document being circulated that you may have seen earlier at the meeting of the Presidents' Council. It concerns the opposition of this Association, and we hope each of its members, to language in the Higher Education Authorization Act that would mandate the designation of a state approval agency with very widespread powers over matters both academic and non-academic in our institutions.

The question is before you. That document deals with whether or not you would be willing to commit yourself and your institution by joining the list of signatories of a letter that has already been sent to several Senators expressing our concern in opposition to that provision or those provisions.

The first item on our agenda this afternoon is approval of the 1992 committee and commission appointments, and, as our tradition, since these will be the appointments who will work with our next chairman, these will be presented by a gentleman who for a few moments is still chairman-elect, Lattie Coor.

MR. COOR: Thank you, Mr. Chairman. I find it an interesting bit of work that the gavel doesn't get passed until the end of the meeting, but the task already begins. It's a preview, I suspect, of things to come.

In light of the magnitude of change and the plans for the '90s, we propose a rather different way of handling commissions and committees for the coming year. You will see a Document 3 in the materials distributed as you came in today, a resolution proposing that we keep the committees and commissions in their current membership for the time being, pending approval of the implementation plan for the 1990s; and that, once that plan is fully in place, assuming it is fully endorsed, we will then make such changes as necessary in the appointments early in the new calendar year with the involvement of the Executive Committee.

I would, therefore, Mr. Chairman, move the resolution contained in Document 3.

MR. LANGENBERG: Thank you very much, Lattie. Is there a second to that motion?

SENATE MEMBER: Second.

MR. LANGENBERG: Any discussion, comments?

(No response.)

MR. LANGENBERG: If not, all in favor, say "aye."

SENATE MEMBERS: Aye

MR. LANGENBERG: Those opposed?

(No response.)

MR. LANGENBERG: Any abstentions?

(No response.)

MR. LANGENBERG: Motion carries unanimously.

There is in your packet a document entitled "Resolution." Its subject is the report of the Knight Commission, and the document is, in effect, a resolution expressing the support of this Association for the general findings and recommendations of the Knight Commission and endorsing the commission's statement of principles and proceeding to urge all of our member institutions to work for the adoption of those guiding principles.

This resolution was approved by the Executive Committee of the Senate at its meeting on September 17, and it is now being forwarded to you for your consideration and, I hope, approval. And I would, therefore, on behalf of the Executive Committee move the adoption of this resolution. Is there a second?

SENATE MEMBER: Second.

MR. LANGENBERG: Is there any discussion? We already had quite a spirited discussion on issues related to this a moment ago. Any further discussion?

(No response.)

MR. LANGENBERG: If not, all in favor, say "aye," please.

SENATE MEMBERS: Aye.

MR. LANGENBERG: Those opposed?

(No response.)

MR. LANGENBERG: Are there any abstentions?

(No response.)

MR. LANGENBERG: Passed unanimously. Continuing then with our custom that the chairman-elect gets to propose things for next year, Lattie Coor will now bring you the proposed 1992 Association budget.

MR. COOR: Thank you, Don. Developing a budget proposal for the coming year has been no easier task for the Executive Committee than it has been for all of us on the campuses. We considered holding the line with no increase. I don't know that we considered seriously cutting the budget, although, as a bit of a provocation to a new president, we thought at least it might have a disciplinary quality by mentioning it in passing.

We concluded, however, that given the nature of the Association budget where we could not really provide salary increases without some form of dues increase -- there's just really not enough of a base to make cuts in program and provide salary increases -- we concluded two things: first, that we really did need to make provision for some salary increases on a merit basis and, secondly, in familiar territory to us all, we decided to solve the problem by recommending a tuition increase.

So, what you have before you in Document 5 is a recommendation that is a "hold the line" budget, no expansion in personnel or programs, and the creation of a salary pool to be distributed on a merit-based salary pool of three percent and, along with that, a dues increase of three percent for all members as well.

On behalf of the Executive Committee, Mr. Chairman, I would like to recommend adoption of that budget.

MR. LANGENBERG: Thank you. Are there any comments, questions, or discussion?

(No response.)

MR. LANGENBERG: Seeing none, is there a second for that motion approving this budget?

SENATE MEMBER: Second.

MR. LANGENBERG: All in favor say "aye."

SENATE MEMBERS: Aye.

MR. LANGENBERG: Those opposed?

(No response.)

MR. LANGENBERG: Any abstentions?

(No response.)

MR. LANGENBERG: Thank you. Lattie, would you move on to moving of the approval of staff officers for the following year?

MR. COOR: We really tried to make this fairly dramatic, seeing the extent to which we could cause some real nervousness on Peter's part. So, if there are any -- what is that wonderful line in weddings? -- if there's any who has objection, if anyone would like to raise a grand and robust opposition, now is the moment to do it, for we bring before you the new staff officers to be appointed effective January 1, 1992. It carries with it the significance of everything this Senate knows about, with Bob's retirement and Peter undertaking a new task.

The three officers to be appointed, to make it official with Senate action, are Peter Magrath as president; Alice Hord as secretary; and Ruth Smith as treasurer.

On behalf of the Executive Committee, I move approval of these three officer nomination.

MR. LANGENBERG: Do we have a second?

SENATE MEMBER: Second.

MR. LANGENBERG: Any discussion?

(No response.)

MR. LANGENBERG: All in favor, say "aye."

SENATE MEMBERS: Aye.

MR. LANGENBERG: And those opposed, "nay."

(No response.)

MR. LANGENBERG: Any abstentions?

(No response.)

MR. LANGENBERG: And, Lattie, the next official action.

MR. COOR: We will have opportunities, some this evening with the presidents and chancellors, other occasions in the weeks ahead, to pay tribute to Bob and Joan Clodius. We have to do some official business, however, to really allow us to do what we want in those settings. So, even though it may seem a little official as we all sit here somberly taking this action, it is a step that will then allow us to celebrate it more fully later.

So, I would like, on behalf of the Executive Committee, to ask the Senate to adopt the following: that we name Robert L. Clodius as president emeritus of NASULGC and Joan E. Clodius as first lady emeritus.

MR. LANGENBERG: Thank you, Lattie. May I have a second, please.

SENATE MEMBER: Second.

MR. LANGENBERG: The Executive Committee debated what might be the effect on the Clodius family if this action were to be approved for Joan but disapproved for Bob, and we decided we'd take them together.

Will all in favor of this motion please say "aye."

SENATE MEMBERS: Aye.

MR. LANGENBERG: Those opposed?

(No response.)

MR. LANGENBERG: It's unanimous, Bob. Thank you all.

MR. COOR: Rode through on her coattails once again, Bob.

(Laughter.)

MR. LANGENBERG: Well, we come now to our response to an action which this body took just a year ago at the Annual Meeting. At that meeting, you considered a draft charter for the '90s, describing some changes in the structure and the functions of our Association and based on a many-months study, self-study, by the Association with the aid of Bob Bryan, and you approved a resolution directing your Executive Committee to proceed to develop an implementation plan. We come back to you this year at the Annual Meeting for approval of that plan.

You have in your packet of materials as a reminder a copy of the charter for the '90s and beyond that you approved last year and a copy of the draft resolution that you passed.

You also have an outline of the implementation plan. That plan has been developed over this past year with strong involvement of the NASULGC staff and a great deal of consultation with all of the constituent bodies, organizational bodies, of NASULGC. It calls for -- it reaffirms the basic source of the Association's authority as lying here in this body, in the Senate. It reaffirms the continuing existence of the Executive Committee of the Association and of its Steering Committee operating essentially as they now do. It calls for the continuation or the establishment of councils -- 11 councils in all -- that represent the bodies that within the Association bring together people with like purposes, like functions, and like responsibilities among all of our institutions. It also calls for the establishment of six very broad-based commissions, each one designed to oversee a particular issue area or a very broad area of issues and to assist us in developing understandings of these broad-issue areas and developing positions which the Association can take as it represents us to our various clienteles, including the federal government.

Those commissions are: the Commission on Food, Environment and Renewable Resources; the Commission on Human Resources and Social Change; the Commission on International Affairs; the Commission on the Urban Agenda; the Commission on Information Technologies; and the Commission on Outreach and Technology Transfer.

For most of these commissions, there has been considerable effort devoted to devising how they might operate in detail, what the internal structure of each of these commissions might be. That process is, by far, farthest advanced with the Commission on Food, Environment and Renewable Resources, a group working under the leadership of Jim Ozbun. They have developed a very carefully thought out internal plan for the operation of that commission, and that plan has been approved in broad outline by the Executive Committee.

Most of the other commissions have followed along behind and have also brought forth plans. These have not been formally approved by your Executive Committee as yet, and we will be looking to trying to establish a reasonable degree of uniformity in nomenclature but probably will be allowing a good deal of variation in internal structure and operation in a way that suits the operation of the commissions.

At our Executive Committee meeting yesterday, the Executive Committee considered three proposals having to do with the draft charter implementation plan you have before you. One of these calls for establishing a sunset provision for each of these commissions; that is to say, each commission would be reviewed some years hence and, unless that review was favorable and resulted in a decision to continue the commission, the commission would automatically go out of existence, most likely to be replaced by another commission on another issue area or, perhaps, a commission with a modified charge.

Because of the difficulty and complexity of reviewing the work of a commission, it was felt that if this were approved, that two commissions ought to be approved in the fourth year, two others in the fifth year, and two others in the sixth year. That is to say, we'd take them two at a time, with which two to come first arising from experience with the operations of the commissions as we go on through the next several years to use them. That proposal was approved unanimously by the Executive Committee, and I wish to include it with the draft implementation plan for your consideration.

The Council on Academic Affairs submitted a query to or raised a question with the Executive Committee on the appropriate place within this proposed organizational structure to give proper emphasis to matters relating to undergraduate education and teaching and learning issues. After some discussion, the Executive Committee has moved the ball back to the Council on Academic Affairs and asked them to provide us with their considered advice about exactly how and where it will fit properly.

And, in response to a communication from the Commission on Arts and Sciences, we asked the Council on Academic Affairs to address the concerns expressed by the Arts and Sciences Commission regarding representation on the Council of Deans, proposed Council of Deans, and broad involvement in the commissions being proposed in the implementation.

And that, in broad outline, is the implementation plan you have before you. Not all of the "T's" have been crossed, not all of the "I's" have yet been dotted. What the Executive Committee unanimously recommends the Senate do is to approve this implementation plan as it is before you in outline and charge the

Executive Committee to oversee putting it into action with a report back to this Senate next year on how things are going.

With that, I would like to turn to the gentleman who is going to be leading the implementation of this change if you approve it, President-designate Peter Magrath.

MR. MAGRATH: Thank you, Don. Don has outlined the implementation plan very, very well. A word or two of general purpose as a reminder: It is intended to implement the charter and the new directions that we propose for the Association and its universities as they work together essentially to refocus ourselves, to re-energize ourselves, as much as possible to try to simplify -- it won't be easy and it probably won't be 100 percent -- our working relationships and structures, to try to develop mechanisms by which we can deal with the really crosscutting issues that impact American public higher education in our universities and, in a sense, to build the organizational workings of the Association around our mission, which is basically education, fundamentally education, expressed through research and teaching and, of course, special service related to our educational talents and skills.

The structure is, as I think Don outlined very well, intended to be flexible and changeable. Nothing is cast in the proverbial concrete. Indeed, the provision for a sunset review emphasizes what was the intent and spirit of this reorganization. It's intended also to be interdisciplinary and try to break down compartments and walls that inhibit our ability to represent our fundamental interests.

Commissions will come into place, as Don pointed out. One commission has organized itself as well, in fact will serve, I think, as a model to some extent for the other commissions that are coming together. It's the intent that there be interlocking real relationships between the commissions, so that all parts of our effort will be coordinated in the best possible fashion.

I have to add a word of caution on our resource issues. I'm delighted that expectations are high for the Association and what we can do together. That's the way it should be. I do need to note that with resources being constrained, although we can accomplish and will accomplish, I believe, a great deal with the restructuring and the implementation, some of the things that we need to do and want to do are going to have to be handled on a priority basis until we can identify resources as well as the most appropriate way to move ahead.

Finally, this implementation plan and charter that the Senate voted last year and all the documents are pieces of paper. They're important pieces of paper, of course, but they are only pieces of paper; and the implementation and the charter is all meaningless unless the members, you and I, agree together, to really

exercise collective leadership to make the implementation a reality in terms of the objectives which were stated in the charter.

I think it's a very good plan. I don't think it's perfect in all its details. It's deliberately left pretty broad-based, so that we can adjust it as we feel our way. There will be a certain feeling of our way. I would hope, Don and Lattie and others that come, a year from now we'll have things very well in place; but, even then, we may want to consider and continue making some adjustments as necessary. We don't want to get rigifed, ossified, in a bad sense. I very much support this and hope the Senate will approve it.

MR. LANGENBERG: Thank you, Peter. I would now like to move officially and formally on behalf of the Executive Committee the approval of this implementation plan with a directive to the Executive Committee to oversee putting it into effect. May I have a second.

SENATE MEMBER: Second.

MR. LANGENBERG: Is there any discussion?

(No response.)

MR. LANGENBERG: All in favor please say "aye."

SENATE MEMBERS: Aye.

MR. LANGENBERG: Those opposed?

(No response.)

MR. LANGENBERG: Any abstentions?

(No response.)

MR. LANGENBERG: Passed unanimously.

It's my pleasure now to turn to the president, not yet the president emeritus, just the president, Bob Clodius for his report.

MR. CLODIUS: Thank you, Mr. Chairman. Charles Dickens had it right over 130 years ago. Could he have conceived that someone would use his words to characterize the situation in which we find ourselves today? Just listen. "It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it

was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair."

I will let you use your own experience and observation to fill in the details for I am sure you can all identify those parts of your life in higher education and in governmental relations that are best/worst, wise/foolish, credulous/incredulous, hope and despair. Moreover, the situation is not untypical of that with which economists deal all the time -- on one hand and then on the other -- which lead Harry Truman to hope for a one-armed economist who could not say, "On the other hand."

I am a two-handed economist by inclination and training, however, in this, my 13th and final report to the Senate, I shall try to be one-sided in perspective and mercifully brief.

My own view of things is certainly not one of despair, although the present and near-term picture is bleak, indeed. Over the longer period I think one is justified in being optimistic. It all depends on the American people deciding what is important and what they want to spend their money on. And it depends on what colleges and universities have to offer that is congruent with the public's belief.

The essential fact is that the federal government spends 1.3 thousand billion dollars every year, and that is quite a piece of change. Of course, not all of it is immediately reallocable. Interest on the federal debt can be reduced only through time and effort. Entitlements also immobilize vast sums, but a changing global defense scene should eventually provide opportunities for new or expanded programs in the domestic setting. And, therein lies my optimism for the future of the academy and its programs.

Assuming the context is drawn accurately, we can next ask the essential question: How can this Association and its members best position themselves to maximize their influence on federal and state outcomes supporting teaching, research, and public service? Since money, liquor, and sex are not ours to disburse, we just have to get organized and to think hard. I am pleased to report that this process has been underway now for almost two years. The reorganization in prospect gives high promise of addressing significant issues in integrated and effective ways. I see only the risk that, given the current constraint on resources, the reorganization might suggest more than can be immediately delivered with resulting frustration and disappointment. My only advice, "Hang in there," for I am convinced that support will come, and the interests of the multiple claimants can be addressed.

For the NASULGC reorganization to be most effective in delivering a consolidated message developed from the integration of many perspectives, I

suggest that each member university give attention to its own delivery system in federal relations affairs. Nothing that NASULGC does in restructuring and reorganizing can substitute for presidents and chancellors truly being in charge of and on top of the representation of federal relations from the campus. As you know, such representation takes many forms ranging from the occasional faculty member, to deans and directors of special interests, to a Washington office, to a hired lobbyist.

However, in my judgment there is really nothing that substitutes for the prestige and mystique of the top university officer in gaining a respectful audience from a member of Congress or staff. Since all politics is local politics, it should come as no surprise that the Washington office of NASULGC must rely on that relationship to the fullest extent possible. It is disruptive, to say the least, when a NASULGC staff person arrives at a congressional office to deliver a properly considered and adopted position on a bill only to discover a person representing a differing position from a specialized association whose board and officers may be on the payroll of our very own member institutions. Come on, let's get our act together -- not to spare embarrassment but to make truly effective this reorganization and implementation we are working so hard to create.

Now, let me make a two-handed comment about my successor. On the one hand you have Dr. C. Peter Magrath, distinguished president of public universities, political scientist by training and practical experience, a person of eminent qualifications, a person of solid values concerning public higher education. On the other hand, you have Peter Magrath, a person of human instinct, sensitivity, intuition, and compassion; a person who makes a great friend. I think NASULGC is in great hands -- both hands!

In passing I must also acknowledge the positively great devotion, commitment, and dedication of the NASULGC staff with whom I have been privileged to work. Without this staff there would be no federal relations program; there would be no support for councils, commissions, and divisions; there would be no Annual Meeting. The high quality of NASULGC's programming is theirs to claim. My sincerest thanks to them. I owe them a great deal.

And, finally, I must report what a singular honor and privilege it has been for me to serve you for these past 13 years. The President of NASULGC enjoys a status in the community of higher education and significant influence in public affairs because of the status and standing of the great state and land-grant universities found in its membership. I have enjoyed it and am the beneficiary of it every day. I have traded on it whenever it was to the advantage of the membership to do so, and I have cherished the friendships that have come my way. Thank you for your trust. Thank you for the privilege of service.

ARTHUR ANDERSEN & Co.
WASHINGTON, D. C

Report of Independent Public Accountants

To the Senate Executive Committee of
National Association of State Universities
and Land-Grant Colleges:

We have audited the accompanying balance sheets of the National Association of State Universities and Land-Grant Colleges (the "Association," a District of Columbia nonprofit corporation) as of December 31, 1990 and 1989, and the related statements of revenues, expenses and changes in fund balances and cash flows for the years then ended. These financial statements are the responsibility of the Association's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the National Association of State Universities and Land-Grant Colleges as of December 31, 1990 and 1989, and the results of its operations and its cash flows for the years then ended, in conformity with generally accepted accounting principles.

Arthur Andersen & Co.

