

*The*  
PHILOSOPHICAL  
SOCIETY *of* TEXAS



P R O C E E D I N G S

*1998*

*The*  
PHILOSOPHICAL  
SOCIETY *of* TEXAS

P R O C E E D I N G S

*of the Annual Meeting*

*at Abilene*

*December 4-6, 1998*

*LXIII*

AUSTIN

THE PHILOSOPHICAL SOCIETY OF TEXAS

2000

THE PHILOSOPHICAL SOCIETY OF TEXAS FOR THE COLLECTION AND DIFFUSION OF KNOWLEDGE *was founded December 5, 1837, in the Capitol of the Republic of Texas at Houston by MIRABEAU B. LAMAR, ASHBEL SMITH, THOMAS J. RUSK, WILLIAM H. WHARTON, JOSEPH ROWE, ANGUS MCNEILL, AUGUSTUS C. ALLEN, GEORGE W. BONNELL, JOSEPH BAKER, PATRICK C. JACK, W. FAIRFAX GRAY, JOHN A. WHARTON, DAVID S. KAUFMAN, JAMES COLLINSWORTH, ANSON JONES, LITTLETON FOWLER, A. C. HORTON, I. W. BURTON, EDWARD T. BRANCH, HENRY SMITH, HUGH MCLEOD, THOMAS JEFFERSON CHAMBERS, SAM HOUSTON, R. A. IRION, DAVID G. BURNET, and JOHN BIRDSALL.*

*The Society was incorporated as a non-profit, educational institution on January 18, 1936, by George Waverly Briggs, James Quayle Dealey, Herbert Pickens Gambrell, Samuel Wood Geiser, Lucius Mirabeau Lamar III, Umphrey Lee, Charles Shirley Potts, William Alexander Rhea, Ira Kendrick Stephens, and William Embrey Wrather. On December 5, 1936, formal reorganization was completed.*

*The office of the Society is located at 2.306 Sid Richardson Hall, University of Texas, Austin, 78712.*

*Edited by Larry Sullivan, Ron Tyler, and Evelyn Stehling*

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# THE PHILOSOPHICAL SOCIETY OF TEXAS

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The Philosophical Society of Texas gathered at the Embassy Suites Hotel in Abilene, December 4-6, 1998, for the Society's 161st anniversary meeting. An early bird reception held on Thursday evening at the home of Bill and Alice Wright preceded a morning tour of the Old Jail Museum in Albany. President William P. Wright had organized a timely meeting on "Protecting America: The Changing Character of National Security." Members and guests enjoyed a Friday evening reception at the Grace Museum and dinner at the Abilene Civic Center. President Wright introduced the new members of the Society and presented them with their certificates of membership. The new members are: Lynn Barnett, John B. Boles, Bob Bullock, Laura Welch Bush, Chandler Davidson, Ted Flato, S. Roger Horchow, Luci Baines Johnson, Morris Overstreet, Thomas G. Palaima, Eduardo Roberto Rodriguez, Karl C. Rove, and John D. Stobo.

General Lee Butler served as moderator for the program on Saturday. We paused for lunch at the Embassy Suites and we enjoyed an evening reception, dinner, and dancing at the Abilene Country Club.

At the annual business meeting, Vice President Patricia Hayes read the names of the two members of the Society who had died during the previous year: Derek H. R. Barton and Kenneth S. Pitzer. Secretary Tyler announced that our membership stood 195 active members, 86 associate members, and 34 emeritus members.

The following officers were elected for the coming year: Patricia Hayes, president; A. Baker Duncan, first vice president; Ellen Temple, second vice president; J. Chrys Dougherty III, treasurer; and Ron Tyler, secretary.

Sunday's agenda included presentations by Edwin Dorn and Philip Bobbitt and a panel discussion featuring General Butler, Dr. Dorn, Professor Bobbitt, Dr. Mark, and Dr. Kozmetsky. President Wright declared the annual meeting adjourned, to be reconvened on December 3, 1999, in Austin.

# WELCOME AND INTRODUCTION

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WILLIAM P. WRIGHT

I want to welcome you to Abilene on behalf of all of the Abilene members of the Philosophical Society. I want to express our appreciation to the folks that really helped us make this meeting possible, my assistants Beverly Guthrie and Angie Cook, and, of course, Ron Tyler, as well as Evelyn Stehling and Melinda Wilson of the TSHA, and the staff of the Embassy Suites, who have done everything they could to make things work smoothly. Again, I want to thank all the volunteers from Abilene that drove folks back and forth to Albany and to the Civic Center last night. So all of you all were very important in making this thing work well.

I had no idea two years ago, when we selected the topic for this discussion, that the Koreans would have launched a three-stage missile, or that India and Pakistan would have detonated a nuclear device, or that—well, you probably would have figured that Iraq was causing another problem. But today's topic really is not only timely, I think it's crucially important, because if history teaches us anything, it is that those nations that are focused, and committed and militarily strong are the survivors. Those that are divided by ethnic and religious tensions, ravaged by economic mismanagement, indifferent to education and the aspirations of tyrants abroad, those are the ones that don't survive. So today and tomorrow morning we will discuss these issues as they relate to protecting the United States.

America is not and can never be again isolationist. And as we say in West Texas, whether we like it or not, we've got a dog in almost every fight. When the Asian market collapsed and we looked at our stock portfolios, this became very clear to us. When we've completed our discussions on Sunday, each one of us will consider what we've learned, and then use it as we have the opportunity to benefit this state and nation.

Now, I'd like to introduce our moderator for the rest of our session. Abilene likes to claim Lee Butler as one of our own. We look at him as an Abilenian in exile. Lee came here as a bird colonel, commanding B-52 wing at Dyess Air Force Base. We quickly recognized that he was destined for stardom, as it turned out, as Commander of the Strategic Air Command. From 1991 to 1995, he served as the Commander in Chief of the Strategic Nuclear Forces for the United States. In this position, he was

responsible for the deployment of the nation's nuclear bombers and ballistic missiles, both land and sea based, developing nuclear weapon target plans, and advising the President on response to nuclear attack on the United States. When he retired from active duty, he went into the business world, but he continues to serve in a number of defense-related activities, most recently as a member of the Blue Ribbon Commission reporting to Congress on ballistic missile threats to the United States. It's now my pleasure to present our moderator, General Lee Butler.

# EXTERNAL THREATS

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GENERAL LEE BUTLER, USAF (RET.)\*

GOOD MORNING. I have a little interstate business to clear up before we get into this morning's program. First of all, let me say that as a card carrying fan of Cornhusker football, it's a damn good thing you asked me to come down here before football season starts. The Big 12 idea is about the dumbest deal anybody ever got caught up in. Nobody told us we would have to play real football teams for a change. Second, I have an introduction to make. Now, I know the rules, I lived in Texas. I know that a Nebraskan cannot come here without a passport. So I brought my own. I brought a card carrying Texan. Her name is Dorene Sue Nunley Butler, from San Antonio, Texas.

I saved Dorene from a life of fame and fortune as a dancer thirty-six and a half years ago, and her reward for that was to hang curtains in twenty-eight different homes in our thirty-three years in the Air Force. What a guy! I suppose that you all understand by now that this is, in fact, a homecoming for Dorene and for me. Abilene is, in fact, our official second hometown, and we are proud to be back among friends and kin. Dorene is related to about half the population of West Texas. Her favorite uncle and aunt are coming down tomorrow from Lubbock to be with us, and we appreciate the fact that you all would welcome them here as well.

I must also say that I was very intrigued when Bill called with the invitation to moderate the annual meeting of Philosophical Society of Texas. I checked with a historian over in Lincoln to see if there was a Nebraska Philosophical Society. He said, "Well, not exactly. The closest thing we have is Tom Osborne's post-game call-in program." And, unfortunately, we don't do that anymore. With our record this year, we do need to be philosophical, but mostly we are hurt.

But I was equally intrigued by the subject that you all have chosen for this year's meeting. National security is a subject that has been near and dear to my heart for over forty years. As a life-long strategist, as a leader of combat forces, a pilot, and a student, national military strategy and planning and operations were my stock-in-trade for four decades. In fact,

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\* Lee Butler is president of Butler & Associates, LLC.



in the latter stages of my career, I was directly responsible for United States national military strategy, the organization of our Armed Forces around the world, our global alliance structure, and in one of the most fascinating responsibilities I've ever held, opening up military-to-military relations with the former Warsaw Pact countries and the Soviet Union. But more to the point of our meeting today, I held those particular responsibilities in the period from 1988 to 1991, just as the Cold War was ending and the strategic context of United States national security for the preceding forty years was turned upside down. So what I would like to do, to set the stage for our speakers this morning, is to spend the next few minutes talking about strategic context, the historical and contemporary forces that I see moving across the national security landscape, and their implications for the security of the United States as a nation and for our unique role in the international arena.

I'll begin with what I call one of life's defining moments, 1 October 1989. That's the day when Colin Powell became the Chairman of the Joint Chiefs of Staff. Among the many things he did that morning, he picked up the phone and called Lee Butler, his three-star Director of Strategic Plans and Policy. He said, "Lee, morning, this is Colin." Now, I'm quick. I knew right away that my answer was, "Yes, sir." He said, "You have a minute?" I just happened to have a minute. He said, "Why don't you come on down, let's chat for a few seconds?" I went down to his office, this vast expanse of mahogany, and all I could see was stars glittering in front of my eyes. "Lee," he said, "you and I are going to be doing a lot of work together over the next few years. I think we ought to get to some initial understandings up front." He said, "Uh, I've only got about five minutes, but why don't you give me your world view?" Well, fortunately, the University of Texas had been running a special on world views just that month, and I had picked one up. Well, as my career flashed in front of my eyes, one of the things I remembered someone had told me about Colin Powell is that he liked to talk in sound bites. So, here was my thirty-second reply to him. I said, "Well, Mr. Chairman, I see it this way. The Soviet Union is fibrillating, Eastern Europe is liberating, Western Europe is integrating, the Far East is oscillating, the Mid-East is disintegrating, and the rest of the world is percolating. The long and short of that is we're about to lose our best enemy, the defense budget is gonna fall off a cliff, and your life is gonna be a living hell." Then I prepared to meet my maker. Well, let me tell you something about Colin Powell. He never batted an eye. He said, "That's about right. That's the way I see it, also." Then he added, "But that'll happen a lot faster than either you or I suspect. So I want you to go back to your office, and I want you to take what you just said, and I want you to put it in a longer form. Because that'll become the basis for our new national military strategy. It'll take us about eight months to sell that and all the implications that go with it, reshaping the size, composition of our Armed Forces, rethinking our budget." He said, "But that job starts right now. It's in my in-box and now I'm putting

it in yours. So come back and see me in two weeks." Two weeks. And I did. I came back with the beginnings of a paper that I called Tides, Trends and Tasks, Security Challenges for the United States in the '90s and Beyond. So what I'd like to do, for just a few minutes this morning, is to sketch that out for you, because, in fact, that is still today the foundation of our national military strategy and the way that our Armed Forces and our security apparatus in general looks at America's role in the world.

I won't talk about tasks, because our speakers today have that job, and I'll be very interested to see how they understand what America's tasks are in the New World Order. But I call it Tides and Trends because, thinking back to my days in Al Hurley's classroom, he said, "Lee, whatever you do, when you're trying to imagine the future, always put it in the context of the past." And so, Al, I went back about 500 years, to the beginnings of the nation-state system. I tried to imagine the forces that were shaping our world over the course of five centuries. Someone once said, maybe it was Walt Rostow, that watershed eras are best seen in retrospect. You have to be cautious about imagining that your age is really so different or so unprecedented. But it struck me that ours was, but it was still being shaped by two tidal forces, an in-rushing, destructive tide that pounds against the seawalls of civilization and threatens, at every moment, to erode our sense of humanity; and an out-flowing tide, which is more calming, but which is still fraught with undercurrents and riptides that can cause us to lose control. I gave very explicit labels to these tides. The incoming tide, I describe thusly: the continuing fractionation of mankind into highly ethnocentric entities, seeking self-determination within self-defined borders. I suppose another way of saying that is the continuing struggle between the learned imperative to advance the norms of civilized behavior, and the instinctive savagery that is so deeply imprinted on our DNA code. The outgoing tide, the calming force, but still fraught with peril, I describe as the compelling quest for a higher order or economic well-being in a world whose physical and human resources were capriciously distributed by history, culture and geography. And another way of saying that is the test of whether technology and inventive genius can elevate every society to a decent station in life, or whether grasping, unbridled competition will simply relegate much of the world's population to unrelenting poverty.

That was my analysis. And now, eight years later, I have the sense that those are still the compelling forces acting in our world and in our lives, and shaping our national security. Within those tides, I could see crosscurrents, riptides that I call the contemporary trends, the immediate problems posed by the historical forces, their contemporary manifestation, if you will. And I imagine those to be the following six.

First and foremost, the astounding advent of a second Russian Revolution in this century. It is, to my way of thinking, the defining event of our age. It was wholly unanticipated. The spontaneous collapse of the Soviet Empire has left the United States without a defining sense of

national purpose. We, in fact, lost our best enemy. It leaves Europe with a daunting security dilemma and Russia on the verge of chaos.

The second eventuality was the astonishing achievement of German unification, which itself created extraordinary opportunities for European growth and cooperation, even as it rekindled long-held fears of a dominant political and economic power unable to contain its ambitions.

Third, the prospects for a Twenty-first Century Concert of Europe, but one that works this time, the creation of an economic superpower on a scale to rival the United States, and increasingly restive under the cloak of our political and military leadership.

Fourth, the intensification of intractable conflicts between mortal enemies, now fueled by the reality or the near-term prospect of resort to weapons of mass destruction.

Fifth, catastrophic failures in the human condition in the Third World, where hundreds of millions of people are living in misery to the end of short and brutish lives. Victims of starvation, drugs, debt, poverty and disease, and hostage to the modern Horsemen of the Apocalypse: religious fundamentalism, murderous tribalism, ethnocentrism, and xenophobic nationalism.

And finally, the looming rise of new hegemonic powers, the unholy marriage of regional ambitions, teeming populations, unscrupulous leaders and modern arsenals of high tech weapons.

These historic forces in their current manifestation impose an enormous burden on the United States not only in terms of our security, but also in its larger dimension of concern for the welfare of our fellow travelers on Spaceship Earth. Only we have, or are perceived to have, the political, economic and military strength, and the sense of moral obligation to manage the stunning array of tasks and challenges that emerge from this new global circumstance, which is motivated by the enduring tides of history.

Your speakers this morning have the challenge of addressing how these trends translate into contemporary threats to our vital national interests. But what I would leave you with is to simply remember that neither our survival nor our quality of life is solely a function of our narrow self-interest. Ultimately, they will be governed by our broader sense of humanity, our innate goodness as a people and, above all, our capacity to lead with vision and with courage. Thank you all for the honor of presiding over your session this morning. I look forward with great anticipation to the rest of the program.

# MILITARY ACTION

## *Criteria for U.S. Intervention in Tribal Conflicts*

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HANS MARK\*

### I. INTRODUCTION

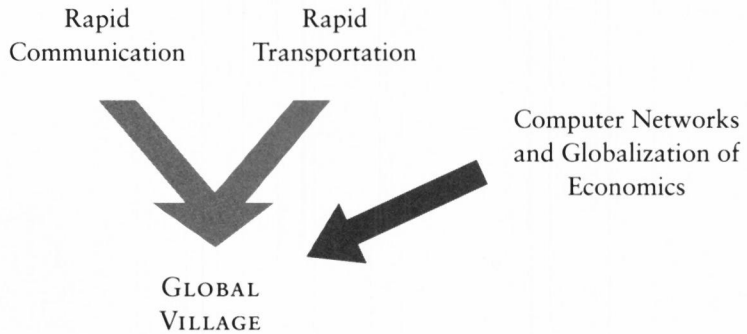
More than thirty years ago, the Canadian journalist, Marshall McLuhan predicted that the new means of rapid communications and rapid transportation would turn the world into what he called the "global village." From our viewpoint today, it is clear that his prophecy was accurate. What he foresaw has happened, and with the additional technology of computer networks, international business and other relations have become so tightly intertwined that there really exists today a "global village." While this is true, it is also true that only a fraction of the world's people benefit from the existence of the "global village." Only those who can afford the technology, the television sets, the personal computers, and the airline fares actually experience it. While these things are all relatively cheap, there are still a great many people in the world who do not have access to the technology. Therefore, they feel that they do not belong to the "global village." Those who exploit these feelings have used the same technologies that make the "global village" possible to sponsor terrorism and social conflict all over the world. In short, while McLuhan's prediction of the benign "global village" has come true, he did not foresee the darker consequences that have also accompanied the application of the technology that he was probably the first to truly understand.

The existence of the "global village" has, without doubt, had a unifying effect on the human race, or at least that part of it that populates this new entity in cyberspace. At the same time, however, another trend has developed which has resulted in much suffering and which seems to be caused by a reversion to what can only be called "tribal warfare" in many areas of the world. This trend is almost diametrically opposed to the development of the "global village" in that it tends to fragment the world rather than unify it. Paradoxically then, we have two movements that seem to be in opposition, occurring simultaneously around the world. If the human

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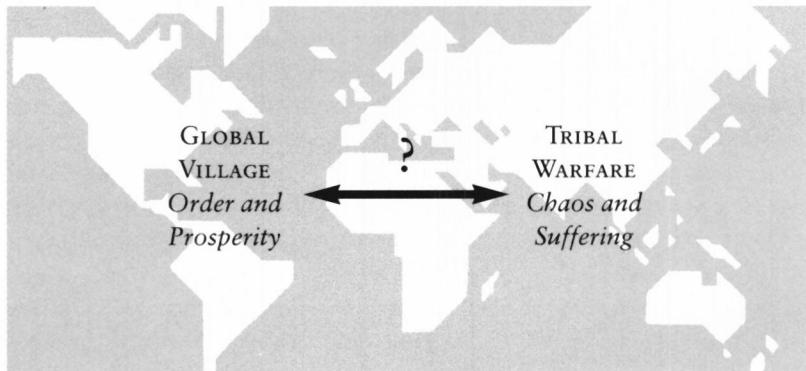
\* Hans Mark is director of Defense Research and Engineering. The views expressed in this article are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.

## MARSHALL MCLUHAN'S PREDICTION (ca. 1960)



rape is, indeed, to reap the benefits of the “global village”, then it must also learn how to control the “tribal warfare” which afflicts us.

The most serious decision that any president of the United States is called upon to make is to put U.S. military forces in “harm’s way.” This paper is an attempt to develop some guidelines that might be useful in reaching the conclusion that military intervention is the correct course of action in some of the many conflicts—I have called them “tribal wars” for reasons that I will explain shortly—that are now in progress around the world.



The most serious decision that any president of the United States is called upon to make is to put U.S. military forces in “harm’s way.”

## II. DIFFERENT KINDS OF WARFARE

What is meant by a “tribal war”? It is important to try and distinguish between four different types of wars: wars between nations, civil wars, guerrilla wars, and tribal wars. Such distinctions may not be very clear, and there will be considerable overlap in the definitions. Neverthe-

## DIFFERENT KINDS OF WARFARE

- War between nations
- Civil War
- Guerilla War
- Tribal War

---

less, the attempt to draw such distinctions is important because the responses—political, economic, and military that the United States and other nations may be called upon to make—depend upon the clarity of the objectives and the precision of our thinking. Here are some distinctions that might be useful:

### *1. Wars Between Nations*

These are defined as conventional conflicts between nation states with established governments that are fought using regular military forces. The governments can usually control the situation. They can make alliances with other nation states that may or may not share common ethnic or religious heritages. Usually, they can make armistices and also stop wars when that is deemed to be in their respective interests. An example of an incident between two nations was the border clash between Peru and Ecuador in 1995. The dispute over some territory near the headwaters of the Amazon did lead to a short conflict, which was then suspended when the two countries declared an armistice. In short, both governments were in control and could stop the conflict when policy dictated. A more recent (1998) example is the skirmish in Kashmir between India and Pakistan. Since the partition of British India in 1947, the province of Kashmir has been disputed territory. Periodically, there have been armed conflicts in Kashmir between the two successor nations, India and Pakistan. These conflicts have always been tightly controlled by the two governments and have been carried out by the regular military forces of each nation. Wars between nations can be large or small, and the great world wars of this century were, of course, the most destructive examples of this kind of conflict.

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## WAR BETWEEN NATIONS

- Conventional warfare between nation states with established governments
- Governments control the situation
- Make alliances with other nation states
- May or may not share common ethnic or racial heritages
- Can Make armistices to stop war when mutually beneficial
- Examples:
  - Border clash between Peru and Ecuador, 1995
  - Skirmish in Kashmir between India and Pakistan, 1998

## CIVIL WAR

- Armed struggle between people of same background for control of the government of a nation
  - Often rebellions or revolutions against existing regimes by regional or political group within the nation
  - Fought using regular military organization
  - Sides form alliances with sympathetic nations
  - Examples:
    - Spain, 1937–1939
    - Khmer Rouge and Cambodia, 1970s–1980s
- 

### 2. *Civil Wars*

These can be defined as armed struggles between people of the same background for control of the government of a nation. Civil wars are often rebellions or revolutions against existing regimes by a regional or a political group within the same nation, and they are fought using regular military organizations. An example of a straightforward civil war was the conflict in Spain from 1937 to 1939 in which regular armed forces were used on both sides. The brutal conflict between the Khmer Rouge and the constituted government in Cambodia during the 1970s and early 1980s is another more recent case in point. Very often in civil wars, each side makes alliances with other nations around the world that sympathize with their respective causes. This was, of course, the case in both Spain and Cambodia.

### 3. *Guerrilla Wars*

Guerrilla wars are closely related to civil wars, and the distinction made here is mostly one of means. In the case of a guerrilla war, the rebels are, again, usually of the same ethnic and religious background as the people in power, but they do not use regular military means to conduct

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## GUERRILLA WAR

- Rebels usually of same ethnic and religious background as people in power
- Rebels do not use regular military means to conduct the conflict
- Sides are not as territorial as in a Civil War
- Examples:
  - Sandinistas and government in Nicaragua
  - Russia and Mujahadeen of Afghanistan
  - Castro's conquest of Cuba, 1959
  - Dirty War in Argentina, 1970s

the conflict. In contrast to a civil war where the two sides may occupy well defined regions of the nation, in a guerrilla war, there is not the same tendency to be "territorial." Good examples of guerrilla wars were the conflict between the Sandinistas and the government in Nicaragua; Fidel Castro's conquest of Cuba in 1959; and the "dirty war" in Argentina during the decade of the 1970s. Guerrilla wars may have similar political objectives to the "civil wars" defined earlier, but they differ in the military tactics used.

#### 4. *Tribal Wars*

A "tribal war" is a war within a nation or a group of nations based on ethnic, cultural, religious, or racial differences. Recent examples of these are the conflicts in Northern Ireland, Rwanda, Kurdistan, the Caucasus region of the former Soviet Union, the former Yugoslavia, and possibly Mexico. The bloody war between Iraq and Iran fought during the 1980s, is an example of a "tribal war" that is also a "war between nations." In this case it was Arab and Sunni Moslem Iraq against non-Arab and Shiite Moslem Iran. Note that the term "tribe" has been applied broadly here to identify any group having clearly distinct religious, ethnic, racial, or cultural characteristics. A good case can be made that the situation that developed in Los Angeles some years ago, following the acquittal of the police officers responsible for the beating of Rodney King, was also really a "tribal war" between the different racial factions living in that city. "Tribal wars" may be conducted by "regular" military forces under the usual discipline; as is, for example, the case in the former Yugoslavia, or by guerrillas or street mobs that are not controlled by anyone. Many "tribal wars" are particularly bitter such as, the conflict in the Middle East between the Arabs and the Israelis, which could also be called a "war between nations", and the conflict between different religious groups among the Moslems and the ethnic Arabs. In these cases, the differences

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## TRIBAL WAR

- War within a nation or group of nations based on ethnic, cultural, religious, or racial background
- Conducted by regular military forces under usual discipline or by guerrillas and mobs
- Typically vicious because differences tend to be irreconcilable
- Examples:
  - Northern Ireland
  - Kurdistan
  - Caucasus region of former Soviet Union
  - Former Yugoslavia
  - Mexico (possibly)



that cause the conflict are, essentially, irreconcilable and that, in turn leads to the extremely vicious nature of these conflicts. It is, of course, this point that makes the understanding of "tribal" conflicts particularly important.

### III. TRIBAL WARFARE

It is true that the world has been afflicted with "tribal warfare" since the beginning of recorded history, and somehow, mankind has both survived and prospered. What is new and what makes tribal wars particularly dangerous, aside from their generally vicious and intransigent nature, is the spread of high technology weapons, including nuclear weapons, and other weapons of mass destruction around the world. A century ago, it was possible for the world at large to ignore most tribal conflicts. Many were localized in regions of the world that were, so to speak, off the beaten track as far as the "mainstream" of civilization was concerned. This is no longer true, and it is for this reason that means must be sought to deal with tribal wars wherever they occur. The very same technologies that made the "global village" possible also make tribal wars more dangerous. The perceived increase in the incidents of tribal warfare recently is certainly a consequence of better communications with organization such as CNN now distributing "instant news" on a worldwide scale. Although data are scanty, there may really be more tribal wars today than there have been in the past, and that this may actually be a consequence of the globalization of much of the world's culture and economy. People who feel excluded from this culture and the benefits of the global economy may look inward toward their "tribal" groups for identification and self-fulfillment. In an increasingly homogenous cultural and economic world, this may be the psychological response of many people who feel that they not part of this new world.

Tribal wars, also because of modern means of travel, may spread around the world, primarily through acts of terrorism. Such acts are extremely difficult to predict, and measures to deal with them, unfortunately, may often infringe upon the freedoms enjoyed by people not involved in the tribal conflict. The attack on the World Trade Center in New York in 1993 was a "spill over" of tribal wars being conducted in the Middle East in which the United States has occasionally intervened.

Another feature of tribal wars is that they may be very difficult to stop. Since the wars are based on religious, racial, ethnic, or cultural differences, these cannot be easily changed, and therefore, the conflicts cannot be easily ended. It is important here to distinguish between the various factors that might motivate "tribes" in such wars. If the purpose of the war is extermination of the other "tribe" (ethnic cleansing) in a certain region, then the war is probably impossible to stop. This is the case in Palestine and also probably the former Yugoslavia. On the other hand, if

## FEATURES OF TRIBAL WAR

- Becoming more vicious with proliferation of high technology weapons
  - No longer occurring "off the beaten track"
  - Increasing in number (?)
  - Will spread through acts of terrorism
  - Difficult to stop
- 

the objective of the "tribe" is to be included in the general society, then an accommodation may be possible. An argument can be made that this is the situation in the Mexican province of Chiapas. If one takes the Zapatistas at their word, then what they want is inclusion in the larger Mexican society. Thus reaching an accommodation in this case may be easier than in those tribal wars in which one side or the other wants to fight to the bitter end. In the latter instances, "containment" should be the objective. It is the containment of such "bitter end" tribal conflicts that becomes extremely important, especially in view of the availability of extremely destructive, high technology weapons.

The central thesis of this paper is that tribal wars of the kind described are the most important single threat to world peace. Therefore, developing the diplomatic and military means for dealing with such situations becomes critical if, indeed, we are to build the "global village" that Marshall McLuhan foresaw.

## IV. INTERVENTION IN TRIBAL WARS

There are, essentially, three reasons why the world community might wish to develop means for intervening in tribal wars. The first is the necessity for a stable environment to maintain the global village. Tribal wars can often spread and become a larger regional or worldwide conflict. The second is to control the spread of biological, nuclear, and chemical weapons. If one side or another acquired nuclear weapons, they could create destruction that would be unacceptable. The third reason is for humanitarian intervention to relieve the suffering in tribal wars. In 1992, the U.S. became involved in Somalia to mitigate the effects of famine. In 1995, the U.S. intervened in the former Yugoslavia to put a stop to ethnic cleansing and prevent this conflict from spreading to neighboring regions.

In the previous paragraph, I have listed reasons why the "world community" might want to intervene in a tribal war. There are also cases in which the President of the United States might want to make the decision to intervene unilaterally when vital national interests of the United States are threatened.

