
2001 INDUCTION CEREMONY



More than 400 members of the American Academy of Arts and Sciences, including nearly 65 percent of this year's class of 185 new Fellows and 26 new Foreign Honorary Members, gathered in Cambridge on October 13, 2001, for the National Induction Ceremony. An overview of the ceremony was published in the Fall 2001 edition of the Academy's *Newsletter*.

Orientation

At the afternoon orientation session preceding the ceremony, Fellows were greeted by President **Patricia Meyer Spacks** (University of Virginia), Vice President **Louis W. Cabot** (Cabot-Wellington, LLC), and Executive Officer **Leslie C. Berlowitz**.

Joel E. Cohen (Rockefeller University), **John Steinbruner** (University of Maryland), **Matthew Meselson** (Harvard University), **Robert C. Post** (Boalt Hall School of Law, UC Berkeley), and **Patricia Meyer Spacks** (University of Virginia) outlined some of the Academy's current project activities. Their remarks follow.

Joel E. Cohen: The *Wall Street Journal* of Tuesday, October 2, 2001, carried a front-page story by Peter Fritsch, entitled "Lesson Plan: Religious Schools in Pakistan Fill Void—and Spawn Warriors," with the subtitle "An American Effort to Boost Secular Studies Failed; Now, a Militant Syllabus." Fritsch noted that the United States's substantial financial support of Afghanistan in the 1980s, which had included funding for education, dwindled after the Soviet occupation ended. In the years that followed, Muslim extremists filled the educational void, and many of their young male students became part of the Taliban movement that fought its way to power in Afghanistan.

From 1986 to 1994, according to Fritsch, the US Agency for International Development paid the University of Nebraska \$50 million to produce texts for Afghan primary- and secondary-school students. These texts taught basic math skills by



Speakers at the Orientation Session: Robert C. Post (UC Berkeley), John Steinbruner (University of Maryland), President Patricia Meyer Spacks (University of Virginia), Matthew Meselson (Harvard University), and Joel E. Cohen (Rockefeller University).

prompting students to do arithmetic concerning dead Russians and Kalashnikov rifles.

In 1995 the United States branch of Save the Children replaced the Pakistani government as the source of primary education in Afghan refugee camps in Baluchistan. That program, with a million-dollar annual budget partly funded by the US Department of State, now educates 16,000 Afghan refugees with new texts from Germany. According to Fritsch, educators and aid workers maintain that such programs, if broadened, could be a powerful weapon against militant Muslims. The current million-dollar budget works out to only \$62.50 per child per year. For comparison, the cost of the first night of bombing Afghanistan has been estimated at upwards of \$2 million.

Andrew Wilder, director of Save the Children for Pakistan and Afghanistan, observed that relatively uneducated hard-line groups recognized the importance of education as a means of influencing the future much better than did the West. On CNN at the end of September, Fritsch reported, Pakistan's military dictator, General Pervez Musharraf, said that his country's 7,000 or 8,000 madrasahs comprise the biggest welfare organization anywhere in the world. They provide free education and living arrangements for up to 700,000 children, most of them poor.

What does all this have to do with the American Academy of Arts and Sciences? Since 1997 the

Academy has been quietly developing a task force to examine the rationale, means, and consequences of providing an education of high quality to all the world's children for 11 years, perhaps from the age of 6 to 16. For lack of a better title, we call this the UBASE project, using UBASE as an abbreviation for Universal Basic and Secondary Education.

With the encouragement, guidance, and support of the Academy's Executive Officer, Leslie Berlowitz, the project received start-up funding from the Academy, an anonymous donor, William T. Golden, John Reed, and Paul Zuckerman. In August 2001 the Hewlett Foundation in California awarded a grant sufficient to sustain the project for three years. The project is headed by David E. Bloom, professor of economics and demography at Harvard, and by me, with the support of Martin Malin and other colleagues on the Academy staff and the continuing help and guidance of Leslie Berlowitz. I'd like to summarize what we are doing and what we hope to do, and to invite your questions here and your help later.

We are looking forward a generation—perhaps 20 or 30 years from now—to a world in which all children receive 11 years of high-quality education. We are trying to figure out what that means precisely: what it would take to realize that world; what the tradeoffs and complementarities might be with other values; what the technological, financial, political, and cultural prerequisites might be; what the consequences might be; and how we would know if we had achieved our goal. We hope that an ambitious program of action-oriented research, pursued under the sponsorship of the Academy, will lead to the development of a global plan of action for UBASE and its subsequent implementation. The developers of a global plan will have to be scholars, program officers, educators, public servants, and business leaders from around the world.

The first phase of the Academy's initiative aims to generate the factual basis on which a realistic plan could rest. We aim to produce reports that could be widely published, followed by work directed

toward action, if these studies indicate that action is warranted. Our research plan concentrates on seven areas:

Basic facts and data. What is known about the state of education around the world? What new data and data systems are needed?

Intellectual and programmatic history. How did ideas of universal education originate? What lessons does the past offer us today?

Consequences of achieving UBASE. What would be the demographic, social, political, cultural, economic, and environmental effects of educating every child well?

Goals and assessment of UBASE. Where do we want to go, and how will we know if we are there?

Means. Delivery, implementation, and technology: how are we going to get there?

Politics of educational reform and obstacles to UBASE implementation. Why isn't high-quality universal basic and secondary education available now?

Cost and finance of UBASE. What will it cost, under various alternative models of education? Who will pay?

Study teams have been or will be formed to work in each area of focus. Workshops are being conducted to support the lead authors in each of the seven areas. In addition to our own planned efforts to publicize the results of our research, we hope and anticipate that others will use our results in their own efforts to advocate grass-roots support and high-level political will for universal basic and secondary education. We look forward to collaborating with others who can make a difference.

We face an enormous challenge. In 1999 the World Bank estimated that among people aged 15 to 24 years in the low-income countries, 23 percent of men and 41 percent of women were illiterate. If we are to do better in the next generation, we must reach today's children today. As of 1995 about 1.25 billion children in the world—more than one-fifth

of Earth's population—were 6 to 16 years old. Six in seven children of this “school-age population,” roughly a billion, lived in the less-developed regions, where the annual per capita income is about \$1,300 a year. The less-developed regions include all of Africa, Latin America, the Caribbean, Melanesia, Micronesia, Polynesia, and Asia, excluding Japan.

According to the 1998 medium projection of the United Nations Population Division, in the next 30 years the school-age population will drop by more than 20 percent in the more-developed countries but will increase by 71 percent in the 48 least-developed countries. The school-age population is a 10-year leading indicator of the population of military age.

The task facing the Academy's project is urgent. We welcome your thoughts on our efforts and your suggestions of how you might contribute.