March 14, 1991

NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES

BALANCE SHEETS

AS OF DECEMBER 31, 1990 AND 1989

ASSETS

CASH

SHORT-TERM INVESTMENTS, at cost which approximates market value (Note 2)

ACCOUNTS RECEIVABLE

PREPAID EXPENSES

FURNITURE AND EQUIPMENT, net of accumulated depreciation of
\$422,541 in 1990 and \$352,340 in 1989

LEASEHOLD IMPROVEMENTS, net of accumulated amortization of
\$141,284 in 1990 and \$123,284 in 1989

DUE (TO) FROM OTHER FUNDS

Total assets

LIABILITIES AND FUND BALANCES

ACCOUNTS PAYABLE

ACCRUED EXPENSES (Notes 4 and 5)

DEFERRED REVENUE:

Grants

Other

Total liabilities

FUND BALANCE

Total liabilities and fund balance

The accompanying notes to financial statements
are an integral part of these balance sheets.

1990			1989		
General Fund	Restricted Fund	Total	General Fund	Restricted Fund	Total
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2,637,276	476,042	3,113,318	1,758,768	596,792	2,355,560
161,602	33,697	195,299	225,838	-	225,838
4,065	-	4,065	48,205	-	48,205
52,893	-	52,893	112,651	-	112,651
42,812	-	42,812	26,391	-	26,391
(829,286)	829,286	-	(316,732)	316,732	-
<u>\$2,069,362</u>	<u>\$1,339,025</u>	<u>\$3,408,387</u>	<u>\$1,855,121</u>	<u>\$913,524</u>	<u>\$2,768,645</u>
\$ 280,498	\$ -	\$ 280,498	\$ 159,950	\$ -	\$ 159,950
251,741	-	251,741	307,891	-	307,891
-	1,339,025	1,339,025	-	913,524	913,524
19,558	-	19,558	8,000	-	8,000
<u>551,797</u>	<u>1,339,025</u>	<u>1,890,822</u>	<u>475,841</u>	<u>913,524</u>	<u>1,389,365</u>
1,517,565	-	1,517,565	1,379,280	-	1,379,280
<u>\$2,069,362</u>	<u>\$1,339,025</u>	<u>\$3,408,387</u>	<u>\$1,855,121</u>	<u>\$913,524</u>	<u>\$2,768,645</u>

NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN FUND BALANCES
FOR THE YEARS ENDED DECEMBER 31, 1990 AND 1989

	1990			1989		
	General Fund	Restricted Fund	Total	General Fund	Restricted Fund	Total
REVENUES:						
Member dues	\$2,315,151	\$	\$2,315,151	\$2,263,965	\$	\$2,263,965
Grants and project support	126,660	1,013,861	1,140,521	156,809	781,420	\$2,438,229
DAEPC support	33,401	-	33,401	50,228	-	50,228
Investment income	220,075	-	220,075	179,572	-	211,757
Annual meeting	240,706	-	240,706	249,315	-	249,315
Seminars	45,235	-	45,235	50,289	-	50,289
Other income	27,796	-	27,796	11,835	-	11,835
Total revenues	3,009,024	1,013,861	4,022,885	2,941,993	813,605	3,755,598
EXPENSES:						
Salaries (Note 4)	1,138,720	380,139	1,518,859	1,163,611	192,199	1,335,810
Staff benefits (Note 4)	236,450	-	236,450	234,103	-	232,103
Copyrights	83,114	-	83,114	63,258	-	63,258
Contingencies	88,177	-	88,177	44,389	-	149,458
Temporary and other personnel costs	48,577	-	48,577	64,288	-	64,288
Professional fees	81,297	-	81,297	64,288	-	64,288
Rent (Note 3)	169,655	-	169,655	161,869	-	161,869
Office supplies and services	80,467	122,767	203,234	66,043	75,114	161,157
Telecommunications	51,019	-	51,019	51,449	-	51,449
Postage and express mail	50,877	-	50,877	53,425	-	53,425
Depreciation and amortization	88,000	-	88,000	92,736	-	92,736
Computer systems	28,195	-	28,195	36,100	-	34,100
Annual meeting	235,594	-	235,594	236,701	-	236,701
Meetings	-	97,655	97,655	-	-	-
Travel and representation	85,445	48,238	133,683	70,581	52,471	123,052
Committees, councils, commissions, and divisions	136,113	-	136,113	94,914	78,564	173,478
Publications	108,043	2,713	110,756	92,989	9,269	102,238
Publicators and copiers	58,818	-	58,818	44,067	-	44,067
Scholarship disbursements	-	290,727	290,727	25,000	148,095	173,095
Stipends	53,528	-	53,528	40,955	-	40,955
Other expenses (Note 5)	46,834	71,622	120,456	86,867	134,823	223,690
Total expenses	2,870,739	1,013,861	3,884,600	2,767,323	813,605	3,580,928
Revenues in excess of expenses	138,285	-	138,285	174,670	-	174,670
FUND BALANCES, beginning of year	1,379,280	-	1,379,280	1,204,610	-	1,204,610
FUND BALANCES, end of year	\$1,517,565	\$	\$1,517,565	\$1,379,280	\$	\$1,379,280

The accompanying notes to financial statements are an integral part of these statements.

BEST COPY AVAILABLE

NATIONAL ASSOCIATION OF STATE UNIVERSITIES

AND LAND-GRANT COLLEGES

STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 31, 1990 AND 1989

	<u>1990</u>	<u>1989</u>
CASH FLOWS FROM OPERATIONS:		
Revenues in excess of expenses	\$138,285	\$174,670
Add- Depreciation and amortization expense	88,000	92,736
	<u>226,285</u>	<u>267,406</u>
Changes in assets and liabilities-		
(Increase) in short-term investments	(757,758)	(763,493)
Decrease (increase) in accounts receivable	30,539	(47,021)
Decrease (increase) in prepaid expenses	44,140	(33,547)
Increase in accounts payable	120,548	94,881
(Decrease) increase in accrued expenses	(56,150)	41,546
Increase in deferred revenue	437,059	395,451
	<u>44,663</u>	<u>(44,777)</u>
Net cash used in operations		
CASH FLOWS FROM INVESTING ACTIVITIES- Purchase of furniture, equipment and leasehold improvements, net of retirements	<u>(44,663)</u>	<u>(11,564)</u>
(DECREASE) IN CASH	-	(56,341)
CASH, beginning of year	-	56,341
CASH, end of year	<u>\$ -</u>	<u>\$ -</u>

The accompanying notes to financial statements
are an integral part of these statements.

NATIONAL ASSOCIATION OF STATE UNIVERSITIES
AND LAND-GRANT COLLEGES

NOTES TO FINANCIAL STATEMENTS

AS OF DECEMBER 31, 1990 AND 1989

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

Organization

The National Association of State Universities and Land-Grant Colleges (the "Association") was formed in 1887 and is incorporated in the District of Columbia as a not-for-profit corporation. The Association is exempt from Federal income taxes under Section 501(c)(3) of the Internal Revenue Code and is classified as an organization that is not a private foundation.

The Association has 148 members including 51 principal state universities, 72 land-grant campuses, and 25 university system administration offices. The Association's overriding mission is to support high-quality public education through efforts that enhance the capacity of members to perform their traditional teaching, research, and public service roles.

Basis of Financial Statement Preparation

The financial statements are prepared on the accrual method of accounting. The Association records its transactions in two separate funds. Each fund reflects only those transactions applicable to its designated functional area.

- | | |
|-----------------|--|
| General Fund | - Reflects transactions related to the general operations of the Association. |
| Restricted Fund | - Reflects transactions for special projects that are funded by members of the Association and other organizations. Use of the assets of this Fund is restricted by the terms of various grants and contracts or by arrangements made with the funding source. |

Furniture, Equipment and Leasehold Improvements

Furniture, equipment and leasehold improvements are carried at cost. Depreciation and amortization are computed using the straight-line method over estimated useful lives of five to eight years for furniture and equipment, eight years for leasehold improvements, and three years for an automobile.

Restricted Fund Revenue

Contract and grant funds that are restricted as to use by the terms of the contract, grant, or other arrangement are deemed to be earned and are reported as revenue when the Association has incurred expenses in compliance with the funding restrictions. Amounts received but not yet earned are reported as deferred revenue.

Cash Flows

The Association does not classify its investments (see Note 2) as cash equivalents for cash flow presentation.

2. INVESTMENTS:

Investments consisted of the following at December 31, 1990 and 1989.

	<u>1990</u>	<u>1989</u>
Commercial paper-		
American Express, due 1/7/91	\$ 99,298	\$ -
Associates Corp. of North America, due 1/10/91	99,367	-
Chevron Oil, due 1/14/91	99,407	-
CIT Holdings, due 2/16/90	-	197,371
Commercial Credit Corp., due 1/17/91	198,719	-
Exxon Financial Services, due 1/2/91	199,692	-
Exxon Funding, due 1/8/91	99,276	-
Ford Motor Credit, due 1/11/91	198,994	-
General Electric, due 1/25/90	-	197,329
GMAC, due 1/11/90	-	197,255
GMAC, due 1/8/91	99,587	-
Heller Financial Corp, due 1/9/91	99,299	-
John Deere, due 1/15/91	99,376	-
Merrill Lynch, due 1/10/90	-	198,008
Merrill Lynch, due 1/12/90	-	197,402
PRU Funding, due 1/4/91	99,333	-
Riggs National Bank, due 1/26/90	-	111,150
U.S. West Financial, due 1/9/90	-	198,805
U.S. West Financial, due 1/3/91	199,338	-
Westinghouse, due 1/16/91	198,771	-
Money market fund- Riggs National Bank (formerly with the National Bank of Washington in 1989)	1,322,861	1,058,240
	<u>\$3,113,318</u>	<u>\$2,355,560</u>
	=====	=====

3. LEASES:

The Association occupies office space under a lease expiring December 31, 1991, which provides for a monthly rental of \$13,308. The lease provides for annual increases based on a proportionate share of any increases in real estate taxes, certain operating expenses, and the Consumer Price Index. Rental expense for office space was \$169,455 in 1990 and \$161,869 in 1989.

The Association also leases office equipment under various leases expiring through 1991. Rent expense under these leases was \$39,697 in 1990 and \$37,458 in 1989.

4. RETIREMENT ARRANGEMENTS:

Defined Contribution Pension Plan

All full-time employees are covered under a defined contribution pension plan. The plan is funded through the purchase of individual annuity contracts, and expense is charged for the total premiums due on such contracts in each accounting period.

Pension expense was \$170,257 in 1990 and \$144,573 in 1989.

The Association's pension plan provides for full vesting upon two years of service.

Deferred Compensation

The Association has accrued \$153,725 and \$131,687 as of December 31, 1990 and 1989, respectively, for deferred compensation due its president.

5. RELATED ORGANIZATIONS:

Consortium for International Cooperation in Higher Education ("CICHE")

The Association, together with five other organizations involved in higher education, began participation in CICHE in 1985. CICHE was principally funded by a grant from a U.S. government agency. In 1988, CICHE determined that certain grant receipts had been misappropriated through fraud by the CICHE bookkeeper who was charged, convicted, and is now serving a prison term. In 1988, the Association recorded a charge of \$90,000 to cover advances it may have to make to resolve issues related to CICHE. At December 31, 1990 and 1989, the Association's reserve was \$63,141 to cover remaining costs related to this matter.

Other Related Organizations

Several officers of the Association serve as officers or board members of other organizations related to higher education. There were no significant transactions between the Association and these other organizations during 1990 or 1989.

MR. LANGENBERG: Next on the agenda is a bit of an anticlimax, a report of the chairman. I will be mercifully brief.

Two years ago, you entrusted me with the post of chairman-elect of the Executive Committee of this Association, and happenstance led me to be the chairman during a year in which we were both designing a new NASULGC and seeking a worthy successor to a splendid president.

I'm pleased to report that both of these objectives have been successfully completed, and I want to tell you what a marvelously satisfying and happy year it has been working with many, many of you to achieve those objectives. I will remember this one for a very, very long time, and I want to thank you for allowing me to participate.

It's now my pleasure on behalf of the Nominating Committee to nominate for election three new officers of the Association. The Nominating Committee wishes to propose for your consideration Jim McComas as president-elect of the Association and, for two three-year terms on the Executive Committee, Steve Beering and John Byrne.

I would, therefore, like to move their election. Is there a second

SENATE MEMBER: Second.

MR. LANGENBERG: Are there any other nominations?

(No response.)

MR. LANGENBERG: Hearing none, would all in favor say "aye."

SENATE MEMBERS: Aye.

MR. LANGENBERG: All opposed?

(No response.)

MR. LANGENBERG: None opposed. Unanimously accepted. Is there any old business?

(No response.)

MR. LANGENBERG: Is there any new business?

(No response.)

MR. LANGENBERG: There is one item of business then, and it's my great pleasure to pass the gavel to next year's chairman. The gavel, as many of you know, is one we actually never use in meetings, but it is a gavel of considerable historic import. It is made from the wood of a sugar maple tree that was planted by Justin Morrill on his estate in Vermont, and it was presented to the Association, actually one of the Association's predecessors, by the University of Vermont, of which Mr. Morrill was a trustee, when he proposed what became the Morrill Act.

So, it's with considerable pleasure that I pass this on to the next chairman of the Association and a former president of the University of Vermont, Lattie Coor.

(Applause.)

MR. COOR: Thank you very much, Don. I had not known the story of this gavel until we were examining it in advance, and there is a special personal quality to it, for it was just 75 years ago on the occasion of one of the anniversaries in 1916, the 50th annual convention, that this gavel was given to the Association. I had the pleasure for 14 years of having in Inglesby House, the university president's residence at Vermont, all of the office furniture of Senator Morrill during his Washington days, and the College of Agriculture there has the Senate furniture, the desk and all that are there.

So, there's a special personal pleasure in receiving this gavel, as well an official pleasure, for I've had the opportunity now, approaching 16 years, to work with this Association and to see the significance it has. No other body in this city has as full a representation in every state in ways that are significant, as Bob Clodius described it, as does NASULGC. And, watching the quality of the work that's been done the last few years, and particularly in preparation for the '90s with the charter adopted a year ago and the implementation plan today, I know this Association is ready to carry on that task in what is probably the most difficult decade we will be facing.

I share Bob Clodius's view that it will be a good decade, but it's one that will require a greater commitment, I think, from all of us than we've seen before. So I undertake this task for the brief time it will be with me for the coming year soberly but with enthusiasm.

I also have a task, my first and only, to perform today. Even though this is the active gavel, there is a gavel we'd like to leave with the immediate now-past-chairman, Don Langenberg. University presidents, in fact university people altogether, should be change agents. We try that every day, but none, I think, has been a more effective change agent than the chair who's just served this Association the last year, as Don noted, a significant moment in adopting the

new charter for the '90s and the implementation plan developed during his year as chair, also the completion of Bob Clodius's great leadership with us, and the selection of the new president.

So, if I may, Don, on behalf of your colleagues in the Senate, present this gavel to you with our thanks.

(Applause.)

MR. LANGENBERG: Let me repeat, it's been a distinct pleasure and greatly satisfying to have worked with so many of you. I have one more year on the Executive Committee as past chairman, and I'm told that that post provides for one to be the official Association curmudgeon, and I intend to do my best. Thank you.

(Laughter.)

MR. COOR: He's been practicing all week. As one who so treasures a Senate that acts so properly, unlike others with which we work, I don't want to wear out our welcome. So, as my first official act, may I entertain a motion to adjourn.

SENATE MEMBER: So moved.

SENATE MEMBER: Second.

MR. COOR: So ordered.

(Whereupon, at 4:35 p.m., the above-entitled meeting was adjourned.)

An Address By

**Bernadine P. Healy, M.D.
Director of the National Institutes of Health**

**Joint Session
Council on Academic Affairs, Council of 1890
Presidents, Council on Research Policy and
Graduate Education, and Federal Relations
Network**

I am pleased to be a part of your meeting today, not because I'm going to be getting the last word, but rather because I have long admired the contribution made by state universities, land-grant colleges, and historically Black institutions, not just to higher education, but to this nation's well being.

I use the phrase "well being" deliberately. It's a term closely associated with my own field of medicine, but I can think of no better way to describe the results of this eternal triangle: teaching, research, and service through extension that takes shape in your schools. Indeed, were it not for researchers at your institutions, many of my own colleagues and their patients would be without the healing powers of such pioneering antibiotics, the streptomycin, cancer fighters like cystoplasma and the Salk and Savin polio vaccines. Clearly, it has been a cooperative relationship between the NIH and institutions you represent -- and need I add -- a research grant or two that has added to the well being of the nation, and the people we both serve.

I'm pleased by the twin theme of your meeting: "Integrity and Accountability." If you'd permit me a metaphor from my own field, integrity and accountability are the systole and diastole that drives the heart of every healthy organization. I do not think it's possible to run a modern government agency or university or to tend to the well being of any sized group of people without them. Each creates the necessity for the other.

The accountability, whether it's to your spouse, to your trustees, or in my case, to the President, we're all accountable. Even if we subscribe to the tongue-in-cheek definition of integrity -- as what you do when no one is watching -- the truth is, in this world, someone is always watching.

I think we have to understand integrity in its original sense, which has to do with wholeness of mind, heart and purpose. Integrity grows out of the sense of unbrokenness, accountability -- if you will -- with those who entrust us with our work and the power and the resources to get it done.

When it comes to the qualities of integrity and accountability, I think your jobs and mine are very much alike. Your job is to come to terms with those goals as leaders of public institutions of higher education. Mine is to wrestle with those same issues, in the context of a one-line, but wonderful mission statement, that I can tell you rivals the Morrill and Hatch Acts in their global reach. You are called, as Allen Nivens paraphrases in his history of our land-grant colleges, "To promote freedom of inquiry, freedom in the discussion of idea and freedom in the dissemination of truth, however unpopular." For my part, I'm accountable to a mission statement that says "The purpose of NIH is science in pursuit of knowledge, to extend healthy life and reduce the burdens of illness."

For both of us, however, integrity and accountability in carrying out those missions come down, in pretty much the same place. You and I are charged with assuring that the pursuit of knowledge is conducted honorably and honestly and we are all accountable, ultimately, to the people themselves, for the way each of our institutions do their jobs.

Public universities must serve the public, just as the National Institutes of Health must serve this nation. We are duty bound to follow that same star. We are, and here I strike my theme for this morning, partners in the public interest.

I'd like to begin by outlining for you some of the thinking about integrity and accountability to the public from NIH. There's been a good deal in the media recently about the issues of integrity in science, so it might be useful to start there first. Clearly, scientists in the scientific community see fraud as a betrayal of the scientific method. The NIH and our universities are betrayed as well by one of its members who defrauds science. But as importantly is the reaction of the public. They also feel betrayed. Why? Because the public understands that while they may be simply the beneficiaries of what we do, you and I are the guardians and the guarantors of the ancient traditions that govern science and scholarship.