The most benign kind of intervention in a tribal conflict is nonmili-

tary, which typically involve political and economic sanctions. In the case of a political "intervention" this may mean voting with one side or the other in the United Nations or other international bodies. It may also include providing aid to refugees from one side preferentially to the other. Finally, it may simply mean making political speeches that support one side or the other.

Economic "intervention" generally means imposing various sanctions on one side or the other. In a relatively closed society, such as Cuba and Iraq, the effectiveness of economic "intervention" is not clear. However, this action is sometimes effective before taking other steps are taken.

In the case of military action, the lowest level of intervention is indirectly by providing weapons and other kinds of military assistance to one side or the other. Conversely, an arms embargo can be imposed on one side or the other. Stationing military advisors in the conflict zone is another choice. Another kind of military intervention is the establishment of a "peace keeping" mission in the territories where the conflict is occurring. This means sending troops to the area. In that connection, it is extremely important to make a distinction between "peace keeping" and "peace making." A "peace keeping" operation is one where both sides have decided to have an armistice, and where keeping the peace is, in fact, a real possibility. In this case, the intervening troops may not have to fight, but must just keep the parties in the conflict apart. The problem of "peace making" is, of course, much more difficult because that involves engaging in direct combat with one or both sides in a tribal war and separating them so that peace is made by force. This normally would require the insertion of a much larger military force.

It is most important, when discussing intervention, to develop and use alliances or cooperative efforts. The United Nations has been most effective in humanitarian efforts such as reducing the famine in Somalia. In a peace keeping role the United Nations is only somewhat effective. Their peace keeping role in Cyprus and in the Middle East was effective; conversely, the United Nations was ineffective in Somalia. In a peace making role the U.N. has not been effective.

NATO and regional alliances can be effective in peace making. Recent demonstrations include the international coalition force's ability to minimize the bloodshed in the former Yugoslavia and the Organization of African Unity's ability to stabilize the turmoil in Liberia. It is critical that the United States develop and participate in cooperative efforts such as these.

Any intervention is likely to be much more effective if it is imposed by a large fraction of the community of nations or by the community of nations at large rather than by the United States alone. This may be difficult to do, but it is most important to develop the appropriate diplomatic means for peaceful intervention that may prevent or stop a conflict before military measures are applied.

Regional alliances and the United Nations also can be used to some effect to prevent the spread of nuclear weapons and other weapons of mass destruction. This is important, and even though the results are not perfect, treaties such as the Nuclear Non Proliferation Treaty (NPT) should be maintained. There are some changes warranted in that particular agreement. It is possible that making a distinction between "rogue" nations and those that have legitimate reasons for creating nuclear weapons could and should be made. For example, it is generally conceded that India has good reasons for maintaining nuclear weapons. India has implacable enemies with a long history of conflict that is based on ethnic, religious, and cultural differences. Furthermore, India is a democracy, and it can be argued that the threshold that India would apply to the use of nuclear weapons would be much higher than in the case of "rogue" nations such as North Korea, Libya, Syria, and Iraq. There is a good argument to be made that putting the cards faceup on the table in the nuclear weapons proliferation business would have beneficial effects for the entire world. An approach might be for the five major "admitted" nuclear powers (the United States, Russia, England, France, and China) to invite specific nations, such as India, Pakistan, and others to join the nuclear club. The five major nuclear powers might provide incentives by sharing certain elements of nuclear weapons technology that the other powers are already know to have but that would still be useful. By taking such a step, it might become easier to diplomatically isolate the "rogue" nations with sanctions that do not have substantial "leaks." Also, it might become easier to control the flow of weapons grade nuclear materials around the world.

It is not clear whether this suggestion can be implemented given the current situation that we face. On the other hand, it is extremely important to propose creative ideas at this point to prevent catastrophes that are waiting to happen in future tribal wars.

## V. THE ROLE OF THE UNITED STATES

For better or for worse, the United States is now the world's only military superpower. It is, therefore, impossible or very difficult for the United States to opt out and to say nothing in the tribal conflicts that are going on around the world. A decision not to intervene in such a conflict is as positive a decision for the world's only superpower as a decision to intervene. The political factors that would lead to nonintervention must, therefore, be as carefully thought out as those that would lead to a decision to intervene. All of this was recently captured by Secretary of State, Madeline Albright, when she said that the United States has become the "indispensable nation" in the post Cold War world.

In addition, there may very well be triggering events that cause intervention by the United States based on domestic policies and other considerations—possibly beyond the control of the political authorities. The

## INTERVENTION IN TRIBAL WARFARE: RATIONALE

- Maintenance of stability necessary for Global Village
  - Control the spread of biological, nuclear, and chemical weapons
  - Humanitarian actions to relieve suffering in tribal wars
    - Somalia, 1992 (famine)
    - Former Yugoslavia, 1995 (ethnic cleansing)
- 

## INTERVENTION IN TRIBAL WARFARE: POSSIBLE ACTIONS

- Non-military actions
    - Political sanctions
      - Voting with a side in the United Nations
      - Aid to refugees
  - Military actions
    - Supplying weapons, materials, or assistance
    - Arms embargo
    - Peace keeping mission requires an armistice
    - Peace keeping mission requires combat
- 

## INTERVENTION IN TRIBAL WARFARE: ALLIANCES OR COOPERATIVE EFFORTS

- United Nations
  - Most effective in humanitarian interventions
    - Somalia (this worked)
  - Sometimes effective in peace keeping
    - Cyprus
    - Somalia (this did not work)
- NATO and Regional Alliances
  - Can be effective in “peace” making
    - Former Yugoslavia
    - Liberia (African Military Alliance)
- U.S. must develop and participate in Cooperative Efforts

ethnic lobbies in United States are very strong, and therefore, they are able to influence foreign policy and the decision to take military action. There is, for example, the “CNN Factor” which, perhaps, caused the intervention in Somalia. There is also the “Randall Robinson Factor”—the fast by Mr. Randall Robinson who is a lobbyist for African Affairs in Washington—that led to American intervention in Haiti. The abuse of U.S. citizens around the world was a factor in the intervention in Panama. Treaties and other commitments would also be a cause for intervention. In all cases, as a general principle, it is better to intervene as a member of a coalition or as part of a United Nations force than to do so unilaterally. However, it should be recognized that the United States cannot, also as a matter of principle, give up the idea that unilateral military intervention in a tribal war might be justified.

Direct military intervention by the United States in a tribal war means the insertion of American combat aircraft, ships, and ultimately, ground forces in the region of the conflict. Direct military intervention may be executed, either unilaterally, as a member of an alliance such as NATO, or as part of a United Nations peacekeeping force. Because of the status of the United States as the only superpower, the responsibility to build these coalitions has devolved on the United States. It is not clear how well prepared the American people are to accept this role at the present time. There has been much rhetoric about not becoming the “world’s policeman.” This is an open issue that will eventually be settled by the outcome of the debate now going on in this country on this matter.

## VI. THE CRITERIA FOR MILITARY INTERVENTION

Given the kinds of military intervention that might be contemplated in a tribal conflict, it is important to develop a calibrated set of criteria that can be used to help in reaching a decision as to whether intervention is desirable in a particular instance.

While the United States is very likely to find itself in a leadership posi-

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## FACTORS AFFECTING INTERVENTION

- Results of non-intervention may be worse than intervention
- Domestic U.S. policy concerns because of ethnic lobbies
- “CNN Factor” (as occurred in Somalia)
- “Randall Robinson Factor” (as occurred in Haiti)
- Abuse of U.S. citizens (as occurred in Panama)
- Treaties or other commitments

*“The U.S. is the ‘indispensable nation’ in global affairs”*

—Madeline Albright

tion during any discussion of international intervention, the criteria outlined here apply primarily to political decisions that need to be made within the United States when military intervention is contemplated. The following three statements might serve as criteria for military intervention by the United States in a tribal war:

1. When the War Directly Threatens the Vital Interests of the United States

This was the case in the Persian Gulf War of 1991 because of the oil resources controlled by Kuwait, Iraq, Iran, and Saudi Arabia. Not only were the vital interests of the United States affected, but also the vital interests of our major allies around the world since they all depend on Middle Eastern oil. In the case of the intervention in Panama, the vital interests of the United States were connected to the existence of the Panama Canal. In a number of cases, there are treaty commitments, for instance, that could be regarded as vital national interests where the United States might intervene. Our commitment to the State of Israel might be an example. Any threat to a member of the NATO alliance could also lead to direct intervention in a tribal war by the United States. The direct invasion of one nation by another (the Iraqi invasion of Kuwait, for example) could also lead to intervention. Actually, the invasion of Kuwait by Saddam Hussein had strong "tribal" elements between Iraq and the family that rules Kuwait. The Iraqis do consider Kuwait to be their "19th Province."

2. When There is a Real Threat That the Tribal War Could Expand

Military intervention may be necessary, even if the vital interests of the United States are not directly threatened. If a tribal war threatens to expand to become a world war, then it is in the vital interest, not only of the United States but also of other nations in the world, to take the necessary steps—including military ones—to stop that from occurring. If for example, collective action fails to prevent the spread of a tribal war of this kind, then the United States may have to intervene unilaterally. It is conceivable that the conflict in the former Yugoslavia may fall in this category. The United States has already made a unilateral deployment of a small unit in Macedonia, for example, to help prevent the spread of the conflict to Greece or Turkey. The participants have thus been put on notice that they will have to kill Americans if they expand the conflict into Macedonia. Hopefully, this will raise the threshold of risk for them to the point where they will not expand the conflict.

3. When a "Rogue" Nation Acquires Nuclear or Biological Weapons

This is the real problem in places such as North Korea, Iran, or Libya. North Korea is capable of plutonium production. Iran has

## CRITERIA FOR MILITARY INTERVENTION

- Tribal War directly threatens vital interests of the U.S.
  - Persian Gulf War—oil
  - Panama—existence of the Panama Canal
  - Treaty commitments (e.g., to Israel or NATO allies)
- Real threat of expansion of tribal conflict
  - Former Yugoslavia—positioned troops in Macedonia to prevent spread of conflict to Greece and Turkey
- Rogue nation acquiring nuclear and biological weapons
  - North Korea—plutonium production capability
  - Iraq—attempted nuclear weapons production; probable biological weapons
  - Libya—probable biological weapons

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attempted production of nuclear weapons, and, like Libya, they probably have produced biological weapons too. If such nations develop or acquire nuclear or biological weapons capabilities, then they could interfere decisively in tribal wars around the world. Such threats could clearly become very serious and justify military intervention. Once again, unilateral intervention by the United States may be necessary if collective action fails.

The importance of “triggering events” that might precipitate military intervention, even if the military intervention criteria that are established are not met has already been mentioned. Such triggering events are inherently unexpected and unpredictable and this must be clearly understood. That being the case, they must still be anticipated. Intervention with military force is ultimately a political decision. However, in making such a decision a critical factor is to evaluate the military capabilities of the intervening coalition or nation and the capability of the United States to support the coalition or nation and, if necessary, to intervene unilaterally. The military capability of potential opponents must also be carefully evaluated. All of this is necessary to judge whether military intervention can lead to something useful and decisive.

## VII. PREPARATIONS FOR MILITARY INTERVENTION

If military action is to be a credible option in either deterring or actually participating in tribal wars, then some preparations must be made. If careful preparations are not part of the agenda, then military intervention is likely to fall. Furthermore, many preparations can and should be made publicly so that the threat of military intervention, either by a coalition of nations, the United Nations, or unilaterally by the United States, is actu-



ally credible. In preparing for military actions of this kind, here are some important considerations:

1. Politics

Interventions cannot be undertaken without some political support. Public opinion polls will always be against intervention, at least in the United States. Thus, there is always public opposition, and therefore, an effort must be made to persuade the public that it is wise to intervene. Essentially, a persuasive argument must be made that, in the long term, the cost of not intervening is higher than that incurred by intervention. The most important political consideration that affects military action is to minimize casualties. There are promising technical means that permit us to do that, and this will be considered shortly. Latent opposition to intervention could lead to riots in the streets if casualties are large. Remember that President Clinton decided to withdraw U.S. troops from Somalia after eighteen U.S. soldiers were killed in a fire fight with Somalis. This is a very critical point in developing the political support necessary for intervention in tribal wars.

2. Weapons

What kind of weapons are especially suited for intervention in tribal wars? Non-lethal weapons may be very important in this instance. Many people who have participated in such actions say that it is often hard to identify who is the opposition. There is often no visible difference that permits distinguishing a "good guy" from a "bad guy." Non-lethal weapons have the peculiar advantage of not requiring bloodletting. Hopefully, this will help to keep casualty rates down and make the intervention more politically acceptable. There are a number of effective nonlethal weapons in the inventory today, including things such as rubber bullets and nonlethal chemical weapons that have been successfully employed. Weapons delivery systems are also important, and this means advanced missiles of all kinds. If one side in a tribal war can threaten another or even third parties with missiles, then this is an important factor in deciding on intervention. Nuclear weapons are even more important. It is critically important to determine whether one side or another in a tribal war may have access to nuclear weapons. Conventional high-tech weapons can be decisive, as well, which was the case with the "Stinger" missiles that the Mujahadeen in Afghanistan deployed against the Soviet forces.

3. Personnel

It is critically important to make certain that a cadre of trained people is available for military actions of this kind. Military attaches around the world are most important in evaluating an early situation.

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## PREPARING FOR MILITARY INTERVENTION

- Politics
    - Persuading U.S. public support of action
    - Long-term cost is greater than short term
  - Weapons
    - Non-lethal weapons
    - Weapons delivery systems
    - Conventional high technology weapons decisive
  - Personnel
    - Cadre of well-trained personnel
    - Military attachés for early evaluation of the situation
    - Specialized forces
    - Training for international situations—languages, cultural, and political understanding
  - Rapid identification of opposition
    - Who are the bad guys?
    - Where are the bad guys?
    - Are there any good guys?
    - Is it possible to tell the difference between the good and bad guys?
  - Military Action
    - Well-defined military objectives
    - Established criteria for success
    - Estimate of capability of opposing forces
    - Defined exit strategy
- 

Much more attention needs to be paid to training military attaches who will be assigned to nations likely to be involved in interventions in tribal wars. Specialized forces are also important. Specially trained units may very well have decisive effects in tribal wars, much beyond the actual numerical strength of such units. Specialized forces equipped with special weapons should be part of the military inventory available. The motivation of the troops used in military interventions is particularly critical. How do soldiers react to taking risks in a cause that may not be related directly to the interests of the nations which provides the troops? Motivations that will cause soldiers to take high risks need to be carefully considered. Interventions in tribal wars, therefore, should be treated more like police rather than military actions. How can this be handled in an effective manner? These are some unanswered questions that need to be dealt with in training military personnel for peace making and peace keeping missions. International training is particularly important; soldiers must receive training in languages, culture, and political understanding. The pro-

ple participating in collective military interventions in tribal wars must properly take international relationships into account.

4. Rapid Identification of the Opposition

Before intervening, the United States must be able to rapidly determine who are the "bad guys" and where they are located. In addition, the United States also has to identify the "good guys," if there are any. It is sometimes difficult to tell the difference between the warring tribes.

### VIII. MILITARY ACTION

In making the decision to intervene with military force in a tribal war, the political and military judgments that have been outlined must be combined. The most valuable commodity in these circumstances is hard knowledge. The president of the United States or the leadership of a coalition of nations must have the very best possible military intelligence to judge how best to use the military if a decision to intervene in a tribal war is made. The following considerations are important if a decision is reached to execute a military intervention:

1. The Military Objectives Need to Be Clearly Defined

This is necessary to judge the size and composition of the force that would be deployed in order to achieve the military objectives. Obviously, hard knowledge of military opposition in such a case is critically important.

2. Criteria for a Success Must Be Established

What would be considered as a successful outcome of a military intervention? What is the definition of victory? In doing this, a clear distinction must be made between peace making and peace keeping, which has already been mentioned. Without clear criteria for success, military interventions are likely to bog down in endless attrition, which is politically unacceptable.

3. An Accurate Estimate of the Capability of Opposing Forces Must Be Made

This is probably the single most important function that must be carried out by intelligence agencies of various nations involved in an intervention or by the intelligence agencies of the United States. What kind of weapons does the opposition have? Are there allies for the opposition that might lead to an expansion of the conflict? What are the logistics considerations? Can a potential opponent sustain a long conflict? These are all questions that need to be posed and answered in developing the strategy for peace making or peace keeping in a tribal war by military means.

#### 4. An Exit Strategy Must Be Developed

Having intervened, how does a coalition or how does the United States get out of the situation? The example of Somalia is perhaps a good one here when contrasted with what happened in the Persian Gulf. In this case, the defeat of the Iraqi military and its destruction was the first objective. Once that was achieved, Kuwait could be liberated. Both of these objectives were achieved. In the case of Somalia, the initial objective was clear—to get food to people who were starving. Once this was achieved, the objective then escalated into taking sides in the tribal war going on between the various factions in Somalia. It was at this point that things became complicated. The United States finally had to withdraw its forces unilaterally because it was felt that the position had become politically untenable. The withdrawal of troops was probably not a good thing to do in the longer run. There will be more trouble in Somalia, and other interventions may be necessary.

There are a number of other important considerations that might be added to this list. Many of them hinge on logistics and the ability to sustain an intervening force. Once military action is initiated, then the most important thing is to make sure that the military commanders have good relationships and information channels to the political leadership. This is a particularly vital point if intervention is made by a multi-national force under the United Nations or NATO sponsorship. The sharing of intelligence is, probably in that case, the most sensitive matter since nations have a tendency to closely hold and protect their intelligence operations. Obviously, there must be sharing of intelligence in combat situations, and this is a new area for many military people. On the other hand, it may be necessary to develop intelligence products in such a way that unique sources, such as American satellite assets, are protected. There are complex questions here for which some operational doctrine needs to be developed, probably on an international basis.

Careful preparation for military intervention is probably the single most important item that needs to be understood, not only by people in the United States, but elsewhere in the world. Executing these preparations will require political understanding in such a way that popular support for intervention in tribal wars can be sustained. Without such an understanding and without public support, military interventions in tribal wars are likely to fail.

### IX. MILITARY PRIORITIES FOR THE FUTURE

Given the leadership role that is likely to be played by the United States, it is important to list those things that the United States needs to do in order to be the effective leader in keeping the peace after the end of the Cold War. Therefore, it might be useful to conclude this paper by list-

ing unilateral steps that the United States needs to take in the coming years.

1. The Enhancement of American Intelligence Services

This is very definitely the single most important factor in developing the means to successfully intervene in tribal wars around the world. The military must make the intelligence field a more attractive career in order to attract and keep the quality personnel. It is most important that the military personnel have an accurate and deep knowledge of the history and culture of various regions around the world. A thorough understanding of this factor may be the difference between failure and success. Knowing local languages is also critically important if the United States is to intervene successfully in tribal wars in the future or act as a coalition leader. We must multiply by a large factor the number of people in this country who understand and who are comfortable with foreign languages. The United States has a very diverse population. However, this advantage, used by General Powell in Haiti and General Shalikhshvili in Kurdistan, is rarely used to its full advantage.

Knowledge about both sides in a tribal war is also important. In that sense, the intelligence operations in Somalia were a failure. Such wars, from the viewpoint of the United States, may not have any logical "good guys" or "bad guys." The fact is that most tribal wars are those in which both sides have a case that can be reasonable to an outside person who has not been involved directly in the conflict. Thus, human intelligence, including a sophisticated analysis of open source information, is the first priority. Unfortunately, for various reasons the United States intelligence agencies have deteriorated in quality during the past decade. This trend must be reversed.

Technological intelligence retains its importance. This means that earth orbiting satellites and air based and ground based surveillance systems must continue to be developed using the most advanced technical means. Finally, the problem of sharing intelligence with allies and coalition partners has already been mentioned. It is important to develop means of doing this if interventions in tribal wars by coalitions are to succeed.

2. The Enhancement of Military Transportation

In order to be first at a trouble spot, military transport must be greatly expanded. This means building, perhaps, 100 or more of the new McDonnell-Douglas C-17 aircraft. This is very definitely the most capable military air transportation vehicle ever created. (The team that developed the C-17 won the Collier Trophy a few years ago for its technical excellence.) The C-17 aircraft is intended to be both a strategic and tactical airlifter which makes it particularly important.

More McDonnell-Douglas KC-10 tanker aircraft would also be useful. Special purpose aircraft such as the Bell-Boeing V-22 "Osprey" tiltrotor aircraft could easily become the sole means for dealing with situations in which no airfields are available. In addition to the development of military transports, making it easier to convert large Boeing 747-type civil transport aircraft for military missions is also extremely important. Air transport is only part of the problem. Bulk cargo and the people necessary to sustain a military force must ultimately be carried in ships and then deployed in trucks. In the case of sealift, a promising idea might be to convert some of the large American and Russian ballistic missile-carrying submarines (twenty "U.S. Ohio" class vessels and about thirty Russian "Typhoon" class ships) to troop and military cargo carriers. These submarines are large ships in excess of 20,000 tons when fully loaded, and they are very fast. One of them can probably carry up to 2,000 fully armed troops if suitably modified. Thus, these ships could carry large numbers of troops in a few days from their bases to any place else in the world, and because of their ability to do this submerged, they can achieve military surprise due to their stealthy nature. Their capacity and flexibility may, therefore, be particularly useful. Sealift also may require the conversion of civilian ships to military purposes. The British did that very successfully in the Falkland Islands War in 1982.

### 3. The Defense of United States Territory

For the first time since the incursion made by Pancho Villa in 1916 across the border to raid Columbus, New Mexico, the United States will have to pay serious attention to the defense of United States territory. A great many people around the world today hate the United States. This is a consequence of the fact that we are the remaining super power. We have intervened politically, culturally, economically, and of course, materially in various conflicts around the world and very often this inspires hatred. There is also a generalized hatred of "western" culture among a number of groups around the world. All of this means that direct attacks against United States territory are now more likely than they were in the past. This situation is made worse by the fact that high technology weapons including nuclear, chemical, and biological weapons have spread around the world. Finally, the ease of transportation and communications makes it possible for people to get into the United States who do not wish us well and to do things that in terms of doing harm would not have been possible two decades ago.

The first priority is to develop defenses against attacks inside the United States by terrorist groups originating elsewhere. First, we must enhance the capabilities of local authorities to deal with such events.

These authorities then will be supported by federal agencies including the Federal Emergency Management Agency, the Federal Bureau of Investigation, and the National Guard. Technical support will be provided by a new agency in the Department of Defense, the Defense Threat Reduction Agency. It is quite likely that by concentrating on this problem many effective defenses against terrorist attacks can be developed. In addition to defensive measures, other things must be accomplished. There is the ability to retaliate against the sources of terrorist activities. This was demonstrated in 1986 by mounting an air attack on Libya in retaliation for a terrorist bombing of U.S. soldiers stationed in Berlin. In the same way, facilities operated by the terrorist group headed by Osama bin Laden were destroyed in 1998 in response to the attack by bin Laden's group on U.S. Embassies in Kenya and in Tanzania. In addition to retaliatory actions, there is also the possibility now of taking effective international legal actions against terrorists. It is too early to tell whether an international legal system to deal with terrorists can actually be developed, but some recent efforts in that direction look promising.

The United States must also do more to develop defenses against attacks mounted from outside our borders. The enhancement of our air defense system should have first priority. Sometimes our air defense has been penetrated. Some years ago, a Cuban Air Force pilot who wished to defect to the United States flew a MIG-23 fighter aircraft across our border and landed at Homestead Air Force Base in Florida before anyone knew that he had penetrated our air space. The technology exists today to build a very effective air defense system and we should make the investment to do that. Space-based moving target indicators (MTI) would constitute a particularly promising method for making certain that we know when airplanes violate U.S. air space in an unauthorized manner. The technology that would be applied to create this air defense system would also automatically improve our civil air traffic control system. Such a system would not only enhance the safety of civil air travel, but also would make it possible to control worldwide air traffic in such a way that we could deal with any suspicious or clandestine flights.

The development of defense against ballistic missile-carrying nuclear, biological, and chemical weapons should also have a high priority. Because of the spread of these weapons and their delivery systems using ballistic missiles, all nations and regions of the world will eventually be under the threat of such attacks. Much technical progress has been made in the past few years in developing defenses against ballistic missiles. It is now feasible to build a system that could guard the territory of the United States against attacks by a modest number of ballistic missiles. Intelligence estimates are that possible adversaries might be able to mount attacks against the United States with something of the order of 100 missiles and defensive systems against attacks are feasible. In addition, some of these defensive systems could be made available to allied nations across

## MILITARY PRIORITIES FOR THE FUTURE

- Enhancement of military intelligence services
  - Making military intelligence and attractive career
  - Understanding history and culture of regions around the world
  - Expansion of foreign language education for military people
  - Developing ways to share information with allies
  - Taking advantage of diversity of U.S. population (Powell in Haiti, Shalikashvili in Kurdistan)
- Enhancement of Military Transportation
  - Made necessary by loss of overseas bases
  - Rapid deployment of military forces worldwide essential
    - More C-17, V-22, and KC-10 aircraft
    - More effective use of Civil Reserve Air Fleet
    - More fast cargo ships
    - Possible conversion of SSBNs for transport missions
- Defense of U.S. territory
  - Many people around the world hate the United States
    - Consequence of interventions
    - Hatred of “western” culture
  - Direct attacks against U.S. territory more likely
    - Spread of high tech weapons around the world
    - Ease of transportation and communication
  - Defense against terrorist attacks
    - Enhance capabilities of local authorities
    - Support provided by National Guard
    - Technical support by Defense Threat Reduction Agency
    - Retaliate against source of terrorists (Libya, 1986; Osama bin Laden, 1988)
    - International legal actions against terrorists
  - Defense against external attacks
    - Enhance air defense system
    - Develop defenses against ballistic missiles
    - Tighten border controls

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the world, and this might be an appropriate step in making the world safer against possible attacks by “rogue” nations or terrorist groups that possess these weapons. In the longer term it should be feasible to build a space-based antiballistic system that could shoot down ballistic missiles launched anywhere in the world, targeted against any nation in the world. The development of such a defensive system on an international basis might be very desirable.

Finally, the United States should tighten border controls to make certain that nuclear, chemical, or biological weapons are not smuggled



across our borders. Once again, technical means exist that would make this particular function easier today than it was two decades ago. These measures should be taken in such a way that it is clearly understood. We are not excluding people from the United States. What we are doing is protecting ourselves against those people who would import dangerous weapons into the country in a clandestine way.

It is most important to implement the measures that I have suggested in this section. Doing this will make the post-Cold War world safer for all of us so that the global village that Marshall McLuhan dreamed about thirty years ago can really come into existence.

# STATE SPONSORED TERRORISM:

*Political/Religious*

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BARD E. O'NEILL\*

ABOUT TWO YEARS AGO, President Clinton defined terrorism as *the* single most important national security threat as we move into the next century, a view that was endorsed by the Chairman of the Joint Chiefs of Staff. While some may disagree that terrorism is *the* most important threat, few would disagree that it certainly is *one* of the most important national security threats. On that the Administration, the attentive public, and the general public agree.

Terrorism complicates a national security paradigm that was designed primarily to deal with nation-states. With terrorism we confront an increasingly complex and often shadowy subject matter where you have non-state actors, tribal conflicts, civil wars, and the like. What I would like to do this morning is share how we attempt to impose some intellectual order on the complicated issue of terrorism and leave the details and the nuances for your questions later on.

It seems to me that the first task is to define terrorism. Very often the terms "revolutionary warfare," "insurgency," "terrorism," "guerrilla warfare," and so on are used interchangeably. This is a mistake since they are different phenomena. I can tell you that for the last twenty-five years, academics and people in the policy arena have debated the definitional issue and have not come up with a consensus. But there is a near consensus. And I will rely on the near consensus because it is consistent with what I generally would conceive terrorism to be, namely: *the threat or use of physical coercion against non-combatants, especially civilians, to create fear in order to achieve political objectives*. I think this captures most of what most analysts believe is the essence of terrorism.