John Steinbruner: In Washington and throughout much of the rest of the country, there is a sense that everything has changed since the events of September 11; but, of course, global circumstances have not been completely transformed by that experience. Very dramatic changes affecting all human societies have occurred over the past few decades, however. The challenge for the Academy's Committee on International Security Studies, and for the rest of the country as well, is to recognize the implications of these ongoing changes and to grasp their full significance. What is most important about September 11 is the global context in which it occurred.

The word *globalization* is now commonly used to refer to sweeping changes that encompass the entire world. Although that single word has no generally agreed meaning, it does encourage one to think about human activity as a whole. The process of globalization is driven by two major forces. The first is the remarkable progress in the development of information technology. From 1950 to 1995 the efficiency gains in handling information in many important applications increased on the order of

100 million times. In the same period we witnessed a dramatic surge in human population, as Joel Cohen just noted. Since 1950 we have added a billion people to the world population every 12 to 14 years, and that dynamic is expected to proceed until about 2025. Ninety-seven percent of that increase is occurring in the world's poorest communities.

Those simultaneously occurring processes present a whole series of unfolding problems. The pattern of economic growth associated with globalization is very uneven. Most of the income growth is occurring at the top of the spectrum, whereas the population increases are occurring at the bottom. Obviously, that presents inherent problems of social equity. And the recent terrorist events, unfortunately, remind us of the importance of those problems.

If we are to address these problems and keep our societies together, a basic requirement is that we ensure that human progress is broadly distributed to a sufficient degree. This simple requirement is very daunting. To accomplish it, we're looking at the need to increase economic growth worldwide by a factor of five in the course of 50 years to have any hope of providing improved standards of living for all segments of the increasing population. Energy production will have to triple, even if large efficiency improvements are achieved. Food production will have to double. And all of this must be done in an environmentally sustainable fashion—because we are being warned that the scale of human activity is reaching the point at which it is capable, in principle, of tipping global environmental balances.

As we work through this agenda, we should understand, I think, that we will have to go through a transformation in the pattern of international relationships—in their politics and organization—if we are to accomplish what we need to accomplish. If we don't do that, we will be in very great peril—not just from terrorist attacks but also from much larger-scale dangers.

If we are lucky and wise at the same time, the events of September 11 may remind us of this looming global agenda and galvanize new thinking about it. New thinking is certainly needed. Each of us would probably derive the implications of underlying changes in somewhat different ways. I'm going to give you my own view of some of the major security implications emerging from the terrorist attacks.

First, we must continue to recognize that the prevailing pattern of the deployment of nuclear weapons is inherently dangerous. Indeed, it is the gravest physical threat that this society or any other confronts. The damage that the organized nuclear weapons arsenals can do is of an entirely different magnitude than even the most destructive terrorist event imaginable. And this problem is not yet solved. The interaction is not the same as it was during the cold war, but the weapons are still there, and we do not yet have policies in place that will remove that danger. It is curious that there has been virtually no discussion of this issue in the broad public for nearly a decade. Everybody assumed that it went away because we declared the cold war over. There is a major agenda generated by this issue that has yet to be accomplished.

Second, a consequence of the globalization process is the dissemination of technologies that are capable of sustaining mass destruction. The managerial mechanisms that we are using to control these technologies are not sufficient to provide the standards of safety that we can achieve—and that we most definitely must aspire to achieve. Without going into great detail, I will simply state that the management of official materials that are able to sustain a nuclear explosion is scandalously loose. Managerial mechanisms need to be tightened globally. We do not have common accounting standards. At the moment, although national governments may know what their own holdings are collectively, the number of nuclear weapons out there is uncertain to within 5,000—a very large number. We also do not have common standards of physical security for this material.

Similarly, our methods of handling those pathogens capable of causing highly contagious disease are extremely inadequate at the moment. We are in the very early stages of learning how to exercise oversight of the basic research process that is generating the possibility of creating pathogens of this sort. It is a new situation. The power of modern biology to do good and evil is extraordinary. Technological advancements introduce the possibility of undertaking massive destruction with small-scale operations capable of evading detection, interdiction, or retribution. Since basic access to the technology in question is inexorably spreading and cannot realistically be prevented, it seems evident that sophisticated methods for regulating actual use will have to be developed. Technology for protective monitoring is available, but its effective application would require a substantial revision of existing attitudes and security relationships.

Third, it is prudent to recognize that the root causes of terrorism are probably connected to the problems of social equity that I referred to earlier—particularly to the endemic problems of civil conflict that exist in large parts of the world. The record of belated and not wholly effective international reactions to these episodes documents an obvious defect in prevailing policy. When we begin to put all these things together and identify underlying causes, I think we will come to understand that in this process of globalization, there is a severe threat to international legal order. What we mean by legal order must be articulated and defended on a global scale, and much more clearly than at present. The threat is one of legal degeneration and the physical consequences that follow. We haven't learned how to articulate this problem or how to organize ourselves to pursue it.

Finally, we are being warned by an international coalition of scientists that unless we hold human-induced carbon emissions to 500 parts per million annually by 2050, we are looking at the possibility of catastrophic global risks—risks of a magnitude that would threaten many human societies, perhaps the entire species. Even though the risks and conse-

quences cannot be specified with scientific precision at the moment, we know of their looming presence. And so we face the burden of taking prudential actions to prevent those risks before we can specify them exactly. At the moment, no institutional mechanism has recognized responsibility for that problem. There is no comprehensively organized effort to respond to it. Technologies exist that would be helpful, but they are not being developed at the pace that would be required to confront the problem in time.

Putting all these things together, one might say that we are in the midst of profoundly altered circumstances whose implications go far beyond the threat of terrorist destruction that we're now riveted on. What is required, almost certainly, is a new form of global organization—one that will have to be inclusive in character and collaborative in nature.

We will not successfully run this world through standard mechanisms of military confrontation. We will not be able to bomb it into submission. We will have to organize it prudentially and protectively. There is a very large agenda associated with those basic requirements, but the first step is to acknowledge them.

Matthew Meselson: Because people are thinking about bioterrorism now, it is appropriate to recognize that there are three different levels at which the problem should be addressed. The first is prevention—prevention of any hostile use of disease, whether bioterrorism or biological warfare. Should prevention fail, the next level is protection, shielding people from exposure. Failing prevention and protection, one should seek the capability to treat those who are exposed.

Treatment can be effective in some cases but by no means in all. We haven't eliminated the common cold, cancer, or AIDS, despite all the work that has been devoted to finding cures for those afflictions. And, depending on the situation, even knowing who to treat can become a serious problem.

Protection against airborne pathogens can be achieved by air filtration. Relatively simple modification of existing air circulation systems in many buildings, if done properly, is capable of filtering out not only pathogens but also other fine particles in the air we breathe that cause respiratory illness. But we can't filter the air everywhere. Air filtration can provide only partial protection.