Those traditions assume honesty on the part of investigators and on the part of scholars. I think there are two important reasons for that assumption. We don't think about them often, but they are worth reflecting on because they go to the very heart of your theme of integrity and accountability.

The first reason is an eminently practical one. No one can discover truth in an atmosphere poisoned by dishonesty. When experimental results or scholarly investigations cannot be trusted, first the investigator, then the community of truthseekers, and finally society falls into error. But we're not talking of the error of the wrong turn, or the honest mistake. We also, therefore, must be keenly committed to pursuing allegations of dishonesty fairly, honestly, and with

integrity that comes with rigorous adherence to due process. Indeed, it's also part of an atmosphere where honesty reigns.

The second reason we must assure honesty is the more philosophical one. The relationship between knowledge and truth is a moral equation. That which is false cannot ever finally be good. We condemn the racist politics of Nazism, the ideologically tainted genetics of LaCinquoism, the fabrication and character assassination of McCarthyism, and we're right to do so. To call a thing true when it's not is no mere intellectual dishonesty. At some point, doing that violently rends the moral fabric that binds us all together. An error propounded for the sake of any cause, or to whatever end, however noble, eventually plunges all of us into darkness.

In a democratic society, these practical and philosophical considerations are defined and are supposed to serve the public interest. That conviction energized the legislation that brought the 148 institutions of this Association into being. It was, after all, the public interest that grounded Jonathan Baldwin Turner's 1850 plan for a state university for the industrial classes -- a plan that was guided by the Jefferson ideals of developing the reasoning faculties of our youth, enlarging their minds, and cultivating their morals so that commerce, agriculture, and manufacturing could benefit every American -- education in the public interest.

That same commitment to the public and to the public interest is the foundation of the National Institutes of Health. For us the Jeffersonian vision of developing, enlarging, and cultivating is embedded in the words of Franklin Roosevelt when he dedicated NIH's facilities in Bethesda in 1940. He said, "We cannot be a strong nation unless we are a healthy nation." Medicine, too, is in the public interest.

The public interest is why the recombinant DNA research sponsored by NIH is subject to oversight, sometimes tedious oversight. It's why we promulgate and enforce guidelines for the humane treatment of animals in research. It's why we insist on rigorous controls in clinical trials and strict adherence for clinical investigation using human subjects -- strict adherence to guidelines. The same principle also underlies the fact that part of the budget of the human geno project is earmarked specifically for working on the ethical implications for learning the genetic make-up of specific individuals.

It's in pursuit of the public interest that NIH has been involved, for the last several months, in defining four principles to help us live up to our mission with integrity and accountability. I want to turn to them briefly in hopes that you might find them of interest, not only in understanding what we all collectively do as NIH -- and indeed we all together are the NIH -- but also as a way of

thinking out loud about the partnership that we value between your institutions and mine.

The first public interest principle we seek to follow is to provide vigorous leadership in setting the research priorities that will achieve our country's national health goals as they have been simply and eloquently put forward by the Department of Health and Human Services' Report, "Healthy People 2000." Indeed, "Healthy People 2000" is the goal of Dr. Sullivan and of Dr. Mason. And it is the goal of the NIH.

Briefly, we are working to increase the lifespan, and especially the quality of life, of Americans by supporting research on a number of strategies, such as reducing the incidence of chronic diseases and conditions, preventing infection, and combating communicable diseases. We're working to reduce the health disparities among Americans in terms of the differences in lifespan, health risk, infant mortality, and limitations on activity that exist among racial, ethnic, and socioeconomic groups.

We're also working to improve access to preventive services for all Americans. The recent outbreak of widespread measles infection, for example, should not be happening in a society where vaccination is available. And finally, it takes something like the tragedy of Magic Johnson for people to catch on to see that prevention is for everybody.

But we must compete for space in a federal budget, whose resources are finite, or at least that is the theory. Our job at NIH often boils down to deciding where among the many important areas of pursuit the public's tax dollars are most effectively spent.

In reducing health disparities among different groups of Americans, do we focus on critical biomedical research areas that are unattractive to the private sector? One such is the fact that the homicide rate among young Black males is eight times the rate of the normal population. This is a biomedical problem. But as yet, it doesn't have private sector payoff, and all too often, it's viewed as primarily a criminal problem. Or at the other end of the life line, do we provide the margin of difference when a research team teeters on the edge of a real breakthrough in treating the high blood pressure that is killing off the fathers of those same young men.

In working to improve access to preventive services, we must fund the research toward an AIDS vaccine, and also, at the same time, work on more effective screening measures for prenatal conditions that put infants at risk. Operationally, we must take a leadership role in areas that give rise to a second public interest

principle, and that has to do with long-range planning. All of you know what that is.

One aspect of our planning is looking into major scientific issues that cut across all of NIH, such as aging, vaccine development, and the special health issues surrounding women and minorities. One priority we have identified that has received some attention is to correct the unacceptable knowledge gaps in women's health. As someone just commented to me this morning, that isn't just an issue for women, it's an issue for men, it's an issue for children, it's an issue for the nation.

In support of a cross-cutting initiative for women's health, we're beginning the largest clinical study ever done in this country, involving over 100,000 participants. It will be focusing on the health of women as they move into those high-risk years of life, for cancer, heart disease, osteoporosis, depression, and Alzheimer's disease.

The third public interest principle of NIH is one where NIH's mission and yours clearly become common ground. It is here that we have a great deal to share and indeed to learn from you. If we are to realize fully the mission of NIH to serve the public, we have to aggressively move the discoveries of the laboratory out of their test tubes and into medicine cabinets and the bedside. Of course, I'm talking about technology transfer. The development of new drugs, therapeutic devices, and diagnostic tests have to be done in partnership with academia and the private sector of industry.

Almost 60 percent of all NIH research awards go to people who work in the labs on our nation's campuses for that very reason. During the past decade, new legislation has provided a sound base for fostering partnerships to improve the transfer of results of government-sponsored research -- whether they be within the NIH laboratories or within your laboratories -- to useful applications for people. To promote patent and licensing that is owned by the inventors and their institutions, not by the government as it was prior to 1980. As you know, from those of you who have followed some of the contentious debate surrounding the CDNA sequencing patents from NIH, you will see that moving into these areas often does bring scrutiny and contention and debate. But I do feel that that's healthy.

In a way, I do feel like I am preaching to the choir, however, when I mention technology transfer, since clearly you are among the most expert in the country in that regard. Your agricultural experiment stations and extension services were the real pioneers in transferring research results into the hands of the most productive worker in the world, historically, the American farmer. Our experimental stations are in effect the grantees and the grantee institutions who

do research sponsored wholly or in part by NIH. About \$9 out of every \$10 that supports biomedical research at your institutions come from the NIH.

We need to hear more from you about the effect of mechanisms you've developed for getting new planned genetics into the hands of farmers and transferring new techniques of animal husbandry into the dairy industry. You have much to teach us about disseminating new ideas and new technology to the public at large, as well as to special constituencies.

The fourth public interest principle at NIH also has a major bearing on our partnership. It's the interface between science and social policy. I'm firmly convinced that one of the most critical jobs we face in this country in protecting the public interest is where science and social policy converge and actually sometimes even conflict. We must be sensitive to the social, legal, and moral issues that surround issues like patenting the human geno or genetic privacy, that touch on very contentious issues like sex and abortion.

We must participate in debate. We must be heard. We must be understood as informed scientists and academicians. But we also must recognize that we may not always have the last word in these debates in a system of government that is so good at balancing power. In the realm of social policy there is no debate on the matter of developing our nation's youth and our responsibility to society to do so.

Clearly, we do seem to be losing ground daily in the race to broaden and deepen the talent pool this nation needs -- first, to maintain that scientific and technological edge, but also and more importantly, to serve its people on a wide-scale basis. The future of biomedical research and the technological innovation that has made this country so extraordinary depends first and foremost on something that you and your schools must do, develop this nation's intellectual capital.

You are the ones who must fan the individual sparks of creativity and genius. But everywhere, the evidence on this scores points to the disturbing fact that our nation as a whole is in retreat. I know Dr. Bromley spent a great deal of time talking about this yesterday, and focusing on the fact that a lot of the problems go even further down than the universities and the colleges, to the level of K through 12.

But I don't need to tell you about the quality you are getting in your first year students. The rising tide in mediocrity has been lapping on your shores, a tide swollen by wave upon troublesome wave of frightening numbers that you live with every day -- that SAT scores have been declining or nearly flat since 1955.

Worse, both the number and proportion of students demonstrating superior achievement on SATs and on international achievement is declining.

U.S. high school students do not like science. They're achieving at very near rock bottom on international comparisons in chemistry, physics, and most particularly, biology. I may say that I'm not particularly impressed with the recent round of second-guessing about the test that produced these results. The fact is, the word that describes the performance of U.S. students overall is "poor," and even our best students are achieving less than they used to. As Bob Dylan used to sing it, "You don't need a weatherman to know which way the wind is blowing."

If you're not as disturbed about the international dimensions of this issue as I am -- although I think you are -- let me tell you what the Minister of Science and Technology of Germany just told me a few weeks ago. He said he admitted that his government has not paid as much attention to biotechnology in recent years because of a variety of political forces surrounding them. They were preoccupied elsewhere. They were also, reluctantly, content to allow America to lead. But he assured me that they are now making strategic investments in biomedicine, particularly molecular biology, taking advantage of their new eastern community and the excellent, hard-working, well-educated K through 12 intellectual capital base that they have so inherited.

That cannot be good news for American business, nor for those like NIH who sponsor research, or for the graduate departments of your universities, who are always looking for top students who will keep them viable and competitive. We do need a shift. Somehow I cannot help thinking that the first steps in a new direction lie in providing a healthy dose of inspiration.

As it stands, our best students avoid careers in science and technology. As the degrees awarded in medicine and the biological sciences have either plateaued or declined, America's institutions of higher education are graduating ten times more lawyers than PhD biologists; 13 times more students get post-graduate degrees from business schools than from medical schools.

I ask you, where are the voices encouraging and inspiring students to take the roads less traveled to get started on what is perhaps a more rigorous, but incredibly rewarding scientific career? Where are the mentors holding out the vision of exhilaration and the sense of accomplishment that go with discovering things that until that very moment, no one ever knew before?

A final telling index of the disparateness that is overtaking the next generation is what is happening among younger physician scientists. We're simply not getting the new minds we need into research. Nearly a decade ago, scientists under 35

were the second largest age group applying for new research money. Two years ago, at NIH, they became the smallest age group. Everyone else applying is older. In short, how well is the public interest served when our biomedical research community is steadily graying? Thus, at every stage of the human talent pipeline, from high school to post-doctoral research, there is significant leakage.

The startling truth is that the foundations of our nation's human capital are eroding. The physician investigator is not merely an endangered species, but is approaching extinction. Potentially this leaking pipeline is in great danger to the health of this nation, indeed, to the public interest as a whole and more so than any plague. Indeed, it is making it impossible for us to effectively cope with the plagues of the future.

A number of factors contribute to the problem and make it worse. One is that the lone investigator and the creative scientist are sometimes overshadowed by the big task force, by the complex grant apparatus that surrounds both private and public research, and by the massive infrastructure needed to support front-line research. On a different front, though, the cost of graduate education, and medical education in particular, has become so high, that comparatively low-paying research careers have become financially unattractive to debt-ridden MD and PhD candidates.

Indeed, I think that here institutions have made a great contribution in keeping the cost of medical education still at something that approaches what is reasonable, although I am dismayed that you, too, are having to see escalation in the cost of tuition. Clinical practice, rather than research, is where new graduates are flocking, particularly because they can't afford to do anything else if they're going to pay their average \$50,000 debt. Eighty percent of those graduate medical students are in debt. The extra training required to produce a top investigative scientist only means more years of loan payments.

As if that weren't enough, the decline in scholarship funds and research grants means that more and more students and researchers are chasing fewer and fewer dollars. As the demand outstrips supply, the well-known scientific phenomenon known as the "Yogi Berra" effect has kicked in. It was Dr. Yogi, you will remember, who complained that Toots Shor Restaurant was getting so crowded, nobody goes there anymore.

The logic is twisted, but the facts remain. When the grant and scholarship line gets too long, young people interested in scientific careers find another line to get in.

In turn, these trends mean that health care delivery, rather than frontier breaking science, is defining the institutional agendas of our best medical schools, many of them on your campuses. Fewer and fewer can afford to do research either, so they don't.

You and I -- or rather the NIH and the institutions we represent -- are on this score part of the problem. Together we have to turn that around. Indeed, we are the ones who not only can do it, but who must do it. We have to find ways of recasting the public interest partnership that frees up the system, that creates some space -- light and air for the generations of biomedical scientists that are slipping away.

Breaking out of what is becoming a gradual, downward spiral will not be easy. But our partnership in the public interest demand that it be done. In that regard, I'd like to make a few final suggestions.

First, the key focus among the highest priorities of both our institutions -- of higher education and of NIH -- must be talent development. Responding to that imperative is the better part of wisdom, and only a wise people is willing to invest today's resources in the health of the generation that comes after them. I was intrigued as I was going through the Baltimore Airport a while ago to see a big sign that bragged about the fact that in Maryland there were more scientists per capita than anywhere in the country -- over 100,000. I thought that was a very encouraging sign, that it was being celebrated, among the many other things that so often are, especially in airports.

The public interest, after all, is at least partly about developing the brain power to secure the public interest. We have to attract not merely competence, but brilliance across the spectrum, among minorities, among women, among those with unconventional views, and among those who seek their own frontiers, and among those whose integrity may include a single mindedness that verges on the intolerable.

You know as well as I that the cost of finding, educating, and training the medical Mozarts in the public interest is not cheap. But the cost of the alternatives, ignorance and scientific stagnation, are incalculably higher. Together, you and I have to figure out how to make that a national priority in the public interest.

Second, I think we have to reclaim the vision of men like Jonathan Baldwin Turner, who first saw the possibility of -- as he called it -- a university for the industrial classes. The vision of Justin Morrill, who made Turner's dream into the reality of the land-grant colleges, and the 17 historically Black land-grant institutions. The vision of Congressman William Henry Hatch, the father of the

agricultural experiment stations, and the vision of Hoke Smith and Asbury Lever, who in 1914 legislation, provided the foundation for agricultural extension in this country and a model for technology transfer.

The focus on their foresight is perhaps best expressed by Justin Morrill, whose original bill dared to envision the public interest as having everything to do with an education that would be, first, accessible to students of all economic classes; second, practical as well as classical; and third, supported by the federal government -- at least in part. Such an enterprise, he saw, could not help but benefit all of our people.

Reclaiming their vision may well mean defining our respective jobs in terms we sometimes lose sight of. As administrators of science and scholarship, it's easy for us to get lost in RFPs, ROIs and POIs, budget minutia and the lobbies of legislatures. But as scientists and scholars, what we are really about is fostering the creative interplay between the free inquiry of the individual mind and the long-range planning perspective that accountability demands and that integrity must seal the bond of our partnership.

Third, both of us, scientists and educators, have a crucial role to play in forming and achieving the public's needs and goals. We can never forget that what we do must serve the public good, and the public good must know that we're there for them. Doing that depends, ultimately, on keeping the public's trust. The history of this century, from the Stokes trial to Cyril Burt's phoney psychometrics, shows decisively that the public trust is probably the most precious asset of every form of learning. Keeping it will mean articulating clear priorities, upholding standards of integrity and accountability, and telling the public clearly, enthusiastically, and patiently what we are all about.

I tell you, frankly, I do not believe that some sort of regulatory code is the answer here, nor more legislation. As in other areas of scholarship, self policing by the scientific community remains the most effective means of keeping and assuring the public trust. It's the only way we can keep the personality dynamics where they belong and challenge research results without questioning one another's integrity.

When conflicts occur between scientific and scholarly possibilities on the one hand, and the demands of accountability and integrity on the other, we have to be prepared for difficult discussion and even fractious debate. But that is healthy. Science and scholarship remain, after all, the servants of humankind and not their master.

In the end, what our partnership and the public interest depends upon is whether or not the public trusts us, you and me.

In that regard, I'm touched by a story that is told about Albert Einstein, or more accurately, about his wife. Let it be my final word to you. It seems Frau Einstein was once asked if she understood her husband's theory of relativity -- remember she herself was a scientist. She thought a long time before answering and finally said, "No, I don't. But I know my husband, and I know he can be trusted."

We can ask for no more from the public than that. And we should deserve no less.

Thank you.

Seaman A. Knapp Memorial Lecture

American Agriculture: Challenged by a Changing World

Presented by

Gerald W. Thomas
President Emeritus
New Mexico State University

It is a very high honor to be invited to present the Seaman A. Knapp Lecture to the Division of Agriculture of our National Association. I have fond memories of my interaction with this group while I was at Texas A&M and Texas Tech. Also, my association with NASULGC as a member of the Executive Committee and the Council of Presidents has been very rewarding.

Seaman Knapp once stated, as he was formulating his early concepts of Agricultural Extension, that the purpose of farm demonstrations was:

"To readjust agriculture and place it upon a basis of greater profit, to reconstruct the rural home, and to give country life an attraction, a dignity and potential influence it has never received."¹

"To readjust agriculture and place it upon a basis of greater profit -- to reconstruct the rural home," this will be the underlying theme for my lecture as I discuss global and national trends affecting our agricultural industry and our family life.

Today is Veterans Day 1991. This celebration is of special significance to American agriculture. International conflicts are indeed "change drivers" for our food and fiber system.

In one of my books which I call A Cockpit View of WW II, I wrote one chapter which could have been entitled, "Food Will Win the War!" This chapter is based upon correspondence with my parents and teenage brother who were "running the ranch" while I was flying a torpedo plane from aircraft carriers in the Atlantic and Pacific Oceans. A quote from my book will illustrate my point:²

"'Food will win the war!' That's what they told my dad when they excused him from military service during World War I. 'We need you back on the ranch to raise horses and produce food for our boys in the trenches.'"

That motto was reiterated during World War II as our agricultural and industrial backup system became more and more critical to the sustainability of the war machine. Again, during the Korean and Vietnam conflicts, adjustments were made to "maintain our food production potential." As late as the Cuban Missile Crisis, one of President Kennedy's first orders was to tie up all Commodity Credit Corporation grain stocks until our future relationships with the USSR could be clarified.

Major wars have always had a significant impact on agricultural history. Even though a country at peace may be in a period of apparent surplus production, the outbreak of war produces food problems of immediate international concern.