Terrorism is violent behavior that is directed at innocent victims. All of us are potential victims of terrorism. Whatever the specific acts might be, in most cases the victims have no direct connection to the issues at hand. Basically, they are irrelevant since terrorists are trying to influence an audience (a government, the public, the media, etc.) situated somewhere

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\* Bard E. O'Neill is director of Middle Eastern Studies and director of Studies in Insurgency and Revolution at the National War College. He is also adjunct professor of politics at Catholic University.

else to do something, maybe to do many things. Since those things vary from case to case, we must guard against the tendency to over-generalize.

When we look at terrorism, in terms of the definition I have suggested, the distinguished chairman of this conference, General Lee Butler, could be considered a terrorist. As head of the Strategic Air Command, he was prepared to execute orders that under certain options would have involved nuclear attacks on urban areas that would have inflicted incalculable civilian casualties. But short of executing such a command, General Butler was threatening to do so, the major hope being that the threat to use force of this magnitude would deter the Soviet Union from doing so. We need only recall that this situation was not only referred to as mutual assured destruction. It was also characterized as the "balance of terror." Fear, of course, was central to all of this.

Historically speaking, the bombings at Hiroshima and Nagasaki, Dresden, and so on were acts of terrorism. Why do I say that? It sounds provocative. It is because Americans, like most people, have a tendency to deny that they have engaged in or supported acts of terrorism. No one wants to be called a terrorist. Yasir Arafat doesn't want to be called a terrorist. Indeed he has always maintained he is a freedom fighter, not a terrorist! We respond by saying to the Arafats of this world that their notion that one man's terrorist is another man's freedom fighter is nonsense in that it is a transparent attempt to confuse ends (freedom) and means (terrorism).

Whether it is Arafat or us, the real issue is whether or not actions meet the definitional criteria. That's crucial. Once we have crossed that threshold and been intellectually honest with ourselves by admitting that in some cases we have engaged in acts of terrorism or the people we have supported have done so, we can then ask another range of questions.

The first might be whether an act of terrorism is moral, immoral, or amoral. Here you could certainly make the case that if Lee Butler had to execute the single integrated operational plan under certain conditions, it might be a moral act. Or, that the bombings in World War II were morally justifiable. Other questions would inquire whether terrorist acts were selective or indiscriminate, criminal or non-criminal, legal or illegal, rational or irrational, and so on. In effect, these are all adjectives that we can use to qualify the term "terrorism" and provide some context for better understanding it. And it is here that those who say they are freedom fighters can enter the argument. But first, they have to acknowledge if they knowingly attacked noncombatants or civilians. Then, if they did, they can proceed to make the case that that it was or is justifiable.

Once we agree on what we mean by terrorism and suggest some qualifiers, we must identify its various *agents* (in law enforcement lexicon, the perpetrators). At this point I have taken the liberty to go beyond what's stated on your program, because I think it's too narrow to look only at state-sponsored terrorism. We need to look at the whole picture, if we are to have a better and more comprehensive understanding of terrorism in

the transmillennial age. Accordingly, with your permission, I would like to sketch out the remaining attributes of a holistic approach to the issue of terrorism.

First of all, individuals can do it—for example, the Yigal Amers and Theodore Kaczinskis of this world, the anti-abortion bombers and the single-issue people. That's important to bear in mind because, as we have seen, these "lone wolves" can be extremely deadly. Second and more important, we have states that use terrorism against their own people, usually to maintain control and quell dissent. There is a long legacy here. We see it clearly in ancient African kingdoms about which E. V. Walter has written. We have seen it in our times with Saddam Hussein and his so-called Republic of Fear. He has institutionalized terror against civilians, often inflicting physical harm on those that are known to be innocent (victims) in order to influence those who might oppose his regime (the real audience or target). So this is an age-old story.

The terror that the Iraqi regime carries out against its citizens is very direct in that it is done by various security agencies. State terrorism can, however be indirect. Death squads in El Salvador during the 1980s come immediately to mind. And let's face it, it wasn't too long ago that the United States nodded and looked the other way while the feared ORDEN (Democratic Nationalist Organization) ran amok in El Salvador. Yes, the United States was an accomplice to terrorism despite the courageous protests at the time by Ambassador Robert H. White.

States also are agents of terror against other states, directly or indirectly. In a notable example of direct culpability the Syrians sent an Air Force intelligence officer to plan and direct the destruction of an El Al airliner in mid-air, a scheme that fortunately was detected beforehand. The alleged involvement of Libyan agents in the Lockerbie bombing is another case in point.

The indirect use of terrorism by states relies on third parties. If, for example, you are the Syrians and you wish to achieve various objectives vis-à-vis the Turks, including getting Ankara to agree on an explicit plan to share the waters of the Euphrates River, you may wish to support terrorist attacks in Turkey by third parties like PKK secessionists or Abu Nidal. Once the Turks capitulate, you can end such support.

Next we have the big area of non-state actors, and it is here that the tribal warfare that was discussed before by Dr. Marks comes into play. Non-state actors are of major concern to us. There are the old, well-organized, insurgent organizations across the world that engage in all sorts of terrorism. And then there are the trans-national groups and coalitions, the Al-Qaida organization of Osama bin Laden being illustrative. Essentially, they find people of like mind—in some cases from different types of groups—and bring them together in an ad hoc coalition for a specific act, like the World Trade Center bombing. Needless to say, this is very difficult to anticipate and deal with.

On a somewhat different tack, as we look to the future, we have to

ask ourselves, might there come a time when criminal organizations that have used terrorism for their own purposes, such as the Mafia, enter the political arena and use terrorism? I've talked to people who deal with gangs in California, some of which have de facto no-go areas that police are reluctant to enter. Thus far, these groups have not engaged in political terrorism. But there might come a day, if the social and economic disparities worsen, especially with respect to the Hispanic population, that some people in the criminal enterprise will take on a political coloration. Speaking in the name of relatively deprived people in the barrio, they may very well carry out acts of terrorism in pursuit of some newly defined political agenda. Experts who have spent considerable time with gangs believe this is an entirely plausible scenario.

Once we identify who it is that are engaging in terrorism, we must turn to a consideration of what causes them to do so. I will comment briefly on this and, if you like, provide more detail in the question and answer period. For now, I would simply emphasize psychological and contextual explanations. Gerald Post of George Washington University will tell you some individuals are predisposed to acts of violence because of inner drives, needs, and frustrations, regardless of structural or contextual factors. These are people that he says have split personalities—the good and the bad. They retain the good for themselves and project (or externalize) the bad onto other people. The problem here, as you no doubt suspect, is that such generalizations are hard to sustain because we have reliable data on only a handful of groups. We don't have enough information to be even marginally confident. Having said that, I acknowledge that where information is available psychological explanations can contribute to our understanding of the causes of terrorism.

A more productive line of inquiry, in my opinion, is to identify and discuss the contextual causes of terrorism. Among the possible causes here are acrimonious societal divisions along religious, racial, ethnic, or tribal lines. Sometimes class conflicts are the underlying genesis of terrorism. Particularly bad are situations where class distinctions are superimposed on ethnic, tribal, and/or religious differences as in, say, Sudan, Turkish Kurdistan, or Northern Ireland. And then there is what I would call the dysfunctional impact of social change. What I have in mind here are the psychological dislocations generated by growing populations and extensive migration from rural areas to impersonal cities that can't provide services for those populations. Especially troubling are changes in values and institutional identifications and behavior that all too frequently affect individuals caught up in this process, particularly young people who in many places in the Third World make up over 70 percent of the population.

Many sacrifice old traditions and religious values on the altar of modernity, only to find their hopes destroyed by the existential realities of poverty and unemployment. For example, in the Middle East some Mus-

lms may ignore prayer while others compromise the fast during Ramadan because such duties are deemed incompatible with new life styles or economic necessity. And then, one day they wake up and begin to take stock of what they've given up for very little in return. Needless to say, when large numbers of people begin to feel this way, it can be very destabilizing. Psychologists and the sociologists have little trouble finding such disillusioned people on the streets of Algiers, Cairo, and other cities. They are notably present in both non-violent and militant Islamic revivalist groups.

Economic causes of terrorism are also not hard to find, especially class and group relative deprivation. Potentially very troubling are periods where a rise in prosperity is followed by a sharp decline. Finally, we should note that in some cases political factors like lack of representation, failure to allow desired participation, and downright lack of responsiveness to legitimate grievances may be contributing causes of terrorism.

Having inquired about the causes of terrorism, we can then take up the question of ultimate terrorist political goals. There is a wide variation here. *Anarchists* wish to destroy organized political authority while *secessionists*—like the very brutal Tamil Tigers in Sri Lanka, Basque Homeland and Liberty, and the IRA—want to create their own nation-states or merge with another one. *Egalitarians* like the Shining Path in Peru or the Revolutionary Armed Forces of Colombia envisage a new social and political order that actualizes the value of equality. By contrast, *traditionalists* wish to recreate a golden age of the past in which a privileged few ruled an inert mass in the name of religious or philosophical values. Although on opposite sides of the political spectrum, both egalitarians and traditionalists thrive on the kinds of social and economic dislocations I mentioned earlier.

While traditionalists are prevalent today, owing largely to the Islamic revival, we cannot rule out some kind of Marxist resurgence, if the misery that Lee Butler so rightfully called attention to endures and intensifies. Whether in the Sierra Madre in Mexico or somewhere else, the message will no doubt be that the Soviet and Chinese versions of Marxism were ill-conceived and hypocritical. The new Marxism, by contrast, will be intellectually compelling and morally consistent. Was this not the message of the self-styled “fourth sword of Marxism,” Abimael Guzman of the Shining Path? And did it not resonate effectively for a period of time? The questions are: who will be the new Guzmans and what harm can they cause?

But our catalog of ultimate aims is not complete. We must also note the *pluralist* organizations like the African National Congress, which, according to the Truth and Reconciliation Commission in South Africa, carried out attacks on civilians in the name of establishing a democratic order as we know it. These and historical antecedents like the People's Will in Russia have sometimes been called “liberals with bombs.”

Finally, we need to mention *preservationists* and *reformists*. The former, like the Afrikaner Resistance Movement during the last phase of the apartheid system and militant Protestants in Northern Ireland in the Ulster Volunteer Force (UVF), have sought to maintain the sociopolitical order as it is. As the British found out, the UVF and associated groups were, at times, more deadly than the secessionists of the IRA! Reformists, by contrast, are not concerned with the basic values and institutions that comprise the political system. They simply want a fair distribution of social, economic, and political benefits. The Kurds in Iran exemplify this.

But what about the future? Are there new groups and goals that merit our attention? The answer is yes. Two are of concern. The first, whom we might call apocalyptic utopians, envisages an ideal human order which will emerge out of the ashes of a violent catastrophe that they will help bring about. Aum Shinriyko is illustrative here. Despite the vague and muddled thinking of its members ("junk ideas" in the words of one Japanese theologian), they can, as the Tokyo sarin gas attack showed, be very dangerous. The second group would be the nihilistic aggrandizers who are devoid of ideas and simply want power and material resources. The incredibly savage terrorists in Sierra Leone, whose favorite tactic is to render people economically useless by hacking off their arms and/or legs, come to mind in this regard.

The general point of all this is that since the ultimate goals of terrorists vary enormously, it is crucial that we take the time to ascertain just what it is that they are seeking. Then we can turn to the short-term objectives of terrorist acts, which also vary greatly and come in different combinations. In the interests of time, I will simply take note of some of them: namely, gaining publicity, exacting ransom payments (a favorite in Colombia), obtaining the release of prisoners, undermining rival groups, enhancing the stature of one's own group, maintaining an organization that is close to extinction, provoking government repression (a preference of Basque Homeland and Liberty), gaining entry to a peace process, destroying a peace process, and revenge. The last deserves a few comments.

Revenge in and of itself may be the aim of a terrorist action, something that an American audience often finds hard to believe. Our tendency is to look for some clearly stated objective that makes an act somewhat rational. When no group acknowledges responsibility or articulates an aim we are puzzled. What our puzzlement overlooks is the fact that some individuals and groups come from cultures in which revenge is highly valued. In fact, they have terms for it, such as *tar* in Upper Egypt or *badal* in Afghanistan. A concrete example of such an act would be the infamous bombings of the Israeli embassy and Argentine-Jewish society buildings in Argentina. Hezbollah's guilt is generally accepted yet it never took credit. Why? The answer is that both acts can easily be seen as the long-promised retribution for an Israeli air attack that killed the Secretary General of Hezbollah and members of his entourage. It was, at least in large part, an act of revenge that the group felt duty-bound to carry out.

Once we have identified the ultimate and short-term goals of terrorists, we need to ask a question about the strategy of the people involved, whomever they might be—individuals, states, or insurgent organizations. Strategy is the integrated use of political, economic, informational, and violent instruments of power to achieve goals. It is, if you will, the plan or way one uses resources to achieve aims. The key questions here are: do the terrorists have a strategy? If so, what is it and how effective are they when it comes to implementing it? In general, we can say that some terrorists have no strategy and this is a fatal flaw. Others have a strategy but it is diffuse, fragmented, and poorly thought out. In yet other cases, the strategy is explicit and clearly articulated. Four grand strategies have been popular in the twentieth century: the conspiratorial; the protracted popular war, which is the Maoist approach; the military focus, which is essentially a Cuban approach (that's where it was codified); and the urban warfare scheme. These are ones you will find emulated to greater or lesser degree in many places across the world.

As we look to the future and press the boundaries of our intellectual horizons a little bit, we have to inquire whether there might be a new strategy that is in its embryonic stage. What I have in mind here is a strategy that is simple in design but potentially very deadly. It might be called "catastrophic extortion." It would rely primarily on the use of so-called weapons of mass destruction, which we'll come to in a moment. The notion is to threaten their use to achieve specific aims and if there is no response to carry out a terrible act and threaten to do it again.

Putting the question of strategy aside, let us quickly touch on the variety of weapons the terrorists use. Weapons and bombs remain, and will probably continue to be, the weapons of choice since they are easily constructed and available. But, as we have foreshadowed in previous comments, there are new, more ominous possibilities as we look to the future. I am, of course, referring to chemical, biological, radiological, and cyber weapons. Perhaps anticipating this, one of the leaders of Hamas commented that his movement had started with knives, moved to guns, and then on to bombs. Now, he said, it was ready to turn to new things. For us, and most especially for the Israelis, the question is what are the new things? Sarin gas? Anthrax powder? As former Soviet biological expert Ken Alibek has pointed out in lectures and his recent book, the possibilities here are numerous and shocking.

It may or may not be true that the probabilities of their use in the future will be low. Even if they are low, we must still be vigilant since the costs may be high. By vigilant, I do not mean panicking the general public. I do mean committing more resources to intelligence and to preparing and training the first responders who will have to initially deal with the consequences.

Permit me to say something about the use of chemical, biological, radiological, or cyber weapons for selective rather than mass destruction, since that option may be more likely in that it minimizes the possibility of



fratricide. So far, most of the discussion of these weapons has assumed mass destruction, the implication being that the casualties will be in the hundreds of thousands. I would suggest to you that there is an equally horrifying scenario, and that is using them in a more sophisticated way to create fear without killing en masse. Rather than target the citizens of Abilene indiscriminately, why not target only the people in this hall with say, a biological or chemical agent sometime today? Although there may be only a few hundred victims, imagine how quickly fear will intensify and spread in this city and beyond. In this scenario, you really don't have to inflict hundreds of thousands of casualties like Ramsi Yousef said he wanted to do if he had chemical weapons at the World Trade Center. The formula is to kill or injure a select group with an insidious weapon that invokes unusual fear. This is what I would be most concerned about.

Hypothetically speaking, if I were to ask a member of the Islamic Jihad Movement for Palestine or Hamas how he would go about it if he thought in these terms, he might say, "I'll go to a primarily Jewish shopping center at the end of Dizengoff Street in Tel Aviv. I'll go to the shopping center, and place a chemical or biological device there. There will be few, if any, Arab casualties but many Jewish ones. Enough Jewish ones to spread panic and fear."

There is a related and interesting point when you look at the aggregate data; namely, that the groups that are the most threatening in the future are not the old-line egalitarian Maoist-type groups that we were concerned about in the Cold War. The most deadly groups now—and probably in the future—are and will be religious and national separatist groups. Think about that. In the name of the nation, but even more to the point in the name of God, one could justify killing or maiming hundreds of thousands of people. When you read and analyze what justifications they write or say, and take note of the way they usually dehumanize and demonize their adversaries, it is not hard to understand why they consider their behavior to be perfectly moral. And they have shown an inclination to do these things.

So what then, just by way of summary, should be our general guidelines for dealing with the problem of terrorism? First, it is imperative to recognize the centrality of intelligence. We need to know about impending incidents beforehand. If we do not and a major incident goes down, the postmortems will point back and say we should have had better intelligence, or we had it and didn't share it. Technical intelligence is very important in this regard, but human intelligence is probably more important.

The next guideline I would stress is reliance on law enforcement and the judicial system. When it comes to law enforcement agencies and the intelligence organizations they must cooperate with, there can be no substitute for rock-solid coordination. The days of petty interagency bickering and distrust must give way in the face of the seriousness of the threat. Happily, there is a growing acknowledgement of this. There are a number

of steps that have been taken to improve the situation, and I want to make sure that due credit is given to those who have done those things, especially in the counterterrorism centers of the FBI and CIA. However, when I go and talk to people at the working level and ask if they are satisfied with the level of cooperation and coordination on this issue and the notion that bureaucratic barriers have been overcome, without exception they have answered in the negative and suggested that there is a long way to go to try to change the bureaucratic culture, so that intelligence and law enforcement organizations—NSA, DIA, CIA, FBI, etc.—make the best use of the information at their disposal.

A third guideline is to ensure that whatever laws and policies we craft don't undermine basic democratic values and principles. There's always an impulse cut corners to nab terrorists, because they do such brutal, terrible things. We cannot do that. To draw and slightly paraphrase an analogy based on a well-known statement from Vietnam, you can't destroy the village (in this case democratic values and liberties) in order to save it. It makes no sense.

Next, we get into long-term guidelines. Lee Butler talks about increased misery. The misery index in the Third World going up. It'll continue on into the next century, and no one thinks it can be fixed overnight. This is not a prescription for doing nothing. There are many socio-economic policies you may devise and implement in order to alleviate suffering in places where you have vital or major national interests. Hopefully, whatever you do will be successful in reducing the probabilities of terrorism and political violence. But, realism and experience caution us that we may not be very successful here. In the meantime, we have to deal with immediate threats.

As for the military response to terrorism, its role has to be carefully defined. Although I think dealing with terrorism is a law enforcement and intelligence problem, this does not mean the military has no role. To the contrary, in certain cases, it may be very important. A question I have here is this: have we thought through deterrents with regard to various kinds of terrorism, like state sponsored terrorism? How do you deter different kinds of terrorists? For instance, can you use the military to try to deter Osama bin Laden, and, if so, how? Moreover, if terrorism has commenced, how can the military be used to end it? And, if the consequences of given terrorist acts are severe, what is the military role in coping with them?

Compelling its termination, of course. Managing its effect. So-called consequence management. And lots of people getting involved in that nowadays. We can come back to it.

Finally, we must note the importance of legislative and institutional reforms in the twenty-first century. This is a very important point. In Washington we have placed greater emphasis on what is called "jointness," by which we mean getting the military services to work together.

Thanks to the leadership and persistence of Congressman Ike Skelton of Missouri, we have made enormous strides in this regard. But this is not enough, especially when it comes to terrorism. And here again, Congressman Skelton leads the way when he insists on "jointness plus." If we expect our armed services to work closely together to cope with military problems, why would we not expect the agencies on all levels of government that deal with terrorism to do the same? One arena for addressing this problem is in the vital education provided to future government leaders in elite senior schools like the National War College. In practical terms, it would mean having students from various law enforcement and intelligence agencies adequately represented in their student bodies.

To conclude, terrorism is and will continue to be a major problem for all of us. It is a complex challenge that requires a tough, sophisticated, and well-informed response that puts a premium on a precise understanding of the long-term goals, short-term objectives, and strategies, tactics, and weapons of terrorists. Within this context, the most horrific specter is quite clearly the use of chemical, biological, and radiological weapons. I think it would take a good deal of audacity to say that the current technical and political obstacles to their use will not be overcome. Lest we be too dismissive, we should recall the skepticism about things like the e-mail or the Internet. Indeed, it was not too long ago that some said they were impossible. Can we afford to express the same disbelief about the technical impediments to nuclear, chemical, and biological terrorism and then wake up one day to find out we were wrong? I leave the answer to you.

# ECONOMIC GLOBAL COMPETITION

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GEORGE KOZMETSKY\*

## INTRODUCTION

When Bill Wright asked me about one and a half years ago to participate in the Philosophical Society of Texas Annual Meeting for 1998, I thought I had a relatively easy task in covering the topic "Economic Warfare" or better yet economic global competition. The IC<sup>2</sup> Institute of The University of Texas at Austin had commissioned Dr. Piyu Yue and I to research global competition which resulted in a book published in 1997 entitled *Global Economic Competition: Today's Warfare in Global Electronics Industries and Companies*.

Our book covered a twenty-two-year period between 1970 and 1992. We reviewed economic efforts in twenty-two nations. We also examined fourteen industries based on electronic technologies and discussed methodology issues relative to the electronic technology chain and their clusters and comparative analysis based on data envelopment analysis. We extended our comparative analysis to 315 corporations within the clustering electronics industries which included electronic components, computer manufacturing, software, telecommunications equipment, industrial instruments, consumer electronics and four emerging industries. The company studies included the largest multinational corporations of Canada, Japan, South Korea, the United States, Germany, Great Britain, and other Western European countries. The time period covered 1982 through 1992. We compared company performance as well as the underlying factors for employment and labor productivity, asset utilization, cost efficiencies and R&D expenditure ratios. We also performed a core competitive analysis between the world's top twenty-six giant electronics companies with more than \$10 billion of sales revenues in 1994. The time period selected was 1985 to 1994.

These time periods covered the formation of the European Community, ASEAN, and NAFTA. Also this time period covered the cold war as well as the transition to cold peace. It covered changes in the World Bank

\* George Kozmetsky is the Chairman of IC<sup>2</sup> Institute, Murray S. Johnson Chair Professor, and E. D. Walker Centennial Fellow at The University of Texas at Austin.

and IMF. Several economic cycles were included as well as changes in national political parties and leadership. Needless to say, Dr. Yue and I spent over four years on these studies.

Today's presentation will concentrate on economic warfare based on Fourth Industrial Revolution technologies. Thereby, I wish to present first, a summary of the lessons learned from Piyu's and my study on Global Economic Competition; second, a quick review of the growing importance of the high technology industry to the United States and Texas, and conclude with a call for Texas-based actions for leadership for the twenty-first century economic global competition.

#### PART I. GLOBAL ECONOMIC COMPETITION:

##### *Today's Warfare in Global Electronics Industries and Companies.*

Dr. Piyu Yue and I reached an early conclusion that there was no economic theory or models to analyze global economic competition for science and technology based industries. We found that global economic competition is a complex dynamic process that could not characterize economic competition among nations, particularly when economic theory and logic rely on restrictive assumptions that have drifted away from the reality of changing times. We settled on a deeper and more disaggregated approach to analyzing the competitive advantages of a nation's economy, its industries and its major companies. In the global technology-based marketplace we see fierce competition between clustering industries as well as among their firms. The final outcome of this competition profoundly determines a nation's economic status and the extent of its power within the international system. We emphasized comparative analysis at three levels; namely, relative performance between nations, between industries, and between firms.

##### **Relative Performance of Nations from 1970-1992.**

We compared the macroeconomic performance of twenty-two nations from 1970 to 1992 that were major exporters and/or importers of electronic products. The center of international economic gravity in the time period 1970-1992 was shared by the United States, Japan, and Germany.

The average growth rates of real GDP is shown in Table 1 for selected nations. In the time period 1978 to 1991 Japan's average growth rate was almost twice that of the United States. However, the 1994 growth rate of the United States was eight times that of Japan. The Asian region nations' growth rates were higher than Japan's. In the 1985-95 period, Germany's and England's growth rates were higher than the United States. By 1994 the U.S. average growth rate of real GDP was higher than that of Germany and England. Please note that China's and Singapore's average growth rate for 1994 continued to grow while the other Asian countries' growth rates dropped.

**Table 1**  
**Economic Growth**  
**Average Growth Rates of Real GDP (%)**

<i>Selected Nations</i>	1978-84	1985-91	1994
U.S.	2.30	2.14	4.1
Japan	4.00	4.57	0.5
China	8.91	9.26	11.5
South Korea	7.19	9.53	8.4
Taiwan	8.60	8.00	6.5
Singapore	8.66	6.42	10.1
Germany	1.77	3.10	2.9
Great Britain	1.52	2.50	3.8
Brazil	3.70	2.76	5.7
Mexico	4.64	1.90	3.5

**Table 2**  
**GDP per Capita (\$ dollar)**

<i>Selected Nations</i>	1970	1980	1991
U.S.	\$4,922	\$11,804	\$22,240
Japan	1,953	9,068	26,930
China	96	252	370
South Korea	279	1,643	6,330
Taiwan	389	2,344	8,813
Singapore	914	4,853	14,210
Germany	3,042	13,213	23,650
Great Britain	2,218	9,493	16,550
Brazil	490	1,867	2,940
Mexico	704	2,766	3,030

GDP per capita is shown in Table 2. Please note that by 1991 Japan's and Germany's GDP per capita was higher than that for the United States. The average net export values are shown in Table 3. You will note that the U.S. international trade deficit increased throughout the period 1978-1994. In contrast, the Japanese international trade surplus increased over the same period. Germany's net international trade was a surplus over the same period.

#### **Relative Performance by Industries.**

Our study also analyzed the national competitive advantages and disadvantages within the global electronic industries. We used Michael Porter's competitive cluster techniques for fourteen electronics-based

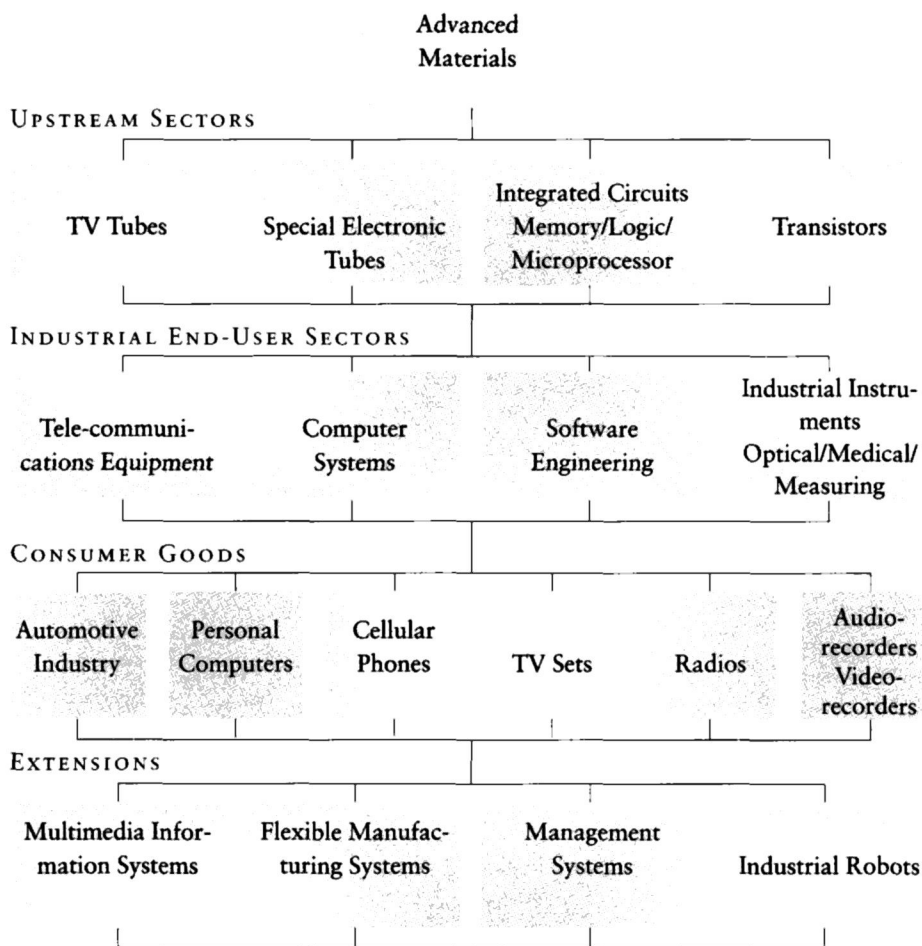
**Table 3**  
Average Net Export Values (\$ billion)

<i>Selected Nations</i>	1978-84	1985-92	1994
U.S.	-\$52.46	-\$130.14	-\$176.59
Japan	9.92	73.56	121.77
China	-0.39	-3.08	5.37
South Korea	-3.25	-0.16	-6.33
Taiwan	2.96	13.04	7.44
Singapore	-5.12	-5.50	-5.84
Germany	15.17	48.12	37.42
Great Britain	-7.00	-29.25	-22.51
Brazil	0.49	11.32	7.56
Mexico	2.71	-1.72	-26.45

industries to represent a nation's competitive advantage. Our contribution was to develop a way to provide linkages among the electronics-based industries in terms of exports and imports. We called these linkages a "technology chain." (See Charts 1 and 2.) The period covered was from 1978 to 1990. Our study showed that Japan has developed the strongest electronic technology chain in the world for materials, components, industrial products and consumer goods. It was very evident that Hong Kong, Singapore, South Korea, Malaysia, and Taiwan had devoted much effort to establishing their own electronic technology chains industry and had become aggressive competitors in the global marketplace. The study, as expected, showed that the United States initially developed the electronic technology chain but it lost share of markets to the Asian countries. However, the United States was still dominant in developing extensions to the electronic technology chain. In fact, the United States was dominant in three out of four of the newer industries—multimedia, information systems, flexible manufacturing systems, and management systems. Japan was dominant in one; namely, industrial robots.