Prevention, the most generic of the three categories of measures against deliberate attack with infectious agents, may be attempted by denying pathogens and certain dual-use equipment to those likely to use them for hostile purposes. Reducing the accessibility of particularly dangerous pathogenic microorganisms can be a useful measure, especially against their acquisition by individuals or unofficial groups. But clinical isolates from diseased humans or animals represent a source of dangerous pathogens that cannot be shut off. And any modern state can acquire the capability to produce biological weapons if it is determined to do so.

The most general level at which to attempt prevention is that of intent. For weapons that are relatively inexpensive to develop and produce, intent is a particularly important limiting factor. If nobody intended to use or even develop biological weapons, the problem would not exist. One of the factors influencing intent is the widespread norm against using disease and poison for hostile purposes. One can find it in the *Iliad*, in Islamic and Vedic law, and in modern law. There is a natural distinction between those weapons which resemble the human arm (whether a blow or a bomb, a hurled stone or a missile) and the ancient scourge of poison and disease. The only treaties in force that prohibit entire classes of weapons are those that prohibit hostile uses of poison and disease: the Geneva Protocol of 1925, the Biological Weapons Convention of 1972, and the Chemical Weapons Convention of 1993. The Biological Weapons Convention was made possible because of an immensely important thing done by President Richard Nixon in 1969—the categorical US renunciation of biological weapons. Without his initia-

tive, the United States might still have an offensive biological weapons program. That would have acted to legitimize such weapons and would have blocked US attempts to prevent their proliferation. In renouncing biological weapons, President Nixon used language that emphasized the threat of such weapons to human beings everywhere and to future generations, saying: “Mankind already holds in its hands too many of the seeds of its own destruction.”

Here at the American Academy and at Harvard and in the United Kingdom, at the University of Sussex and Cambridge University, a group of us have asked if we can find an additional tool to deal with the problem of averting the hostile use of disease and poison. There are, of course, many tools, and one shouldn't expect any one of them to do the entire job. But the tool that we have been wondering about is international criminal law—the kind of law that endows national courts with “universal jurisdiction”—jurisdiction over individuals present in their territory who have committed certain designated crimes, regardless of the nationality of the offender or the place where the crime was committed. For example, there is a treaty creating universal jurisdiction over individuals who commit the crime of airline hijacking. Regardless of where a plane is hijacked, or the nationality of the hijacker, that person can be tried if found in any country that is a party to the treaty. Similar treaties exist for several other crimes, including airline sabotage, crimes against internationally protected persons, hostage taking, theft of nuclear materials, and torture. You all know the case of the former president of Chile, Augusto Pinochet. He is not a subject of the United Kingdom. No one accused him of crimes committed anywhere under UK jurisdiction. Yet, under the 1984 Torture Convention, the highest court in the United Kingdom affirmed its jurisdiction to extradite Pinochet to Spain for trial there. It is not relevant that, for compassionate health reasons, he was released and allowed to return to Chile.

With the advice of an international group of legal authorities, we have drafted a treaty [copies of which were distributed to the audience] that would define as a criminal offender anyone who knowingly directs, or knowingly renders substantial aid to, the stockpiling, production, use, or threat of use of biological or chemical weapons. Of course, there could be individuals undeterred by such law; law does not eliminate crime. But it does mean that any individual contemplating the prohibited activity, whether a private person or a state official, would have to take account of the possibility of trial and possible imprisonment if found in any country that supports the envisaged treaty. Even if such an individual remains in a state that supports his illegal activity or is otherwise unlikely to take action, there is the possibility of indictment in absentia as an international criminal. People who violate international criminal laws are called *hostes humani generis*—enemies of all humankind.

At the most general level, the problem is to prevent hostile exploitation of biotechnology. The record of other technologies is troubling. Essentially every technology humans have developed—stonework, metallurgy, internal combustion, electronics, etc.—has been used not only for peaceful purposes but also, energetically, for hostile ones. We are now at the threshold of an immense new technology that will eventually show us how to manipulate all the life processes, including cognition, development, reproduction, and heredity. So it is important for us as a species—not just as any particular nation—to take measures to ensure that this history is not repeated with biotechnology.

Robert C. Post: The Academy is beginning to develop a project that will focus on the governance structure of the United States. Historical and legal background is necessary to understand the timing and justification for the project.

The federal government, as you know, was originally created to possess only limited power. In the eighteenth century the states ceded some of their authority to the new national government, but they retained plenary police power. The states

could continue to govern in those areas that were not transferred to the exclusive control of the federal government by the Constitution of the United States. The federal government, by contrast, was conceived as possessing only that power given to it by the Constitution.

During the first 150 years of our national existence, therefore, the United States Supreme Court would from time to time hold that a particular federal statute was unconstitutional because it was beyond the power given to the federal government. So, for example, in the early twentieth century the Court held that Congress could neither tax child labor nor forbid the circulation of goods produced by child labor in interstate commerce, because the federal government never received the power to regulate child labor. That power remained in the states.

The Supreme Court initially resisted the radical expansion of federal authority proposed by Franklin Roosevelt to combat the Great Depression. Roosevelt struck back by attempting to pack the Court with young and sympathetic justices. To speak roughly, the crisis was resolved when the Court concluded that the extent of congressional power would no longer be a question for constitutional adjudication. The limits of national authority would be set by political processes. Congress would no longer be denied the power to enact legislation believed necessary to address national exigencies. The Court would instead police the field of constitutional rights, which means it would review *how* the federal government chose to exercise its power. From the time of the New Deal to the 1990s, the Court would not question the *existence* of federal power.

Over the past decade, the Rehnquist Court has begun to unravel this settlement. Most of us in this room have grown up with the notion that Congress has essentially plenary police power, that Congress has the authority to do what is necessary to govern the nation. We believe that Congress can exercise its power in an unconstitutional way because it can violate rights, but we do not question that Congress

has power to enact legislation. But since the mid-1990s the Rehnquist Court has begun, for the first time since the New Deal era, to strike down congressional legislation on the grounds that Congress is without requisite power. The doctrinal questions are complicated and subtle, but in essence the Court has instructed Congress that it is without power to regulate what is “truly local,” such as violence against women or the possession of guns near schools, and that Congress is also without power to impose upon states laws that forbid discrimination based on age or disability. These are matters that states can regulate, because they have plenary police power, but not the federal government.

This has not been a matter of merely partisan politics; the resurgence of federalism and separation of powers has not neatly reflected divisions between conservatives and liberals. For example, Congress was virtually unanimous when it passed the Religious Freedom Restoration Act, which limited the ability of state and local governments to pass laws that adversely impacted religious practices. Senators Orrin Hatch and Ted Kennedy joined hands to sponsor the statute, which was supported by both the right and the left. When the Court struck down the law as beyond congressional power, therefore, it was not playing partisan politics. It was instead advancing a fundamental principle about the structure of our national government, about the separation of powers between its judicial and legislative branches. It was undoing the New Deal settlement.