Certainly food helped win every war America has experienced, including Desert Storm -- and food helped shape the peace that followed. But, unfortunately, policies that stimulate the agricultural sector during war emergencies historically have not been adjusted with dispatch to peace-time conditions. We are traditionally slow to change. Former Secretary of Agriculture Orville L. Freeman put it this way:

"Throughout World War II and the Korean conflict, the farmer produced to intense demand and reaped fair returns and grateful recognition. But the technological advances that enabled him to meet the wartime demands betrayed him once the emergencies were over."³

Secretary Freeman was right. Wartime policies have helped -- and to some extent betrayed -- the American farmer. But Veterans Day 1991 has special significance. Most of the startling -- and largely encouraging -- events that have shaken up the world scene this past year relate back to the Allied victories in Europe and the Pacific during World War II. Where would we be today if we had not taken an unwavering stand to protect our concepts of individual freedom and democracy? Tearing down the Berlin Wall represented the formal end of the Cold War -- a postscript to World War II. But the unique opportunity resulting from the end of the Cold War to divert resources to more productive endeavors met with complications.

-- The realignment of Eastern Europe occurred with such breathtaking speed that the world was caught unprepared.

- The death throes of Communism unleashed a fistful of gravely ill economics in Eastern Europe. In addition, the internal conflicts within the Soviet Union, the coup d'etat, declarations of independence by the Baltic States, and the dilemma of moving from socialism to a more capitalistic, competitive economic system has challenged both Soviet citizens and the rest of the world community.
- The tragic massacre of students in Tiananmen Square brought an abrupt halt to China's flirtation with democracy. But, the irrational behavior of the aging leadership exposed a cancer at the very core of Chinese communism that makes its demise as a political system inevitable.
- Our euphoria about a peaceful world following the Cold War was shattered by the Persian Gulf crisis. Suddenly, our attention was again shifted back to the role of energy in our complex ecosystems. Desert Storm and the aftermath also increased our awareness that some major cultural differences exist among the world's people and raised questions about the separation of church and state.
- The tragedies in Bangladesh, the assassination in India, and the hunger problems in several Asian and African nations again created a basic human rights alert, a focus on the need for stable governments, and the continuing challenge to reduce poverty. Recent estimates on the number of people suffering from hunger and malnutrition are not much different from the statistics we confronted in 1974, when I attended the World Food Conference in Rome led by Secretaries Henry Kissinger and Earl Butz.

While these are specific events which made the news, it is the more subtle international developments that must be considered as we shape our educational and research programs for American agriculture. A new economic and political agenda is emerging that will significantly impact on our everyday lives and our business enterprise. These changes include:

- **A worldwide trend toward capitalism, private enterprise, and more democratic governments** -- Education will be the key to continued progress on these fronts.
- **Improved communication and transportation systems** -- Inadequate language training and lack of cultural awareness remain barriers to progress. I serve on the State Board of Education for New Mexico and one of the goals in our Long-Range Plan states, "By the year 2000 all high school graduates in New Mexico will be proficient in two languages." The new European Community aspires to be "trilingual by

1995." New communication technologies, such as FAX, will help overcome some language barriers, but a realignment of our education curriculum is essential.

- **Increased tourism** -- Means more people interaction and the need for a greater knowledge of diverse cultures.
- **Increased trade among nations** -- This leads to a gradual reduction in trade barriers, with some unknown impacts emanating from the formation of new "Economic Communities," such as the European Community or other "freetrade" agreements among selected nations. Recently, a member of the Federal Reserve Board of Governors promoting freetrade stated, "However, there is also a danger that without a General Agreement on Tariffs and Trade breakthrough, Europe in 1992 will take one more step toward a Fortress Europe." ⁴ We know that protectionism tends to slow down worldwide economic activities and eventually impacts on local agricultural production.

Our hemisphere is an example of the freetrade movement as we open our boundaries with Canada and Mexico. The fast-track Free Trade Agreement with Mexico is becoming a reality. While both countries will benefit from open markets, in the long-run, there will be short-term, adverse impacts on certain sectors of our economy. The most widely expected winners from the Mexico agreement in the agricultural sector are food processing, grains, and oilseeds. Expected losers are citrus, vegetables and sugar.⁵ It is obvious that many political decisions are being made (sometimes overnight) without the necessary database or research studies to examine alternatives for economic development.

- **Increased capital flows** -- Perhaps the movement of capital and foreign investment is as significant as trade, particularly for the U.S. economy with its burdening internal debt load.
- **A move toward world pricing and production costs** -- This leads to a reduction in subsidies, particularly for the agricultural sector.
- **An international labor market** -- New technologies make it possible to utilize cheap labor in Third World countries or at remote locations. Recently, a faculty member dictated a letter at his desk. It went by satellite, was typed by a Chinese secretary earning 90 cents an hour, and returned for signature in less than 20 minutes.

- **Growth of "multinational" corporations continues with the profit motive overriding national loyalties** -- Country borders are growing vague. Some of these multinationals are dealing in agricultural products.
- **Changing consumer demands** -- With significant impacts due to health and environmental concerns, we see more "built-in maid service" using technology to replace drudgery. In some cases, the packaging costs exceed the cost of the food product contained therein. Changing consumer demands point to the need for closer relationships between the producer and consumer.
- **Continued pressure from population growth** -- Particularly in the Third World countries where the debt load contributes to slow economic recovery and reduces the opportunity to improve the "quality of life."
- **Unprecedented impact of "Environmental Awareness"** -- Generating interest in the "sustainability of ecologic and economic systems."

These worldwide trends form the backdrop -- they set the stage for future agriculture. Two of these items deserve a more careful analysis. They are: (1) the continuing growth in world population, and (2) the impact of environmental awareness.

Population Growth

The latest global projections indicate a possible leveling of the world population for the year 2100 at 10.4 billion people -- double the present number. Most of this growth will take place in the less developed countries. Whether or not leveling will occur at 10.4 billion will depend upon educational programs and economic development -- both precursors to numbers reduction. At the present growth rate, the world is adding about 100 million new people each year -- nearly one Bangladesh each year. And, unfortunately, education and economic developments are not keeping pace with this population growth.

Our greatest challenge is not only to keep the status quo as population increases, but to meet the needs for a better quality of life for all people. Let me illustrate our dilemma using only one -- perhaps not the best, but one of the less complicated measures of quality of life -- namely, per capita Gross National Product (GNP). The following data are from the World Bank and the Population Reference Bureau in Washington, D.C.:

The world average GNP per capita in mid-1991 was \$3,760. Twenty countries have average incomes below \$300 per year. At the time of this survey, the

United States stood at \$21,100 per capita GNP. There are over four billion people in the world with annual incomes of less than \$750. *

A worthy goal would be to bring these four billion people from the present \$750 per capita GNP to the world average, which is five times their present level. But, from an environmental impact standpoint, four billion poor people are one problem, while four billion wealthy or middle class people are another. We know that wealthy people use more resources (land, water, and energy) and place more pressure on the environment than poor people. Indeed, the problems for sustainability will increase as more and more people move into higher income brackets. Pressures will build to overuse our natural resource base -- both at home and abroad. At the same time, the best opportunity to increase the per capita GNP in most developing countries is to strengthen the agricultural sector.

To close the GNP gap between the developed and less developed world will require an annual economic growth rate for these poor countries of 5-10 percent per year. This will be difficult, if not impossible, for most countries. We cannot reach this level of performance even in the United States. World population must somehow be brought into balance with the environment. This will happen only if we continue to emphasize education, family planning, and economic development.

In addition to increased numbers and income levels, agriculture and home economics programs must recognize other demographic changes. The changing age structure -- more older Americans -- impacts on markets. Even the cultural and religious mix influences consumer demands. Worldwide, there are now about a billion people of the Islamic faith.

The diversity of religion and culture has meant a diversity in ethnic food and fiber products. My own state, New Mexico, has moved from a majority to a "minority in the majority" state -- and we raise lots of chile which is essential to the rapid growth of Mexican food outlets. To help promote Mexican food, we organized the International Connoisseurs of Green and Red Chile with chapters all over the world. As an example of our outreach, we have the "Grand Pods" chapter in New Mexico, the "Latter Day Pods" chapter in Utah, and the "Bureau of Pods" in Washington, D.C. Unfortunately, the budget discussions on Capitol Hill continue to neglect the important role of the Bureau of Pods as we seek to eliminate chile withdrawal symptoms.

Impact of Environmental Awareness

Ranking next to demographic changes as a factor in influencing agriculture, I list the impact of environmental awareness. Agricultural development has been driven historically by the need to provide food and fiber for an increasing

population. The primary constraints in the past have been economic; and, yet, the long-term success of these activities will depend on an adequate consideration of the more subtle environmental or ecological issues. While it is possible to accommodate both economic and ecological concerns, it is obvious that agricultural development, with the major emphasis on increased production, has not adequately considered the ecological dimension. This neglect of environmental issues is now a worldwide concern and has led to the popularization of the term "sustainability."

In the 44 years that I have been associated with professional agriculture, I know of no word that has swept through international development circles and the halls of Congress as rapidly and with such force as the term "sustainability."

One might get the impression that this is a new term, but its origins go way back. Dr. Hugh Hammond Bennett, founder of the Soil Conservation Service, defined conservation as "sustained use of natural resources." Many of us have spent our entire professional careers on ecological issues and approaches to sustainable agricultural production.

Discovery, or rediscovery, it makes little difference. What is important is that the concept of sustainability and the concern about worldwide environmental degradation has finally reached the general public.

Over 30 years ago, while I was Dean of Agriculture at Texas Tech, I emphasized that the important question for agricultural science was *not* *Can the world feed itself?* To feed the world is obviously possible *from a technological viewpoint* both now and into the projected future. The important question should be, *Can the world afford to feed itself?*⁷ This is partially an economic question. But, more importantly, it is an ecological question. In other words, will the world's environment withstand the pressure from the technological and social changes necessary as we attempt to feed more and more people? What is the environmental cost of eating, particularly when you add together the supply and production sectors, processing, packaging, and distribution, as well as waste management on both sides of the consumer?

We are not experiencing what I call, "The battle of the two great Ecos" -- Economics and Ecology. While we are seeking a balance between the constraints of these two Ecos, it seems clear that economics is the more pervasive. Perhaps this will always be true given the nature of humankind.

Will and Ariel Durant, in the several volumes on The Lessons of History, state it this way:

Nature smiles at the union of freedom and equality of our utopias. For freedom and equality are sworn and everlasting enemies, and when one prevails the other dies...We are all born unfree and unequal...diversely endowed...

The Durants emphasized that we all like to compete. Competition is the basis of our so-called private enterprise system. Competition enhances individual performance. Preserving the concept of competition is more important to most of us than the drive toward equality. John Wesley Powell stated it this way: "It is thus that the whole universe of life is in a struggle; all living beings are engaged in a warfare -- one with another." *

Many countries of the world, including centrally controlled economies, are discovering the importance of capitalizing on our native competitive tendencies. Even China, in spite of Tiananmen Square, is "moving away from Marx," particularly in the farm sector. One report states that, due to some elements of Capitalism, the standard of living of every Chinese has increased 10 percent per year in the past decade.⁹ And, of course, we see the massive, but frustrating attempts by the Soviet Union to adopt a private enterprise approach. One Soviet expert, in a post-mortem analysis of why communism failed, stated emphatically that the handwriting was indelibly etched on the wall at the time the USSR collectivized the farms and removed them from private ownership.

Contrast the historical events in the Soviet Union in the last century with that of the United States and the reasons for the great success story in American agriculture becomes obvious. We encouraged private ownership with the passage of the Homestead and related Acts; we established the land-grant colleges with training in agriculture as a primary mission; we passed the Hatch Act establishing the necessary research component; and we tied the package together with the Smith-Lever Act to focus on Extension as envisioned by Seaman A. Knapp. We produced beyond our wildest dreams and we promoted private ownership and initiative. Someone once stated, "Agriculture made America possible."

It seems obvious that the new world economic revolution will be characterized by private ownership and economic incentives as the key stimulus to production. But, just as surely as most countries have discovered the importance of changing policies to provide "an incentive to produce," they have also neglected the second important segment of sustainable development -- that of providing "an incentive to conserve." Sooner or later the politician and the economist must add an appropriate ecological component to all approaches to food and fiber production.

Perhaps at this point I should clarify my concepts of ecology. Ecology is a legitimate field of science defined as: "The relationship among all organisms

and the environment." I emphasize all organisms because humankind must be considered the most important part of the formula due to the human impact on the environment, as well as the ability of humans to modify the environment to fit our specific needs.

Ecology is not a concept of environmental protection. We have already influenced every part of the world's environment, including the most remote polar areas. The challenge now is to understand these impacts and to adjust development activities based upon research. The key to our relationships with the environment is management, not protection, per se. My own field of Range Science could be called "applied ecology."

About two decades ago, when our nation and the various states were in the process of establishing "environmental protection agencies," I went before a joint meeting of the New Mexico Senate and House to talk about environmental concerns. I argued that New Mexico did not need an Environmental Protection Agency (EPA). Rather, we needed an Environmental Improvement Agency (EIA). The choice of words does make a difference. The word "improvement" implies research and an examination of alternatives, where as protection could exclude humans from the formula. My argument in Santa Fe was followed by legislation. I believe New Mexico is now the only state which has an EIA rather than an EPA.

I believe in the axiom, "Never does nature say one thing and wisdom another." But, to let nature take its course in a protectionist atmosphere will neither benefit humankind or maintain the values we are trying to protect. Even wilderness areas must be managed in order to maintain the natural beauty and the biological populations of the region. Also, we have learned the hard way that deserts as well as oceans are not unlimited sinks for our human's pollutants, but are indeed fragile ecosystems which react to human's involvement.

This leads to the conclusion that sustainable agriculture must be "ecologically sound, economically profitable, socially acceptable and politically supported." ¹⁰

Toward Sustainability

As some of you know I chaired a couple of national task forces on the subject of sustainable agriculture. " We were only partially successful in bringing together the so-called environmental community and the production-oriented scientists. I also had the privilege of working as a member of the Research Advisory Committee for USAID on topics such as global warming, tropical forestry, and biological diversity.

We have come a long way since these early discussions of environmental concerns. Directives on approaches to sustainability are now in place at USDA, USAID, the World Bank, and many other national or international organizations.¹² Time alone will determine whether these new thrusts are more than rhetoric and paperwork. Some major challenges remain.

The move toward sustainability will require a more careful examination of economic and ecological systems that constitute the food and fiber complex. American agriculture today is vastly different from our historical concepts, which focused primarily on farming and ranching. Today's agribusiness complex includes, not only the producers, but suppliers of farm inputs, processors and distributors of agricultural products, managers of natural resources, and an array of miscellaneous activities and services as we follow the original product to the consumer (and beyond, if we look at recycling and waste management). With the trend toward reduction in the on-farm population, some have proposed that agriculture is becoming less important in the world economy. Actually, the reverse is true. Worldwide population growth will continue to challenge agriculture to produce good quality food and fiber.

Most of our research and extension programs in the past focused on the producer with the goal to increase yields and efficiency. And, as studies have shown, the advantage of cost savings gained at the farm level have been quickly passed on to the American consumer. We can buy food for the U.S. home with less take-home pay than ever before -- and consumers could save even more, if we concentrated on the recommended diets by our home economists. Perhaps, after all, consumer benefits are the ultimate measure of progress in any sector of our economy.

Many of the ecological implications of agriculture and livestock development require more knowledge of complex ecosystems and a better understanding of the interactions among the physical, biological, and climatic components. The relationships between the "productive capacity" of the resource base and the "absorptive capacity" of the environment are not well understood.

All too often, we attempt to correct a problem at one point in the system and create more serious problems at another level. For example, a corrective measure to reduce soil salinity by flushing the soil profile may actually increase the amount of water required to produce a ton of grain. This is critical if water supplies are limited. A decrease in the use of inorganic fertilizer or pesticides may mean more units of land are needed per capita. This increased land requirement may increase the threat to move cultivation into submarginal lands.

The role of energy in agricultural systems is particularly important. Any comprehensive approach to an ecosystem analysis of energy in the food system

goes far beyond a simple discussion of petroleum or electricity. It is necessary to consider food, wood, and all forms of organic material also as energy. Therefore, two major energy flow patterns must be studied:

1. The capture of solar energy by the vegetation and the movement of this food energy, or biomass, through the ecosystem until a part of it eventually reaches the consumer as a food product. One might consider biomass energy as renewable, since it is driven by an almost unlimited supply of solar energy.
2. The second energy flow pattern is usually called subsidized, or cultural energy. This is the energy that runs the agricultural system -- that is required to produce, process, and deliver food to the ultimate consumer. This latter source of energy includes not only petroleum, hydroelectric power, and coal, but also horsepower, oxen or camel power, humanpower, and certain other energy subsidies. Most of the energy subsidies from modern agriculture, unfortunately, must continue to come from petroleum or coal -- depletable resources. No country in the world can reach ultimate "sustainability" until we find an alternative to fossil fuel.

We are changing the energy flow patterns for agriculture in several ways:

- The trend toward mechanization in the agricultural sector is continuing worldwide in spite of the emphasis on "appropriate technology" and the underdeveloped humanpower available in most countries. This trend creates a greater negative balance in the ratio of renewable-to-depletable energy sources. But, as one study showed, to slow down the move toward mechanization would require that labor be valued at almost zero.
- More refined and processed foods, greater consumption at distant points from the source of production, and a more variable, but perhaps better balanced, diet is expensive from the standpoint of photosynthetic biomass utilization as well as fossil fuel costs.
- Total world biomass energy is probably going down with the destruction of many forested areas and with increased desertification, although this reduction is partially offset by increased crop yields. If worldwide biomass production is decreasing, we are losing some of our ability to utilize surplus carbon dioxide.
- Humankind is consuming a higher percentage of the total biomass as population increases, leaving less and less available to all other biological populations. We do not know the impact of this transfer on the total ecosystem.

-- Much of the original biomass produced by photosynthesis is lost to the consumer by processing, packaging, and distribution before the product reaches the consumer. I recall vividly a statement made by Dr. George VanDyne, Colorado State University, before his untimely death. Dr. VanDyne was conducting basic research on energy flow in a grazing system. He concluded from his research:

Of the total energy captured by the vegetation, only .0003 percent reached the consumer as meat. He concluded that this was a small, but tasty percentage.

The studies by VanDyne and his coworkers also pointed out that the role of insects in the agricultural sector is often overlooked. For example, some of our research on semidesert rangelands in New Mexico revealed that insects, particularly termites, consume more biomass than livestock under normal grazing conditions. And, of course, all of the studies show that we have also underestimated the role of rabbits and rodents as major consumers of vegetation.