What was clear for the study was that global national competition was driving the technology chain from a high technology business to a commodity business. (See Chart 3.) In other words the life cycle of technology products is short. As new and advanced products are launched on the market, the earlier generations become technologically and economically obsolete. What we have observed is that while the technology-based product/service cycle is short—under two years—it takes a nation some twenty to forty years to develop their technology-chain-based industries. For example, it took at least thirty years for the United States to develop Silicon Valley. The Japanese government funded over a decade of research and development to enter the computer manufacturing market.

**Chart 1**  
The Electronic Technology Chain



**Chart 2**  
The Electronic Technology Chain  
Concept

- Level 1: Primary products upstream sectors
- Level 2: Industrial end-user sectors
- Level 3: Consumption goods sectors
- Level 4: Extensions to emerging sectors

**Chart 3**  
Global National Competition

“Global National Competition” is driving the technology chain from a high-tech business to a commodity business



Those corporations that successfully market and sell the most advanced products at any given point in time will experience spectacular growth rates—so-called *hyper-growth*. Economists have been late in recognizing this phenomenon, so characteristic of the technology economy. Conversely, corporations clinging to product laggards can see their markets collapse overnight, with disastrous results. The technology-based economy can become polarized into two camps: swarms of small start-up companies growing at phenomenal rates, and stumbling giants.

The high tech corporation is typically embarked on a dynamic path that is located far from equilibrium all the time. The orbit is nonlinear. It harbors the possibility of *chaos*.

In the resulting setting of industrial turmoil, there will occur rapid *technological evolution*. A kind of balance will be established between creativity and oblivion, between the commercialization of new products, the launching of new start-up companies, mergers and acquisitions, and bankruptcies.

#### Firm Level.

Our comparative analysis at the firm level clearly indicated that the giant companies have been the gravity center of global economic competition. Their successes and failures impact the global marketplace, affecting international trade balances, employment, personal and national wealth and status, and, finally, the standard of living of present and future generations. In previous sections we observed that many excellent mid-sized electronics companies in the U.S. are out-performing Japanese and U.S. giant firms. Although mid-sized and small electronics companies have relatively limited human, financial, and technological resources, they compete aggressively with giant electronics companies in all the clusters, and expand rapidly. Their successes can change the future landscape of the global competition in the electronics industries. U.S. examples are Microsoft, Intel, and Dell.

I'd like to selectively review with you the comparative performance of the global giant electronics companies. There are twenty-six companies in all, each with consolidated sales revenues of more than \$10 billion in 1992 except for a Korean company, Samsung Electronics, whose sales revenues were only \$4.848 billion in 1992, but soared to \$14.282 billion in 1994. This group includes ten companies based in the U.S., ten in Japan, two in Germany, and one each in France, the Netherlands, Sweden, and South Korea. The twenty-six giant companies are about 8.25 percent of the 315-company sample size studied. The sales revenues of the twenty-six-company group were \$755.454 billion in 1992, accounting for 60.5 percent of total sales revenues of all the 315 sample companies, which spread over the entire electronic technology chain.

Comparative performance of these twenty-six giant firms by nation is shown in Table 4. The Japanese giant companies increased their relative

**Table 4**  
**Comparative Performance of Global Electronics Companies—**  
**By Nation, 1994**

	<i>Sales Growth</i>	<i>Market Share</i>	<i>Market Share 1994/1985</i>	<i>Gross Margin</i>
Japan	13.08	42.82	1.46	3.13
U.S.	6.31	39.21	.71	11.40
Germany	15.99	9.46	1.24	-1.60
France	-11.21	1.38	.77	2.60
Netherlands	5.96	2.87	.76	5.73
Sweden	8.74	1.62	1.26	4.65
South Korea	40.11	1.65	2.50	18.97

share at the expense of the United States and Western European nations. A closer examination of ten U.S. giant companies would show eight of them lost relative share and only two increased their relative share.

Behind the giant electronic companies relative share are many factors such as recessions, corporate strategy and other political, social and economic factors. However we examined their three input factors—labor, capital, and technology—used in different versions of economic growth theory. In the 1993-94 time period, the following conclusions can be made; namely,

*Employment:* nine of the ten Japanese companies continued to increase their employment. eight of ten U.S. companies decreased their employment.

*Total Assets:* All ten Japanese companies increased their total assets. five out of ten U.S. firms increased total assets.

*R&D Expenditures:* seven out of ten Japanese companies increased their R&D expenditures. five out of ten U.S. firms increased R&D expenditures.

Japanese companies kept increasing their input factors throughout the period 1985-1994. It is particularly striking in the total employment increase of 690,000 people. In the same period the United States was downsizing by 532,000 people. Total assets of the Japanese companies increased by 4.0 times in the 1985-94 period while U.S. firms increased their assets by 2.87 times. R&D expenditures for U.S. firms also lagged Japanese R&D expenditures—1.3 times for U.S. firms to 3.8 times for Japanese firms. The comparison of the company level data clearly shows that rapid global expansion of the global Japanese electronics companies into a commodity market. In contrast, the U.S. electronics industry was concentrating on emerging market changes and profitability.

One major conclusion from our analysis of the twenty-six global giant companies was that new technologies are revolutionary because:

- A. They reflect fundamental advances in science.
- B. They are widely diffused. Consequently, many nations as well as regions and individuals will have increasing opportunities to develop and utilize these technologies for their own purposes.
- C. They spur new industries and regenerate traditional industries.
- D. They are creating new types of institutional alliances among academia, business, and government.
- E. They require greater intellectual property protection.
- F. They create new approaches and pose newer requirements that make existing skills and competencies obsolete. Furthermore, they significantly alter or create new consumption/behavior patterns."

## PART II. POWER SHIFT.

General Butler, Dr. Mark, and Mr. O'Neill have touched on the changing external threats, military actions, and terrorism. They clearly established the changing nature of our national security. Part I of this paper has recognized that economic security is also important for national security. In the past, I have referred to this concept as comprehensive security. But what many of us see is a power shift. The challenges are more than changes in worldwide markets and economic growth. It is more than the challenge of utilizing revolutionary dual technology for comprehensive security. The challenge is more how to create wealth and prosperity at home and abroad in times of cold peace.

If I could pick the most significant lesson that I have learned from our comparative nations study regarding warfare in global electronic industries and companies, I would say that entrepreneurial leadership makes it possible to get on and stay on the leading economic edge. Entrepreneurial leadership is not entrepreneurship at a firm level be it a start-up or a progressive 200-year-old multinational firm. It is the need for creative and innovative leaders of all sectors—academic, private, government, and the foundation sectors. How they all work for the common good of all people in a caring and sharing way is the key. I firmly do not believe entrepreneurial leadership can be attained through government promotion and protection, or government targeted industries and incentives.

In the past year, I have had numerous occasions to observe and discuss at home, in China, in Japan, and in Eastern Europe how to build a civil society. At the core of these discussions I've observed what Jessica T. Mathews has called a "power shift." (See Charts 4 and 5.)

In the past, comprehensive security was focused at the Federal level. However, power shifts place the emphasis on communities, global or local. My good friends, Dr. and Mrs. Rostow, have taught me that if you can't handle the problem at a local community level you can develop a global community.

Chart 4  
Power Shift

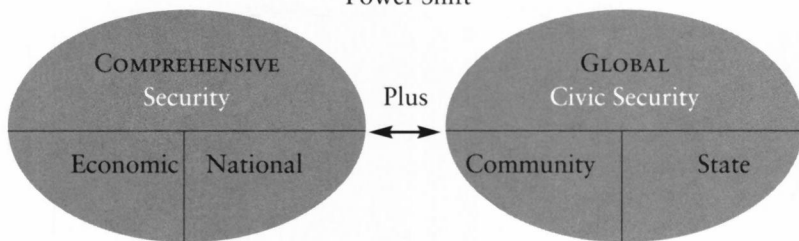


Chart 5  
Definition of Power Shift

A competing notion of “human security” is creeping around the edges of official thinking, suggesting that the security be viewed as emerging from the conditions of daily life—food, shelter, employment, health, public safety—rather than flowing downward from a country’s foreign relations and military strength.

JESSICA T. MATHEWS  
*Senior Fellow at the Council in Foreign Relations*

In the United States, high technology is the single largest industry by sales. In 1996 total high tech sales were \$866 billion in five industry clusters. (See Charts 6 and 7.) U.S. high tech sales have increased 37 percent from 1990 to 1996. U.S. high tech sales surpass U.S. auto manufacturing and construction revenues. (See Chart 8.) U.S. high technology service revenues have surpassed electronics manufacturing since 1991, software and computer-related services are the most dynamic segments. All high technology manufacturing segments except defense electronics continue to grow. High technology is the nation’s leader in R&D expenditures—\$40 billion in 1995 or thirty percent of all R&D expenditures. The high tech R&D growth since 1990 is 42 percent.

Texas is more high tech than most of its citizens realize. In 1996

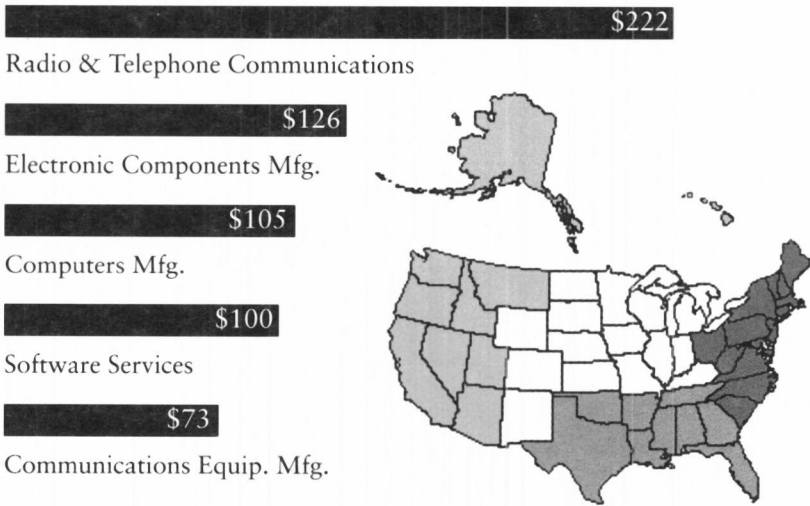
- Texas was the second ranked high tech state in both exports and employment. (See Charts 9 and 10.)
- Texas added over 69,000 high tech jobs between 1990 and 1996 to make it the leading state.
- Fifty-one of every 1,000 private sector workers in Texas are employed by high technology firms.
- Texas’s high tech industry employs more than oil and gas drilling, agriculture and petroleum refining. (See Chart 11.)

**Chart 6**  
1996 Total High-Tech Sales \$866 Billion

High-Tech Mfg. Shipments	\$428 Billion (12%)
High-Tech Services Revenues	\$438 Billion (57%)

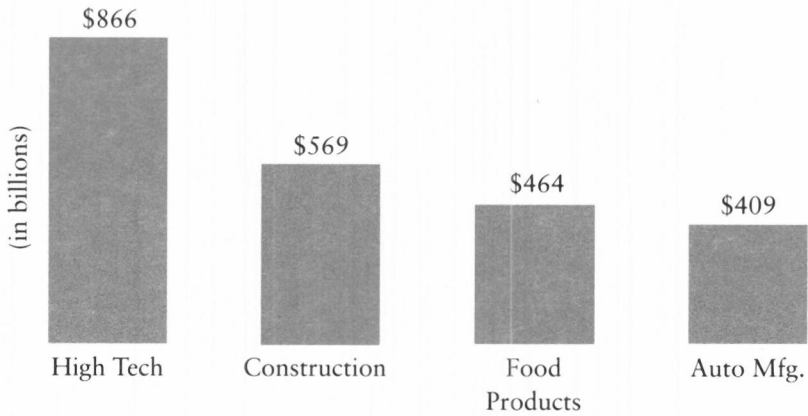
*American Electronics Association*

**Chart 7**  
1996 Leading Hi-Tech Industry Segments (sales in billions of U.S. \$)



*American Electronics Association*

**Chart 8**  
1996 Sales Comparisons, Select Companies



*American Electronics Association*

Chart 9

1996 Top 10 CyberStates by High-Tech Merchandise Exports  
(in millions of U.S. dollars)

1. California	\$68,009	6. Massachusetts	\$12,063
2. Texas	\$39,765	7. Arizona	\$10,930
3. New York	\$16,705	8. Ohio	\$8,590
4. Illinois	\$15,250	9. Michigan	\$7,873
5. Florida	\$12,672	10. Pennsylvania	\$7,305

*American Electronics Association*

Chart 10

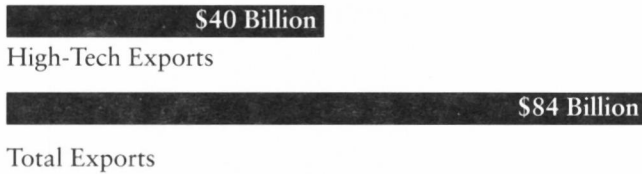
1996 Top 10 CyberStates by High-Tech Employment

1. California	4. Illinois	8. Pennsylvania
2. Texas	5. Massachusetts	9. Virginia
3. New York	6. Florida	10. Ohio
	7. New Jersey	

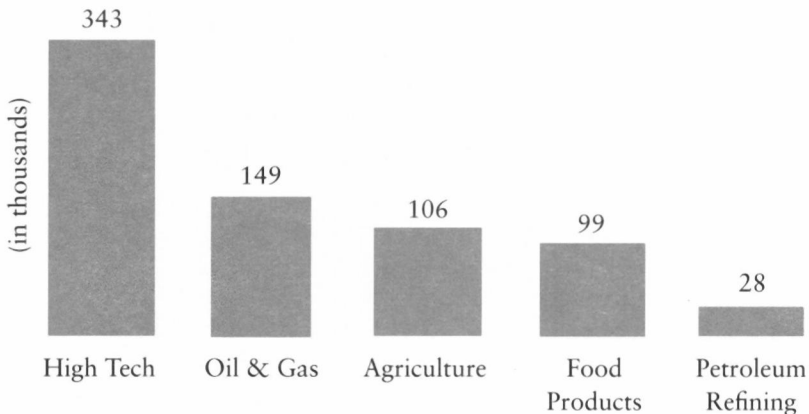
*American Electronics Association*

Chart 11

1997 International Trade

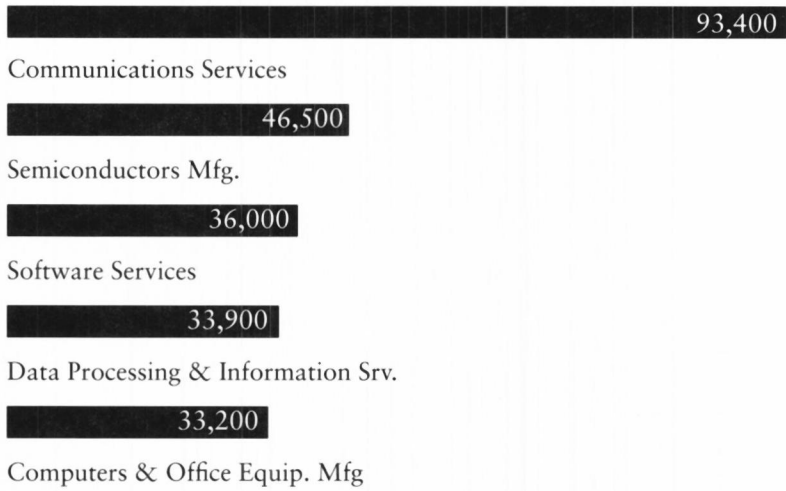


1996 Employment Comparisons, Select Industries



*American Electronics Association*

**Chart 12**  
 1996 Leading Hi-Tech Industry Segments (Employment)



*American Electronics Association*

**Chart 13**  
 Real per-capita income in Texas & Border region

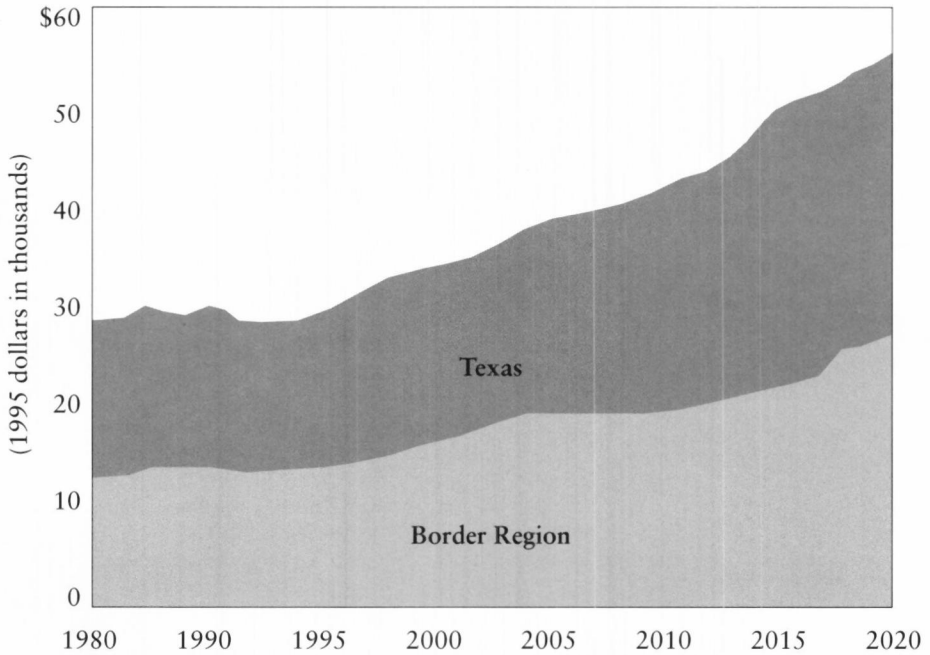


Chart 14  
Power Shift



Chart 15  
Power Shift

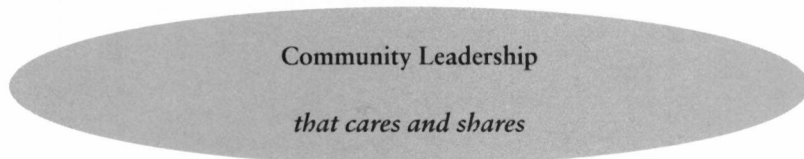


Chart 16  
Power Shift

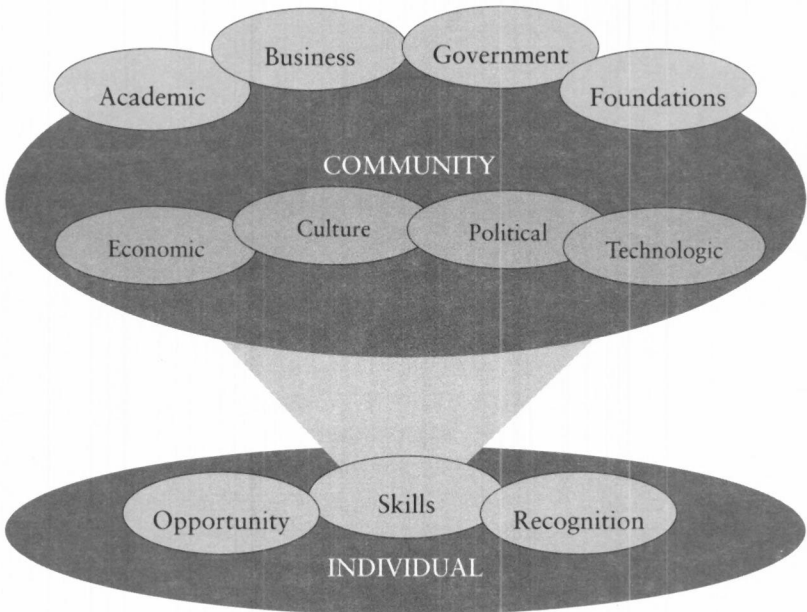




Chart 17  
Power Shift



Chart 18  
Power Shift



- Texas's average high technology industry wages are 57 percent above Texas's other average private sector wages.
- Texas's high technology industry employment is primarily in communication services, semiconductors, software services, data processing and computers, and office equipment manufacturing. (See Chart 12.)
- A major challenge for Texas's high technology is to develop the border region. (See Chart 13.)

### PART III. TEXAS'S CALL TO ACTION

For Texas to continue to be economically and globally competitive we need to address three key issues. (See Chart 14.)

First. Provide entrepreneurial leadership at the community level for the power shift. This leadership must be caring and sharing. (See Chart 15.) Therefore, this leadership must come from within the community. The community must provide the necessary civic entrepreneurship infrastructure that commercializes revolutionary technologies.

Second. The community leadership must provide for proactive state research bases. (See Chart 16.) The community leadership must make sure that Texas gets its fair share of the Federal research budget. The entrepreneurial leaders must make sure that each community region in our state has its share of research and development—academic and private. We must stay on the cutting edge of commercializing technology for the emerging global markets including building global alliances.

Third. Improve the workforce development programs from entry skills, through technicians as well as the science, engineering, and management professions. (See Chart 17.) This will require more than traditional education and private-sector training. In short, we need to evolve certificates of competencies that are timely and provide sufficient numbers of individuals when needed and where needed.

Entrepreneurial leadership requirements are shown in Chart 18. All individuals need to have opportunities, e.g., jobs, skills and competencies

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#### Chart 19

##### Definition of Power Shift

The richness of a community is no longer tied to natural resources or the industrial base, but to how well its leadership takes advantage of human potential.

A community's ability to learn not only how to create technology, but also how to turn it into a product and gain value from it will be the test that determines success in the 21st century

DR. W. ARTHUR PORTER

as well as appropriate recognition of their contributions. The community leadership needs to integrate its economic, cultural, political, and technology sectors. Entrepreneurial community leadership must come from partnerships between the academic, business, government, and foundations sectors.

In conclusion, I'd like to quote my good friend Dr. Skip Porter: (See Chart 19.)

# CULTURAL COLLAPSE

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MARIAN WRIGHT EDELMAN\*

I'M VERY GLAD TO BE IN ABILENE and to see all of you here. I admire Lee Butler very much, and I am so sorry that I missed what I hear was an extraordinary morning session, but I am delighted to share with you this afternoon.

I know you have heard about the external threats to our security. I profoundly believe and my bottom line is that the greatest threat to our national security and future comes from no external enemy, but from the enemy within and our loss of strong moral, family and community values and support. I believe that parent by parent, youth by youth, voter by voter, professional by professional, congregation by congregation, club by club, community by community, foundation by foundation, corporation by corporation, city by city, state by state, that every American and all Americans must commit anew personally, and as voters and professionally, to a national crusade of conscience and action that will ensure that no child is left behind in our nation. I think that the bottom line must be that we must find a better balance between school readiness and military readiness. Indeed, I believe that school readiness is military readiness. That we must find a better balance between child welfare and corporate welfare in the distribution of our national resources. And that we must, continue to build strong security for our sixty-six-year-olds and all of us who are becoming senior citizens or are senior citizens. But I think we've got to extend that same security, health security, educational security, in the early years of life. There's no reason in the world why every six-year-old should not have the same kind of health care and investment that every sixty-six-year-old has and deserves. So we need a fundamental shift in priorities and in our paradigms, because every nine seconds of every school day, one of our children of every race and class drops out of school. Every ten seconds one of our children is abused or neglected. Every fifteen seconds, as we sit here, one of our children is going to be arrested. Every half-minute, in the richest nation on earth, one of our children is born into poverty. I think it's shameful that we let children be the poorest group of Americans. Every minute a child is born to a child, often the mothers and fathers have not

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\* Marian Wright Edelman is founder and president of the Children's Defense Fund.

started high school or finished high school. Every three minutes one of our children is arrested for a drug abuse offense. Every five minutes one of our children is picked up for a violent crime. Every hour and a half an American child is killed by gunfire. I was very struck when the Nobel Peace Prize was awarded to the Irish leaders, who are fighting for peace, much deserved, and the *Washington Post* wrote that 3,600 people had been killed in the violence in that strife-torn country. And that's a lot of lives to be lost, but then I realized that's less than we lose in American children each year to gunfire. We lose nearly 5,000 children a year, a classroom full every two days. What has happened to us that the killing of children by guns has become morally routine? Where is our voice? Where is our outrage? And every four hours, our children lack so much purpose, some of them, that they commit suicide.

While I don't think we can return to the good old days, I also believe that the more change there is, and we're seeing technological and other changes at a kaleidoscopic rate, it is all the more important that we have strong anchors, so that our children can still retain some basic sense of who they are. And we've got to reestablish the rituals of family and the rituals of childhood. I would hope to try to see how we can reinstall in rebuilding our families, because every Sunday morning, and I'm sure many of you had similar childhoods, in a different way, my parents, my sister and three brothers and I, gathered around the breakfast table. And each child had to repeat a Bible verse. And we can get away with "Jesus wept" only once. Then we would all say the Lord's Prayer in unison. After breakfast, we would brush our teeth, check out each other in the mirror, and then we would comb our hair, put on our best clothes, and then we'd go off to Sunday service, where my daddy was the Baptist preacher and my momma was the organist, church fundraiser and general everything. After church, when we were little, we would go with our parents, and we would drive elderly or disabled parishioners home. And then, we would come back and prepare dinner together. While my mother would fry or smother chicken or pork chops, the children took turns churning ice cream for dessert, setting the table, and entertaining any guests invited to join us for Sunday dinner. Many families don't go through these family rituals anymore too often in a regular manner. And with fast food restaurants, many children don't know how to make anything from scratch. That's how we were socialized in conversation and how we learned to be together. This rhythm of family life was very important.

Every Sunday afternoon we had to take flowers from the church up to the hospital, and then visit members of the congregation who were sick at home. Sunday evenings always were shared with one church family member or another, who prepared very scrumptious meals for our family.

Every school day morning we got up to the smells of breakfast cooking and came home every afternoon to a hot dinner and discussions about our day. There are many millions of mothers and fathers who are working

today, and five million children come home alone. We've got to find a place for them to come, whether it's the congregation or the community center, because they need to have some adult be with them and be able to debrief, and to have some safe haven from the street. After school we had to clean up the kitchen, we did our homework, and then we would go out in the yard and we would play marbles, and dodge ball, and horse shoes, and red light, and momma may I, and regular jump rope, and from the sophisticated northerners, we learned how to do double Dutch and hopscotch. We'd then have a snack, play the game of jacks, Old Maid, Monopoly or Chinese checkers, and then we'd take our sponge baths, say our prayers, and go to bed about 9:00, to get ready for another day. We had a lot of fun without a lot of money, making up games creatively that didn't need store-bought toys, money or directions from adults. Regular checkers played with soft drink bottle caps, homemade stilts with discarded pieces of wood or tin cans, my favorite, attached to wire, was much or more fun than the expensive toys we are marketed today as parents that we think our children have to have. And they put pressure on us as having to have. Pin the tail on the donkey used to tickle our funny bones for hours and, as we got older, and I'm sure many of you have done this, spin the bottle titillated our young adolescent libidos, which were always kept in check by ever-present adults.