This has been quite unnerving, to put it mildly, for those of us who deal in the world of constitutional law. It has posed a profound challenge to the Congress of the United States because the limits of congressional power are now uncertain. It is unclear how Congress must act in order to protect itself from judicial scrutiny. It is unclear what sorts of congressional findings will justify the exercise of congressional power. It is unclear what sorts of limits the Court will impose in the near future.

This uncertainty has ramifications for the confirmation process. The Court exercises control over

Congress by passing on the constitutionality of congressional legislation. But the Senate exercises control over the judiciary by deciding who shall be confirmed as federal judges. The Senate must approve the President's nominations to the national bench. The Court's new aggressive imposition of limitations on federal power challenges the Senate to decide whether it should defend its prerogatives by policing the confirmation process. Ought the Senate to take a presidential nominee's views of federalism into account before deciding whether to confirm? Senators are expressing a renewed and urgent uncertainty about how the nomination process should be run. And while some of this surely is imbued with partisan overtones, much is not. It is a question of how the relationship between federal courts and the federal legislature ought to be structured.

These new developments also have ramifications for the more everyday, ordinary dealings between the courts and Congress. This relationship is most typically evident in the realm of statutory interpretation. When Congress passes a law, it is up to courts to decide what the statute means. The question of how courts should determine legislative meaning is now hotly debated. It is in the interests of both courts and Congress that the signals of communication between the two branches be clear and unambiguous. Yet it is possible that the new tension between Congress and the courts may be affecting processes of statutory interpretation.

Several Fellows of the Academy—Jesse Choper, Linda Greenhouse, Abner Mikva, Nelson W. Polsby, and myself—have come to the conclusion that the time is now propitious to use the good offices of the Academy constructively to intervene in these issues. The Academy is able to serve as a neutral broker between Congress and the courts, and for this reason it might facilitate much-needed discussion. This March we are scheduling a Stated Meeting in Washington, DC, that will feature a dialogue between Judge Harvie Wilkinson III, who is the Chief Judge of the Fourth Circuit Court of Appeals, and Senator Charles Schumer of New

York, over the question of how courts and Congress should relate once the New Deal settlement has become unraveled. When the Court intervenes constitutionally to limit federal power, how should we understand the values of federalism and of separation of powers? How ought we to envision the relationship between Congress and the courts?

Our goal is, on the occasion of the Stated Meeting, to sponsor a very candid, very private, off-the-record dialogue between members of the judiciary and members of Congress. We shall create a setting where they can sit down and talk to each other in confidence about the parameters and implications of these constitutional developments. Our hope is that out of this private dialogue might come an agenda for scholarly research. If judges and members of Congress can identify issues of common concern that might be illuminated by serious and impartial scholarship, we could use the good offices of the Academy to intervene in these important controversies in a constructive way.

Patricia Meyer Spacks: The Academy's new humanities initiative is oriented particularly toward communicating more fully to the general public the meaning, value, and current situation of the humanities in the United States. I want to focus on one aspect of that initiative, the histories of the humanities, in order to talk about how the idea of such histories came into being, as well as why it's important to write them—and why it's so difficult.

Everybody knows that the incorporation of new knowledge continually alters the shape of the sciences. Even the social sciences, in the public mind, depend on information that changes. But subjects like history and literature and philosophy feel different. After all, history, by definition, is about the past, and the past doesn't change. The books that we read in literature courses in college are, in our experience, the great books; when our children and grandchildren read different ones, something must be wrong. We're all amateur philosophers, trying to puzzle out meanings in our existence; why should the philosophy now taught in universities be so changed from the philosophy studied fifty years

ago? In a sense, we all, professionals and nonprofessionals alike, consider the humanities our personal possessions. But in fact the humanities as studied now in institutions of higher education in many respects fail to resemble the humanities as learned by previous generations.

The humanities constitute our cultural memory. When that memory appears to be disrupted, it is natural to feel alarmed. In the realm of the humanities, as seen from outside the academy—indeed, perhaps even within the academy—the idea of the *new* has less value than it possesses for the sciences. The new, in fact, often feels dangerous.

The Academy, on several occasions over the past few years, has brought together groups of scholars to consider the current situation of the humanities and what aspects of that situation could profitably be addressed by intellectual investigation. The consensus that gradually emerged from these meetings resembled the view that I just sketched: a widespread perception holds that the humanities now, as professed in institutions of higher education, hardly resemble their counterparts of fifty years ago. To some extent, we agreed, this perception is false. Despite alarmist proclamations, Shakespeare is still taught everywhere, and students flock to study him. But the perception also contains significant truth: a great deal has changed. It would be worthwhile to study the processes of change, trying to understand how we have come to be where we are.

From the beginning, we understood that such study would not be a simple matter. We agreed that we should try to produce “histories” rather than “a history” of the humanities in the twentieth century, because we knew that every discipline in the humanities has its own story. Although we expected to find points of convergence, we assumed that conspicuous differences would also manifest themselves—that each story, each history, would be different from all the rest. We also agreed that the books containing our histories should be composed by diverse groups of scholars, not by single individuals, partly because no individual could grasp the multiplicity of narratives required by the variety of

disciplines, and partly because we considered it important to represent different points of view. We would try to avoid implying value judgments of the changes we recorded; the point would be to tell a series of stories, not to assess whether we reported progress or regress.

But the multiplicity of possible approaches proved more vexatious than we anticipated. Last winter the Academy hosted a gathering of people potentially interested in contributing to the first volume of histories. Before the end of that two-day meeting, it became clear that the multiplicity of narratives we faced—the reason we were dealing with histories rather than a history—involved not only differences among disciplines but differences in understandings of what constituted the history of any individual discipline. To mention just one area of disagreement: Was the story of change one of gradual evolution or of sharp divergence in response to specific stimuli?

As a result of that meeting, the plan for a single volume of histories changed to a proposal that we begin with *two* volumes of histories. One, which I am editing, will attempt to take a long view of twentieth-century developments in American history, American literature, philosophy, law (specified as one of the humanities in the founding document of the National Endowment for the Humanities), and composition, a field only recently acknowledged as a humanistic discipline. The other, edited by historian David Hollinger, will focus more sharply on twentieth-century changes brought about by the increasing diversity of population and of attitude in American colleges and universities.

Together, these two books should begin to convey both the complexity and the difficulty of explaining recent changes in the humanities. If they fulfill the aims of those who have collaborated in their conception, they will also enlighten their readers about how the humanistic disciplines, which sometimes seem remote from immediate social problems, themselves reflect and respond to cul-

tural change, preserving vitality, as the sciences do, by a constant process of rejuvenation.

Upon conclusion of her remarks, Ms. Spacks asked Mr. Post to comment on the database project of the humanities initiative.