One of the new thrusts of the environmental movement concerns the maintenance of "biological diversity" as a part of our natural resource base. Biological diversity is important not only as a source of valuable genetic material for future use by humankind in agriculture and medicine, but maintaining biological diversity is a sound ecological principle. The emphasis on "endangered species" may cause amusement among certain sectors of our society, but we must recognize that the loss of any species is an indicator of a more serious ecosystem disturbance. I think it is only fair to point out, however, that the protection of certain endangered species may come into conflict, ecologically speaking, with the more important objective of maximizing biological diversity. Managing for a single species will ultimately lead us away from "multiple-use" and biological diversity. And when insects, with more species than the combined total of all plants and animals, are added to the "endangered" list, we will indeed open the proverbial "Box of Pandoras." A good tongue-in-cheek question to pose for today's society might be, "Will we protect the 'little things that crawl' with the same vigor as we protect 'charismatic macrofauna'?"

One of the major questions raised by my study of desert encroachment and food production in the Sahelian/Sudanean zones of Africa was the dilemma focused on the question: How can we separate human-accelerated environmental degradation from that related to the geologic processes of change? Is it possible to halt or reverse the erosion and desertification process in all arid lands, or is a part of the trend toward aridity a geologic phenomenon? These questions have never been answered to my satisfaction. Sometimes, our perspective on change is too short -- too limited by our professional background or political pressures.

The issue of global warming is another example of diverse viewpoints. The geologist looks at the issue with a different perspective than the economist. We all recognize deficiencies in the database. However, we cannot wait for "adequate proof" that global warming will take place. We must make a massive effort now to reduce air pollution from carbon and sulfur dioxides, methane, and the chlorofluorocarbons (CFC). The burning of fossil fuels is by far the major problem. However, that does not reduce our responsibilities to change certain practices in the food and fiber sector to help offset the threat of global warming. Some estimates indicate that agriculture and forest practices contribute about 25 percent of the total pollutants that lead to climate change.

Meanwhile, back on the farm, we find frustration and confusion. These national and international pressures are having significant impacts, particularly those related to environmental awareness and market changes. But while farmers in crop production are having some difficulty responding, it is animal agriculture where we see the greatest pressures. For example, on public lands in the West the long-promoted concept of multiple use is challenged by "Livestock Free by '93!" Animal rights groups are hyperactive. Health considerations are shaping consumption patterns. Some pressures for change are justified. Others are based upon emotions. All require analysis and response from scientists and extension specialists.

Some of the attempts of producers to capture more of the off-farm profits in the food sector through vertical integration have not been successful. The experience of a friend of mine -- a traditional Texas cow/calf producer -- will illustrate the problem. We had been talking about vertical integration for several years before he finally ventured into the arena. He retained ownership of his calves through the feedlot, slaughter, and packing house, and on to a direct sale to a California restaurant chain. The experiment did not last too long. When I asked for an explanation he stated, "There were good profits in the system -- but we just did not have the management expertise to compete. Each stage in the operation required skills that we did not have, we have dropped back to a cow/calf-feeder operation."

Vertical integration, like diversification, sounds good in theory, but management constraints hold back the process. I expect the trend toward larger, more mechanized and more specialized farms to continue. Per acre yields may level off due to a reduction in the use of chemicals, more careful application of irrigation water, approaches to integrated pest management, and diversion of land to organic farming. Genetic engineering and biotechnology should be redirected to find ways to offset reductions in per acre yields. In my opinion, water, rather than land, will soon become the most limited resource for world food and fiber production.

Developing a Response to Global Pressures

In this paper, I have tried to emphasize that there are many "Patterns of Change" on the global and national level that dictate a response from extension, research, and teaching programs of the member universities of NASULGC. The questions now arise, "How do we develop the proper response?" "Where do we go from here as we search for sustainability in all aspects of agriculture and natural resource utilization?"

There are five major approaches that must be examined if we truly desire to bring about change:

1. We must target the educational process -- focus on the key factors in the process of change. Educational programs designed for the general public will not necessarily be effective for legislative bodies, students, or the scientific community. Education must be focused to be effective, and education must be viewed as a continuing process. It is never complete.

At present, there are significant, alarming deficiencies in our teaching programs on global awareness at most NASULGC institutions. We have been slow to adjust curricula, to face the need for language training, to provide international experiences for our faculty. Our International Affairs Committee of NASULGC has outlined some goals, but most of us remain parochial in our attitudes and responses.

2. Much more and better directed research is needed as we add international and environmental dimensions to all aspects of food and fiber production.

The science of ecology can contribute substantially to the research and evaluation process, particularly through the examination of ecosystems. The challenge, however, is to involve all scientific disciplines in a collaborative research approach to sustainable development. I repeat, the challenge is for a wide range of disciplines.

3. There is a continuing need for technical assistance and/or technology transfer specialists to help carry research results to agriculture, business, and industry -- and to rural families. This will require the cooperative efforts of universities, government, and the private sector. But, while the original goals of the Cooperative Extension System, as envisioned by Seaman A. Knapp, are still valid, changing technology and an evolving global political and economic scenario require new strategies and operational approaches. The challenges are clearly outlined in documents such as Patterns of Change¹³ and the Futuring Panel Reports of the

Strategic Planning Council.¹⁴ Can we adjust to these new challenges? Only time will tell.

4. We must build conservation and environmental sustainability into our economic and political system. Our economists must place a dollar value on each critical national resource and quantify the cost of resource deterioration and/or pollution. More importantly, we must create an economic "incentive to conserve" that tends to balance the "incentive to produce" that is already in place in many countries.
5. Lastly, legislation and regulation may be necessary. Many groups move rapidly into the legal arena because they are frustrated with the research and education process. All too often, political decisions are made without the necessary database or research to fully examine alternatives. Expensive time at the courthouse steps results from premature legislation and regulation.

All five of the instruments of change -- education, research, technology transfer, incentives for sustainability, and regulatory approaches -- can be influenced in a major way by the member organizations of NASULGC in cooperation with USDA and other agencies. I am confident that the leaders assembled here will accept and respond to the new challenges posed by the changing global and national pressures. This is an exciting time to be associated with agriculture.

Again, my special thanks to the Division of Agriculture for the high honor you have extended to me to deliver the Seaman A. Knapp Memorial Lecture.

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An Address By

D. Allan Bromley

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Office of Science and Technology Policy**

Joint Session

**Council on Research Policy and Graduate Education
and Federal Relations Network**

Ladies and gentlemen, it is a great pleasure to be here. I was properly impressed to find all you good folk here on a federal holiday. You have heard what I'm supposed to be doing. A number of you heard me give a definition before, but it really is too good, I can't pass up the chance to do it again. That is, my job really is to translate what scientists do in terms that are understandable to politicians and to translate what politicians do into terms understandable to scientists and engineers. That tends to be more difficult.

Just how treacherous this whole operation is was illustrated in a story told to me just recently by the science advisor to the President of Mexico. It seems a Mexican bandit knocked off a small bank in southern Texas and escaped back across the border with the loot, with a ranger in hot pursuit. The ranger caught up with the bandit just south of the border in a little village, but there was a problem. The ranger could speak only English and the bandit only Spanish.

So, in time honored fashion, the ranger got the most distinguished looking elder gentleman in the village who could speak both languages and deputized him to translate, and the following conversation ensued. "Ask him what his name is." The answer came back, "He says his name is Jose." "Ask him if he robbed the bank." "Yes, he robbed the bank." "Ask him where he hid the money." "He refuses to answer."

So, the ranger pulled his pistol, put it to the bandit's head and said, "Try again." At this point, the bandit in very soft Spanish said, "I hid it in the village well." The translation came back, "Jose said he is not afraid to die."

The point of this little anecdote, if there is one, is simply to suggest that you should be sure that your translator shares your agenda.

My purpose here this evening is to emphasize to you that indeed I do share your agenda.

It gives me particular pleasure to speak with you this evening because I must say that I've long felt that the Morrill Act of 1862 marked one of the most important

break points in the development of this nation. But recognizing the importance of higher education, the Land-Grant Act permitted the federal government, through a program of support for higher education, that over the years has expanded and diversified and I must say is one of the areas for which we are envied by all of the civilized world.

We're unique in a very real sense in that we assume that higher education is a citizen's right and not some special privilege. That's a fundamentally important aspect of the way we do business. Obviously, as Senator Simon pointed out earlier this evening, the GI Bill was a worthy successor to the Morrill Act, and it, too, had an enormous impact on making available to every citizen in this nation education to the maximum level that he or she was capable. That, of course, is fundamentally important.

I think what's important, also, is that we in the United States make absolutely unique demands on our universities and our colleges. We look to them, not only to train each generation of young minds, but we also expect our universities and colleges to generate something over 80 percent of all the new knowledge. Hopefully, of course, the young minds are trained to use that new knowledge in a creative and innovative fashion.

That's quite distinctly different from what happens in any other nation where the research and the education are quite distinctly separate. They come under different areas of their respective governments, and frankly have very little contact, at least until post-graduate stages. I think that one of the strengths of our system, of course, has been our belief that, from the very earliest days of this country, research and education had an enormous level of synergy, that they were completely intertwined, and that you couldn't really train scientists and engineers, for example, without doing science and engineering. It seems like a rather obvious thought, but it's a unique one for us.

When we examine the range of education in this country, I think one must be struck by the absolutely stark contrast. We still lead the world, without question, in graduate education. Graduate education is still our most important export. The fact that more than 50 percent of our higher degrees in engineering and many areas of science go to foreign students does not mean at all that we have too many foreign students, but it certainly does emphasize the fact that we've got too few American students.

Those foreign students who receive their higher education here in the United States, if they go back home, are among the best ambassadors that we could possibly have. If they stay here, they fill positions in our economy that would be vacant without them. But we simply can't continue to count on them because more and more their home countries are beginning to become concerned about

what they rightly view as a brain drain where we take their best young people and only send a very small fraction of them back home.

At the undergraduate level, because again we're the only developed nation in the entire world that has no centralized standards for what constitutes a college education, we have peaks of excellence that are far beyond world standards, and we have vast swamps of mediocrity that are difficult to describe. But on the average, we're competitive. It doesn't say much for the level of the planet, but we'll come back to that.

At the pre-college level, I think I can only characterize what we're doing as perpetrating a fraud on our children and our grandchildren. We are, for the first time in the history of this nation, giving our children and grandchildren an education that is poorer than that their parents received. That's a scandal and it's something we obviously have to do something about.

The reason we can be so good at the graduate level, obviously measured by the enormous number of foreign graduate students who come to us, and so bad at the pre-college level, is a simple result of the fact that we're prepared to sacrifice a totally unacceptable fraction of our young people along the way.

In science and engineering, today a particular case, that sacrifice bears particularly heavy on women and minority group members. Since more than 70 percent of new entrants into the work force between now and the year 2000 will be women or minority group members, this is a situation that we simply cannot tolerate as a nation as we move ahead.

It is something that is important to all of us. It is something that all of you share with us here in the federal government, and with all state governments, a very major responsibility to take care of. I want to come back to this as part of the focus in the Bush administration.

Let me turn to the whole question of graduate education and the federal government to begin with. It has a long history. The first recorded example of cooperation between the federal government and the universities was in the early 1800s, when the Navy decided that its one-man office of Naval research -- led by a significant Swede, Jon Erickson, who for reasons not known to any Yale, called his first armored warship "The Princeton" -- needed some 12-inch guns to put on the Princeton. I mean, no self-respecting warship should have less than 12-inch guns. So, they went out to seven universities and said very simply, "Design the gun. We will build a model and we will test it. If your model turns out to be the best, you've got a contract. God knows what you will do with it, but we will get 12-inch guns."

So, on a marvelous morning in 1845, the Princeton steamed out into the Chesapeake Bay. Happily, the first test was on the gun built by Captain Parsons of the Navy. When it exploded, as it did, it wiped out the Secretary of State, the Secretary of the Navy, the Governor of Maryland, three Navy captains, two members of the Congress, and, as the report of the day has it, "sundry other dignitaries." It's the sort of thing that gives technology a bad name.

But, building on this somewhat less than auspicious start, the federal government, of course, has played a major role, particularly since World War II, in the development of a science and technology enterprise that is the strongest that the world has ever seen. It remains the strongest that the world has ever seen despite the fact that some other nations, by focusing their resources, have been able to move up to equal us or even move ahead of us in some very narrow areas.

This shouldn't be surprising, but it does make us remember that our leadership is by no means divinely ordained and something we have to keep an eye on. It's interesting to think back now to the flight of Sputnik in 1957. It's difficult now to recall just how hysterical the response here in the U.S. was to that flight. There was this feeling, "My God, what has gone wrong? Here are these louts flying satellites and we're blowing stuff all over Florida."

It was a very, very difficult period and we responded with the famous Gillilan Report of the President's Council of Advisors of Science and Technology, PCAST. We had the Gillilan Report that said, "Look, there's no way we're going to be able to meet the need for manpower in space in the military in the 1960s and beyond unless we have a crash program." So we had a crash program starting in 1962, and for the next six to seven years, funding to universities grew at 20 percent per year.

Now, unhappily, the universities responded with enthusiasm to this -- perhaps with more enthusiasm than was warranted, because at the end of the period, in 1968, when the government discovered that the goals established for 1970 had already been met, the crash program was turned off. Then the universities discovered that they were diode coupled. They had built large buildings which had to be maintained and modernized. They had hired faculty members, many of whom had been given tenure. We all know what that means.

So, unfortunately, this enthusiastic response to an immediate need -- perceived need in 1962 -- resulted in a situation that froze a whole generation of young Americans out of academic careers. We've been oscillating ever since. One of the real challenges we face together is that of damping that oscillation.

One of the things that I think is important for us to keep in mind is that we still have a problem that was examined back when Dave Packard and I took a look at it in 1986 in the White House Science Council. We did the study on the health of U.S. colleges and universities. We talked to representatives of over 100 colleges and universities. We talked to an enormous number of people.

Out of that, our main conclusion can be very simply stated, and I quote it: "Our universities simply can't respond to society's expectation for them, or discharge their national responsibilities in research and education without substantially increased support." That is still demonstrably true.

We have a very difficult political situation, however. Senator Simon was talking about one aspect of it. There are a great many other aspects. I'm happy to say that we have made some progress, but there is a lot of progress left to be made.

The NSF has just finished a study of university infrastructure. What it shows is that for \$12 billion we could in fact bring America's academic infrastructure back to an acceptable state. That's a somewhat daunting number. But when you look at it more closely, you discover that \$4 billion is required for modernization and maintenance, much of which has been deferred, and the other \$8 billion for new construction.

Now, it is my own belief that we have to focus on the \$4 billion right at this point given our budget situation. It makes very little sense to focus on the \$8 billion, building new facilities to house new faculty, who will submit new proposals when we are not in the position to fund more than a small fraction of the excellent proposals from existing faculty.

So, the focus in this administration is going to be on the \$4 billion required for modernization, upkeep, and general maintenance -- the first part of the focus, let's say. We recognize that the other part of the problem is very real. It's still out there. There's a general agreement, I think, too, that the funding for this should be shared -- perhaps equally by the federal government and by non-federal sources -- and that it is tremendously important that we get a program that's available for competitive proposals, and get it quickly because in the absence of such a program, we're going to be deluged with pork.

Last year we had 427 identified pork programs, and the total amount of money involved for those programs was \$802 million. That's a lot of money. For that kind of money, one can set up a very respectable competitive program. So that is one of our goals, and that is one of my hopes, in fact, that we'll be able to do that.

Now it's also true that each year as we put together the President's budget we have to do a balancing act. We must balance between supporting what the nation's scientists and engineers want to do today, against providing the facilities and programs that will define and take them to the frontiers where they're going to be five and ten years from now. Over the last several years I would be quite free to admit that we have tended to let the balance tilt slightly toward the investment in the future.

So there has been real pain out there in the community. We recognize that. This year we requested an 18 percent increase for the NSF, 16 percent of which had to go down to the actual brand name sciences and other disciplines. Usually, despite the size of the increase to NSF, it gets siphoned off to other things before it gets down to what our university researchers really need support for.

We've increased in the NIH the investigator initiated grant budget by between nine and ten percent, so we're making a determined effort to improve the situation for the university investigator. But let me emphasize that we'll never remove all the pain that's out there. It's a simple demographic fact. Eighty-seven percent of all the scientists and engineers who have ever lived are out there today writing proposals, and less than four percent of the taxpayers are out there to respond to those proposals. That's a fundamental disconnect, no matter how you look at it. It's important, however, to recognize that last year we requested a 13 percent increase in the budget for research and development, the nation taking it up to \$75.6 billion.

We did that in the face of the Omnibus Budget Act, which freezes the tap on domestic discretionary spending, and what it means is that we had to identify other programs with very effective constituencies. I might say, more effective than the academic constituency. We snatched those back or killed them. I'm optimistic we're going to be able to do the same thing this year. What that reflects is that the President and the majority of the members of Congress believe deeply that we as a nation are underinvesting -- underinvesting seriously -- in science and technology.

I think we can count on -- even despite the budget difficulties we face -- progress and a maintenance of the trend that we've established during the last several years.

Now, let's go back to this question of pre-college education. Of course, there is the standard statement that pre-college education is no business of the federal government -- that that's a matter for the states and the regional groups, municipalities and so on. But, unfortunately, particularly in science and technology, as distinct from most other careers, people make their career

decisions before the junior year in high school. If you've lost them at that point, you've lost them permanently.

I think all of you know the discouraging facts, but let me just quote a few. Hal Lewis, Berkeley, in a new book called Technological Risks -- which is worth reading if you haven't read it -- points out that we live in a society where half of the American public believe in lucky numbers, less than half know that the earth goes around the sun once a year, and American industry spends as much on remedial mathematics education each year as is spent on direct mathematics education in elementary schools, high schools, and colleges. That's a ridiculous situation, but it's nonetheless true.

In fact, my favorite characterization of our numerical literacy goes back to a tale about Yogi Berra. After a really tough game, Berra went into a pizza parlor and ordered a huge pizza. The waitress placed it on the table in front of him, looked at it, and said, "Do you want it cut into four pieces or eight?" Berra looked at it for quite a while and said, "You'd better make it four. I don't think I could eat eight." The facts are discouraging. They really are discouraging.