I was very lucky as a child, because books were always a part of our home life. And my parents considered them necessities, rather than luxuries. A new book was more important than a second pair of shoes, and I used to love to go down to my daddy's book-lined study, where he would read for many hours of the day. These kinds of rituals repeated themselves when I went off to college at Spelman and I rebelled against many of the rituals, including compulsory chapel, which we had to go to. But I now look back and most of what I remember from college years really came from chapel at Morehouse and Spelman, where Dr. Mays and other great leaders would come in and tell us about everything and about what life was about. And the first thing I did when I became Chairwoman of the Spelman College Board of Trustees was to re-institute compulsory chapel, which I had rebelled against, because young people don't have a chance to hear what adults think is important, and don't get the inspiration from the great role models that they need. Dr. Mays, who was Martin Luther King Jr.'s mentor, another inspirational speaker, shared with us on a regular basis what he believed, had experienced, thought we needed to know to make the world better, made it real clear that education was not about yourself, it was about giving to others and about making the world better. And no idea was too big and no detail was too small, as they trained us and prepared us to wade into the river of life with sturdy boats and oars and life vests to keep us afloat when we fell into rough waters. We were taught to be neither victims nor victimizers. They urged us not to hate white folks, because God created white folks, and black folks, and brown

folks, and all folks out of the same dust, and that ultimately we would all be held to the same standards of justice. They preached that service to community was a higher value than service to self, that conscience took precedence over career, that respect for life, our own and others, was inviolate. And they taught us to value and respect ourselves and others by valuing and respecting us enough, as children and as young people, to carefully plan and prepare the daily rituals of fellowship, homework, community involvement and activities, and support of each of us at each stage of our development. Practical adult worldly advice to young people always was grounded in a deeper message of purpose and service, reinforced by example. They didn't tell us how to go about changing the world, they helped struggle to change the world with us. And we never lost hope, even though the wonderful old days were not so wonderful in the segregated South, but we never lost hope, because there were always adults who were there to say we can work together and struggle together to make it. And our young people today who are suffering from despair and see suicide as the only out and prison as the only protest need that same kind of assurance from the leaders in their communities, whether they're congregations, or they're community elders, or they're parents. We may not win, but we'll be there and we'll fight to make sure that this world will be better for you and for your children. And we need to make sure, as well, that education is there not just to lift self, but to lift the entire community.

I don't know how I could have survived the indifference, and the evil, and the violence so rife in our nation and in the world, the shallowness and pettiness of so much of Washington's self-important life without these seeds of faith, of prayer, of ritual planted in our young souls, my young soul, by parents and community elders. And I worry in every piece of my being about our many children of every race and income group, who, lacking a sense of the sacred or any internal moral moorings, are trying to grow up in a society without boundaries, without respect, without enough positive role models at home, in school, in religious congregations, in our communities, in our political and economic life, and in a culture where almost anything goes on television, in the movies, in music, and in how we treat each other. Without a sense of core values, like honesty, and discipline, work, responsibility, perseverance, community and service, we all become easy prey for the false idols of culturally manufactured glitz, materialism, greed, and violence. Never have we exposed so many children so early and so relentlessly to cultural messages glamorizing violence, sex, possessions, alcohol, and tobacco, with so few mediating influences from responsible adults. Never have we experienced such a numbing and reckless reliance on violence to solve problems, or to feel powerful, or to be entertained. Never have so many children been permitted to rely on guns and gangs, and on television rather than on parents and neighbors, and religious congregations and schools for protection and guidance. And never have we pushed so many children onto the

tumultuous sea of life without the life vest of nurturing families and communities, caring schools, challenged minds, and job prospects that can allow them grow up and get a job, and form new families. Young families are not getting off the ground, not able to make decent wages. Forty percent of all of our young families with children are poor. And never before have we subjected to our children to such a tyranny of drugs and things, and taught them to look for meaning outside rather than inside themselves, teaching them, in Dr. King's words, to judge success by the values of our salaries or the size of our automobiles rather than by the quality of our service and relationship to humanity.

I hope that, as we face a new century and millennium, we will recognize that the overarching challenge for America is to rebuild a sense of community, and hope, and civility, and caring, and safety for all of our children. I hope that we will reclaim our nation's soul and give back to all of our children a sense of security and give them their ability to dream about and to work toward a future that is attainable and hopeful, and that is real. How do we do this? How do we do this together? I think the first thing is that adults, each of us, need to just examine ourselves, take an audit from time to time. Our children don't need us to be perfect, but they do need us to be honest. They need to know how to struggle. And one of the things I remember most about Dr. King is he never was afraid to say when he didn't know an answer, and when he was afraid. He could share that with young folks, but he also taught us not to be paralyzed by fear. And this, again, ability to struggle and see adults struggling is really important, and James Baldwin said it a long time ago, that our children are confused because they see what we say, and then they see what we do. And they almost never do what we say, but they almost always do what we do. And we don't really have a youth problem in America, we have an adult problem in America, because we tell our children not to be violent, and then we are violent. We have over 220 million guns in circulation in this country and produce another handgun every eight seconds or import another gun every eight seconds. Almost every other house has a gun. What message does this send to our children, and how is it that we can let our children under 15 die at rates from gunfire twelve times the rates of twenty-five other industrialized nations combined? What messages are we sending to our children? Again, we often talk about our faith congregations. The drug dealers are open twenty-four hours a day, seven days a week. How many hours a day are our congregations open, so that children have safe havens from the street? And how much do our children see us applying what we hear on Sunday morning to our professional lives on Monday through Friday, in the values that we stand for every day?

How can we begin to close the gap between what our children see us doing and what our children hear us saying? If any tell, or snicker, or wink at racial, gender, religious or ethnic jokes, or engage in or acquiesce in practices intended to diminish rather than to enhance other human beings, our children pick up those signals, and that contributes to the loss



of community and our disrespect, one for the other, in a nation that must be indivisible if we are to go forward together.

I do hope we will not repeat the lessons of the past, and I do hope, as we face a century when America may see the majority become the minority, that we will have set into place a new series of tolerances in the way in which we conduct ourselves in our homes, in our congregations, in our communities, because our children are watching. And I do hope that we will move beyond trying to be good role models just for our own children, but that we will also reach out to try to make a difference in the life of at least one other child who is not our own. And I am always so moved by the fruits of generous action. I would like to tell the story right now of a foster child, who was born a little over forty years ago to a young teen mother, who couldn't take care of him and placed him in foster care. But the baby really did not thrive, didn't speak until he was three or three and a half, and the foster mother was so worried that he'd be put into an institution for the retarded. And so every day she began to nag, as the social workers began to talk about removing the child from her foster care, a couple that she knew, whom her husband worked with in the Post Office. And the husband said, "No, we can't adopt another child because we've got two of our own. My wife is pregnant and we've just got enough to handle. And besides, we can't afford the adoption." But the mother got the bug that she was really going to do something about this child. She was a gifted singer, and she got a bit role in *Carmen*, got enough money to pay for the adoption cost, and took this child in and loved him back to life. And in a year, he was talking, and learning, and eventually went on to Yale College and Harvard Law School, then picked up a degree at the Kennedy School of Government. He is now our new mayor-elect of Washington, D.C. We often don't remember that when we save a child, we often save much, much more.

I'm very moved by the story of 4,000 years ago, of three women who crossed race and ethnic boundaries and faith. Moses' mother, Moses' sister and the Pharaoh's daughter, who took one Hebrew slave boy and sent him into safety. And by saving that young boy, saving that one child, these three women, who crossed many boundaries, ended up saving the child whom God used to liberate the Hebrew people. You never know, when we reach out to one child, whether we may be saving a whole nation or a whole community. Let's find a way through mentoring, through tutoring, through setting up after-school programs. If you can't find the time, send a kid to summer camp, support programs that are trying to set up mentoring, but let's reach out and make a covenant that we'll make a difference in the life of at least one child.

Third, we must counter the idols of our culture and the pervasive adult hypocrisy that are confusing so many of our children, and leading them astray. I hope that parents, and child advocates, and spiritual leaders will become profoundly and doggedly countercultural and reject our culture's glorification of violence, excessive materialism, truth shaving and

easy feel goodism. We all must make an effort to teach our children the difference between heroism and celebrity, and not to confuse money with meaning, or educational degrees with wisdom and common sense, or power with meaningful purpose. In CDF, the Children's Defense Fund, I'm obsessed with how we create a new generation of servant leaders, or young people who see themselves as instruments of service, but who are skilled in understanding the means of change that will be needed in the twenty-first century, who understand the relationship between programs and policy and community empowerment strategies, and politics and technology, and can use the media effectively and form coalitions, but who are wrapped up in a sense of commitment to something beyond themselves, and who ask, "Why are we here and what is it that we are trying to accomplish in bringing ourselves together for something that's bigger than ourselves?" Our goal is to create at least 2,000 new leaders by the year 2000. I hope that we can all focus on how we can identify and nourish this sense of service in our leaders, and teach our young people what Walker Percy had one of his protagonists say, that you can get all As and still flunk life. I hope that in our political life and in our corporate life we will begin to broaden our concept of what a leader is, as we try to figure out how we bring our communities together, and rebuild our families, and recommit our nation to just opportunity for all.

But reaching out to just one person is not enough. We've got to build a movement. We've got to change the policies. Charity and individual action is very important. Service is absolutely crucial, but that's not enough to change the priorities of a nation that lets its children languish uneducated, that lets its children be the poorest group of citizens. And I hope that in Texas, because Texas is so important, one can take the lead.

I am excited to be reopening a Texas office in Houston. But Texas has one in twelve of all American children, and we have targeted ten states in America where a majority of all children live, a majority of all minority children, and the majority of all poor children live. And between Texas, California, and New York, a third of the children in this country that fall into these categories live, and you like to be big, and are big, and first, and doing good for children in Texas can do good for children and send a different signal all over America. You have one in ten of all poor children in Texas. You have one in fifteen of all uninsured children here in Texas. And I hope we can band together and build on a new marvelous step forward, with the enactment in 1997 of the bipartisan Hatch-Kennedy Child Health Insurance Program, and some powerful women here in this room helped make that possible. But I was so grateful that Senator Hatch and Senator Kennedy understood that children suffering from asthma, or who are facing life threatening diseases, don't know a Democrat from a Republican, or a liberal from a conservative. They just need some help, and they need all of us to put partisan politics aside and, as a result of this effort, backed up by a lot of community action and a national coalition, a \$48 billion child health insurance program was passed to deal with the

problem of eleven and a half million uninsured children in our country, 90 percent of whom live in working families. That's intolerable. This new bill will serve up to five million children, and I don't think the Lord really meant us to give only half of our children a healthy start, but I'm very eager to have it well in force, so we can make the case for why we've got to make sure that every one of Texas's children gets that healthy start. You have made enormous strides forward, and we cite you for educational attainment. You are one of the few states that's really closing the gap between black and white, and brown and white children, between rich and poor children, and many of you in this room have been instrumental in that, including Ernie Cortes. But I also do hope that Texas will take the lead in implementing a strong health insurance program. You've got between 1.3 and 1.4 million children uninsured in Texas. We are waiting for a final decision. You've been a little slower than other states in getting off the ground on this, but I do hope that we will see Texas move into a leadership role in seeing that as many of your children can get insured as soon as possible, because, as a mother, I find it unimaginable to think about having a child with a life-threatening cancer, and in addition to struggling to hold your child, yourself and your family together, you also have to beg, borrow and scrape to find enough money for the next chemotherapy treatment, which parents blessed with health insurance don't have to worry about. The closest thing I have to a daughter is a very wealthy young French woman, who has AIDS. And she's been a long-term survivor, thanks to the best health care that her wealthy family can afford. And I've been very moved by her courage in her thirteenth year of struggling with this disease. But I don't know how the parents whose children have AIDS and don't have this kind of family and medical support system, manage. And we should not have to have people face two-front battles against life-threatening diseases and health care poverty at the same time in our wealthy nation and in your wealthy state.

One of my sons had asthma and whenever he got ill, I could always rush him off to the hospital emergency room, or to our pediatrician, but I was very moved by a Texas mother's story, whose eleven-year-old daughter woke her up in the middle of the night, saying, "Mom, I can't breathe." Her inhaler was broken and Mrs. Coleman, whose eight dollar an hour job had no health benefits, rushed her daughter out to the car, but, debating all the time whether she would go into a hospital emergency room, which would cost about \$100 and break her budget, or to go to an all-night drugstore and find an over-the-counter remedy. She chose the over-the-counter remedy. Happily, her daughter was all right, but she said to me that, "For eighty-eight dollars or a hundred dollars, I was gambling with my child's health and life." No parent in this wealthy nation should have to worry this way. We have got to begin to put into place the building blocks, the early investments, the sensible things that make cost-effective sense, as well as those that are right for every one of our children. It's

unworthy of us that millions of parents, who are trying to work, don't have safe, affordable, quality childcare, don't have adequate nutrition, and don't have health care. Health care is a school readiness issue, or the children are not ready for school, because we don't invest in these early years, and we must come together to build a movement, again, to change the values of a nation that would rather invest twenty, thirty, forty thousand dollars to lock our children up after they get into trouble, and won't invest the money in the early years, when it makes sense, to get them ready, get them educated, give them a stake in a society that values them. We must change that together by broadening and building a stronger constituency that is committed to saying to all of our political leaders, on all sides of the aisle, that we will no longer tolerate the neglect and abuse, and lack of preparation of our children for the new world, the post-industrial world, where America will not remain as the sole remaining superpower unless we really do prepare our future workforce and our future leaders, who are our children today, whose plight I portrayed at the beginning.

We can do this. We can do this. It'll take all of us coming together across race and class, and while it must be an inclusive movement, I also think that there's a very special role for women, and for mothers and grandmothers to come together and just to say it is time, folks, to change the priorities of this nation. We're going to take care of our children, and to say that through our votes, as well as through our voices and our organizations. And that must be our goal in the new millennium. I think that we can have America rise to its best self by making sure that every one of its children feels valued.

Let me end with a prayer, which I always do, because I think that in our land of economic plenty, we are in the midst of a spiritual famine that is reflected in the suffering, and the lives, and the struggles of our children.

And so, I would like to ask God to forgive our rich nation, where our babies die of cold quite legally. And God, forgive our rich nation, where small children suffer from hunger quite legally. God, forgive our rich nation, where toddlers and school children die from guns, quite legally. God, forgive our rich nation that lets children be the poorest group of citizens quite legally. God, forgive our rich nation that lets the rich continue to get more at the expense of the poor quite legally. Oh, God, forgive our rich nation, which thinks security rests in missiles rather than in mothers, and in bombs rather than in babies. God, forgive our rich nation for not giving to you sufficient thanks by giving to others their daily bread. God, help us never to confuse what is quite legal with what is just and right in your sight.

Alexis de Tocqueville, a long time ago, said that America will be great as long as America is good. Our opportunity on the eve of a new era is to make sure that America is good, and that our children's lives reflect that good. I look forward to working with you, to see that we realize our best selves. Thank you, very much.

# RACIAL/ CLASS CONFLICT

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ERNESTO CORTES JR. \*

GOOD AFTERNOON. I want to thank, first of all, the Philosophical Society of Texas for inviting me here. If it hadn't been for you, I would have never, ever been to a city that I'd only heard about in song. I'm told it's the prettiest town anybody's ever seen, or, at least, that's what the song said. I hope that that becomes evident to me as I drive through it.

I was struck, as I was listening to Ms. Edelman, that maybe the best thing for me to do is to say "Amen, ditto, I agree." What more can I say? What more can anybody say about the challenges and the opportunities we have to really renew our most important and hallowed traditions of fairness, and equality and participation? But I guess I can't get away with that. So, I'll try to figure out if there's another angle that I can come at, notwithstanding that Ms. Edelman has just about stolen all of my thunder, taken most of my stories and made them better, and given me very little to work with. I'll have to throw away my script and try something new.

When I grew up in San Antonio—Ms. Edelman's talk reminded me about my early childhood—things were kind of like they were for her. The way I used to put it was that when I grew up, there were 250 adults organized against me. My father had six brothers and six sisters, my mother had eight brothers and five sisters, and we came from a Mexican Catholic family. My grandfather was kind of the patriarch, on my mother's side, of all of us. And, of course, all of my aunts and uncles had *comadres* and *compadres*. We went to St. Cecilia's Catholic Church and at that time, a Mexican Republican was somebody you just looked at, but didn't stare at. At least, that's what my father said. "Look, but don't stare." Okay. "Don't be impolite." Because we were all part of the Democratic Party. In fact, one of the highlights of my young life was when my Uncle Raul Cortes brought Adlai Stevenson as the first Democratic national candidate to the West Side of San Antonio in 1952. My father worked for Pepsi Cola for a while at the time, because they were hiring Mexicans. This was kind of an early version of affirmative action. And he got into trouble

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\* Ernesto Cortes Jr. is the southwest director of the Industrial Areas Foundation.

with all of his brothers and sisters, because he sort of suggested that maybe in '52 that voting Republican wouldn't be an evil act. Anyhow, I just want to give you a sense of kind of the culture that I grew up in, which was one where there were all these networks of relationships of family and congregation and church. When I went to school in the morning, the bus driver knew who I was. When I walked to school as a young person, it was kind of like walking through Checkpoint Charlie at different places, because everybody kind of would make sure that I was going where I was supposed to go.

So at the tender age of seventeen, I got out of town as fast as I could to go to not any place nearly as wonderful as Spelman, but A&M.

But I guess what Marian's remarks remind me of is how important those intermediate institutions were, those networks of relationships were to my own development and my own upbringing. And I was particularly struck by my own upbringing when I began to organize, in East Los Angeles in 1976, to create what became the United Neighborhood Organization of East LA. When my wife and I went to a parish festival and met with the leaders of what became the UNO organization, they were lamenting how that particular festival had been a fiasco, a failure, nobody came, because there had been a drive-by shooting. And what struck me more and more, as we began to try to find people who were interested in getting involved in building what became the UNO organization, that instead of 250 adults organized against one kid, as it was for me in San Antonio, it was the reverse, fifty kids organized against every adult, and the adults living under virtual house arrest, afraid to go out, afraid to go to church, afraid to go to work, afraid to go out anywhere, and the city's virtually living under a state of martial law. Informal, to be sure, but martial law nonetheless. Curfews, self-imposed curfews by adults, leaving the streets run by their children.

Now, unfortunately, when I got back to San Antonio and went back to Houston to begin organizing, we saw the same patterns begin to emerge. I was struck that Texas was beginning to go the way of Los Angeles. And now, as I go back to Los Angeles and look at what's going on there today, I'm reminded of Lincoln Steffens' remark, that I've seen the future, but it doesn't work. Because what you're beginning to see in places like Los Angeles, or places which are undergoing incredible polarization of class, and race, and ethnicity. This past Friday there was a front-page article in the *Los Angeles Times*, a very disturbing, disquieting article, about the fact that the African-American middle class has virtually left the city of Los Angeles and moved to Ventura and outlying counties, and even back to the south, afraid of the violence, afraid of the turbulence that exists in inner city Los Angeles. Places like the historic African-American communities, like Compton, and Watts, are left to only those who are very, very old and those who are very, very young and very vulnerable. The only immigration into these communities that is taking place is

among people who are immigrants from other countries, who also, unfortunately, have to be counted among the most vulnerable.

What's going on in Los Angeles reminds me of some analyses that I've read by people, like Frank Levy and Richard Murnane, who have written a book called, *Teaching the New Basic Skills*, which talks about the growing inequality of power and wealth in our society, and the decline in real wages that is taking place. Even white males who have high school diplomas have seen a precipitous decline in their real wages during this period of time, notwithstanding what's happening to African-American, or Hispanic, or Latino males, or females. I'm also reminded of Rebecca Blank's book, *It Takes a Nation*. She talks about how the economic growth is no longer an effective anti-poverty program, that, in fact, unlike the 1960s, where you saw economic growth reducing poverty, in the late '80s and '90s you've seen just the opposite, that as we become more and more affluent, as we see our real gross domestic product increasing, we're also seeing poverty rates increasing at the same time. There has been this fundamental disconnect between increases in GDP, and even increases in productivity. I was always taught, when I took economics as a young freshman, that the whole neoclassical theory hinged upon John Bates Clark's notion that as productivity increased, real wages were supposed to go up. There was this historic social compact, which existed in the United States from 1865 to 1973, that as productivity increased, real wages increased. I know that there were some things you had to do, in order to get those wages to go up. There was a fellow cited by Harry Johnson that said—it was a University of Chicago economist, no liberal, by the way—that there're two ways to get those wage rates up to the productivity increases. One is by investment in human capital. The other is class conflict. I used to tell people that I preferred the first, but I'm not unwilling to do the second, regrettably.

Unfortunately, at the same time that we've seen productivity go up, we've seen real wages go down. And, of course, there are some people who argue that that's partially because you've seen the power of organized people decline at the same time you've seen the power of organized money increase. Alinsky used to teach us at the Industrial Areas Foundation that there're two ways to get power; one is to organize money. People like Bill Gates have got lots of power. People like Rupert Murdoch have a lot of power. People like Warren Buffet have lots of power. Then the other way you get power is to organize people. And, unfortunately, as my friend, Frank Levy, says, organized capital has got organized labor on the run right now, because we have seen a significant decline in our capacity to organize working people to be able to negotiate and bargain. We've seen a significant decline in our capacity to participate effectively. We've seen both political parties kind of disconnected from their constituencies, or the constituencies that they traditionally represented. I used to say that the Republican Party represents those people who make over three hun-

dred and fifty thousand dollars a year, and the Democratic Party represents those people who make over a hundred and fifty thousand dollars a year. The rest of us folks have got to make do.

And I was kind of reminded of this even further when my friends in the BUILD Organization went to see Barbara Mikulski and began to talk to her about strategies for the Democratic Party, and she said to them, in a candid moment, "What do you mean? There is no Democratic Party. What we've got are franchise agreements." Lloyd Bentsen and Ann Richards, they got the Texas franchise, but there are no political parties. What we have are these permanent campaign, marketing campaign organizations. In fact, I'm reminded that a woman by the name of Kathleen Jameson, who used to teach at the University of Texas until she went to the University of Pennsylvania, used to tell her students, "If you want to understand electioneering in the United States, you should not take political science courses, because in political science courses we will teach you a lot of irrelevant stuff. Particularly, we'll teach you about all those dead white, European males, like Aristotle and Montesquieu, and we'll also talk about issues, and we'll talk about the great movements. And if you really want to understand electioneering, you really need to understand marketing campaigns. Because elections today are not about issues, and debates, or negotiations or agreements. Elections are now about how we persuade people to buy our product versus another, and that means you've got to master marketing technique. You've got to master the thirty-second spots and attack videos, and all that sort of thing." So, like I said, I don't think we do politics anymore. Every four years we have what I think is this quadrennial electronic plebiscite, which has nothing to do with real politics. And, to me, that's tragic, because I think if there is one thing, one idea that the United States has to contribute to the rest of the world, it is its understanding of democratic politics.

Alexis de Tocqueville, I'm told, when he came to the United States to study ostensibly prisons and other eleemosynary institutions, was really here to study American politics. And he thought it just might work. You know about Tocqueville, of course. He was a French aristocrat whose father had been guillotined, and for that reason, was not too keen on revolutionaries or revolutions. He was concerned because when he saw the counter-revolution take place, he thought that they were making the same mistakes again. So he came to the United States and hoped to find something different. And he found a couple of interesting things. One was that even though we kind of went crazy every four years with national political elections, the politics that really mattered to people was not the politics of national elections, but the politics of the local communities, the politics of the school board and the township.

The second thing that impressed him was the way in which people conducted politics—he said that Americans had this disposition to form all kinds of associations. But what he was interested in about this kind of



associational democracy, which he wrote about, was, number one, this democracy was based upon understanding of people's self interest. Number two, is that it involved all kinds of bargaining and reciprocal arrangements, so that people would get together and work on, for example, raising a barn, and then those people would get together and work on organizing a school district. So what impressed him about was this bargaining, and negotiating, and reciprocal relationships that emerged, which began to build some kind of trust between those folks.

The third thing which impressed him was the fact that the leadership that emerged, that developed, was institutionally connected. It was connected to congregations, connected to townships and to other institutions. So, Tocqueville thought that maybe it might work, although he was concerned about the fact that there were some dark undersides to this whole American experiment, and that was that whole groups of people were left out, to wit, African-American males, women, and white men without property, and, of course, slaves. Because of this, Tocqueville developed a political philosophy, which I kind of share, which is to be conservative about family, and community and tradition, tradition meaning the living ideas of the dead versus traditionalism, the dead ideas of the living, and liberal about civil rights, and radical about power and participation.

Tocqueville also gave us another interesting insight. He thought that we had, what Americans had, what he called an Augustinian soul. And part of that Augustinian soul was our capacity to withdraw into ourselves, to become self-absorbed, to become only concerned with that which was our private interests. But he felt that that was not so bad, because there was an antidote to that Augustinian soul. And that antidote was participation in face-to-face local political activity, which enabled people to kind of transcend their private interests, to transcend their egotism, their narcissism, and their contentment.

The other dimension of the Augustinian soul, which he was concerned about, was our inclination, which came out of our enterprise culture, which he thought was good and positive, our inclination and our capacity to generate wealth and prosperity, but also to overreach and to make larger claims on life than were appropriate. In a word, greed. But he felt that there was an antidote toward that inclination, and the antidote was the existence of families, and networks of families, and other intermediate institutions, and religion, congregations and faith-based institutions. And he felt those institutions, those networks of relationships would constrain this inclination to overreach and to make larger claims on life than were appropriate.

Now, obviously, you know where I'm going with this, and that is given the fact that we have now created this new technological revolution, this globalization of our economy, this thrust towards transcending national sovereignty, we have also, at the same time, given its potential for creating large amounts of economic wealth and creating all kinds of

opportunities, undermined our capacity to form local communities. Peter Drucker wrote an article in the *Harvard Business Review*, where he talked about the fact that given the imperatives of technology and the logic of the marketplace, community values have to suffer. And that's the way it'll have to be. But then he lamented, if that's so, then how do we begin to seek some sort of understanding of what is the common good?

Now, I'll argue that if we are going to create, in fact, those values of trust and reciprocity, and solidarity, which I think are foundational not only for the creation of a democratic culture, but also for our enterprise culture as well—Kenneth Arrow wrote a very fine book called *The Limits of Organization*, where he talked about those values of reciprocity and trust that are essential for the creation of our enterprise culture. And Walter Oken has written *Why the Market Has Its Place*, because the market is this wonderful, powerful institution for generating wealth and making choices, and has its place, but the market has to be kept in its place. And not just by government, but also by society. But if we do not have those thick networks of relationships, which enable us to constrain that enterprise culture, if we do not have those thick networks of relationships that enable us to develop what Bellah describes as habits of the heart, those patterns of behavior which Tocqueville thought were so important to associational democracy, then we have to think about ways in which we can recreate them.

Now, the other insight that I thought Ms. Edelman gave us was that we cannot go back to the 1950s. We cannot recreate that kind of wonderful time, which wasn't always so wonderful, when I had to undergo all the constraints of those 250 adults. But we can begin to think seriously about trying to initiate a strategy to recreate or to revitalize the institutions of family, congregation, neighborhood, labor union, and professional association, which can establish a different kind of politics. A politics which is centered on the values and visions of a free and open society, democrat with a small 'd', and the responsibilities of a republican culture, republican with a small 'r'. I would argue that in order for such a politics to work, it has to be also connected and centered in the values of our three great faith traditions, Judaism, Christianity and Islam. We are all people of the book. But if we are going to understand the imperatives of those traditions, we are also going to have to recognize that we cannot be people of the book, we cannot be true to those values, unless we understand that we have to create the mixed multitude, the mixed multitude where our traditions of Sinai and Pentecost enable us to create the sense of peoplehood, people who are able to engage in a covenantal relationship with our creator.