Robert C. Post: Pat describes the humanities as the scene of division and disagreement. One consequence of this disagreement is that we do not now possess a useful database offering basic information about the state of the humanities in the United States. We don't know such basic data as how many people are receiving Ph.D.'s and other degrees in the humanities, in what fields, with what career paths, and with what compensation. The National Science Foundation's science and engineering indicators provide such information for the sciences. The indicators are the indispensable foundation for all public policy regarding science education. There is no analogous data set for the humanities, which means that we are flying blind when we attempt to construct public policy for the humanities in this country. We construct such policy in all kinds of settings, ranging from national initiatives to the specific decisions of particular universities about the allocation of resources in humanities education.

Data, of course, reflect cultural judgments and have political consequences. Past attempts to gather data about the humanities have accordingly been undermined by intramural divisions, as well as by the absence of a strong national center willing to offer a sustained commitment of time and resources to this function. The ecumenical character of the Academy, however, offers a great advantage in this regard. The Academy not only contains representatives of all humanities disciplines; it also contains representatives of the social sciences who are able to construct a useful database, as well as representatives of the sciences who can speak to the experience of developing, acquiring, and deploying data. The Academy, therefore, can serve as an honest broker whom all parties can trust. We can represent all humanities disciplines. We have the expertise to create a reliable and effective database

that can be used by those who want to make policy at the national and local levels. We have the opportunity to do something of tremendous importance.

I should stress, however, that this is a very difficult project. It is an expensive project that will require extensive funding. But if any organization can pull it off, the Academy can. An Academy working committee is now focused on developing a national humanities database. It is chaired by Francis Oakley and Jonathan Cole. We've recruited a new member of the Academy, Stephen Raudenbush of the University of Michigan, to help. Other active members of the committee include John D'Arms, Kenneth Prewitt, and Robert Solow. Cole and Solow were both key players in the development of the NSF indicators. We hope we have assembled the kind of expertise that can intervene to create an effective and useful database.

The singular and fractious politics of the humanities, however, remains a significant concern. The Academy is therefore striving to bring the relevant parties together, so as to broker an acceptable vision of the indicators. Data are not neutral; the questions you ask determine the data you receive. It is important that we ask the right questions. For that reason, we are developing informal partnerships with the American Council of Learned Societies, the National Humanities Alliance, the Consortium of Humanities Centers and Institutes, the NSF, and the National Endowment for the Humanities, as well as with other government agencies. We're also trying to meet with learned societies to discover what they would want to know about their particular disciplines.

We have tentatively scheduled for publication in February 2002 a report entitled *Making the Humanities Count: The Importance of Data*, which will present an analysis of the current state of data gathering in the humanities. At present there are several incomplete and partial data sets for the humanities. These data sets are incompatible with each other; they ask incommensurate questions and cover disparate areas. They define disciplines in dif-

ferent ways. But it is necessary to survey our present knowledge of these matters, and our first report will provide a useful map. We are also going to publish a bibliography of resources pertaining to the humanities in the United States that will help policymakers and scholars identify key existing humanities databases, major studies of the humanities, and major institutions interested in these issues. We shall put this information up on our website, and we shall make it widely available to researchers and to the general public. Our hope is that these publications will spur the creation of an ongoing data-collection process that will keep us informed about the development and health of the humanities in the United States.

Induction Ceremony

At the evening ceremony, each of the newly elected Fellows and Foreign Honorary Members in attendance was congratulated by the officers of the Academy and invited to sign the Members' Book. Academy Treasurer **Peter S. Lynch** (Fidelity Management and Research Corporation) then introduced six new Fellows who addressed the membership on the challenges facing the world and the Academy at the beginning of the twenty-first century: Former US Secretary of State **Madeleine Albright** of Washington, DC (Class V: Public Affairs, Business, and Administration), **Irwin Jacobs** of Qualcomm, Inc. (Class I: Mathematical and Physical Sciences), **Brigid L. M. Hogan** of Vanderbilt University (Class II: Biological Sciences), **Andrew Delbanco** of Columbia University (Class IV: Humanities and Arts), **Quincy Jones** of Quincy Jones Multimedia Group (Class IV: Humanities and Arts), and **Eli Broad** of SunAmerica, Inc. (Class V: Public Affairs, Business, and Administration). Their remarks follow.

Madeleine Albright: I used to say that I loved having Thomas Jefferson's job, but life for the United States today is quite different from what it was for Thomas Jefferson. As a result of the events of September 11, we know how life is now tragically different.

I listened actively to the presentations made here earlier today, and they reminded me of one of my favorite subjects: the very different roles and approaches taken by members of the government



Former Secretary of State Madeleine Albright (Washington, DC).

and by those who are in the general academy. When I was in the Carter White House, one specific event proved to me the disjointedness of these two communities. The Soviets had just invaded Afghanistan, and we in the government had brought together opinion makers from the academy, as well as from various organizations. There was a complete and total disconnect between the comments made by Secretary of State Cyrus Vance and National Security Advisor Zbigniew Brzezinski and the suggestions made by those who were in the audience.

I then moved to the academy myself, as a professor at Georgetown University. I read journals and I wrote for journals. And I despaired over the policies of the government and the mistakes that were being made, thinking that someone in academia could certainly have done a better job.

Then I became a member of the government, first as Ambassador to the United Nations and then as Secretary of State. I had the opportunity to make policy, and I tried to replicate the academy as best I could, with seminars and a variety of discussions—and remembered that as a professor, I had to have a conceptual framework for what I was thinking about.

When I was at the United Nations, there were 183 member countries, and I thought they could be classified into four groups. The largest group consisted of nations that believed in an international system of some kind, with treaties and diplomatic discourse. The second group comprised new countries that didn't yet have the institutions necessary to being part of that discourse. The third group included nations that were outside the system and tried to destroy it; we called them rogues (or states of concern, when we got more polite). The fourth group consisted basically of failed states that needed their heads held above water. We have now added another group, the nonstate actors, who are currently disrupting our lives.

Our hope had been to strengthen the nations in the first group by creating new treaties and new links among them; to provide institutional structures for the countries in the second group; to either isolate or reform the nations in the third group; and to do what we could to let the fourth group operate within the system. What happened, however, was that we didn't have enough money to do it. Whereas the defense budget was very large, the foreign affairs budget amounted to less than one penny out of every federal dollar. While we understood that foreign policy was more than security policy, it was very hard to bring that point forward. Today I'm outside of government again, and I'm watching what has happened since September 11. I hope very much that we will remember that US foreign policy has to be more than just plain defense and security policy, and that the security of this country depends on our understanding the nuances of the many aspects of foreign policy.

Although the membership of the Academy is divided into various sections, the truth is that all the issues the Academy deals with are now part of our foreign policy. Whether it's health issues or cultural diplomacy or scientific issues, it's all part of foreign policy. We need to remember that if this country is truly to be secure, we have to make sure that our foreign policy is about more than just fighting terrorism. I hope very much, now that I

am a part of this illustrious group, that it will be possible for us to work more closely together so that the people in this room can actually not be out of sync with the people in the government, and that the ideas that have been brought forward here can in fact become the ideas that inform what is going on. Perhaps, over the next years, we can find and continue that magical balance in our country between our unique birth and geographical isolation and our global responsibilities, between fear and hope, between an open society and security—never forgetting that democracy is our greatest security and that the most realistic foreign policy for the United States is one that recognizes that respect for the humanity of others is in our vital national interest.