You know that our international competitors just beat us hands down in the international competitions. There is one point you should bear in mind, however. All of these competitions where we get the hell beaten out of us are ones that have true/false questions and things of that kind. If you ask American kids to go do something and make something happen, i.e., science fair sorts of things, they will take on anyone in the entire world. We still do have a little bit of tinkering left in the system, and thank God for it. We're busily trying to remove it from engineering schools. They're becoming more and more theoretical as the days go by, but it's important to leave that in mind.

Now, the Bush administration recognizes two things. One, that science and mathematics are important to our national future; and two, that one can do things in terms of developing standards in science and mathematics without getting hung up in political difficulties that would certainly get you if you tried to do them in the social and political sciences.

So, the focus has been on mathematics and sciences, to what some perhaps feel is a disproportionate level. I think all of you know that of the six goals that the President and the governors put together for education in this country, three relate specifically to science and mathematics. The one that is perhaps the most demanding -- Number Four -- says that, "By the year 2000, American students will be second to none in the world in science and mathematics." Given the distance behind scratch from which we are starting, that, I think you would recognize is a stretch goal.

Now, within the federal government, operating out of my office, there is a new committee chaired by Admiral Watkins, Secretary of Energy, the vice chairman, David Kerns of the Department of Education, and Luther Williams of the National Science Foundation. They operate under the Federal Coordinating Council for Science Engineering and Technology, the group with the unhappy acronym, FCCSET.

Last year they turned out their first report, which was an inventory of what we in the federal government are actually doing about education. Nobody had the slightest idea prior to that. They also identified, based on that inventory, our greatest need for improvement, which is at the elementary school level. We have to be very careful in all this that we don't screw up the one thing we do well, graduate education. I keep emphasizing that because there's a great tendency to focus on one problem at a time, thereby generating some beautiful ones in areas that are otherwise okay.

So, we have to focus on the fact that we really do know how to do graduate education while we fix elementary school education. At the elementary level, the fundamental problem is that our teachers are not adequately prepared. Less than 50 percent have any training whatsoever in the subjects that they are teaching. That's a ridiculous situation by any standards. It's not the fault of the teachers.

We have turned over to the schools the responsibilities that formerly were handled by parents, families, churches -- you name it -- and have stood back and said, "Okay, it's yours." Worse than that, I've heard from governors from a number of states that less than 50 percent of the teachers in their states actually have any contact, whatever, with students. They are in the bureaucratic structure. If one fired a substantial part of that structure, I suspect that we would have vastly better education. But one is not supposed to say that.

The American 2000 Strategy that you heard about this afternoon, I assume, is one that again focuses on mathematics and science. But, the thing I want to emphasize is that we talk an awful lot about science and mathematics -- that, after all is part of my job -- but it is demonstrably true that we can't fix science and mathematics unless we address the entire problem of education and the entire problem all they way through from elementary days through graduate school.

I never refuse to tell an old joke if someone asks for it, so you'll pardon me if I tell this one -- someone demanded it. I used to think the reason that the people I was getting at Yale as graduate students didn't know as much mathematics and science as I thought they used to was, presumably, they were studying other things, philosophy, English, you name it. But I recalibrated shortly before coming down here. I had a Harvard graduate who joined me to get his PhD.

He now has the PhD and is rapidly becoming an internationally-known physicist. But, the first sentence of the first draft of his PhD thesis when I received it read as follows: "This field of research is so virginal that no human eye ever set foot in it."

Just to prove it's not just physicists, I talked to an old colleague in biology who said, "I have one of those, too." His student had written this memorable sentence: "In spring, the birds gonads swell and fly north." It paints a graphic and somewhat painful picture.

Well, what this emphasizes, of course, is that we're all in this together. We have fundamental problems that are not going to be changed without some cultural change. We're going to have to first of all convince parents in this country that they have to become reinolved in the education of their children as they once were. We're going to have to demand objective standards of performance, and we're going to have to stop measuring the input to education -- the number of dollars, the number of this, the number of that -- and begin focusing a little bit on the output. Do our students know anything?

For that reason, we're in the process of putting together in mathematics and in most fields of science now standards -- what students should be expected to know at the end of grade four, grade eight, and grade twelve. We don't call this a national curriculum, because that has elements of coercion, but rather a set of standards.

We're now working on ways to measure performance against those standards. With that in place, and we'll have it in place this year, every child, every school, every teacher, every state, and the federal government if it wants, will get a report card each year measuring how well all of us are doing or how badly we've missed our goals. This, I think, is essential.

So, one of the things I want to leave with you is the fact that we're all in this together, and I look forward to working particularly with this group because you represent a very unique group of American institutions. The sorts of things that my office is going to try to do in this coming year overlap in a great many ways with the things you have underway, so, as I've said, I look forward to working with you.

Thank you for inviting me.

**Elected Heads of the Association
1887-1992**

Editor's Note: Until 1979, the elected head of the Association was called the President and the staff director was called the Executive Director. Beginning in 1979, the elected head of the Association is called the Chairman and the staff director is called the President.

An individual serving as Chair-elect serves the following year as Chair.

Chair-elect	Name	Member Institution
1887	George W. Atherton	Pennsylvania State University
1889 (Jan.)	George W. Atherton	Pennsylvania State University
1889 (Nov.)	J.H. Smart	Purdue University
1890	H.H. Goodell	University of Massachusetts
1891	W.L. Broun	Auburn University
1892	W.A. Henry	University of Wisconsin
1893	S.D. Lee	Mississippi State University
1894	M.E. Alvord	Oklahoma State University
1895	S.W. Johnson	Connecticut Agricultural Experiment Station
1896	George T. Fairchild	Kansas State University
1897	H.C. White	University of Georgia
1898	H.P. Armsby	Pennsylvania State University
1899	H.E. Stubbs	University of Nevada
1900	A.W. Harrisa	University of Maine
1901	W.M. Ligget	University of Minnesota
1902	J.K. Patterson	University of Kentucky
1903	W.O. Thompson	Ohio State University
1904	E.B. Voohees	Rutgers, The State University of New Jersey
1905	M.J. Buckham	University of Vermont
1906	L.H. Bailey	Cornell University
1907	J.L. Snyder	Michigan State University
1908	M.A. Scovell	University of Kentucky
1909	W.J. Kerr	Oregon State University
1910	W.H. Jordon	Cornell University
1911	W.E. Stone	Purdue University
1912	E.H. Jenkins	Connecticut Agricultural Experiment Station
1913	A.C. True	U.S. Department of Agriculture
1914	E.A. Bryan	Washington State University

1915	C.E. Thorne	Ohio State University
1916	K.L. Butterfield	University of Massachusetts
1917	Eugene Davenport	University of Illinois
1918	C.A. Lory	Colorado State University
1919	Samuel Avery	University of Nebraska
1920	H.L. Russell	University of Wisconsin
1921	T.D. Boyd	Louisiana State University
1922	Howard Edwards	University of Rhode Island
1923	R.A. Pearson	Iowa State University
1924	A.F. Woods	University of Maryland
1925	E.A. Burnett	University of Nebraska
1926	H.A. Morgan	University of Tennessee
1927	J.L. Hills	University of Vermont
1928	Anson Marston	Iowa State University
1929	A.M. Soule	University of Georgia
1930	G.W. Rightmire	Ohio State University
1931	E.O. Holland	Washington State University
1932	J.C. Futrall	University of Arkansas
1933	T.O. Walton	Texas A&M University
1934	F.L. McVey	University of Kentucky
1935	J.G. Lipman	Rutgers, The State University of New Jersey
1936	Alfred Atkinson	Montana State College
1937	C.W. Creel	University of Nevada
1938	J.A. Burruss	Virginia Polytechnic Institute
1939	F.D. Farrell	Kansas State University
1940	F.M. Mumford	University of Missouri
1941	J.D. Hoskins	University of Tennessee
1942	E.E. Day	Cornell University
1943	C.B. Hutchinson	University of California
1944	C.S. Boucher	University of Nebraska
1945	T.P. Cooper	University of Kentucky
1946	R.D. Hetzel	Pennsylvania State University
1947	J.L. Morrill	University of Minnesota
1948	J.A. Hannah	Michigan State University
1949	A.S. Adams	University of New Hampshire
1950	R.F. Poole	Clemson University
1951	M.S. Eisenhower	Pennsylvania State University
1952	A.A. Hauck	University of Maine
1953	F.L. Hovde	Purdue University
1954	Lewis Webster Jones	Rutgers, The State University of New Jersey
1955	Irvin Stewart	West Virginia University
1956	M.T. Harrington	Texas A&M University

1957	A.N. Jorgensen	University of Connecticut
1958	C.C. French	Washington State University
1959	C.M. Hardin	University of Nebraska
1960	J.A. Perkins	University of Delaware
1961	J.T. Caldwell	North Carolina State University
1962	N.G. Fawcett	Ohio State University
1963	Elmer Ellis	University of Missouri
1964	David D. Henry	University of Illinois
1965	Edgar F. Shannon, Jr.	University of Virginia
1966	James H. Jensen	Oregon State University
1967	W. Clarke Wescoe	University of Kansas
1968	Fred H. Harrington	University of Wisconsin
1969	Richard A. Harvill	University of Arizona
1970	Wilson H. Elkins	University of Maryland
1971	David W. Mullins	University of Arkansas
1972	W. Robert Parks	Iowa State University
1973	Lewis C. Dowdy	North Carolina A&T State University
1974	Ernest L. Boyer	State University of New York System
1975	Daniel G. Aldrich, Jr.	University of California, Irvine
1976	Harry M. Philpott	Auburn University
1977	Glenn Terrell, Jr.	Washington State University
1978	Edwin Young	University of Wisconsin
1979	A.R. Chamberlain	Colorado State University
1980	Harold Enarson	Ohio State University
1981	Clifton R. Wharton, Jr.	State University of New York System
1982	Robert Q. Marston	University of Florida
1983	Edward J. Bloustein	Rutgers, The State University of New Jersey
1984	C. Peter Magrath	University of Minnesota
1985	I.M. Heyman	University of California, Berkeley
1986	John DiBiaggio	Michigan State University
1987	Stanley O. Ikenberry	University of Illinois
1988	Chase N. Peterson	University of Utah
1989	Robert M. O'Neil	University of Virginia
1990	Donald N. Langenberg	University of Maryland System
1991	Lattie F. Coor	Arizona State University
1992	James McComas	VPI & State University

**Member Institutions
1991**

ALABAMA

Alabama A&M University*
Auburn University*
Tuskegee University
University of Alabama System
University of Alabama, Tuscaloosa
University of Alabama at Birmingham

ALASKA

University of Alaska Statewide System*
University of Alaska, Fairbanks

ARIZONA

Arizona State University
University of Arizona*

ARKANSAS

University of Arkansas System
University of Arkansas, Fayetteville*
University of Arkansas, Pine Bluff*

CALIFORNIA

University of California Systemwide*
University of California, Berkeley
University of California, Davis
University of California, Irvine
University of California, Los Angeles
University of California, Riverside
University of California, San Diego
University of California, Santa Barbara

COLORADO

Colorado State University*
University of Colorado
University of Colorado, Boulder

CONNECTICUT

Connecticut Agricultural
Experiment Station*
University of Connecticut*

DELAWARE

Delaware State College*
University of Delaware*

DISTRICT OF COLUMBIA

University of the District of Columbia*

FLORIDA

Florida A&M University*
Florida State University
University of Florida*
University of South Florida
State University System of Florida

GEORGIA

Fort Valley State College*
Georgia Institute of Technology
University of Georgia*

GUAM

University of Guam*

HAWAII

University of Hawaii*

IDAHO

University of Idaho*

ILLINOIS

Southern Illinois University System
Southern Illinois University, Carbondale
University of Illinois*
University of Illinois, Chicago
University of Illinois, Urbana-Champaign

INDIANA

Indiana University
Purdue University*

IOWA

Iowa State University*
University of Iowa

KANSAS

Kansas State University*
University of Kansas

KENTUCKY

Kentucky State University*
University of Kentucky*
University of Louisville

LOUISIANA

Louisiana State University System*
Louisiana State University, Baton Rouge
Southern University*

MAINE

University of Maine System
University of Maine*

MARYLAND

University of Maryland*
University of Maryland, College Park
University of Maryland, Eastern Shore*

MASSACHUSETTS

Massachusetts Institute of Technology*
University of Massachusetts*
University of Massachusetts, Amherst

MICHIGAN

Michigan State University*
University of Michigan
Wayne State University

MINNESOTA

University of Minnesota*

MISSISSIPPI

Alcorn State University*
Mississippi State University*
University of Mississippi

MISSOURI

Lincoln University*
University of Missouri*
University of Missouri, Columbia
University of Missouri, Kansas City
University of Missouri, Rolla

MONTANA

Montana State University*
University of Montana

NEBRASKA

University of Nebraska*
University of Nebraska, Lincoln

NEVADA

University of Nevada, Reno*

NEW HAMPSHIRE

University System of New Hampshire
University of New Hampshire*

NEW JERSEY

Rutgers, The State University
of New Jersey*

NEW MEXICO

New Mexico State University*
University of New Mexico

NEW YORK

City University of New York
Cornell University*
State University of New York
State University of New York, Albany
State University of New York, Binghamton
State University of New York, Buffalo
State University of New York, Stony Brook

NORTH CAROLINA

North Carolina A&T State University*
North Carolina State University*
University of North Carolina
University of North Carolina at
Chapel Hill

NORTH DAKOTA

North Dakota State University*
University of North Dakota

OHIO

Bowling Green State University
Kent State University
Miami University
Ohio State University*
Ohio University
University of Cincinnati
University of Toledo

OKLAHOMA

Langston University*
Oklahoma State University*
University of Oklahoma

OREGON

Oregon State University*
Oregon State System of
Higher Education
University of Oregon

PENNSYLVANIA

Pennsylvania State University*
Temple University
University of Pittsburgh

PUERTO RICO

University of Puerto Rico*

RHODE ISLAND

University of Rhode Island*

SOUTH CAROLINA

Clemson University*
South Carolina State College*
University of South Carolina

SOUTH DAKOTA

South Dakota State University*
University of South Dakota

TENNESSEE

Tennessee State University*
University of Tennessee*
University of Tennessee, Knoxville

TEXAS

Prairie View A&M University*
Texas A&M University System
Texas A&M University*
Texas Tech University
University of Houston System
University of Houston
University of Texas System
University of Texas, Austin

UTAH

University of Utah
Utah State University*

VERMONT

University of Vermont*

VIRGIN ISLANDS

University of the Virgin Islands*

VIRGINIA

University of Virginia
Virginia Commonwealth University
Virginia Polytechnic Institute
& State University*
Virginia State University*

WASHINGTON

University of Washington
Washington State University*

WEST VIRGINIA

West Virginia University*

WISCONSIN

University of Wisconsin System
University of Wisconsin-Madison*
University of Wisconsin-Milwaukee

WYOMING

University of Wyoming*

* Indicates land-grant institution

Constitution

Article I -- Name

This Association shall be called the National Association of State Universities and Land-Grant Colleges.

Article II -- Purpose

The purpose of this Association shall be the consideration of questions relating to the promotion of higher education in all its phases in the universities and land-grant colleges of the several states of the Union, and the discussion of such questions and formulation of plans, policies, and programs as may tend to make the member institutions of the Association more effective in their work.

This purpose may be accomplished:

1. By cooperation and unity of effort among and by the member institutions;
2. By the maintenance of proper and legal relationships between the member institutions and the Federal government as well as with other organizations, institutions, and agencies supported by public or private funds.
3. By appropriate action on proposed or actual Federal programs affecting the several state universities and land-grant colleges.

Article III -- Institutional Membership

1. All members of the American Association of Land-Grant Colleges and State Universities as of November, 1960, shall be and continue to be eligible for membership, subject to payment of annual dues, regardless of any other provisions of this Constitution.

2. The membership of this Association may also include:

A. All universities in the states and territories of the United States which are founded wholly or in part upon those grants of land made by Congress to the states upon their admission into the Union, which grants are commonly known as seminary or university grants;

B. Every college or university established under the Land-Grant Act of Congress approved July 2, 1862, or receiving the benefits of the Second Morrill Act of Congress approved August 30, 1890, as amended and supplemented;

C. Any present member (as of July 1, 1963) of the National Association of State Universities, not otherwise eligible for membership;

D. In addition to the above, membership may also be extended by invitation of the Association (1) to separately governed state universities and (2) to universities which are part of a multi-campus state system which meet the following criteria:

(a) The institution has substantial state responsibilities in instruction, research, and extension.

(b) The institution's instructional program includes a substantial and diversified complex of programs leading to the Ph.D. degree and to post-baccalaureate professional degrees conferred by the faculty of that campus.

(c) Research is a substantial purpose and budget of the institution, and is recognized substantially in the institution's criteria for faculty appointment and advancement.

(d) Extension and public service are in fact a substantial commitment of the institution beyond the immediate community in which the institution is situated and/or are over and above the offering of evening classes and lectures, etc.

(e) When the institution is a part of a multi-campus university system, membership must be recommended by the officer holding executive responsibility over the existing member institutions in the system.

3. The membership shall also include, subject to continued payment of annual dues, all institutional members of the Association as of July 1, 1972, who were elected as having a common purpose with that of the above institutions.

4. The Association further recognizes as eligible for full membership that office of a multi-campus university system which in fact exercises executive responsibility over institutional members of the Association.

5. Invitation to Membership:

A. Membership in the Association shall be by invitation following election for those institutions and offices eligible for membership under Sections 2, 3, and 4 above, except that present members of the National Association of State Universities will also be admitted on application. The Association shall consider for invitation to membership any institution nominated by a present member institution as meeting the stated criteria and any multi-campus university system office qualifying and applying under Section 4 above. The nomination of an institution which is subject to the authority of a multi-campus state system whose executive office is a member of the Association must be recommended by that office.

B. Such nominations and/or applications shall be submitted to the Executive Committee and will be referred by that Committee to a Standing Committee on Membership for its recommendation. Recommendation by the Executive Committee for election of new members shall be submitted to all present member institutions at least three weeks prior to an annual meeting. To be elected to membership, a nomination must receive a two-thirds vote of the members of the Association Senate present at a regular annual meeting and constituting a quorum.

Article IV -- Delegates

The affairs of the Association shall be conducted by delegates from the member institutions appointed according to the provisions in the Bylaws of this Association.

Article V -- Organization and Officers

The principal deliberative, policy-making, and legislative body of the Association shall be a Senate, with membership, powers, and officers as provided in the Bylaws of this Association.

The subordinate bodies of this Association shall be constituted as prescribed in the Bylaws of this Association.

Article VI -- Meetings

This Association shall hold at least one meeting in every calendar year, to be designated as the annual convention of the Association. Details of the annual convention and provisions for special meetings shall be as provided in the Bylaws of the Association.