Several years ago a fellow by the name of Sheldon Wolin wrote an essay in a book called *The Presence of the Past*. He had some reflections on a great biblical story, which I'd like to share with you, about two brothers in the *Book of Genesis*. Well, they were twins, and these twins,

of course, were Esau and Jacob. And Esau and Jacob were born to one of the great patriarchs, Isaac, and his wife, Rebecca. Now, you know about Esau. Esau was his father's favorite. He was Isaac's favorite. Esau was a wild kind of a guy. He kind of got his mother all upset because he used to like to roam around. But Esau was also hairy, he was a hunter. He was a man of few words. He was kind of what I call a '50s kind of a guy, all right. Now, his brother, Jacob, was a bit different. Jacob was his mother's favorite. He was a great cook. He was smooth of skin. Jacob knew his way around a tent. A cunning, shrewd guy, he was kind of a '90s kind of fellow. Now, one day Esau was out hunting and had been unsuccessful, and he was starving and he was famished. And he saw his brother, Jacob, making this stew. I guess it was lentil stew or pottage stew, I forget which. He saw his brother, Jacob, making this stew, and he came to Jacob and he said, "Jacob, I'm starving to death. I've been unsuccessful. Feed me." Jacob says, "Brother, you know you can count on me, but what do I get for it?" And Esau says, "Brother, what do you want?" Jacob says to Esau, "Sell me your birthright." Esau says, "Well, my birthright is not going to feed me right now. What good is it? I'll starve to death with my birthright. It's not going to keep me warm at night. I can't make love to my birthright. After all, my birthright is my identity, my father's obligations, it's a burden to me. Of course, I'll sell you my birthright." And we're told in the *Book of Genesis* that from that day forward, Esau despised his birthright. Wolin suggests, and I tend to agree, that you and I, we are Esau, because we have been willing to sell our birthright for material things.

What is our birthright? Wolin argues that our birthright is our politicalness, our capacity to come together and to negotiate, and to deliberate about the issues that concern us; the raising of our children, the education of our children, the disposition of our families, and what happens to our communities. Or as Aristotle defined politics: that which has to do with those deliberations, which take place around the Agora, the public square, those deliberations about family, property and education.

Now, of course, Aristotle was a fairly limited fellow. He was one of these dead, white, European males that my daughter always tells me about and thinks are irrelevant. And to be sure, Aristotle had a very, very limited perspective, because Aristotle thought that only certain groups of people should be able to do this political thing, because he thought that what made us human was our capacity to do politics, because there was something about us which only emerged when we were able to engage in these kind of deliberations. But, unfortunately, Aristotle didn't think that all of us were human. He thought some of us, because we were so absorbed with our needs and our necessities, that we were so absorbed with our private interests, and I'm told, and political theorists here can correct me if I'm incorrect, that the way Aristotle described the word 'private,' or the Greek word for 'private,' meant idiot. Somebody who was

totally concerned with his needs and necessities, or her needs and necessities. Aristotle thought, therefore, that those who were idiots were women, slaves, immigrants and people who work with their hands. Wolin argues that one way of looking at our political tradition, one way of thinking about our birthright is that it is about the struggle of those people that Aristotle thought were idiots, gaining their rightful place at the Agora, at the public square. It was the struggle of working people in the Labor Movement, of African-Americans and other people of color in the Civil Rights Movement, of immigrants, of women in the Women's Movement. It was a struggle for Jacksonian Democracy. It was the very basic struggle, which was a source of our own political traditions and our foundational documents. That is our birthright. No question.

There are some other dimensions to our birthright. Our burden, racism, oppression of women, oppression of white working people, certain imperialistic kind of tendencies, and indications of our limits to overreach ourselves. There are some things that we ought to apologize for. The Japanese aren't the only people that ought to apologize, to people that they've kind of picked on. And I know that's probably an unpopular thing. I wish that someday the rest of you would apologize to us Mexicans, I mean, I like being part of the United States, but you still owe us an apology, okay. And particularly, you owe me an apology for having to have to go through what I went through in San Antonio, because every year I had to celebrate, for one solid week, the defeat of the Mexican Army at the Battle of San Jacinto. Now, I'm a kid who grew up in a town which is 53 percent Mexicano, and I always wondered how come we celebrate the defeat of the Mexican Army every year. Anyways, I don't want to go on and on. Yes, I do, but I won't. Anyhow, that's also a part of our birthright. That's also part of our heritage. And we have to embrace that burden unless you believe that what's a little slavery between friends, and I didn't do it, so I'm not responsible.

Anyhow, my point is that Wolin has said that we are like Esau, willing to sell our birthright for material things. Or, as Ms. Edelman suggests, willing, because we are ahistorical, to give up our responsibilities and rights as citizens, to become consumers and clients.

Somebody asked the question about the role of Madison Avenue. I'm told that a child who is born in America, who lives to be seventy-five years of age, will spend three years of their life watching television commercials. Three years of their life watching television commercials. I happen to think that that's a formative dimension in their development. I happen to think that helps shape who they are and how they behave. There was a fellow by the name of Danby, who's a book critic of the *New Yorker* magazine, who wrote an essay about three summers ago. In that essay he argued that in order to raise a child today, you have to be a bully. And I've gone through those kind of tough, hard negotiations with my own sixteen-year-old son. I've won some of them. I won the battle against

Nintendos, I won the battle against hundred and twenty-five dollar shoes, but I've lost some other battles. But it's hard to fight a sixteen-year-old articulate, tough kid, when you don't have any allies. And he's got enormous allies, okay. He's got enormous leverage about what other kids do, and how other kids behave. Danby argues in that article that it used to be that kids, before the credit cards and the charge accounts that so many kids have today, would grow a soul and develop a personhood. They would develop a soul before they became consumers and customers. But now, he says, it's the other way around. Most of our kids are becoming consumers and customers long before they develop a soul, long before they develop a personhood. That, unfortunately, is the product or function of our willingness to sell our birthright.

The great Czech poet, Havel, talked about how in 1968 when the Russian tanks came into Prague, the Czech people, the intellectuals and the middle class, made a deal with the *nomenklatura*, and the deal was as follows: that we, the *nomenklatura*, will provide you, the Czech intellectuals and middle class, with all the goods and services of a mass consumption society, the good restaurants, the good homes, the fine cars, the summer places to retreat to, in exchange for which we will make all the political decisions. And so, you can quit your civic associations and quit your political movements. Havel argues that the Czech people, as a result of that deal, underwent an internal migration. They withdrew into themselves and they became self-absorbed with their private lives and their private concerns. Of course, they had a pretty good excuse; they had Russian tanks at their head.

Hannah Arendt argues in her book *Men in Dark Times* that the German middle class, during Nazi Germany, underwent the same kind of internal migration. They also withdrew into themselves. They also became self-absorbed. They also became concerned with their private concerns of raising families, and getting jobs, and having the goods and services of a mass consumption society. Of course, they had an excuse, too; they had gone through the turbulence of World War I, the Great War, in defeat, and all that it implied.

We see the same phenomenon, unfortunately, occurring here in the United States. Christopher Lasch talks about the culture of narcissism. John Kenneth Galbraith calls it the content of the contented class. Robert Reich calls it the secession of the successful, the withdrawal of those who are affluent, those who are cosmopolitan, those who are well off, well read and well connected, into their private concerns. And so, they all argue that more and more of upper middle class suburbanites are becoming disconnected from the concerns of ordinary people. I just read an article in the current issue of the *Atlantic Monthly*, which talks about how the Reagan Revolution has produced this group of upper middle class Republican yuppies, who have very little concern with their communities and very little concern with any other children other than their own, and

who are now also withdrawing into this kind of self-absorbed, narcissistic kind of world. I will argue with you that unless we begin to restore the vibrance and vitality of our political institutions, unless we begin to restore the connectiveness of our intermediate institutions of family, congregations and schools, that we will eventually undergo the same kind of polarization, the same kind of discontent as Nazi Germany, and other countries as well. We will see increasing polarization between young and old and between races.

Now, there is an antidote. There is a story. There is hope. And that hope is that we can begin to recreate that social fabric, to reweave that social fabric, to reclaim our traditions. Now, that's what organizing is all about for me. It's not just about service. It's not just about being nice and being good. It's about learning that wonderful thing that we all have to learn from our political tradition, and that is politics. Not the politics of electoral activity, but the politics of negotiation, deliberation, and engagement. Now, in order for that kind of politics to occur, it requires that literally hundreds of thousands of ordinary men and women begin to tap their energies and to tap their capacities. And that requires an understanding of a universal that we try to teach in the Industrial Areas Foundation, called The Iron Rule. The Iron Rule is: never, ever do for anybody what he or she can do for themselves. It's as important to an organizer as The Golden Rule, because what The Iron Rule says is that people have the capacity to act on their own behalf, if they're mentored and if they are taught. Now, The Iron Rule—don't let me be confusing—The Iron Rule does not rationalize social Darwinism. It does not rationalize root, hog or die. What The Iron Rule says is that we have to invest in the development and the capacity of ordinary people. But what is inimical to the development of an Iron Rule is another unfortunate tradition in our polity and in our institutional structure, and that tradition is embodied in another story. And that story comes from a book written by a great, I like to say Mexican author, but my wife always gets mad at me, because the guy's name is Dostoevsky. And she says he's not a Mexican, he's a Russian. And I say yeah, but he understood the Mexican soul. Therefore, I'd like to claim him as a Mexican, but anyway he was a Russian.

Dostoevsky wrote this book called *The Brothers Karamazov*, which is a great book. And in the book is a chapter called "The Grand Inquisitor." And I know all of you, because you're members of the Philosophical Society, have read and memorized that book, so you'll permit me if I kind of summarize it very, very quickly. And summarize that particular chapter, which has to do with the nightmare that one brother tells to the other. Ivan tells his younger brother that this nightmare, which takes place during the middle of the Spanish Inquisition, Christ comes back to Earth. And he's recognized by all the people. And they make a big to-do of him, miracles are performed, a young girl was brought back to life. But he's also recognized by The Grand Inquisitor, who has him arrested, and them

throws him into a dungeon. The Grand Inquisitor comes to see Christ in the dead of night. He says, "Why did you come back? You had your shot. We tried it your way. It doesn't work. For 1,400 years we tried it your way. We offered men freedom. We offered them hope. We offered them opportunity. They don't want to be free. They want to be taken care of. They want magic and mystery and authority in their lives. And after frustrations and pain, and sorrow, and agony and despair we finally got smart. And we went over and we did a deal with the other guy. And today in your name using your words we serve him. And we give people what they want.

They want to be told what to do. They can't even feed themselves. They have to give us the bread, so that we can give it back to them. They can't accept the responsibility and the anxiety. They don't want to be free. So be gone, lest we have to crucify you one more time. So the story ends. Christ kisses him and then goes into the dead of night.

Now, unfortunately, the Grand Inquisitor, from my perspective, is alive and well in most of our institutions. The Grand Inquisitor is alive and well in our universities. The Grand Inquisitor is alive and well in our workplace, in our churches, and in our schools, where the definition of a lecture course is where the notes of the instructor go from his notebook to that of the student, without ever going through the head of either one of them. Neal Poston, in his book *The End of Education*, says that our children enter schools as question marks, with energy and vitality, and leave as periods. Seymour Sarason says, "Public education is the only legalized form of child abuse we have in the United States."

Well, the antidote for the Grand Inquisitor, for his attitude that adults are children, for his attitude that they have to be taken care of, is what we call The Iron Rule, which is lifted up in another story. And, unfortunately, Ms. Edelman took the thunder out of that story, because that story is of another great leader by the name of Moses.

Now, as Marian Wright explained to all of you, Moses was raised in the House of Pharaoh by the daughter of Pharaoh, to be a leader. But he was also raised by a Hebrew woman. Now, the word 'Hebrew' is an interesting term. It does not refer to ethnicity. It does not mean Jewish. It means someone who lives on the margins, someone who is outcast, someone who is considered desperate, an outlaw. David becomes Hebrew to Saul, and Moses becomes Hebrew to Pharaoh. Well, Moses was taught to identify with those who are Hebrew. So one day he came across an Egyptian overseer striking and beating up on a Hebrew. And the *Book of Exodus* tells us Moses, seeing no one—now, I used to think that that meant that there was nobody else around. But then I learned later that what that meant was that there was nobody who was willing to act like a human being, or like a mensch. And Moses, seeing no one, struck and killed the Egyptian, buried him deep in the sand.

The next day he comes across two Hebrews fighting with each other,

and says, "You should be brothers. You should be organizing. You should be in solidarity with each other. You shouldn't be fighting." And they say, "Oh, yeah, Moses, okay, you want us to follow you and get us in trouble, like you're in trouble. Who gave you the right to tell us what to do, Moses? Who made you our lord? And what are you gonna do to me, Moses, if I don't do what you tell me? Are you gonna kill me, like you did the Egyptian?" Well, Moses realizes he's in trouble now. So he splits. And realizes that he's not just in trouble but that his own people have turned against him, because the Egyptian didn't squeal on him. So who squeals on him? Well, his own people. So Moses says "I don't need this. I'm a smart guy." So he goes to the suburbs. He becomes part of the culture of narcissism. Gets a big home, marries Jethro's daughter, the boss's daughter.

But Moses has got a problem. His problem is his identity, his memory, his story. His story, which was taught to him by that Hebrew woman. And that story's so powerful, and so meaningful, and so significant to him that it confronts him. And it's like a burning bush, a fire that doesn't consume. It's what we call, in the eye of tradition, the kind of anger which is cold and calculating, anger which is different from rage, anger which comes from loss and grief. Anger, which is understood in the Norse word 'ang', which means loss and grief.

Anyhow, Moses realizes what he's got to do, and when Yahweh confronts him and says, "I want you to go out and free my people," he says to Yahweh, "Wait a minute. The people have rejected my leadership. Who will I say sent me?" And Yahweh says, "Don't worry about it, Moses. I'm gonna organize a sponsoring committee for you. You tell them that the God of Abraham and Sarah, and Isaac and Rebecca, and Jacob and Rachel, tell them that God sent you." Moses says, "Wait a minute, Yahweh. Wait a minute, God. You know, I've been away a long time. I don't know the language of the streets anymore. I stutter. My Spanish is rusty." God says, "Look, Moses, you're not supposed to be the charismatic leader. They've got lots of charismatic leaders. They've got your brother, Aaron, your sister Miriam. They've got Joshua. They've got Caleb. Your job is to be the organizer. The job of the organizer is to identify, test out, and train leadership. The job of the organizer is to put together organizing teams in parishes and schools. The job of the organizer is to teach people how to act on their own behalf, never violating The Iron Rule. The job of the organizer is to get people to start off small with small issues, and then get in bigger and bigger fights, and to begin to build larger and larger coalitions. That's the job of the organizer, Moses. That's the kind of work you've got to do." So Moses finally realizes he's got to do that, so he does it.

You know, the big story, and I don't have any time to go through it too much, but, you know, he frees the people from Pharaoh's army. They ask for a day off and then he gives them manna from Heaven. But the Hebrews are like a lot of us. They say to Moses, "Moses, what have you



done for us lately? This manna is boring, it tastes terrible. Back in Egypt we used to have it good. Back in Egypt we used to have garlic, and leeks, and cucumbers, and we had fish every day for free, and now we've got nothing to eat but this crummy manna. It tastes terrible, it's boring. We want some meat." Now, can you imagine, 500,000 people all screaming, "We want meat." And it gets louder and louder. 500,000 people screaming for meat! And so, finally, Moses goes to God and says, "God, why do you stick me with this problem. First of all, you're the one who made them the chosen people. You're the one who made the commitment to them, not I, but I'm stuck with them. I've got to carry them around on my breast like a wet nurse. Where am I gonna get meat for 500,000 people? If this the way you want to treat me, why don't you kill me right now and get it over with?" This is all in the *Book of Numbers* if you want to read it. God says to Moses, "Look, Moses, you're being a jerk. Your father-in-law, Jethro, explained it to you. You gather your seventy best leaders, people that you know you can rely on, people that you can trust. Bring those seventy to the tent of presence for a meeting. Don't just get anybody, Moses. You've got to understand organizing is being selective. It means going after people who are relational, people who you've tested out in small group meetings and small actions. People you know you can count on to be reciprocal, to understand the need for deliberation. You bring those people, and you tell them that they've got to accept the burden that's on you, because you're not going to violate The Iron Rule." So Moses finally does what he's told. He gathers his seventy best elders, brings them to the tent of the presence, and puts the responsibility that he's feeling on them. He tells them, "You want meat to eat? There's some quail out there. Go out and organize some foraging parties. I'll work with you, I'll guide you, but I am not going to do it for you."

Now, I told that story to the Valley Interfaith Leaders in the Rio Grande Valley when we were going through, a big freeze in 1983. The Reagan Administration sent down a fellow by the name of Tom Pauken, who was supposed to bring us bread, but ended giving us scorpions. And you can read his side of the story in the book that he wrote, where he doesn't say very many kind things about me. At any rate we went through a kind of beleaguered situation, and we began to regroup and reorganize, and I told that story to our people. But I brought with me a scripture scholar, because I knew I would be saying some things which maybe they weren't used to. And he was okay with what I said, except he said to me, "You know, you only told half the story." I said, "What do you mean, I told only half the story?" He said, "Well, the other half of the story is in Luke's gospel, but it's not quail in Luke's gospel. It's loaves and fishes. It's not Moses in Luke's gospel, it's the disciples. It's not Yahweh in Luke's gospel, it's Jesus of Nazareth. But it's the same story. The disciples come to Jesus and say, 'We've got all these people. We cannot feed them. Send them away. Send them back to Mexico. Send them back to Haiti. Send

them back where they came from. We can't take care of them. We can't educate them. We can't feed them.' And Jesus says to them, "Feed them yourselves." They said, 'We can't. All we've got are these five loaves and two fishes.'" This is my interpretation, the Cortes interpretation of the story. "Jesus says, 'You guys must think I just got off the boat. Don't show me what you've got for them, show me what you have for yourself,' because travelers at that time used to carry food and drink inside their clothes, but it was for themselves. He says, 'Because if you are willing to risk and model risk taking behavior, they'll emulate you. So, bring the people together in small groups and if you show them what you've got, what little you've got, they'll be willing to show you what they've got.'"

Now, there's two ways of looking at the miracle; one is Jesus said, "Shazam," and everybody had a Big Mac and a Coke. Or the other way to look at it is that there were people there who hated each other. Nabateans, Samaritans, Galileans, Greeks, Romans, all kinds of different groups of people who hated each other and mistrusted each other. The miracle was that by modeling risk-taking behavior, by modeling calculated vulnerability, by showing what they had, everybody there had a little bit of time, talent and energy, and they began to put it together. There was a more than enough for all of them. I will argue with you that the people in our communities have time, talent, energy. They need to be shown, they need to be modeled risk taking behavior, reciprocal behavior, and that's the role of local political organizations, which understand The Iron Rule. Thank you very much, and I'm sorry I went so long.

# EDUCATION

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TOM LUCE\*

AS I WAS LISTENING in the back of the room, I had a flashback. It had to do with a nightmare I had about, I think it was seven years ago, that I thought I'd put out of my mind and memory, but it turned out I hadn't. And that was an occasion which I was very much honored to be asked to be one of the speakers who introduced Dan Morales when he was sworn in as Attorney General. And it was quite an occasion in the House of Representatives, a large crowd there. It was a very joyous occasion. He was the first Latino to be elected statewide in the state, and there was a great celebration. And I was very honored to be included until I walked into the House Chamber. Then I found that I followed Barbara Jordan on the program. To make it even worse, out of all of the verses in the Bible, she chose the same one to read that I had chosen. There was only one difference; when she read the verse, it sounded as if God herself was reading the Bible. And I had that wave of nightmare come over me as I listened to Marian Wright Edelman, and as I listened to Ernie preach. But let me tell you another side of Ernie, and it's a side he talked about, but I want to give you a concrete example of what it means to organize a community.

When we first worked on what later became known as House Bill 72, the first real effort, post-World War II, to reform our education system, there came a crisis. I guess there always is in something that you're trying to do that's transformative, and that was that the bill was voted down in the Public Education Committee by the House in a special session on a Sunday night. That became known as the Father's Day Massacre, because it occurred on Father's Day. And since the Committee, who had to send it to the floor, had just voted it down, it appeared as if the special session was over, as Ernie and I walked out of the committee room. And being the neophyte that I was, I hadn't been educated into the politics of public education, I didn't know what in the world to do. And I said, "Ernie, it looks to me like we have about twenty-four hours to turn this situation around." Ernie said, "Don't worry." The next morning, and we didn't break up till 10:00 on Sunday night, at 8:00 on Monday morning, all of a sudden rolled up four buses of people from San Antonio, from COPS in San Antonio, who began to walk the halls of the Legislature. And within twenty-four hours, we had turned around the decision of the House Public

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\* Tom Luce is the founder and chairman of the board of Just for the Kids.

Education Committee. So, Ernie not only talks the talk, he goes out and walks real strong, and he carries a big stick. I am forever indebted to him for what he has done and what the communities, which he helps to organize and train to be their own leaders, what they do for public education. And so, I am a little bit, not a little bit, I'm a lot intimidated by following Ms. Edelman and Ernie, but I will do my best to really talk about, for a few minutes, some of the specifics of where we are in public education.

And I want to start at an unusual place, it seems, in a discussion of public education, and that is I want to talk about the good news about public education. And that comes from someone who has been very vocal about the need for change, who feels very strongly that we have let our children down for decades in our state. But as we push, and push, and push, and we should never stop pushing to improve our education system, we really do need to stop for a minute and reflect upon the success that we have had in this state in the last fifteen years. It really is remarkable. And, of course, part of the problem was we started at the bottom of the barrel. I mean, the real bottom of the barrel. But just last month, a group called the National Education Goals Panel, which annually tracks and reports on thirty-three indicators tied to our eight national education goals, commissioned a report to look at the success of Texas and North Carolina among all of the fifty states. And the reason they chose those two states was they stood out as achieving the most significant, positive gains in the greatest number of academic indicators of any of the states in the country. As a result of these indicators, they commissioned a study by the Rand Corporation to analyze the gains, first to ensure that they really were valid and significant and then second to try to ascertain why we had had the success that we had had the last fifteen years, so that we would know if we were on the right track. This Rand analysis, which was released last month, confirmed that the academic achievement in Texas and in North Carolina were "significant and sustained over the last fifteen years." North Carolina and Texas, again, had the largest gain on statewide scores on the NAPE, that's the national education test that exists today, and North Carolina and Texas had the most significant gains in that very important, valid, solid national test that our students take. And even more significantly, I think, the scores of our so-called "disadvantaged students" rose even more, in greater percentage increase, than the test scores of more advantaged students. In other words, we finally began to make progress across all of our student populations.

Now, the other significant thing, and I know this could certainly be debated by everyone in this room, but this analysis further revealed that the factors which we commonly think would cause such an increase were not really involved in the success in Texas and North Carolina. And that was that our real per pupil spending, our teacher-pupil ratios, the number of teachers with advanced degrees, and the experience levels of our teachers did not correlate to the academic achievement that we derived over the

last fifteen years. Now, of course, we don't know how much more we might have even gained if we had had these additional factors. But those factors were not present and could not explain the success that we have achieved. And, as a matter of fact, in those factors we were below average of the states in the country.

Interestingly enough, the study concluded that the most plausible explanation for the test score gains by North Carolina and Texas was a similar set of policies that both states implemented that coincided with the increases in achievement. What were these reform policies? That would be, I'm sure, what we'd all like to focus on. I certainly did. Here's what they listed: one, statewide academic standards by grade, with clear teaching objectives; two, holding all students to the same standards, recognizing that all children can learn; statewide assessment closely linked to academic standards; accountability systems with consequences for results; and a shifting of resources to schools with more disadvantaged students and the infrastructure to sustain reform. I think that is what has been the most remarkable about what has happened in Texas, is that for fifteen years we have sustained, in essence, the same general reform standards.

Now, fortunately, we keep, and we should keep, a philosophy of continuous improvement, a continuous raising of the bar. But for once in public education, we have left in place a reform structure and given it time to change.

When you look at the size of the public system in Texas, it's absolutely essential that any program you derive must be sustained over a period of time. It's highly offensive to some people to call students products, but if we look at students as a product, keep in mind the product cycle is twelve years. And really fourteen if we count kindergarten and pre-kindergarten. So it takes a long time to turn the Queen Mary. It really takes a long time in Texas, where we educate four million public school students. Four million. In fact, if you looked at the Texas public schools as a business, the annual revenues of the Texas public schools, K through 12, not counting higher education, are only exceeded in this state by two Fortune 500 companies' worldwide revenues. In other words, Texas public education would rank right behind Exxon and J. C. Penney's worldwide revenues. But we're trying to educate four million students, and we have 350,000 employees, 6,500 campuses.

Now, there's a lot of people in this room that have been involved in transforming businesses, but I challenge you to present a more complex set of size and scope, as compared to changing the Texas public schools. So what has been remarkable in our state is that the political leadership has sustained the reform movement through fifteen years, different Lieutenant Governors, different Governors, but they have been focused on public education, maybe not to the extent I would like, but much more than we ever were for the past fifteen years. And I think it's important to focus on this improvement, because as I travel the state, I see an enormous

amount of despair about public schools. As a matter of fact, it's gone full cycle. Fifteen years ago, I was talking to groups like this, saying, "Hey, folks, we have a problem out there." Today, you have to try to convince people that we can really make a difference. Well, we don't have any choice but to make a difference. I mean, we really don't. Whether you're concerned about crime, or you're concerned about the economy, or you're concerned about any social problem, it crosses, it intersects with our public schools. And we have no choice.

And I get a lot of questions about vouchers and private schools. Well, we need to put in perspective vouchers and private schools, because, folks, there aren't enough seats in private schools to fill the need of four million public school students for at least my generation, my children's generation, and probably my grandchildren's. I haven't checked recently, but as of, I think it was, three years ago, there were sixty million public school students in the country, and six million were in private schools. If you double the private school population, and I don't see how you can do it, the infrastructure does not exist, but if you doubled it, look at the numbers that you still have in public school. So we can't run away from the problem. You can't run far enough, you can't run fast enough. We are educating our next generation in our public schools. It's that simple. But we have lots of great news, and that was just part of it.

And let me say from time to time you read and there is always controversy about the TAAS test. Well, it's not hard enough, or it's not this or it's not that. But, folks, because we have had statewide testing, which can always be improved and should always be improved, we have made enormous progress for fifteen years. I know it is very appealing when we think about statewide testing to focus on educating, in a broad sense, our children. But when we are dealing with third grade reading, you can either read or you cannot read. And when we are talking about addition, and subtraction, and multiplication, and division, you can or you can't. And we must put in place the basic skills that will enable our students then, really, to maximize their potential.

And for the last fifteen years, we have focused on minimal standards. Let's face it. We had no standards fifteen years ago, and so, which was the only thing to do, we put in place minimal standards. And with respect to those minimal standards, we've made enormous progress. Again, this is on the state test, not the national test, but it parallels the same results. For instance, we have 78 percent of our tenth grade students passing the math test in 1997, up from 59 percent three years previously. We've gone from fifty-nine to seventy-eight. That's good news. Now, there's one slight problem; that's tenth grade math. And the jobs of tomorrow are jobs that require fourteen years of education, on average, twelve years of real basic skills, education, so you can be trained like George Kozmetsky trains students. But they have to have basic skills. So we're making progress in that basic skills. But we have set the bar, by our own admission, at tenth grade.

And, folks, there are no jobs today for students with a tenth grade education, even if it's a real tenth grade education, let alone if it's a minimal standard education.