Irwin Jacobs: I first came to Cambridge as a graduate student at MIT back in 1956. I wasn't really sure which career path I wanted to follow, but Claude Shannon, the father of information theory, was then teaching at MIT, and I was fortunate to take one of his classes.

Shannon was a master of elegant ideas. He began his pioneering work by studying the amount of information that can be transmitted through a noisy communication channel. On the basis of his



Irwin Jacobs (Qualcomm, Inc.).

investigation, he was able to set a theoretical upper limit to the number of bits of digital data that could be sent through a channel with high reliability in the presence of noise. In other words, he was able to show the remarkable fact that there is a lower bound to the amount of energy-to-noise required to communicate each bit of information reliably through a physical channel. He not only found that lower bound; he also provided a proof that signals or codes do exist with redundancy, similar to the redundancy we have in language, which allows one to communicate at any energy-to-noise ratio per bit above his lower bound while achieving an arbitrarily low probability of making an error.

Initially, Shannon's model was regarded as an interesting mathematical theory to teach at universities but lacking in practical value. Then people began to realize that indeed there was at least one practical application: reducing the amount of energy used in deep space communications. In space, energy is very expensive, so saving some energy while achieving reliable communications has a large payoff. People then kept working to develop more practical coding schemes and to implement them on both spacecraft and satellites, as well as on the ground.

At the same time, the wireless and cellular industries began to grow. Cell phones became quite popular, and ways to make use of Shannon's theory in the wireless industry were explored. A technology called code division multiple access (CDMA) was developed. CDMA allows many people to occupy the same radio spectrum by adding code redundancy to their signals; that is, even if you can't quite hear all the details because of noise and interference, you can still put signals back together and retrieve the original information. In the case of a wireless channel, with everyone sharing the same frequency at the same time, the interference is largely generated by the other users. With Shannon's method of reducing the amount of energy that each user requires to reliably transmit information, many more users can employ a given

amount of spectrum. Shannon's idea now has great economic importance. For example, in Europe recently, rights to use limited blocks of cellular radio spectrum for periods of 10 or 15 years have been auctioned for over 100 billion US dollars.

So a technology that once seemed purely academic has turned out to be quite practical; clearly, being able to provide voice communications is important to many people. And it turns out that this technology may have even greater applications in overcoming what is referred to as the "digital divide"—that is, making access to the Internet available efficiently and at low cost to many people in many countries and regions. Wireless voice telephony continues to spread rapidly; next will come wireless high data rate Internet access covering most populations.

Education is another key area in which wireless access will help. Now, for example, once a school has wireless capability, there is the additional ongoing expense of providing and maintaining computers, software, and the local network within the school. That expense, even in the United States, has limited availability for many students. Clearly, as we begin to try to provide a more universal education, this problem becomes an even greater issue.

The cellular telephone is actually a very powerful computer—probably as powerful as your desktop was just a few years ago. Furthermore, the telephone is rapidly obtaining high data rate, always-on wireless access to the Internet and could, with proper software also downloadable from the Internet as available, be used as a computer by many students. Wireless telephones are reliable and relatively inexpensive, and are gaining sufficient coverage to be used both in the classroom and at home. Issues of inconvenient data input and output due to physical size are being overcome by virtual keyboards, limited voice recognition, and various types of displays. It appears possible that the technical means to outfit all students at reasonable cost are rapidly becoming available, and we are left with the ongoing and difficult challenges of developing the software and finding ways to use this

technology to supplement and individualize teaching, at times in virtual classrooms.

Finally, I would like to address one other area, which is now on all of our minds: that of safety. One of the well-used capabilities of the wireless telephone has been to report emergencies by dialing 9-1-1. Typically, when you call from a wireless phone, the person receiving that call doesn't know automatically where you are and therefore can't determine the proper agency and dispatch the right person to help you. A global positioning system (GPS) satellite receiver is now being incorporated into the latest mobile phones to achieve precise position location automatically. Indeed, the wireless telephone can receive GPS more accurately in more locations than possible with a stand-alone GPS receiver, since the phone also obtains time, frequency, and rough location information from the cellular network. And the telephone does this at very little additional cost, because the necessary electronics all fits on the same chip of silicon used for other telephone and computing functions. In light of the terrorist attacks of September 11, I think this type of capability will become increasingly important for all of us.

The other side of this coin is the issue of privacy. Sometimes you want your position or other information to be known, but at other times you do not. There are great challenges in protecting our privacy, and this brings us to one more aspect of Shannon's early work: he was originally studying cryptography and how to keep communications secret when he came up with information theory.

I hope that some of these wireless techniques, as they evolve, will directly impact certain of the Academy's activities. In particular, wireless and digital technology could assist with the UBASE program to provide universal basic and secondary education. The challenge to all of us is to develop the right curriculum and software to maximize the potential of this increasingly powerful and broadly available technology.



Brigid L. M. Hogan (Vanderbilt University).

Brigid L. M. Hogan: Not far from here, in the Museum of Fine Arts in Boston, there is a beautiful painting by Paul Gauguin. It was created toward the end of his life, in Tahiti, and is entitled *Where Do We Come From? What Are We? Where Are We Going?* In the 100 years since the painting was made, advances in the biological sciences have revolutionized our ideas about the three questions that Gauguin posed. One challenge for the biologists here is to explain these remarkable discoveries to the general public in a way that is nonthreatening, nonjudgmental, and uplifting to the spirit. Moreover, we have to be prepared to deal with the complex ethical, social, and political issues raised by some of these discoveries so that their benefits can be made available to a wide sector of society.

So, what about the questions “Where do we come from?” and “What are we?” Each of us developed from a fertilized egg that gave rise to more than 250 different cell types, organized into beautifully proportioned structures such as the eyes, hands, heart, and brain. The British biologist Lewis Wolpert calls this achievement “The Triumph of the Embryo.” Within a few years we will be able to describe precisely, in terms of genes and molecules, how embryonic cells gradually become specialized for different functions, and how they know where

they are and how they should behave in relation to the embryo as a whole. We will have this information not only for mice, fish, worms, and flies but also for a whole host of other organisms, from hydra to bats. Already, we know that many of the genes controlling embryo development in humans and mice are virtually identical, or closely related, to those used by worms and flies.