Article VII -- Finance

At every annual convention the Association shall provide for obtaining the funds necessary for its legitimate expenses, and may, by appropriate action of the Senate call for contributions upon the several institutions eligible for membership; and no institution shall be entitled to representation or participation in the benefits of the Association unless such institution shall have made the designated contribution for the year previous to that in and for which such question of privilege shall arise, or shall have said payment remitted by vote of the Senate.

Article VIII -- Amendments

This Constitution may be amended at any regular convention of the Association by a two-thirds vote of the Senate members in attendance, if the number present constitutes a quorum of the membership; provided that notice of any proposed amendment, together with the full text thereof and the name of the mover, shall have been given at the immediately preceding annual convention and repeated in the call for the convention. Every such proposition or amendment shall be subject to modification or amendment in the same manner as any other propositions, and the final vote of the adoption or rejection shall be taken by yeas and nays of the Senate.

Bylaws

Article I -- Principal Office and Registered Agent

A. The principal office of the National Association of State Universities and Land-Grant Colleges, a nonprofit corporation incorporated under the laws of the District of Columbia (hereinafter the "Association"), shall be in the District of Columbia.

B. The Association may have such other office or offices at such suitable place or places within or without the District of Columbia as may be designated from time to time by the Association's Executive Committee.

C. The Association shall have and continuously maintain a registered office in the District of Columbia and the Association's Executive Committee shall appoint and continuously maintain in service a registered agent, having a business office identical with the registered office, who shall be an individual resident of the District of Columbia, or a corporation, whether for profit or not for profit.

Article II -- Purposes

The purposes of the Association, subject to the limitations of Article XXV, hereof, are to consider questions relating to the promotion of higher education in all its phases in the universities and land-grant colleges of the United States, the discussion of such questions, the formulation of such plans, policies, and programs as may tend to enable the members of the Association to be more effective in education, and to engage in such other related activities as may be desirable or required to fulfill the purposes and objectives of the Association.

These purposes may be accomplished by (1) cooperation and unity of effort among and by the members of the Association, (2) the maintenance of proper and legal relationship between the members of the Association and the Federal government, as well as with other organizations, institutions, and agencies supported by public or private funds, and (3) appropriate action on proposed or actual Federal programs affecting the several state universities and land-grant colleges.

The Association is organized and is to be operated exclusively for charitable and educational purposes within the meaning of Sections 501(c)(3) and 170(c)(2)(B) of the Internal Revenue Code of 1954 (or the corresponding provisions of any future United States internal revenue law).

Article III -- Membership

A. Membership Classification. The membership of the Association shall consist of institutions of higher education, each of which qualifies under Section 115(a) of the Internal Revenue Code of 1954, or is exempt from Federal income taxation under Section 501(a) of such Code as an organization described in Section 501(c)(3) of such Code, and is an organization described in Section 509(a)(1), (2), or (3) of such Code (or the corresponding provisions of any future United States internal revenue law), and which meet the following additional criteria:

1. All members of the American Association of Land-Grant Colleges and State Universities as of November, 1960 shall be and continue to be eligible for membership in the Association, subject to payment of annual dues, regardless of any other provisions hereof, other than the foregoing provision of this Article III.

2. The membership of the Association may also include:

(a) All universities in the states and territories of the United States which are founded wholly or in part upon those grants of land made by Congress to the states upon their admission to the Union, which grants are commonly known as seminary or university grants;

(b) Every college or university established under the Land-Grant Act, approved by the United States Congress on July 2, 1862, or receiving the benefits of the Second Morrill Act, approved by the United States Congress on August 30, 1890, as amended and supplemented;

(c) Any member as of July 1, 1963, of the National Association of State Universities, not otherwise eligible for membership;

(d) Separately governed state universities and universities which are part of a multi-campus state system, which meet the following criteria:

(1) The institution has substantial state responsibilities in instruction, research, and extension.

(2) The institution's instructional program includes a substantial and diversified complex of programs leading to the Ph.D. degree and to post-baccalaureate professional degrees conferred by the faculty of that campus.

(3) Research is a substantial purpose and budget of the institution and is recognized substantially in the institution's criteria for faculty appointment and advancement.

(4) Extension and public service are in fact a substantial commitment of the institution beyond the immediate community in which the institution is situated and/or are over and above the offering of evening classes and lectures and the like.

(5) When the institution is a part of a multi-campus university system, membership must be recommended by the officer holding executive responsibility over the existing member institutions in the system; and

(e) An office of a multi-campus university system which in fact exercises executive responsibility over one or more institutional members of the Association.

3. The voting membership of the Association may also consist of such other institutions having a common purpose with that of the above institutions as the Association may elect, provided, however, that such institutions shall qualify under Section 115(a) of the Internal Revenue Code of 1954 or be exempt from Federal income taxation under Section 501(a) of such Code as an organization described in Section 501(c)(3) of such Code, and shall be an organization described in Sections 509(a)(1), (2), or (3) of such Code (or corresponding provisions of any future United States internal revenue law).

B. Invitation to Membership

1. Invitation to membership in the Association shall be by invitation following election for those institutions and offices eligible for membership under Article III A2 or 3, hereto, except that the present members of the National Association of State Universities will be admitted on application. The Association shall consider for invitation to membership any institution nominated by a present member institution as meeting the required criteria and any multi-campus university system office qualifying and applying under Article III A2(e) hereof. The nomination of an institution which is subject to the authority of a multi-campus state system whose executive office is a member of the Association must be recommended by that office.

2. Such nominations and/or applications shall be submitted to the Association's Executive Committee and will be referred by that Committee to a Standing Committee on Membership for its recommendation. Each recommendation by the Executive Committee for election of new members shall be submitted to all present member institutions at least three weeks prior to an annual meeting. In order to be elected to membership, a nomination must receive a two-thirds vote of the members of the Association's Senate present at a regular annual meeting and constituting a quorum.

C. Voting Rights. Each member of the Association shall be entitled to one vote at meetings of the membership or, where required, in conjunction with a mail ballot, such vote to be cast in the Senate. Voting by proxy in the Senate by an official delegate's appointee shall be permitted.

D. Delegates. The affairs of the Association shall be conducted by delegates from the member institutions, appointed as follows:

1. **Regular Delegates.** The president or chief executive of any member institution in good standing shall be a regular delegate to the annual convention of the Association, and may appoint such additional individuals from the institution as regular delegates as the nature of the activities of the Association may require. If the president or chief executive of any member institution in good standing is unavoidably absent from part or all of any annual convention or special meeting of the Association, a delegate shall be appointed in writing to act for the institution in the affairs of the Senate.

2. Special Delegates. Individuals from other educational institutions with an interest in common with member institutions of this Association, may, by a majority vote of the Executive Committee of the Senate, be admitted as special delegates to the convention sessions of the Association with all privileges except the right to vote. Similarly, individuals or representatives of other organizations engaged in activities related to the program of this Association may be granted privileges as special delegates. All privileges granted to special delegates under this section shall include provisions pertaining to periods of time or terms during which the privileges are operative.

E. Resignation of Members. Any member of the Association may withdraw from such membership at any time by giving written notice thereof to the Secretary.

F. Revocation or Termination of Membership. Any member of the Association may have such membership revoked or terminated by affirmative vote of the Association's Senate, whenever in the Senate's judgment the best interest of the Association would thereby be served or whenever such member loses eligibility for such membership under the criteria as stated in Article III A, hereof.

G. Reinstatement. Any member of the Association, the membership of which has been revoked or terminated under Article III F, hereof, may be reinstated to membership by action of the Senate, upon a thorough investigation and after satisfactory assurances of eligibility have been received.

Article IV -- Meetings of Members

A. Annual Meeting. An annual convention of the membership of the Association shall be held, within or without the District of Columbia, such meeting to be designated as the annual convention of the Association, for the purpose of transacting any and all business that may be brought before the meeting.

B. Location of the Meeting. The Association's Executive Committee shall decide the time, day, and place of the annual meeting.

C. Notice of Meeting. Written or printed notice, stating the time, day, and place of the annual meeting, shall be delivered to all members at least thirty (30) days prior to the date of the meeting.

Article V -- Senate

A. General Authority. There shall be a Senate of the Association, which shall be the ultimate policy-making body of the Association and which shall have the authority to review the actions of and receive periodic reports from the Executive Committee, elect the officers of the Association, elect the members of the Executive Committee of the Association, approve the selection of new members of the Association, approve changes in the organization and structure

of the Association, approve the method for calculation of dues, approve the annual budget, approve amendments to the Articles of Incorporation and Bylaws of the Association, and delegate any and all of its powers to the Executive Committee.

B. Members. The membership of the Senate shall consist of the chief executives of member institutions, three representatives of each Council of the Association, with the exception of the Council of Presidents, four representatives of each of the divisions and the Chairmen of Commissions of the Association excepting those who are otherwise members of the Senate.

C. Quorum. A majority of the Senate shall constitute a quorum for purposes of meetings of the Senate.

D. Special Meetings. Special meetings of the Association's Senate may be called by the Executive Committee on its own initiative or in response to a petition. The Executive Committee shall determine the time, day, and place of such special meetings. Notice of special meetings, stating the time, day, and place of said meeting and the purpose or purposes for which the meeting is called shall be delivered to the Senate membership at least ten (10) days prior to the meeting date.

Article VI -- Senate Committees

A. Standing Committees. Standing committees as designated by the Senate shall be appointed by the Chairman of the Association with the advice and approval of the Executive Committee.

B. Special Committees. Special committees may be appointed by the Chairman of the Association with the advice and approval of the Executive Committee.

C. Joint Committees. Joint committees as designated by the Senate shall be appointed by the Chairman of the Association with the advice and approval of the Executive Committee.

D. Vacancies. Vacancies occurring in Senate committees shall be filled in the same manner as provided in Sections A, B, and C of this Article.

Article VII -- Executive Committee

A. Membership. There shall be an Executive Committee of the Association, which shall be composed of twenty-two (22) members and which shall have all the powers and authority necessary to carry out the purposes and functions of the Association as determined by the Senate. The Executive Committee shall have all of the powers and perform all of the duties commonly incident to and vested in the Board of Directors of a corporation, including the authority to appoint and remunerate agents and employees to manage, supervise and control the property and affairs of the Association, to cause the annual budget of the Association to be prepared, to disburse the funds of the

Association, and to adopt such rules and regulations for the conduct of the Association's business, responsibility and authority as shall be deemed advisable, insofar as such delegation of authority is not inconsistent with or repugnant to the Articles of Incorporation or Bylaws of the Association or to any applicable law. The Executive Committee shall consist of the Chairman of the Association, who shall serve as Chairman of the Executive Committee during his/her one-year tenure as Chairman of the Association, the Chairman-elect of the Association, who shall be Vice Chairman of the Executive Committee, the Past Chairman of the Association, the Chairman of the Council of Presidents, the Chairman of the Committee on Federal Legislation, and one individual from each of the other Councils and Divisions, and such other number of individuals elected by the Senate, including at least one chief executive from the 1890 institutions, as are required to make a total of twenty-two (22) members. However, a majority of members of the Executive Committee shall at all times be chief executives of member institutions, and a rotation system of representation by Councils and Divisions shall be adopted if and as necessary to meet this requirement.

Moreover, except for the Chairman, Chairman-elect, Past Chairman, and Chairman of the Council of Presidents, as members of the Executive Committee, no more than one individual from a member institution shall hold membership on the Executive Committee at any one time.

B. Terms. The terms of individuals elected to the Executive Committee shall be three years, (except for those serving ex officio), and in the case of initial selection of representatives of new Councils and Divisions, which shall be for such term not exceeding three years as is required to preserve rotation of experienced membership on the Committee. No individual may serve for more than three consecutive years on the Committee.

C. Meetings. A meeting of the Executive Committee shall be held at least once each year prior to the annual meeting of the Association, at such time and place as the Committee shall determine. Other meetings may be held on call of the Chairman, or by written request of a majority of the members of the Executive Committee.

D. Notice. Written or printed notice, stating the time, day, and place of each meeting, shall be delivered to each member of the Executive Committee at least ten (10) days prior to the day of each meeting. Attendance by a member of the Executive Committee at a meeting shall constitute waiver of notice of the meeting, excepting such attendance solely for the purpose of objecting to the transaction of business on the grounds that the meeting is not lawfully called or convened.

E. Quorum; Voting. At all meetings of the Executive Committee, a majority of the members shall constitute a quorum. Each member of the Executive Committee shall be entitled to one vote, which may be conducted by mail ballot. Proxy voting shall not be permitted. In the absence of a quorum, any action taken shall be recommendatory only, but may become valid action if subsequently confirmed by a majority vote, in conformance with the quorum

requirements, by a mail ballot of the voting members of the Executive Committee.

F. Powers and Duties.

1. In the interim between the annual conventions of the Association, the Executive Committee shall meet promptly to fill the office of the Chairman or Chairman-elect of the Association, should these offices become vacant, and shall have the power to fill vacancies in the Executive Committee occurring in the positions held by individuals elected by the Senate, and, upon recommendation of the Executive Committee of a Council or Division, to fill vacancies in terms of Council or Divisional members of the Association Executive Committee which may occur.

2. The Executive Committee shall, between the Association's conventions and meetings, act for the Association in all matters of business. The Committee shall be charged with the general arrangement and conduct of all meetings called by it. The Committee shall present a well-prepared order of business of subjects for discussion by the Senate and shall provide and arrange for the meetings of the several units of the Association. Further, the Committee shall prepare reports of its interim activities to be submitted to each member of the Senate within thirty (30) days after each meeting.

G. Steering Committee. There shall be an eleven-member (11) Steering Committee of the Executive Committee of the Association.

1. Membership. The Steering Committee shall be composed of the Association's three elected officers (Chairman, Chairman-elect and Past Chairman); the six (6) chief executive officers elected by the Senate; the Chairman of the Council of Presidents; and the representative of the 1890 Presidents.

The Chairman of the Association shall serve as Chairman of the Steering Committee.

2. Meetings. The Steering Committee shall meet at the request of the Chairman of the Association, or at the request of a majority of the members. The Chairman of the Steering Committee, or his/her designated agent shall be responsible for notifying the Steering Committee membership in writing of the dates, times and locations of Steering Committee meetings and the general nature of the business to be transacted. Meeting notices generally shall be delivered to members at least ten (10) days prior to the convening of a meeting, but this provision may be waived to accommodate discussion of unforeseen events or situations of a compelling nature.

3. Responsibilities. The Steering Committee will be responsible for setting the agenda for Executive Committee meetings. It shall have primary responsibility for matters dealing with the internal administration of the Association, and shall have oversight and review responsibility for Association positions on public policy issues affecting the interests and welfare of the membership.

The Steering Committee is empowered to take up issues on its own initiative, and to consider matters referred to it by the Executive Committee or by Councils, Divisions or other committees of the Association.

The Steering Committee is authorized to establish, review and revise from time to time rules, procedures, and policies it deems as necessary and proper for the efficient conduct of its business and in the best interests of the Association.

The Steering Committee shall refer to the Executive Committee, and subsequently as appropriate to the Senate for consideration those of its recommendations which affect the interests and welfare of the membership as a whole, or which modify existing Association policies previously adopted by the Senate.

Article VIII -- Eligibility

An individual, to be eligible for election to any office, other elective position, or for committee assignment in this Association, except as may be otherwise provided, shall be a regular employee on an active basis of a member institution of this Association. Further, should the employment status of an individual holding an office, other elective position, or committee assignment in this Association be changed (in the interim between annual conventions from that hereinbefore described) so as to render the individual ineligible, the office, other elective position, or committee assignment shall be declared vacant as of the time the change occurred and the vacancy shall be filled according the provisions of these Bylaws.

Article IX -- Length of Terms

Except as otherwise provided herein, in situations wherein individuals are selected or appointed to units of the Association, the first elections or appointments shall provide for the filling of terms of varying lengths such as three, two, and one year terms in order that a continuity of experienced personnel may be secured for the units as a result of subsequent elections or appointments in filling full-length terms or vacancies in unexpired terms.

Article X -- Officers

A. Enumeration of Officers. The officers of the Association shall consists of a President, a Chairman, who shall also serve as Chairman of the Executive Committee, a Chairman-elect, a Past Chairman, a Secretary, and a Treasurer, and may include such other officers as may be deemed necessary.

B. Officeholder Combinations. Any two or more offices of the Association may be held by the same person, except the offices of Chairman and Secretary.

C. Nominations of Chairman-elect. A candidate for Chairman-elect who shall become Chairman of the Association at the annual convention following his/her election as Chairman-elect shall be nominated by a committee of seven (7) individuals, to consist of the most recent past Chairman and, prior to 1979, Past Presidents of the Association who are in active service in member institutions at the time and who are in attendance at the annual meeting, together with such additional members of the Senate as the Chairman may appoint to bring the number to seven.

Additional candidates for Chairman-elect may be nominated by members of the Senate at the time the nominating committee makes its report to the Senate.

D. Election of Chairman-elect. The Chairman-elect shall be elected for a period of one year by a majority vote of the Senate during the annual convention of the Association. He/she shall assume office at the close of the convention in which he/she is elected and shall serve until the following annual convention of the Association, at which time he/she shall assume office as Chairman of the Association.

E. Term of Chairman. The Chairman of the Association shall serve in that office for one year after his/her assumption of it, or until his/her successor shall have qualified.

F. Term of Secretary and Treasurer. A Secretary and Treasurer shall be elected for a period of one year by a majority vote of the Senate during the annual convention of the Association. They shall assume office at the close of the convention in which they are elected and shall serve until the following annual convention of the Association. The Secretary and Treasurer shall each serve in that respective office for one year after their assumption of it or until their successor shall have qualified.

G. Duties of the Chairman.

1. The Chairman of the Association shall have all powers and shall perform all duties commonly incident to and vested in the office of the chairman of a corporation, including but not limited to being the chief executive officer of the Association. Notwithstanding the foregoing, the Chairman of the Association shall have the following specific powers and duties:

(a) Presiding at the general meetings of the Association, the meetings of the Senate, and the meetings of the Executive Committee.

(b) Signing all certificates, contracts, and other instruments of the Association authorized by the Senate.

(c) Delivering an address at the annual convention.

2. The Chairman shall also perform such other duties as the Senate may from time to time designate.

H. Duties of the Chairman-elect. The Chairman-elect shall serve as a member of the Executive Committee of the Association and shall become familiar with the work of the Association and be prepared to present to the Executive Committee for its advice and approval, at or prior to the convention

following his/her election as Chairman-elect, a list of nominees for membership on the Association's commissions, standing and special joint committees, and delegates to other organizations.