I had a very brief political career. It's another nightmare I'm trying to put behind me, but I'll never forget, the candidate will go on nameless, but one opponent of mine once asked me, "Tom, I don't understand why you get so serious about education, why you get so wound up." He said, "It seems real simple to me." He said, "All you need to do is to teach them boys to pump gas." Well, when I recovered from the shock—and you really put that in perspective, from his perspective of when he graduated from high school, that was true. I mean, you could go to work on the oil and gas fields, and you could be a roughneck, and you could have a tenth grade education, and you could make a living. Today, the equivalent to the automobile assembly line or oil fields that required you to have a hard back and broad shoulders 30 years ago is the entry level job at Intel. I was fortunate to work on an effort to attract Intel to our state to build a chip factory. And 60 percent of their jobs are entry-level jobs, so it's just the kind of employer you want. That entry-level job in that chip factory is the equivalent today of the General Motors assembly line twenty-five years ago. It's your good paying, entry-level job, with benefits. There's only one difference; it's not a blue-collar job today, it's a gray-collar job. That's what I call them. It's a gray-collar job. To be employed at Intel, you have to have finished a course in chip manufacturing in a community college, and you have to be trainable. You have to be trainable. And that's the difference between today and twenty-five years ago, and that's why we have the education gap that we have, is that we are getting better on a trend line like this, but the skill level is going like this. And that's the gap. We just can't say, "Well, you know, why aren't our public schools doing better." They're faced with an enormous change in what is required of the students that they graduate. But we haven't changed the system to reflect that reality. Again, I want to say it 100 times, folks, we are making progress, and we should not throw the baby out with the bath water, but we have to continue to make dramatic changes in what we're doing.

As we sit here today and we worry about how to educate our children, we still haven't done anything about, in any sense of the word, the developmental capacity of our children from zero to three. And we all know, I mean, there really isn't any doubt about the fact—I mean, people may argue about whether you develop 70 percent of your capacity, or 60 percent, or 50. Who knows. In my world, I don't know exactly how much, but I know it makes a big difference. And I despair from time to time, as they argue in Congress about Head Start and how much to fund, when what we really ought to be arguing about is do we have the right developmental components of Head Start, or do we just have child care? When I say, "just have," child care beats no care, but what we need is developmental care of our children from zero to tree. If we're serious

about every child being able to read at the end of the third grade, and I applaud Governor Bush—there is no more worthy goal than ensuring that our children can read at the end of the third grade—but if we're really serious about that, that every child will be given that opportunity, then we have to do something about zero to three. If we're really serious, we may also need to have year round schooling for our children to keep up. You know, it's not really doing any good when our students compete in a worldwide economy, and they do, pure and simple, they do, for us to say, "Well, we're just trying to educate more children," or, "We just have a more difficult population to educate." When they're competing for jobs, the excuses we have really don't matter.

Today, for the largest company in the Metroplex, software engineers in Bangalore, India maintain their central accounting system. No announcements were made about jobs going overseas or new plants being built. You don't need to do that anymore. You just hire software engineers in Bangalore, and they do it there. So we're competing, our children will be competing world wide, and I'm talking about people who have "blue-collar jobs" or "gray-collar jobs."

Everybody in this economy is impacted by what happens across the world. And yet, to a large extent, we have a system that we're trying to fix that was designed for the agrarian society. Our school year is defined by the crops that we used to grow. And we just have to face the fact there's not a lot of jobs in the agricultural field. I checked the other day. We have 500,000 students in our state taking agriculture vocational education. There are not 500,000 jobs in agriculture for the next nine millennia for children in Texas. Why is that happening? I have my own theory. We have a school finance system that gives a school more money to place a student in agriculture vocational education than to keep a child in an academic track. Incentives work. Incentives work. And our system still is designed around the agrarian society.

We have a school finance system that gives a school more money to keep a child in bilingual education than to graduate, if you will, to being fluent in English, as well as Spanish, or French, or something else. Now, do we need bilingual education? In my judgment, absolutely. When you have children that walk in, sit down at the desk and cannot speak English, you must, you must communicate in ways that enable the child to learn and make the transition to be able to speak English. But today, we give a school more money if the child stays in bilingual education. As a result, we have a lot of children that are what I call "no lingual." They haven't conquered a real foreign language, nor the English language. But again, on whether you agree or disagree on bilingual, the changes that are required in the future require us to look at the system, because we have made the, I won't say easy changes. They were hard as they could be. But the changes we have made are changes to the system that existed. And if we're really going to achieve what we need to, the system has to change.



The delivery systems have to change, the incentives have to change. We have to reward teachers in a different way, in terms of compensation, in terms of the quality of teachers that we attract. And we've gotten the low-lying fruit, so to speak. It didn't seem very low-lying for the last fifteen years, but, again, we've made enormous progress.

Today, because of the benefits of that accountability system, we have data available to us that will enable, or should enable, every community to push to raise the bar. And we need to start saying the passing standard should be raised. We need to also know how our students are doing at a proficiency level, which you and I would translate into real proficiency in the subject. You're at grade level. I brought several of these overheads, but I'll only use one, because I know it's a long way to the back of this narrow room.

Let me show you. Just for the Kids, that Bill Wright and many other people in this room helped to get started, both financially and with their time and effort, Just for the Kids has developed this data on every elementary school in our state, and most people by now know in an individual school what the passing rate is on the TAAS test. In some of our schools, for instance, a lot of our suburban schools, report high passing scores. But, folks, if you look underneath that data, what you see in this school, which is in Clear Creek, with a passing rate of 90 percent, their proficiency rate is 40 percent. Now, again, don't start throwing stones. When we started this, the passing rate was at forty. But continuous improvement means the next bar needs to be let's get the proficiency up to where the passing is.

Because we have individual student data, we're able to factor in some very important things for local communities to know that are represented in the second and third chart. The second chart makes an adjustment: many educators will tell you, "Wait a minute. It's not fair to hold me accountable for the students I have, because you don't understand, 20 percent of them I just got six months ago. We have a transitory population. People are moving around." Well, in the second bar chart we factor out any student that was not continuously enrolled in that school. And that's the second chart.

The third chart, and this is important, the third chart takes the average of the top ten schools that have social economic characteristics of that school and says here's the top ten average of schools just like yours. Now, in that case, it's a pretty vivid contrast that this school can do a whale of a lot better. We're not comparing apples against oranges, we're comparing apples to apples, oranges to oranges, and we're able to look at it grade by grade and subject by subject, which is a whole lot better than saying, "This is a good school," or "This is a bad school." This enables you to say, "Here's what we're doing in the third grade in reading." And I can show you some schools that are doing great in reading and are abysmal in math. Or that are doing great in math in the third grade, and in the fourth grade it drops through the floor.

I show you that data because I am convinced, and Just for the Kids is convinced, that the next step in education reform consists of really two, really three fundamental factors; one, local communities have to quit talking about education and do something about education. Local control is, and will be, ever-present in education in my lifetime. And in the real world I truly believe it is the only way to really get excellence in education, because in Texas we have schools that range from three students in a one-room school house to 200,000 students in urban Houston. You cannot devise a system that micromanages the various types of schools that we have in our state. So local control is the best way to meet individual needs of students, if the local community is involved. And when it comes to local control, I am reminded of a famous saying by Darrell Royal, and, fortunately, there are some people in this room who will remember who Darrell Royal is. He used to be chided quite frequently because he didn't throw the ball more. He said well, the reason he didn't was that when you threw, three things could happen, and two of them were bad. You could throw a long touchdown pass, you could have an interception, or it could be incomplete. Well, in local control three things can happen; one, and the most likely is, based upon where we are today, the status quo will prevail, because the same things will continue being done, because the community is not involved. And when I say involved, I'm talking about at an individual school level. So, one thing that could happen, status quo.

Number two, things can get worse. Who knows, maybe even in local control, some people may think football is king. Or it can get great. We are convinced at Just for the Kids that the next step means local communities must get involved all over the state. Some will be organized by groups like Ernie is generating across the state. Others will be done by groups who, maybe instead of adopting a school and just having a banquet, really get involved, really understand where they are, deal with the issues of change. But we have to get involved if we're to turn it around.

So, we believe it's getting local communities involved in a very specific way; one, informing them, so that we're really debating with factual knowledge, and we're debating about academic subjects, and based upon that data, communities are setting specific, measurable goals and adopting plans to achieve those goals.

So, one, the local communities have to get involved and two, we must keep raising the standards. It's painful, but we can't stop. And, folks, every child really can learn, if they're challenged and the bar is raised. A lot of us have raised children. I've never found a child, nor really myself, where I've ever exceeded my own expectations. You know, it just doesn't happen. And if we don't expect very much from our children, we won't get very much.

Peter O'Donnell has funded an advanced placement program now in southern Dallas County. The program started when we were working with Roy Schwitters, when we used to have a super collider, to improve education in Ellis County. And when the Foundation gave schools and

students an incentive to take advanced placement, all of a sudden, students in every school in Ellis County, all of a sudden, were taking more advanced placement courses than students in any state. Any state. And when people looked at the results, they said, "Oh, well, Peter, that's Ellis County." Well, he took it to Dallas, to the Dallas Independent School District. He took it to nine poor urban schools. And in just two years they went from not even on the map to three times the number of African-American and Hispanic students taking and passing advanced placement courses than the national average. What had changed? They offered advanced placement courses. There were incentives. The student was rewarded. The school was rewarded. The teacher was rewarded. And look what happened. So we've got to keep raising the standards, and giving incentives to achieve those standards.

And then, three, we have to get serious about debating real overhaul of our system while the 747 is flying. Unfortunately, we don't have the option of landing and saying, "Well, we're just gonna think about this for two or three years." Children's lives are at stake every single day. So we have to fix it on the fly, and it's not easy. But we've got to start debating some real change in the system itself.

And I could go on a long time about that, but I've probably gone way too long as it is. But I would urge you, as you leave here, to really focus on the fact that public education really is the key, and it will be, for my grandchildren's generation. It's there, it's not going away, it's getting tougher all the time, but we don't have any choice but to fix it. Thank you very much.

# MAINTAINING MILITARY READINESS

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EDWIN DORN\*

GOOD MORNING. It's a pleasure to be here. I'm honored, Bill, that you invited me to speak before this august group. Tom Luce talked yesterday about how intimidated he was to follow Marian Wright Edelman and Ernie Cortes. I am equally intimidated. Although I must say not as intimidated as I was last year, when I learned that I was following Elspeth Rostow and Max Sherman as dean of the LBJ School. They are formidable people. *They built up a wonderful institution, and I am the happy inheritor of their energy, their imagination, their intellectual prowess, and their commitment to service.*

Speaking of inheritance, General Butler mentioned his working with Colin Powell. I must tell you about my first conversation with Colin Powell, after I arrived at the Pentagon. As you know, the confirmation process is Byzantine. First the president announces an intent to nominate, and then he formally nominates you, and then you go through the confirmation hearing. So there is a period of what you might call political purgatory. It is the period after which you have been called, but before you have been blessed with the Senate confirmation. And that's a period when you're in the building and you can make a lot of courtesy calls, but you can't make any decisions and you can't really sit in on the important meetings. So I started making courtesy calls on my fellow political appointees and on some of the senior military folks, beginning, of course, with the chairman of the Joint Chiefs of Staff, Colin Powell. And I asked General Powell if he had any advice for someone "parachuting" into the Pentagon. I'd never worked there before. I'd had no real contact with the military since I battled paperwork in Frankfurt, Germany for the U.S. Army as a lowly captain. It was a short and undistinguished career. And he said to me, "Ed, you guys in the Clinton administration are inheriting the finest military force ever assembled. Your job is, just don't screw it up." Well, I thought that was good advice. Lee Butler, in the meeting that he mentioned, later amplified Colin Powell's point. I'll get later to the caution that Lee shared with the secretary of defense, because it has proven prophetic.

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\* Edwin Dorn is the dean of the Lyndon B. Johnson School of Public Affairs at The University of Texas at Austin.

Let me begin, however, with a more recent incident. Perhaps little noted, but I think important. That was a very terse exchange, about a month ago, between Senator John McCain of Arizona, a hero of Vietnam, and the current members of the Joint Chiefs of Staff. In the most tense part of that exchange, McCain accused the Chiefs of allowing military readiness to deteriorate and of misleading the Congress about it.

There have been lots of newspaper reports about declining readiness. As a matter of fact, there was a story a couple of weeks ago about a projected shortfall of some 35,000 recruits. Now, in a force where you're only recruiting about 200,000 a year, that's a very big number. I hasten, however, to add that that number is exaggerated, if not outright false. Nevertheless, in the terse exchange between McCain and the Chiefs and in some of the news stories, we are witnessing the early warning signs of a big fight over military readiness. I want to talk for a little while about the history of our recent fights over military readiness, talk about what's really going on, about what we need to pay attention to, and then move on. I hope I can conclude by referring to some of the issues we discussed yesterday, some of the broader issues.

During past twenty years, we've had a major political fight—and in some instances a major substantive fight—over military readiness on the average of once every five years. In fact, it was evidence of declining readiness, a so-called hollow force, that contributed to President Carter's defeat in 1980. We remember, of course, the Iranian Hostage Crisis, that humiliating incident in 1979, and then the attempted rescue, which led to the debacle that we now know as Desert 1, leading to the deaths of eight military personnel when Navy helicopters collided with Air Force tankers in the Iranian desert. That and a number of other factors, contributed to a public sense that the Democrats, of whom Jimmy was the leader, had allowed the force to deteriorate. And it led the then chief of staff of the army, "Shy" Meyer, to write a book called *The Hollow Army*, talking about all the problems we were having in manning, equipping, and training the force. We were recruiting large numbers of high school dropouts, and as a result were having high attrition rates. This led, to a major aspect of the Reagan campaign and of the first Reagan term: a massive buildup of the military, an increase of roughly a trillion dollars over a period of years in military spending. So that was one debate over readiness, and it contributed to the defeat of the Democrats in 1980.

But, you know, turnabout is fair play. Around 1984 or '85, the then-Chairman of the House Armed Services Committee, Les Aspin, held a series of hearings, with liberal amounts of political theater, called "What Happened to the Trillion Dollars?" The armed forces have some very precise ways of measuring readiness. And by those measures, as we increased spending on defense, readiness went down. There are easy ways to explain that: you put new equipment into the force, soldiers are not trained to use the equipment, and so the commander is required to say, "We are not trained."

There are basically three measures of readiness; do you have the people, do you have the equipment, and are the people trained to use the equipment? Consider an acronym, people, equipment, training. PET. It's a little more complicated than that, but that's one way to think about it, and when you have people who haven't been trained to use new equipment, readiness goes down. Nevertheless, that was embarrassing to the Reagan administration. That was a second argument about readiness.

Les Aspin, when he became President Clinton's first secretary of defense, knew that turn about was fair play, and so he immediately inoculated himself against charges of a hollow force. How did he do that? He created, for the first time in the Defense Department, an office in the Office of the Secretary of Defense charged with maintaining readiness. There previously had been something called an assistant secretary for force management. Aspin changed that title and upgraded the position, so there then became an undersecretary for personnel and readiness.

Readiness was a new function for the Office of the Secretary of Defense. You can imagine how bureaucratically difficult that was to carry off. We can discuss some of the details, but they're not really important. What was important was a second aspect of Aspin's inoculation. He decided to establish an outside panel, what he called a Readiness Advisory Committee, consisting of some of the nation's most distinguished retired generals. Who do you suppose he selected to chair that committee? General "Shy" Meyer, the very man who had accused Jimmy Carter of allowing a hollow army to develop. It was a kind of double inoculation and it worked very well, at least for a few years. In fact, we succeeded in 1994-1995 in beating back Congressional attempts to raise the specter of growing hollowness. But McCain's upbraiding of the Chiefs just a few days ago, his charge that the force is deteriorating, the newspaper stories about recruiting difficulties and retention difficulties—all these things suggest to me that we are on the verge of another big fight over readiness. This debate may coincide with the runup to the 2000 election, just as the charge of a hollow army coincided with the runup to the 1980 election.

Well, what's really going on? Has readiness deteriorated and, if it has, what are the underlying causes? Let me mention five issues that I think contribute to our concerns about military readiness, and that will figure in the debate. The first is borrowing. The defense budget is very big, upwards of two hundred and fifty billion dollars a year, but there are really only three fundamental things you can spend that money on: you can spend it on people, you can spend it on equipment, or you can spend it on training. The people budget, incidentally, includes health care and child care. The largest and highest quality child care system in the United States is run by the U.S. military. DOD spends about fifteen billion dollars a year on health care, which makes the military the second largest health care provider in the country, behind VA. We run dependents' schools, in which are enrolled every day 80,000 to 90,000 students. Those are mostly outside the United States, spread across twenty-four time zones. So that's the people part of

the budget, and if you add all of the pieces together, along with things like family housing, it comes to close to half of the two hundred and fifty billion dollars we spend a year on defense. The rest is divided between equipment and training. And we have a huge training establishment, because what the military does, when it is not at war, is train.

In the early 1990s we made a conscious and explicit decision to borrow from our equipment modernization accounts, in order to pay for what we call short-term readiness. That means recruiting high quality people, raising their pay, improving quality of life, and shoring up our training. Remember, the defense budget is declining at this time. We cut the budget by close to 40 percent. So at a time of shrinking budgets, we were disproportionately shrinking the modernization accounts, in order to shift money into accounts for what we call short-term readiness.

We thought we could afford to do that because the Reagan administration buildup had bought a lot of shiny, new things. New tanks, new aircraft. That's when some of the stealth weaponry, which actually had begun development during the Carter administration, finally came on line. There also was a buildup in the Navy, in terms of the number and quality of ships. So we thought we could afford to postpone the next round of modernization for a few years. We were explicit about doing that. Toward the end of his term, around 1996, defense secretary Bill Perry began warning that we needed to begin shifting money back to modernization. Right now there are huge debates in Congress and in the Administration over what the modernization shortfall is. Do we need to shift another ten billion dollars a year into modernization, or twenty billion dollars? There are only a few sources for that money. And one of those sources is not increasing the overall size of the defense budget. The topline is not likely to change.

One of the really interesting aspects of all of our debates over defense is that there has not been in Congress, and there has not been from any presidential candidate in the past three election cycles, a recommendation for a tremendous increase in the defense budget. So we are going to be dealing with a number in the two hundred and fifty billion dollars range over the next several years. I do not believe whoever runs in the year 2000 will advocate a tremendous increase in the defense budget, so we're simply talking about shifting money around from the people accounts into the modernization accounts. And there are only a few ways to do that. One is you can reduce your force structure. We're now projecting a force of around 1.4 million people on active duty, between 700,000 and 800,000 in the reserve components, and we are reducing the civilian component to a little over 700,000 people. DOD employs about half of the civilians who work for the federal government.

Lee mentioned the plan to reduce the size of the Defense Department by 30 percent; that was to reduce the size of the active component from the roughly 2.1 million people that it had reached during the height of the

Reagan buildup down to about 1.4 million. The latest review, the Quadrennial Defense Review, proposes cutting it slightly lower than that.

In one of my first conversations with Secretary Aspin and then Deputy Secretary Perry, I walked in with a graph which displayed the size of the defense establishment over a period of about forty years, from the Korean War, through the Reagan buildup. As you might imagine, the size of the topline went up and down at predictable periods. One of the things that did not appear to change throughout was the size of the civilian component. In peace and in war, the civilian component of the Defense Department remained around a million people. Perry and Aspin looked at that chart and they said, "There's something wrong here. How can you have an active military that's going up and down like this, and yet the underlying civilian infrastructure, which is supporting it, remains constant?" He was perplexed at how that could happen, and he quickly adopted a principle, which was to reduce the civilian component proportionate to the reductions in the military component. That led us, over a period of time, to say we'd reduce the civilian component about 30 percent. This is on top, incidentally, of the reductions that would have been brought about as a result of the Base Realignment and Closure (BRAC) process.

We worked for a few months over how to do that, and the result was a memo that I think is still referred to, spittingly in the Defense Department, as "The Infamous Dorn Memo." We probably received more nasty comments about that than we received about anything we ever did. Gays in the military, putting women into fighter planes, nothing produced as many unkind comments as that infamous Dorn memo. And it didn't take me very long to figure out why.

One of my first public appearances, after being sworn in, was to go out to visit a submarine repair base at the north end of San Francisco Bay. Mare Island, it's called. At its peak, Mare Island had about 12,000 civilians and a few military. Mare Island was on the BRAC list. It was scheduled to be closed in three years. It was my task to go out to Mare Island, enter a hanger filled with 5,000 very surly union members, and explain to them why they should be so happy that we won the Cold War. This was a tough sell, and it is a tough sell because military people and civilians view a closure of a base in very, very different ways. When you close a military base, the military people simply move on to another base. They're re-assigned. But the civilians are kind of stuck. You're not simply talking with the civilians about finding a new way of making a living, you are talking about finding a new way of life. Keep in mind that these are bases that have spawned communities. The city of Vallejo at the north end of San Francisco Bay was essentially spawned by the Mare Island Submarine Base. That base had been in the Navy since before the Civil War, so several generations of families had been tied to it. Telling those folks that you are going to change their way of life is a very big deal, so I came quickly to understand why I got those nasty cards and letters.



We had borrowed heavily to pay for readiness, and the question was how are we going to recover. Let me mention a second issue, overstructure. To paraphrase Ronald Reagan, the Defense Department is too big and it costs too much. All the bases are not needed, but, after four rounds of BRAC, large numbers of Congressional districts have been affected, and resistance to more base closures has grown very large, so much so that in the Defense Reauthorization Acts for the last few years, Congress has inserted report language, discouraging the Secretary of Defense from proposing the closure of more bases. We are just beginning to see savings accrue in the range of four billion to six billion dollars a years, as a result of a series of closures that began a decade or more ago. Projections are that we can double those savings if we make more closures. But Congress has said, "No."

There's another bit of pressure on the defense budget, and that comes from contingency operations. We think about the big ones. We know about the Persian Gulf conflict. We remember Somalia and Rwanda, and so on. At last count, however, the U.S. Military had engaged in more than thirty major contingency operations since the end of Desert Shield/Desert Storm. That is a lot of activity. Now, the effect of that on readiness, of sending these troops abroad, is mixed. There is a direct effect on costs, however, because those contingency operations are costing us an extra \$3 billion a year. That is the projected cost this year of the Bosnia operation alone, as a matter of fact.

Lee mentioned the meeting in 1994, when there was a big discussion of contingency operations and of their effects. I believe Secretary Perry was chairing that meeting, and Lee said, "You know, Mr. Secretary, the military has a can-do attitude. We can do anything you tell us to do. We'll salute sharply and go off and accomplish the mission." But Lee said, "You have to think about what that is costing us underneath, about the things we are borrowing, the things we are not doing, in order to pay for those operations." And he said, "Please, don't push us too hard." Well, there is evidence that the force, or portions of the force, have been pushed very, very hard, as a result of these contingency operations. Equipment is wearing down, people are wearing out, families are beginning to fall apart. The contingency operations therefore are the third concern.

There's a fourth concern, a rather ironic one. As a result of the dramatic scaling back of defense spending, we have entered an era of what can only be called honest budgeting. When you're spending three hundred billion dollars a year, as we were doing during the Reagan buildup, you can afford a little slack. When you have that slack, Congress can afford to move a little bit of money around. This year, for example, Congress moved around a billion-and-a-half to two billion dollars to pay for favored projects. One of the favored projects throughout the 1980s and into the 1990s has been C-130s for the Guard and the Reserve. C-130s are these big, four-engine prop cargo planes. Why did Congress keep buy-

ing more C-130s, even though DOD insisted they weren't needed? Because the planes are manufactured in Marietta, Georgia, part of Newt Gingrich's district. And because the chairman of the Senate Armed Services Committee, Sam Nunn, was from Georgia.

Well, everybody knows how that game is played. What McCain wanted during these hearings was for the Chiefs to say, "The defense budget is inadequate. We need more money." Instead, what the Chiefs said, is, "The budget that we sent over was adequate. What produced a problem was Congress' decision to move the money around to pay for things we didn't want." You might imagine that that answer infuriated John McCain. What he said to them was, "You've allowed readiness to deteriorate, and you've misled us about it." But he really was thinking is, "You guys know how the game is played, and you didn't give us the slack we've come to expect." That is the point of frustration: in an era of constrained budgets, and thus more honest budgeting, there simply is not that slack.

The fifth problem with readiness has to do with a sustained economic boom. We allowed conscription to lapse in 1972 and since 1973, have relied on an all-volunteer force. The all-volunteer force had a rocky start, but it has proven to be a great success. The quality of people is high, and even more importantly, the people who are there, want to be there. They have volunteered.

We are now, however, entering into a new challenge. This will be the first time we have tried to maintain an all-volunteer force in a full employment economy. That is going to be a major challenge, and that is why people are suggesting, or predicting, major shortages in personnel in the coming year or so. It's likely that 35,000, which you read about in the newspaper, is a bit high, but there will be shortages and there's a serious question about how we're going to deal with that, particularly since the propensity of youth to enlist is not high. Enlistment propensity has been declining for twenty, twenty-five years. It began to decline especially at the end of the Cold War, probably because engaging in peace-keeping operations and humanitarian operations simply does not have the same cachet, the same sense of urgency, as defending the Free World against a Soviet monolith. That decline, incidentally, has leveled off a little bit during the past year. How do we know that? We conduct surveys every year. We survey about 10,000 sixteen- and seventeen-year-olds, call them on the phone, and find out whether they are interested in joining the military. We find out why they're not interested in joining, and we adjust our advertising on the basis of what they tell us about what might interest them about the military, what turns them off about the military. The propensity decline seems to have been arrested, but it is at a very low level. Only about 12 to 15 percent of American youth say they might be interested in joining, so the recruitment challenge remains a daunting one.

Where are we going? I mentioned the five things that we've got to deal with: the borrowing, the overstructure, the contingency operations,

the problem of getting Congress to adjust to an era of honest defense budgeting, and the challenge of recruiting and retaining a high quality force during a sustained economic boom. Those are the kinds of issues that you will see raised during what I expect to be a debate over deteriorating readiness, and the charge that this Clinton administration is "soft on defense."

Unfortunately, I'm not confident that we will hear a debate over the more fundamental question: What do we need to be ready FOR? We've gone through several major reviews of defense policy during the past decade. Around 1990, Colin Powell produced a review which led to what he called the Base Force. Les Aspin produced what he called a Bottom Up Review, which led to a need to have a force capable of fighting two nearly simultaneous major regional contingencies. We just went through a Congressionally mandated Quadrennial Defense Review, which essentially confirmed the need to size the force to fight those two major regional contingencies. I have serious reservations about the nature of the threat that leads us to maintain that size force. But it seems to me that we have not structured the force to deal with a couple of external threats. I think Hans Mark talked about them yesterday. One, or course, is terrorism, which can be external or, as we've learned from the Oklahoma City bombing, internal. The other is the kind of issue we are dealing with today in Bosnia, which might be described as tribalism. A ten-division army cannot deal with either of those threats. Nor is a twenty-wing Air Force capable of dealing with the kind of threat that can be carried around in a suitcase. It is possible to wreak considerable havoc in a metropolitan area with chemical or biological agents that can be secreted in very small amounts.

There's also another threat, which George Kozmetsky has talked compellingly and eloquently about, and that is technological terrorism. There are also some other internal threats. Marian Wright Edelman, Tom Luce, and Ernie Cortes talked eloquently about them yesterday—increasing wage gaps and the possibility that even in a full employment economy, we may be confronting the existence of a permanent underclass. Having been back at the University of Texas for a little over a year and watched some of the effects stemming from the *Hopwood* decision in Texas and Proposition 209 in California, I worry about the resegregation of our institutions of higher education. And more fundamentally, I worry about the same thing that Marian worried about yesterday, the loss of moral compass and of a spirit of selflessness.