Biologists relish these discoveries. They also have no difficulty in understanding why one would want to make mutant flies with legs in place of antennae, or tadpoles without heads. Discoveries made with these kinds of experiments have led to the identification of human genes responsible for serious birth defects and cancer. The challenge is to explain to taxpayers, and to animal rights advocates who threaten to disrupt our work, that money spent on these seemingly perverse experiments will not only reveal the underlying unity of nature—a joy and beauty in itself, increasing our respect for all forms of life—but may also lead to new therapies for serious diseases.

A different sort of challenge has come with experiments related to embryonic stem cells, or ES cells. These cells were first discovered about 20 years ago in mice, when scientists found they could isolate from the early embryo—before it has implanted into the uterus and when it is barely visible to the naked eye—small clusters of cells that are not yet committed to a particular course of specialization.

These unspecialized cells multiply indefinitely in the laboratory. They can also be persuaded to differentiate into mature cell types—for example, into nerves, bone, blood, and muscle. Moreover, if these cells are injected into the corresponding tissue in an adult mouse, they behave quite normally. Initially, there was little impetus to exploit this remarkable finding because mouse cells could not be used to regenerate human tissues. This situation changed dramatically in 1998, when human ES cells were derived from spare embryos from in-vitro fertilization clinics. The therapeutic potential of these human cells is obvious, but major practi-

cal and ethical problems need to be overcome before it can be achieved.

The initial isolation of human ES cells was funded by the commercial sector, which meant that they were not freely available to all researchers. Scientists funded by the National Institutes of Health (NIH) could not make their own ES cells because a law forbids federal funding for research in which a human embryo is harmed or destroyed, even if it is donated by a couple and would otherwise remain in a freezer or be discarded. In fact, this law was in place several years before human ES cells were isolated and was introduced to block a move by the NIH to fund research related to infertility and failed pregnancies. It means that there has been a sustained and deliberate withholding of tax dollars for research that could relieve the suffering of infertile couples—a ban driven by the religious views of those who believe that human life begins at fertilization and that small clusters of embryonic cells should be afforded the same ethical and legal rights as a newborn baby.

At first only a small, but not insignificant, number of people were affected by this ban. However, the therapeutic potential of human ES cells for people with diabetes and degenerative disorders has greatly enlarged the population that could benefit from the fruits of federally funded research in this area. President Bush's decision that there can be funding for studies using a limited number of already derived cell lines is a compromise that will allow some work to go ahead.

Meanwhile, it is very likely that new advances will make the scientific arguments in favor of federal support grow stronger. One of the challenges facing scientists, ethicists, lawyers, and policy makers—including distinguished members of this Academy—is to ensure that the general public understands the science of embryonic stem cell research, how it differs from reproductive cloning, and the arguments for and against the therapeutic uses of ES cells relative to alternative strategies. It is my belief that only with education can complex issues be debated in a rational way, balancing

potential health benefits with respect for different moral views in a diverse society.

What is true today for ES cells will undoubtedly apply to other biomedical and reproductive issues tomorrow. As a group, we must not shy away from the need to explain to the public what we are doing and why. Only then, in response to the question “Where are we going?” can we truly say, “Toward an educated, tolerant, and just society, in which the fruits of scientific research are available to the greatest number of people.”

Andrew Delbanco: Since September 11, I find myself returning to the opening passage of one of Melville’s stories, in which a ship captain is awakened with the news that an unidentified vessel is approaching; whether with friendly or hostile intent is unknown. In the predawn darkness, he tries to make out its outline, but he is unable to distinguish the wings of gulls from the enveloping gray of sea, cloud, and sky. He sees nothing but “shadows present, foreshadowing deeper shadows to come.”

As humanists, we are supposed to do better than that. We are supposed to carry in our heads exemplary precedents that help in times of crisis. But in my city, and certainly in my mind, this process of



Andrew Delbanco (Columbia University).

reflection is only just beginning. Whenever one feels a resurgence of the old New York jauntiness, the wind seems to shift, and we catch a hint—even far uptown, where I live—of that acrid smell in which one element is burning human flesh.

We are assimilating new images. There is the image, for instance, of a New York City cop lying half-naked on a table in a funky Greenwich Village tattoo parlor, having his skin imprinted with a memorial to his fallen comrades—the service provided free by a young woman with a lip ring and a nose stud, a belated reconciliation, perhaps, between the police and what's left of the counterculture that once would have called this man a pig. Some say we are witnessing the return of the working-class hero. Others say that postmodern irony has been discredited. Who knows? Who can say which will be the enduring consequences of these terrible events and which will turn out to be mere spasms of piety or propriety? The only thing of which I am convinced is that all our convictions are premature.

So I ask myself what I can reasonably say about my own work as a practitioner of the humanities since the world changed on September 11. One thing I know is that the events have given me a teaching opportunity—or, I should say, a responsibility as a teacher of American literature. I have found it a renewed challenge to present to my students the texts of early America—a culture that had its own elements of messianic religious fervor, even fanaticism. Yet I find my students strikingly receptive to certain texts that they may have found puzzling in the past. The Calvinist theologian Jonathan Edwards, for instance, seems less strange to them this year when he describes human beings, like so many bugs, each suspended by a slender filament over the fires of hell—dangling at the mercy of an inscrutable God who, with a flick of His finger, may toss them into the pit. And I have had no trouble convincing them to read *Moby-Dick*—a book about a suicidal charismatic whose religion is all about hate and who regards anyone who tries to deflect him as a blasphemer.

I am less certain how the larger intellectual context in which we teach and write has changed. I wonder, for instance, if the quotation marks may be falling away from the word *civilization*. It has been a main work of the academic humanities in the last quarter-century to insert implicit quotation marks around that word in order to signify that we no longer regard our civilization as perched atop a pyramid of lesser predecessors or rivals. Humanistic scholarship has been driven by the laudable motive of recognizing multiplicity and relativity in human experience—of looking at the world, one might say, horizontally rather than vertically.

It was striking to me, therefore, that the first response from our political leaders about the meaning of the September 11 attack was to call it an attack on civilization—a word used in the singular, yet with the intent of comprehending a great many cultures and societies, including some we deem hostile to our own. Maybe—just maybe—the word *civilization* will emerge from this crisis restored to dignity as a term sufficiently flexible to comprehend human difference, yet sufficiently delimited to mark the boundary between tolerable distinctions and what we can call, without apology, intolerable barbarism.

I wonder, too, what effect these events will have on our relation to the idea of progress. Among academic humanists, this idea has become suspect. We are uneasy with the eschatological religious traditions from which our own disciplines ultimately derive, but we also feel apart from the methods of modern science, by which truth builds incrementally toward more truth. We would do well to ask ourselves what it might mean to believe in progress in our changed world. Is liberalism, in the broad sense of the word, exportable? Is globalism an inevitability or an illusion? If humankind is moving forward, toward what is it moving?