I. Duties of the Past Chairman. The Past Chairman shall serve as a member of the Executive Committee.

J. Duties of the Secretary.

1. The Secretary of the Association shall have all powers and shall perform all duties commonly incident to and vested in the office of secretary of a corporation, including the following duties and responsibilities:

(a) Attending all meetings of the Association and of the Senate, and be responsible for keeping, preserving in books of the Association, and distributing true minutes of the proceedings of all such meetings.

(b) Maintaining the official membership roster of the Association.

2. The Secretary shall perform such other duties as the Senate may from time to time designate.

K. Duties of the Treasurer.

1. The Treasurer of the Association shall have all powers and shall perform all duties commonly incident to and vested in the office of treasurer of a corporation, including the following duties and responsibilities:

(a) Collecting all dues and money owing the Association.

(b) Dispensing funds upon authorization of the Senate.

(c) Serving as custodian of all funds of the Association and shall be bonded as directed by the Senate.

(d) Developing and reviewing the fiscal policies of the Association.

(e) Having the accounts of the Association audited annually.

2. The Treasurer shall also perform such other duties as the Senate may from time to time designate.

Article XI -- President and Staff

A. President. The President of the Association shall be employed on an annual basis for full-time service by the Executive Committee with the approval of the Senate. The employment of the president shall not be governed by the provisions of Article VIII of these Bylaws. The President, who has the privilege of attending all meetings of all units of the Association, may be directed by the Senate to act as Secretary to the Senate and to the Executive Committee and to perform the duties of Treasurer of the Association, as described in Article X hereof. The President shall administer the national headquarters of the Association, which shall be in Washington, D.C.

B. Staff. Staff members shall be employed/dismissed by the President consistent with the Association personnel policies and the annual budget adopted by the Executive Committee and approved by the Senate. The employment of

staff shall not be governed by the provisions of Article VIII of these Bylaws. Members of the staff of the Association shall be given such titles and perform such duties as may be assigned by the President.

Article XII -- Councils

A. Creation of Councils. Councils of the Association shall consist of chief executives of each member institution of the Association or of major campuses of such institutions or of chief administrators responsible to the chief executive (institutional head) for major policy areas on an institution-wide basis. There are hereby established the following Councils, as enumerated. Additional Councils may be created, or established Councils discontinued, by a two-thirds vote of members of the Association's Senate present and voting at an annual meeting, if the number present and voting constitutes a quorum of the Senate.

1. Council of Presidents and Spouses.*

(a) Composition. The Council of Presidents shall consist of the chief executive of each member institution and of such other individuals, who shall be the chief executives of major and comprehensive campuses of member institutions, as are selected for invitation by the officers of the Council of Presidents with the approval of the chief executive of the member institution concerned. Alternates may not be named for attendance at meetings of the Council of Presidents.

Special delegates to the Association and individuals representing other educational organizations may be invited to attend meetings of the Council of Presidents, at the discretion of the Executive Committee of the Council. Former chief executives of member institutions who retired in office shall be invited to attend meetings of the Council.

(b) Purpose, Reports. The purpose of the Council of Presidents is to provide a forum of discussion of subjects of interest to chief executives of member institutions. Officers of the Council of Presidents and Spouses are responsible for furnishing such summaries of discussions at its meetings as they deem appropriate for publication in the Proceedings, or for other purposes of record, to the National Office of the Association.

2. Council for Academic Affairs. The Council for Academic Affairs shall consist of chief administrative officers under the institutional head responsible for the academic program of the institution, and shall place special emphasis in its deliberations upon undergraduate education.

3. Council for Business Affairs. The Council for Business Affairs shall consist of chief administrative officers under the institutional head responsible for fiscal matters.

4. Council for Research Policy and Graduate Education. The Council for Research Policy and Graduate Education shall consist of the chief administrative officer or officers responsible to the institutional head for research policy and graduate education.

5. Council on Extension, Continuing Education and Public Service.

The Council on Extension, Continuing Education and Public Service shall consist of chief administrative officers responsible on an institution-wide basis for making the resources and services of the university available to the community as a whole (except as these functions are in part assigned separately within any member institution to the Cooperative Extension Service).

6. Council on University Relations and Development.

The Council on University Relations and Development shall consist of the chief administrative officers under the institutional head responsible on an institution-wide basis for the functions of public information, development, alumni, university relations, and state and federal government relations. Council membership also shall include member-university officials, with government relations responsibilities who are based in Washington, D.C.

7. Council on Student Affairs.

The Council on Student Affairs shall consist of the chief administrative officers under the institutional head responsible on an institution-wide basis for student affairs.

B. Representation in the Senate and on the Association Executive Committee. Each Council (other than the Council of Presidents and Spouses) shall be entitled to representation in the Senate by three representatives elected by the Council as a whole, one of whom shall be designated as the Council's representative on the Association's Executive Committee. Except for initial terms as provided for elsewhere in these Bylaws, such election to membership in the Senate and designation as representatives on the Association Executive Committee shall be for three-year terms.

C. Council Executive Committees. Each Council shall elect an Executive Committee of five or more members, of whom three shall be its representatives in the Senate.

D. The Executive Committee of each Council shall at each annual convention provide for the selection of a chairman and secretary of the Council, and for such other officers as it may desire.

E. The Executive Committee of each Council shall be charged with the general management and conduct of all meetings held by the delegates comprising a Council. They shall appoint all standing and special committees and, in cooperation with the representatives of other Councils of the Association, appoint intercouncil committees. All committees of a Council shall report to the Chairman of the Executive Committee of that Council.

F. It shall be the duty of the Executive Committee of a Council to transmit to the Association Executive Committee any reports or recommendations originating in a Council appropriate for consideration by the Senate. (Such transmittal shall not preclude direct transmittal to the Senate of such recommendations.) Furthermore, the Executive Committee of the Senate, from time to time, may refer and assign topics, subjects, questions and issues to the Executive Committees of the Councils for study, analyses and recommendation.

Article XIII -- Division of Agriculture

A. Creation of Division. There shall be within the Association a Division of Agriculture, which shall consist of the chief administrative officer or officers responsible to the institutional chief executive for programs in instruction and research related to Agriculture, and in Cooperative Extension work, and such other delegates as are determined by the internal organizational structure of the Division.

B. Organization of the Division. The Division of Agriculture may be organized into sections or other units according to the desire of its delegates, provided that adequate provision be made within the Division for participation in its activities of individuals having institution-wide responsibility in agricultural matters.

C. Representation in the Senate and on the Association's Executive Committee. The Division shall be entitled to representation in the Senate by four (4) members selected by the Division, of whom at least one shall be an individual responsible on an institution-wide basis for agricultural matters. One of the members of the Senate, who shall be an individual responsible on an institution-wide basis for agricultural matters, shall also be designated as the divisional representative on the Association's Executive Committee for a term not to exceed three years.

D. Divisional Executive Committee. The Division shall elect an Executive Committee of five or more members of whom at least two shall be individuals responsible on an institution-wide basis for agricultural matters. Duties of the Committee shall be as described for the Executive Committee of the Councils.

E. All business and programs of units of the Division shall be coordinated through the Executive Committee of the Division with the business and programs of the Division.

Article XIV -- Division of International Affairs (Approved by the Senate November, 1986)

A. Creation of Division. There shall be within the Association a Division of International Affairs (hereinafter, the "Division") comprised of member institutions who elect to belong to the Division, and are represented by their chief executive officers and their designees.

The Division shall review, nurture and promote international activities of Association member institutions, and shall serve as an advocate for curricular matters relevant to international education, student and faculty exchange, foreign student affairs, humanitarian and developmental assistance activities, and other matters as deemed appropriate by the Division.

B. Organization of the Division. The Division may be organized into committees according to the desire of its Executive Committee in order to

conduct the programmatic affairs of the Division. Official voting members of the Division, as determined by the Division, shall be from among the chief executive officers and their designees.

C. Division Executive Committee. The Division shall have an Executive Committee of which at least one-third of the members shall be chief executive officers of institutions and shall determine the size, composition and specific terms of office of the members of the Executive Committee.**

D. Representation in the Senate and on the Association's Executive Committee. The Executive Committee of the Division shall choose from among the Division's members four representatives to the Association's Senate. The Executive Committee of the Division shall also select a representative to the Association's Executive Committee who shall be a chief executive officer and shall represent the Division in the Senate.

E. Coordination. All business and programs of units of the Division shall be coordinated through the Executive Committee of the Division.

Article XV -- Marine Division (Approved by the Senate November, 1983)

A. Creation of Division. There shall be within the Association a Marine Division whose members are actively engaged in instruction, basic and applied research and public service focused on the ocean, the coasts, and the Great Lakes, and who are represented by their chief executive officers and their designees.

B. Organization of the Division. The Marine Division may be organized into units according to the desire of its Board of Directors in order to carry out its programmatic concerns. Official voting members of the Division, as determined by the Division, shall be from among the chief executive officers and their designees.

C. Representation in the Senate and on the Association's Executive Committee. The Division shall choose from among the Division's delegates four (4) representatives to the NASULGC Senate. A university chief executive officer, who is from a NASULGC member institution, shall be the representative to the Association's Executive Committee.

D. Division Board of Directors. The Division shall choose a Board of Directors which shall be responsible to the Association for the management of Division affairs. At least three members of the Board of Directors shall be chief executive officers of institutions.

E. Coordination. All business and programs of units of the Division shall be coordinated through the Board of Directors of the Division.

Article XVI -- Division of Urban Affairs

A. Creation of Division. There shall be within the Association a Division of Urban Affairs whose members are actively engaged in instruction, basic and

applied research and public service focused on urban issues and who are represented by their chief executive officers and other designees as determined by the Division.

B. Organization of the Division. The Division of Urban Affairs may be organized into committees according to the desire of its Executive Committee in order to carry out the programmatic concerns of the Division. Official voting members of the Division shall be the chief executive officers and their designees as determined by the Division.

C. Representation in the Senate and on the Association's Executive Committee. The Executive Committee of the Division shall choose from among the Division's members four (4) representatives to the Association Senate, at least two of whom shall be chief executive officers. The Executive Committee of the Division shall also select a representative to the Association's Executive Committee who shall be a chief executive officer representing the Division in the Senate.

D. Divisional Executive Committee. The Division shall elect an Executive Committee whose initial size and composition and specific terms of office shall be determined by an interim executive committee. The interim executive committee shall be the present Urban Affairs Committee of the Association.***

E. Coordination. All business and programs of units of the Division shall be coordinated through the Executive Committee of the Division.

Article XVII -- Divisions and Councils - General

A. Meetings. The Councils and Divisions of the Association shall hold at least one annual meeting, which shall normally be at the time and place of the annual meeting of the Association, but may be at another time and place prior to the annual meetings of the Association, on request of the Council or Division concerned, with the prior approval of the Executive Committee of the Association, provided (1) that the Council of Presidents and Spouses shall meet annually at the time of the Association meeting but may hold other meetings as determined by its Executive Committee and (2) that if any Council or Division meet at a time and place separate from that of the Association as a whole, its representatives in the Senate and on the Association's Executive Committee shall attend the annual meeting and transmit for appropriate action by the Senate the recommendations, reports, etc., of the Council or Division concerned.

B. Voting. In instances in which provision is made for more than one representative of a member institution to attend meetings of a Council or Division or sub-unit of a Council or Division, such representatives shall collectively be entitled to only one vote.

C. Records. It shall be the responsibility of the chairman and secretary of each Council and Division to furnish a record of its meetings to the National

Office of the Association for inclusion in the Proceedings and other records of the Association.

D. Applicability to Divisions. Unless otherwise specified in these Bylaws, general procedures, and provisions applicable to Councils of the Association shall apply to the Divisions.

Article XVIII -- Commissions

A. Commissions of the Association will have the responsibility of considering problems in a particular category of academic or professional education of major interest to the member institutions of the Association, of maintaining liaison with organizations in the subject-matter or professional area, with major developments in member institutions, and of making reports and recommendations to the Executive Committee and the Senate for consideration and action by the Association. Members of Commissions shall be named by the Chairman with the advice of the Executive Committee, and subject to approval by the Senate. Prior to this, the Chairman shall, either directly or through the staff of the Association, request nominations for Commission membership from organizations in the category of interest of the particular Commission, giving preference to organizations composed wholly or predominantly of delegates from member institutions of the Association. Due consideration shall be given by the Chairman to the nominations so received, and to the question of the interrelationship of Commission membership with that of organizations in the category of their interest. Chairmen of Commissions will initially be named by the Chairman of the Association, and will thereafter be elected by the membership of the Commission, on an annual basis, with eligibility for reelection, not to exceed three terms.

B. Establishment of commissions, membership, powers, financing. The number of members of each Commission shall not exceed fifteen (15), and they shall be composed of institutional heads and of staff members of institutions holding membership in the Association.

C. There shall be Commissions on Education for the Health Professions, the Business Professions, the Engineering Professions, Graduate Education, Arts and Sciences, the Teaching Profession, Home Economics, the Arts (formerly called Fine Arts), and Veterinary Medicine. Additional Commissions may be established and existing Commissions discontinued by a majority vote of quorum of the Senate at any annual meeting of the Association.+

D. Meetings of Commissions will be held annually or more frequently, in connection with the annual meeting of the Association or in connection with the meetings of appropriate organizations other than the Association, or otherwise. Expenditures of Commissions for attendance at meetings, carrying on of studies or projects, etc., or other purposes involving funds of the Association, shall be financed only to the extent provided in the budget of the Association for

the work of the particular Commission involved, or as specifically authorized in advance by the Executive Committee.

E. The Chairman of any Commission of the Association, if not otherwise a member of the Senate, shall during the period of his/her chairmanship become a member of the Senate, with all privileges. Other members of Commissions, if not members of the Senate may be invited by the Chairman to attend meetings of the Senate at which recommendations of the Commissions concerned are made and discussed.

Article XIX -- General Limitations

No unit of the Association other than the Senate, or, in the interim between annual meetings, the Executive Committee, is authorized to take action in the name of the Association on broad policy or legislative matters.

Article XX -- Finances

At every annual convention, the Association shall provide for obtaining the funds necessary for its legitimate expenses, and may, by appropriate action of the Senate call for contributions upon the several institutions eligible for membership; and no institution shall be entitled to representation or participation in the benefits of the Association unless such institution shall have made the designated contribution for the year previous to that in and for which such question of privilege shall arise, or shall have said payment remitted by vote of the Senate.

Article XXI -- Annual Reports

The Secretary of the Association shall cause to be prepared and timely filed such annual reports and returns as are required by law, including an annual report with the appropriate agency of the District of Columbia government, in the prescribed form. This annual report shall be executed on behalf of the Association by its President.

Article XXII -- Fiscal Year

The fiscal year of the Association shall commence on January 1 and conclude on December 31.

Article XXIII -- Shares of Stock, Dividends, and Certain Loans Prohibited

The Association shall not authorize or issue shares of stock, nor pay any dividends to its members, members of the Executive Committee or Senate, or its

officers, nor make any loans to the members of the Executive Committee or Senate or its officers.

Article XXIV -- Dissolution or Final Liquidation

Upon any dissolution or final liquidation, the Executive Committee of the Association shall, after paying or making provision for the payment of all the lawful debts and liabilities of the Association, distribute all of the assets of the Association to one or more of the following categories of receipts as the Executive Committee shall determine:

(a) A nonprofit organization or organizations which may have been created to succeed the Association, as long as such organization or each of such organizations qualify under Section 115(a) of the Internal Revenue Code of 1954 or as an organization exempt from federal income tax under Section 501(a) of such Code as an organization described in Section 501(c)(3) of such Code (or the corresponding provisions of any future United States internal revenue law); and/or

(b) A nonprofit organization or organizations having similar aims and objectives as the Association and which may be selected as an appropriate recipient of such assets, as long as such organization or each such organizations qualify under Section 115(a) of the Internal Revenue Code of 1954 or as an organization exempt from federal income tax under Section 501(a) of such Code as an organization described in Section 501(c)(3) of such Code (or the corresponding provisions of any future United States internal revenue law).

Article XXV -- Inspection of Books and Records

All books and records of the Association may be inspected by any member of the Association, through its duly authorized agent or attorney, for any proper purpose at any reasonable time.

Article XXVI -- Limitation on Activities

No part of the net earnings of the Association shall inure to the benefit of or be distributed to the members of its Executive Committee or Senate, officers, other private individuals, or organizations organized and operating for profit, except that the Association shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distribution in furtherance of its purposes as set forth in Article II, hereof.

No substantial part of the activities of the Association shall be the carrying on of propaganda or otherwise attempting to influence legislation. The Association shall not participate in, or intervene in (including the publishing or distributing of statements), any political campaign on behalf of or in opposition to any candidate for public office. Notwithstanding any provision in these

Bylaws or in the Association's Articles of Incorporation, the Association shall not carry on any activities not permitted to be carried on:

(a) By an organization exempt from federal income tax under Section 501(a) of the Internal Revenue Code as an organization described in Section 501(c)(3) of such Code (or the corresponding provisions of any future United States internal revenue law),

(b) By an organization described in Sections 509(a)(1), (2), or (3) or the Internal Revenue Code (or corresponding provisions of any future United States internal revenue law), and

(c) By an organization described in Sections 170(c)(2), 2055(a)(2), or 2522(a)(2) of the Internal Revenue Code (or the corresponding provisions of any future United States internal revenue law).

Article XXVII -- Parliamentary Authority

The rules contained in "Robert's Rules of Order, Revised" shall govern this Association in all cases to which they are applicable, and in which they are not inconsistent with the Articles of Incorporation and Bylaws of this Association, and any applicable statute.

Article XXVIII -- Amendments

These Bylaws may be amended by a two-thirds (2/3) vote of the Senate of the Association in assembly or by mail ballot if the number present in assembly or casting ballots by mail constitutes a quorum of the Senate.

*Approval for name change from Council of Presidents to Council of Presidents and Spouses made November 13, 1984.

**Upon establishment of the Division, the current International Affairs Committee will disband and form the interim Executive Committee of the Division. The interim Executive Committee shall proceed to establish a suitable organization, solicit institutional representation, arrange for the election of officers of the Division, determine the initial composition of a permanent Executive Committee, and shall perform such duties as specified in Item D, Article XII.

***As the Committee was constituted November, 1979.

+The following Commissions are inactive: Commission on Education for the Health Professions; Business Professions (11/83); Graduate Education and Teaching Professions.