Perhaps most important, the events of September 11 surely demand that we defend anew the foundational value that the humanities and science ultimately share: the value of thinking. Thinking can be distinguished from dogma by the fact that

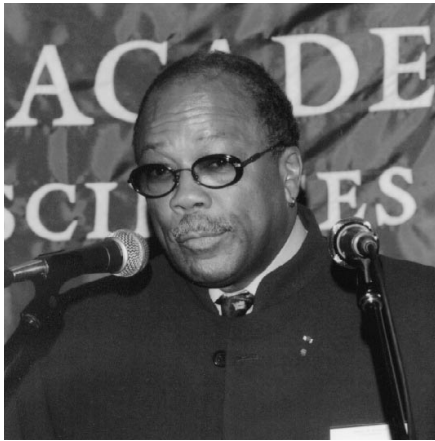
thinking entails self-doubt. It implies the continuous recognition that whatever thought we articulated a moment ago has become instantly inadequate and stands in need of extension and revision. As a general proposition, I suspect this is something about which we can all cordially agree.

The difficulty comes when we turn to the moral dimension of thinking and say that thinking is fundamentally inconsistent with brutality, because brutality requires the reduction of other human beings to the condition of dispensable objects or instruments—something that cannot be achieved by a person with even a minimal sense of his own fallibility. The theological word for this achievement is *evil*.

Here, I suspect, our cordiality of agreement begins to break down. There are good reasons why it should—reasons to be even more wary of the word *evil*, with its metaphysical and absolutist force, than of the words *civilization* and *progress*. But serious writers on the problem of evil have always insisted that the obligation to resist it entails a responsibility to acknowledge the capacity for it within ourselves. The critical moments in the history of a civilization are those that require us to resist evil without emulating it. I think many of us believe that such a moment is now at hand. If this is so, then the challenge for the humanities in the contemporary world will be to illuminate the difference between doubting ourselves when we should and trusting ourselves when we must.

Quincy Jones: In my more than 50 years in the music business, I have been fortunate enough to witness firsthand the power of the arts to tear down cultural boundaries and bring the people of the world together.

Martin Luther King, Jr., once said that “the ultimate measure of a man is not where he stands in times of comfort and convenience, but where he stands at times of challenge and controversy.” Today our nation and the world have come together in mind and spirit in a way that has never been seen before. And although the circumstances that



Quincy Jones (Quincy Jones Multimedia Group).

brought forth this spirit of togetherness were tragic, they offered us the opportunity to truly display our ability to overcome adversity—and to show by example that we can put aside our differences and come together for the betterment of humankind.

This new spirit of unity throughout the world is a state of mind that is very comforting and encouraging to me. It is an ideology that I have always been a proponent of, and what I believe is the most valuable reward that the arts have to offer: the ability to bring people together. I look forward to working with my fellow inductees to assist the Academy in the furthering of this new and long-overdue idea of global unity.

The artists, the scholars, the scientists, and the leaders from the realms of public affairs, educational and cultural administration, and business and civic life who are members of this Academy embody the best American and international ideals. As members of this Academy, we have an opportunity to speak to a wide public, here and abroad, about the value of employing our creative faculties—our intellects, our expressiveness—to overcome the hatred and suspicions that have proved to be so dangerous and deadly. We have an opportunity to build bridges of understanding to other nations and other peoples.

Eli Broad: I was asked to speak this afternoon about how corporate leaders can improve American life through their involvement in the civic, educational, and cultural affairs of our nation.

As a business leader, I recognize the deeply rooted obligation that I and other business leaders owe to our country. I was born in New York City, the son of Lithuanian immigrants who came to America with a strong desire to make a good life for themselves and their family. To achieve their goals, they relied on perseverance and seized the opportunity that our nation's free enterprise system offers. They instilled in me the value of hard work and gave me the gift of education.

When I moved to Los Angeles in 1963, I didn't have the right family, social, political, or religious background. Like Madeleine Albright, Quincy Jones, and the others you heard from tonight, what I did possess were ideas and a willingness to work hard and take risks.

As a business leader, I believe there is a unique role I and other corporate leaders can play. Although we may not be skilled statespersons or diplomats like Madeleine Albright or possess the musical virtuosity of Quincy Jones, I believe business leaders can make a significant difference by using their skills in civic and cultural activities and in philanthropy.

Involvement, I believe, should be more than simply writing a check or donating a large sum of money to an institution. It should be much more than simply handing over financial resources to a well-meaning organization in the hope that someone else will use the money to solve our society's most pressing problems. Involvement should be about investing one's self—along with one's resources. It is about committing our time, skills, and energy—and our money—to a cause we believe in and in areas where we passionately want to make a difference.

Business leaders in America have spent considerable time and talent building our great nation. Through ingenuity and perseverance, our country's



Eli Broad (SunAmerica, Inc.).

business leaders have taken bold action and brought their ideas to life in the business world. When success in business life takes hold, business leaders have seen the rewards from it. Their hopes, dreams, sweat, ambition—their early-morning strategy sessions and late-night negotiations—all have been targeted to the goal of succeeding. This is the free enterprise system at work.

I have participated in that system—and I am pleased to say that my ideas were accepted, my proposals were funded, and I was able to create two large and successful businesses. Now I believe it is my turn to commit the energy to solving our nation's challenges through involvement in civic and cultural affairs and philanthropy. I choose to focus my time and energy on improving our nation's K–12 urban public schools, cultural institutions, and revitalizing downtown Los Angeles.

Conventional thinking did not create the great industries that flourish today. They were inspired dreams that came to life through devotion, hard work, ingenuity, and entrepreneurship. We will not solve the systemic and entrenched challenges that society faces through conventional thinking.

A unique opportunity exists for corporate leaders to speak with a voice that promotes untried and unconventional ideas when confronting our

nation's toughest challenges. Business leaders are often free from the vested interests that inhibit government and established institutions. Many business leaders already follow the courage of their convictions and find ways to give back to a society that has given so much to them.

Last Tuesday and Wednesday I attended an education summit hosted by Lou Gerstner of IBM. In attendance were 35 of our nation's governors and 50 of our nation's business leaders. Lou Gerstner and other business leaders are committed to the vital task of reforming urban K–12 education.

We must challenge the status quo, take bold action, and offer new solutions and untried methods so that we can solve our nation's most entrenched problems. Solutions are not always quick to emerge—but with the skills and talents honed in the business world, corporate leaders can help solve some of the most pressing and intractable problems in our society that government and other institutions will not or cannot tackle.

There are no people better prepared to take risks in order to eventually succeed than the business leaders of America. Our free enterprise system rewards new ideas that begin as risky ventures with monetary gain. Our philanthropic system rewards risky ideas that succeed with a stronger and better society, which is the greatest wealth that one can bestow.

Today we are celebrating what is possible in America. Many of us have backgrounds that in other countries would prevent us from being involved in certain business, civic, educational, or cultural activities. But not in America. Because America is a meritocracy, there is great opportunity for cultural, educational, government, and corporate leaders—regardless of where they come from—to contribute to a better society.

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