One of the most rewarding things to me about working in the Defense Department for four years, was working with and in behalf of a million and a half people dedicated to selfless service. I had an interesting exchange in the fall of 1994, which I think captured that spirit. I visited with several enlisted men from the 10th Infantry Division just after their return from Somalia. You may recall that in September of 1993, a dra-

matic and deadly fire fight in the crowded streets of Mogadishu resulted in the deaths of nineteen U.S. soldiers. The scene, televised worldwide, of a soldier being dragged naked through those dusty streets, created the perception in the United States that that mission had been a disastrous failure. It led to the firing of Clinton's first secretary of defense, Les Aspin. So when I met these soldiers, I wanted to find out how they felt about Somalia. I walked up to a young sergeant, six-foot-two, slender, ramrod straight, with close-cropped hair, and a deep southern drawl, and I asked him what he made of his tour in Somalia. And he said, "Well, sir, all I can say is 'God bless America.'" I listened to the drawl, I looked at the demeanor, and I thought I knew where he was coming from. I expected he was going to talk about what a waste of lives and people that mission had been. I expected him to say how glad he was to be back in the United States, where he could drive down the street and get a Big Mac anytime he wanted and not worry about the locals spitting on him or killing him. I expected him to talk about the treachery and the lack of gratitude that he had experienced at the hands of the Somalis.

But that's not what he said. He said, "Sir, they sent us over there to keep people from killing one another, and we did that. They sent us over there to deliver food, to keep people from starving to death, and we did that. They sent us over there to build roads and to build clinics, and we did that." He said, "Sir, we fulfilled our mission." He went on to say that we were the only country that had both the resources and the moral will to come to the aid of strangers. He was enormously proud of what he had done and enormously proud to be a soldier. It was a moving moment, one of several I experienced.

However, I worry a great deal about the distance—the gap—that continues to grow between the men and women who serve in the military (and who also serve in some of our voluntary programs), and the larger population. I worry about the moral distance between the selfless service that they exemplify, and the self-centeredness that we continue to see in the rest of the population. I'm delighted to be at the LBJ School because there, also, we see young men and women dedicated to serving people. But those students come in the hundreds. They are a small group in comparison to the tens of thousands in the rest of the university, who may not share those feelings. That is one of the things that I would like to see us discuss. Incidentally, it is one of the things that President Clinton challenged us to discuss and consider during his first election campaign. Unfortunately, that spirit seems not to have grown in recent years. I'd like to see it revived. I don't have any magic remedies. We can't force universal service. The people who are serving, who dedicated themselves to military service or AmeriCorps, are a very small and selective group, but their spirit is inspiring. That's the spirit that we need to try to restore in larger numbers of people. I don't know how to do it, but I hope, together, we can think of a way.

# CRITICAL NATIONAL INFRASTRUCTURE

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PHILIP C. BOBBITT\*

IT'S GREAT TO BE HOME. I look out in this group. It may be the Philosophical Society, but it really looks to me like coming home. I see the Weinbergs, the Rostows. I went to law school because of Chris Dougherty. I have a "family" out here that I very seldom get to see, so it's a real treat for me to be here.

For about a year and a half now, I've lived in Washington. If you visit Washington, a place you must go is the Library of Congress. And if you go to the Library of Congress, you ought to see the Madison Building, and there you ought to take a look at the two great Coronelli globes. These were made in the 1680s for Louis XIV. One is a depiction of the heavens and the other of the earth, as it was known then. If you walk around this magnificent work of art and look at the depiction of California, you'll see the Bay of Baja extends all the way north, enclosing California as an island. Now, this is 1683. So, that depiction was in the teeth of reports by missionaries, trappers, and by Indians who said that California was not, in fact, enclosed by the Bay of Baja. Nevertheless it was a common representation in the maps of that era. So explorers would sail up the side of California, disembark, portage their ships up over the Sierras, and come down to the American desert, which was the largest beach they'd ever seen.

Just like these explorers and like these cartographers, we have mental maps that we hold to with tenacity, maps that structure the way we think, that are habitual with us, maps that we cling to, despite contrary evidence. The most difficult part of the task of infrastructure protection, which I'll talk about today, is shaking off these habits and trying to build structures that cross jurisdictional and psychological lines, that bridge government and the private sector, one nation and many nations, the developed and the undeveloped world. Critical infrastructure is a term of art. It refers to the automated electronic networks that link the commercial and defense sectors, and that if interdicted, would cause a severe disruption in these sectors.

It is a cliché to say that generals always prepare to fight the last war

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\* Philip C. Bobbitt is senior director for critical infrastructure at the National Security Council.

rather than the next one. Everyone in this room and all the generals have heard it. But if it's such a cliché, why do we go on this way? Why do we continue with planning based on what we know of the past? I think it's because what we know about the future is mainly the past. Things are usually pretty much the way they have been. About warfare, we can say three things: that it pits one country against another, that it is waged by governments, not by private parties, and that the victorious party defeats its adversary. This is the past and the way we expect the future to be.

Now, it happens that we are living in one of those relatively rare periods in which the future is very much unlike the past. In fact, the three certainties that I just mentioned about national security, that it is national, not international, that it is public, not private, that it seeks decisive victory, all these lessons of the past, I think, are about to be turned upside down in the future to which we are plunging. The driving force behind this change is communications and computation technology. The objects of change are the basic infrastructures of modern societies that have been the targets of warfare ever since the first modern states emerged.

In the past fifteen years, that short a period, our basic infrastructures in banking and finance, oil and gas and electrical power, telecommunications and transportation, and government services itself have all undergone a fundamental change. Where once it was only a nuisance to a banking transaction if the lights went out, for example, it now can mean a complete interruption. Where previously transportation continued whether or not the telephone lines were down, now planes, and tankers and air cargo are stilled, sometimes dangerously so, if communications are interdicted. Infrastructures that previously were logically and geographically distinct have become interconnected and radically automated. This has led to an increase in national wealth that can be compared, I think, to that brought by the Industrial Revolution. With this dramatic increase in productivity, however, has come an equally dramatic increase in vulnerability. The nodes that connect these infrastructures, those that are critical to their operation, now present far more lucrative targets than the simple bridges and power stations of previous decades.

The belief that our complex information systems are vulnerable to attack is widespread in the government. In May of this year, President Clinton reflected this belief in his Annapolis commencement address. He said, "Our security is challenged increasingly by nontraditional threats from adversaries, both old and new, not only hostile regimes, but also international criminals and terrorists, who cannot defeat us in traditional theaters of battle, but who search instead for new ways to attack by exploiting new technologies and the world's increasing openness." And he went on to say, "Intentional attacks against our critical systems are already underway."

Testifying before a Congressional Committee two summers ago, the then director of Central Intelligence, John Deutch, said that, "Criminal

hackers were offering their services to so-called rogue states.” “They scheme,” he said, “to undue our vital interests through computer intrusions.” And he warned against an “electronic Pearl Harbor.” This phrase was repeated by deputy secretary of defense, John Hamre, in testimony before the Senate last spring.

A better phrase might be an electronic Agincourt. If you remember the central scene in Shakespeare’s *Henry V*, it sets the stage for a battle that transformed the face of Europe when Henry V’s yeomen, armed with long bows, defeated the French knights, the knights of the most powerful state in Europe. That kind of technological transformation of strategy and statecraft, I think, is coming to us now. Not only have the targets become vastly more significant, the weapons of a new age are transforming attacks on those targets.

For five centuries, it has taken a state to destroy a state. And so, for five centuries, states have had to develop a means of deterring or defeating other states. The entire worlds of diplomacy, international law, alliances, naval, air and land warfare are all predicated upon conflicts among states. It took states to create armies, and navies and diplomatic services. Only states could marshal the financial resources to threaten the survival of other states. Only states could organize societies to defend themselves against attacks by states.

We’re entering a period, however, when very small numbers of persons, operating with the enormous power of modern computers, can produce greater damage to our American infrastructures than all our previous wars combined. Attacks that render commercial aviation perilous, that cancel even a single week’s trading on a major stock exchange, that freeze a natural gas pipeline to a major city in winter: these sorts of events can trigger the economic and political panic that no war has ever brought to this country. And to these threats we must now add the possibility of attacks using weapons of mass destruction that are not delivered by bombers or missiles, but are biological and chemical agents dispersed by crop dusters, or small nuclear weapons ferried into unsuspecting harbors by small boats and other craft.

Information warfare specialists at the Pentagon have estimated that a properly prepared and well coordinated attack by fewer than thirty computer virtuosos with a budget of less than ten million dollars could shut down everything from electric power grids to air traffic control. But this is just speculative. How real are these threats? What’s actually happening?

The National Computer Security Center reported that a survey of 520 American businesses, government agencies and universities disclosed that 64 percent had experienced intrusions in the last year, up 16 percent. The Internet was the main point of entry and attack. The FBI estimates that electronic crimes are running at ten billion dollars a year. And it also claims that less than 20 percent of the companies victimized ever report these intrusions to law enforcement agencies. This will not be an easy task

for the law enforcement arms of government, even if they had more thorough reporting.

At the beginning of the 1990s, a computer hard drive seized by the FBI would contain about fifty thousand pages of text. Today such an agency would have to deal with five to fifty million pages of data on the same hard drive. Budget-constrained government agencies average more than four years to order, acquire and install new computer systems versus less than nine months in the private sector.

It's estimated that the electronic capabilities of U.S. law enforcement run about five to ten years behind that of transnational crime. For example, ten thousand high-powered scanners, something of that order anyway, are smuggled from Asia into the U.S. every month. These can intercept and record mobile phones, faxes and telephone communications, so that a law enforcement computer crime teams can often find themselves being followed by the same hostile agents they thought they were tracking.

It's not an easy task, but it won't get any easier. In the last four years, the computer chip has gone from 1.1 million transistors on a single chip to about 120 million. It's estimated that this figure will soon reach 400 million and can go to 1 billion. Supercomputers will go from 256 billion moves per second to more than a trillion. And by coupling supercomputers, engineers have achieved 10 trillion operations per second. The latest desktop personal computers now have the speed of yesterday's supercomputers. And you, perhaps, all heard the President say that a Ford Taurus has greater computing power in it than did Apollo 7.

More significant simply than these developments in technology are their impacts on strategy. There is still no technology for determining the source of a disguised cyber attack, so that the attack that ends up at the Pentagon that we can trace back to Austin may not have begun in Austin, but may then lead us back to New York, or then to Latvia, back down to the Middle East, back to California, and there the trail may go cold, if we even get that far. Internet users now number about 120 million, 70 million of who are on the U.S. But five years from now, we think that about 1 billion persons will be online, two-thirds of them living abroad.

It has been publicly reported that eight nations have developed cyber war capabilities comparable to the U.S., and it has been publicly reported that three foreign nations have targeted U.S. systems for cyber attack.

In 1997 a Red Team, an artificial team set up to play a war game or execute an exercise as your adversary, put together by an intelligence agency pretended to be North Korean agents. Thirty-five men and women took hacker tools freely available off the World Wide Web, downloaded them, and they managed to shut down large segments of the American power grid and completely silence the command and control system of the U.S. Pacific Command in Honolulu. In a Red Team Defense Information Systems Agency attack, DISA, the Defense Information Systems Agency, launched some 38,000 computer attacks against its own systems,



just to test them. Only 4 percent of the persons in charge of these systems ever realized that they were attacked, and, of these, only 1 in 150 ever reported the intrusion.

Using the tools of information warfare, attackers can overload telephone lines with special software. For example, hackers have rerouted 911 emergency calls to a Swedish sex line. They can reroute and disrupt the operations of air traffic control, shipping and railroad computers. In February of last year, three hackers disrupted logistics planning for U.S. operations in the Gulf, and for many weeks, we thought the source of this was coming from the Gulf, because the hackers had cleverly routed their signals through computers in the Arab Emirates. Hackers can scramble the software for major financial institutions. Citibank lost \$10,000,000 to Russian computer hackers a few years ago. Hackers can alter, by remote control, the formulas for medicines in pharmaceutical plants. They can change the pressure in gas pipelines. A hacker group supporting the Mexican Zapatista rebels recently launched a denial of service attack against the Pentagon's primary Internet site and shut it down. The notorious Japanese group, Aum Shinrikyo, was working on computer virus developments when they launched their sarin gas attack in the Tokyo subway.

And this is perhaps the most ominous aspect of cyber attacks, because it is hard to separate the threat posed by terrorism, weapons of mass destruction using chemical, biological and nuclear weapons, and cyber attacks. Any one of these techniques is so useful to the others. I wrote the President's plan for an exercise using biological agents about, I guess it was seven or eight months ago, an exercise ultimately for the Cabinet. I must say I think I missed a very enjoyable career as a thriller writer. I had a great time doing this, but I had to throttle back my more deplorable instincts, because it's so easy to make that scenario horrific by adding onto it something that cripples the response teams that would otherwise be helping.

A coordinated cyber attack is the dream of many terrorists, but CBW, chemical-biological weapons attacks, really begin to produce frightening scenarios, if the means of coping with them, which are highly dependent upon rapid information transfer, are attacked at the same time. Furthermore, an adversary state might well want to shield itself from retaliation by operating not through its armed forces, which I very much doubt we will soon see invitingly arrayed across a desert frontier, but through shadowy agents who pose as terrorists, or act through the infinitely extendable arms of the Internet.

Strategically, the important thing to appreciate about these attacks is their essential ambiguity. It may not be possible, indeed, it is very likely not to be possible, to determine the source of the attack, and so strategies of retaliation and deterrence, which have served us well in the past, become almost useless. In such a world we must move our thinking from threat-based strategies that rely on knowing who our enemy is and where

he lives to vulnerability-based strategies that try to make our infrastructures more slippery, more redundant, more versatile, more difficult to attack, and more easily reconstituted.

Today, there is no great power that wishes us harm. In that respect, we are more secure now than at any time since the development of ballistic missiles and nuclear weapons. But that is not to say that we are invulnerable, nor that we face no threats that can be anticipated. Rather, our current situation implies that threats may come from unpredictable corners, not necessarily from great powers, that they may do just as much harm through disruption as we once feared from destruction. If we do not change our strategic approach to cope with this development, we might very well find ourselves in the following dilemma: faced with reports, like the one I described earlier, reports of significant intrusions into our network of critical communications, we might be paralyzed, because we would not know whether the intrusions represented a criminal conspiracy, an attack by a foreign power, a terrorist incident, a software glitch, or even a college prank. Not knowing the source of a threat, we wouldn't be able to assign a response to any particular division of government.

Let me give you this thought experiment: imagine a Principals Committee meeting. This is a subcommittee of the NSC, composed of those cabinet officials devoted to national security affairs. Imagine a room, a small paneled room, where there are the Secretaries of State, of Defense, the Attorney General, the Director of Central Intelligence, the National Security Advisor. Imagine that a trap door in a computer program, that is, a line of code that has been secretly inserted to allow the attacker to re-enter at some subsequent date, suppose this trap door, implanted at some time in the past by unknown parties, has recently been used by an Internet operator to enter a Pentagon system and send false commands to our satellites in space. Now, this is obviously a crime, so perhaps the Attorney General is the first to speak, and she says, "The FBI is on the case." But the National Security Advisor objects. He says, "What is wanted is not a prosecution, not even a criminal investigation just yet, because this would alert the persons who have broken in. What we really want is to send the hackers false data, so we can mislead them, get them to show their hand and either retaliate or isolate them, and find out who's behind this. This is a job for the Defense Department." But the Secretary of Defense objects that the computer used is a domestic one. It has a U.S. IP address. While the original signal may indeed have come from overseas, all we know is that the point of departure is the U.S. It's not a Defense matter. Perhaps the Intel people can track it down. Well, not NSA, they're under DOD. Not CIA, who, like, NSA, is restricted from spying on a U.S. person. In any case, if the Central Intelligence Agency were to act, would this require a Presidential finding? And how could the President execute a finding, authorizing a hackback (that's tracing back to the original computer), since we don't know against whom it is directed? Which takes us back to

the Attorney General and the FBI. But now, the Secretary of State enters the fray, and she says that no action can be taken. It violates the rights of neutral states, so if the FBI tracks its signals back, they have to stop if one of these signals takes them through a neutral IP address. Nor can the FBI violate the laws of an ally. Now, Britain has a Computer Misuse Act. This broadly proscribes any person from causing a computer to perform any function with intent to secure unauthorized access to any data held in any computer. Because the Internet was designed to withstand a nuclear attack by sending message packets through any working node, this UK statute could have a very broad application. An American, routing his attack against Department of Defense computers through a UK address, would claim the protection of the UK law against U.S. investigators. And so, the AG throws the ball back. Back to whom?

We cannot depend upon jurisdictional allocations of authority that rely upon knowing the source of the threat, but those are our jurisdictional allocations under our current system. There are no clear lines among these threats. The attacks don't arrive with labels that tell us whether they are the result of one form of conspiracy or attack or another. So, you have to craft a governmental structure that is supple and flexible enough to react in an environment of unprecedented uncertainty. Above all, you must avoid the paralysis that can seize a government when the jurisdictional lines along which we habitually act, do not neatly correspond to the known facts of the instant. This will require a profound shift in our habitual ways of thinking.

I gave a talk at the Naval War College some months ago to officers who are there to play a scripted war game, and after I said something like what I've just said to you about the ambiguity of attacks, one of the young officers raised his hand and said, "But, sir, we know who our attacker is. It's the Red Team." And you can see how naturally this would come to someone. In fact, we all have to learn to think in new ways.

National security will cease to be defined in terms of borders and territory alone, because the links among our critical infrastructures, as well as the attacks on them, exist in cyberspace, not on an invaded plane marked by the seizure and holding of territory. The line between the public and the private that has been the essential division in our society will be blurred, because most of these critical infrastructures are in the hands of the private sector. Indeed, it's often said that more than 95 percent of all Pentagon traffic goes along highly vulnerable publicly owned lines. I would say that the U.S. military and civilian structure is almost the same. This means we'll have to take in new security partners, drawn from the private sector, in order to protect the public good. There will be no final victory in such a war. Rather, victory consists in having the resources and the ingenuity to avoid defeat.

Now, if that sounds bleak, let me remind you that it is the consequence of our unprecedented success. We have dominated the present era

because we were best situated to benefit from a globalized market, and because we did not shrink from international leadership, even when we became vulnerable to weapons of mass destruction. Now we're learning that the same forces that brought globalization and universal vulnerability are bringing a new ubiquity of threats.

In May, the President signed Presidential Decision Directive 63. PDD 63 sets in motion a process to produce a national plan for critical infrastructure protection, and that plan will be made public early this next year. But no plan can provide the change in our way of thinking that this new era demands. Structures can facilitate new approaches, but, at some point, a community must arise that will sustain these new approaches.

"Once in while," Graham Greene wrote, "a door opens and lets in the future." I think we are at such a moment.

# MEMORIALS

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PROFESSOR SIR DEREK H. R. BARTON  
1918-1998

Sir Derek Barton, who was distinguished professor of chemistry at Texas A&M University and holder of the Dow Chair of Chemical Invention, died on March 16 in College Station, Texas, of heart failure. He was 79 years old and had been chairman of the Executive Board of Editors for Tetrahedron Publications since 1979. Barton was considered to be one of the greatest organic chemists of the twentieth century. His work continues to have a major influence on contemporary science and will continue to do so for future generations of chemists.

Derek Harold Richard Barton was born on September 8, 1918, in Gravesend, Kent, U.K., and graduated from Imperial College, London, with the degrees of B.Sc. (1940) and Ph.D. (1942). He carried out work on military intelligence during World War II, and after a brief period in industry, joined the faculty at Imperial College. It was an early indication of the breadth and depth of his chemical knowledge that his lectureship was in physical chemistry. This research led him into the mechanism of elimination reactions and to the concept of molecular rotation difference to correlate the configurations of steroid isomers. During a sabbatical leave at Harvard in 1949-50 he published a paper on the "Conformation of the Steroid Nucleus" (*Experientia* 1950, 6, 316) which was to bring him the Nobel Prize in Chemistry in 1969, shared with the Norwegian chemist Odd Hassel. This key paper (only four pages long) altered the way in which chemists thought about the shape and reactivity of molecules, since it showed how the reactivity of functional groups in steroids depends on their axial or equatorial positions in a given conformation. After returning to the U.K. he held chairs of chemistry at Birkbeck College and Glasgow University before returning in 1957 to Imperial College, where he developed a remarkable synthesis of the steroid hormone aldosterone by a photochemical reaction known as the Barton Reaction (nitrite photolysis). In 1978 he retired from Imperial College and became director of the Natural Products Institute at Gifsur-Yvette in France, where he studied new chemical reactions, especially the chemistry of radicals, which opened up a whole new area of organic synthesis involving Gif chemistry. In 1986 he moved to a third career at Texas A&M University as distinguished professor of chemistry and continued to work on

\*As of August 1999

novel reactions involving radical chemistry and the oxidation of hydrocarbons. His discoveries become of great industrial importance. In a research career spanning more than five decades, Barton's contributions to organic chemistry included major discoveries that have profoundly altered our way of thinking about chemical structure and reactivity. His chemistry has provided models for the biochemical synthesis of natural products, including alkaloids, antibiotics, carbohydrates, and DNA. Most recently his discoveries led to models for enzymes that oxidize hydrocarbons, including methane monooxygenase.

The following are selected highlights from his published work:

The 1950 paper that launched Conformational Analysis was recognized by the Nobel Prize Committee as the key contribution whereby the third dimension was added to chemistry. This work alone transformed our thinking about the connection between stereochemistry and reactivity, and was later adapted from small molecules to macromolecules, e.g. DNA, and to inorganic complexes.

Barton's breadth and influence is illustrated in "Biogenetic Aspects of Phenol Oxidation" (*Festschrift Arthur Stoll, 1957, 117*). This theoretical work led to many later experiments on alkaloid biosynthesis and to a set of rules for ortho-para-phenolic oxidative coupling that allowed the prediction of new natural product systems before they were actually discovered and to the correction of several erroneous structures.

In 1960 his paper on the remarkably short synthesis of the steroid hormone aldosterone (*J. Am. Chem. Soc.*, 1960, 82, 2641) disclosed the first of many inventions of new reactions—in this case nitrite photolysis—to achieve short, high-yielding processes, many of which have been patented and are used worldwide in the pharmaceutical industry.

Moving to 1975, by which time some 500 papers had been published, yet another "Barton reaction" was born—"The Deoxygenation of Secondary Alcohols" (*J. Chem. Soc. Perkin 1, 1975, 1574*), which has been very widely applied due to its tolerance of quite hostile and complex local environments in carbohydrate and nucleoside chemistry. This reaction is the chemical counterpart to ribonucleotide<sub>4</sub> deoxyribonucleotide reductase in biochemistry and, until the arrival of the Barton reaction, was virtually impossible to achieve.

"Invention of a new Radical Chain Reaction" (1985) involved the generation of carbon radicals from carboxylic acids (*Tetrahedron, 1985, 41, 3901*). The method is of great synthetic utility and has been used many times by others in the burgeoning area of radicals in organic synthesis.

These recent advances in synthetic methodology were remarkable since Barton's chemistry had virtually no precedent in the work of others. The radical methodology was especially timely in light of the significant recent increase in applications for fine chemical syntheses, and Barton gave the organic community an entrance into what will prove to be one of the most important methods of the next century. He often said how proud

he was, at age seventy-one, to receive the ACS Award for Creativity in Organic Synthesis for work published in the preceding five years.

Much of Barton's more recent work is summarized in the articles "The Invention of Chemical Reactions—the Last 5 Years" (*Tetrahedron*, 1992, 48, 2529) and "Recent Developments in Gift Chemistry" (*Pure. & Appl. Chem.*, 1997, 69, 1941).

Working 12 hours a day, Barton remained energetic and creative to the day of his death. The author of more than 1000 papers in chemical journals, he also held many successful patents. In addition to the Nobel Prize, he received many honors and awards, including the Davy, Copley, and Royal medals of the Royal Society of London and the Roger Adams and Priestley medals of the American Chemical Society. He held honorary degrees from thirty-four universities. He was a Fellow of the Royal Societies of London and Edinburgh, Foreign Associate of the National Academy of Sciences (USA), and Foreign Member of the Russian and Chinese Academies of Sciences. He was knighted by Queen Elizabeth in 1972, received the Légion d' Honneur (Chevalier 1972; Officier 1985) from France, and the Order of the Rising Sun from the emperor of Japan. In his long career, Sir Derek trained over 300 students and postdoctoral fellows, who include some of today's most distinguished organic chemists.

For those of us who were fortunate to know Sir Derek personally there is no doubt that his genius and work ethic were unique. He gave generously of his time to students and colleagues wherever he traveled and engendered such great respect and loyalty in his students and coworkers that major symposia accompanied his birthdays every five years, beginning with the sixtieth and ending this year with two celebrations just before his eightieth birthday. With the death of Sir Derek Barton, the world of science has lost a major figure, who, together with Sir Robert Robinson and Robert B. Woodward, the cofounders of Tetrahedron, changed the face of organic chemistry in this century.

Professor Barton is survived by his wife, Judy, by a son, William, from his first marriage, and by three grandchildren.

A. I. Scott, Texas A&M University,  
Department of Chemistry, College Station

WILLIAM E. DARDEN JR.  
1916–1998

Bill Darden was born in Waco, Texas, to William E. and Mary Lucrecia Prather Darden. He attended Waco Public Schools, the McCallie School in Chattanooga, Tennessee, and was graduated from the University of Texas, where he was an active member of Kappa Sigma fraternity. Bill's grandfather was William Prather, the president of the University of Texas from 1899 to 1905. Bill served the university as a regent from February 1947 to January 1953.

Darden served as a lieutenant commander in the Navy during World War II. He was active in business in Waco throughout his life. His father had been in the lumber business, and he continued in the building materials industry. He was married to Jean Hendrick Darden. They had six children and four grandchildren.

Throughout his life he was closely involved with nearly every aspect of civic life in Waco. He was president of the Waco Independent School District Board, he was chairman of the Ridgewood Country Club, he was active with the Waco Chamber of Commerce and on the Advisory Board of Providence Hospital. In addition to his civic activities he was a former director of Petroleum Life Insurance in Midland, Lumberman's Underwriters Insurance in Austin, Pioneer Savings Association in Waco, and Community Bank and Trust in Waco.

Bill loved to hunt, to be around the fire on a hunt, and to tell a good story. He also listened with enthusiasm. Food was his avocation. As his wife so aptly said, "He liked food whether it was good or bad." People flocked to him for advice. He was a very fair person and would always consider all sides of a question before making a judgment. His friends were absolutely devoted to him and he to them.

A.B.D.

LLERENA BEAUFORT FRIEND  
1903-1995

Llerena Friend, noted Texas historian and bibliographer, was born on October 19, 1903, in Dublin, Texas, the daughter of Everest M. and Llerena Collinsworth Perry Friend. After attending public schools in Wichita Falls, she attended the University of Texas, where she received the B.A. degree in 1924, the M.A. in 1928, and the Ph.D. in 1951.

From 1924 to 1926 she taught at the high school in Vernon, and from 1926 to 1944 she taught at Wichita Falls High School. In 1945 she returned to the University of Texas, where she became a research associate at the Texas State Historical Association. She worked for Walter Prescott Webb as an editorial assistant on the *Handbook of Texas* (volumes I and II). In 1950 she became librarian of the Texas Collection, Barker Texas History Center, where she served until 1969. She also served as lecturer in the Department of History from 1964 until 1971, when she retired from the university as professor emeritus.

Her Ph.D. dissertation, written under the supervision of Eugene C. Barker, was published in 1954 under the title *Sam Houston, the Great Designer*. She edited *M. K. Kellogg's Texas Journal, 1872* (1967) and, with Ernest W. Winkler, *Check List of Texas Imprints, 1861-1876* (1963). In 1970 she published *Talks on Texas Books* by Walter Prescott Webb.

During her professional career she received numerous awards and commendations, and was active in the Texas State Historical Association,



the Western History Association, Alpha Chi Omega, and the Texas Institute of Letters. After retirement, she returned to Wichita Falls, where she was active in cultural and educational affairs.

Miss Friend was greatly respected as one of the leading experts in Texas bibliography and liberally shared her knowledge with her students and colleagues. University chancellor Harry Ransom thought of her as "a sage and gentle Texan, as generous as she is wise. Her own making of accurate and highly readable accounts of Texas history follows a dual tradition sprung from Barker and Webb. She has fulfilled the motto of one of her predecessors, Swante Palm: 'Get knowledge and share it.'"

She died in Wichita Falls on September 8, 1995.

J.C.M.

#### FRANKLIN HARBACH

1903-1993

Franklin Harbach was born in Bernville, Pennsylvania, in 1903. After graduating from the University of Pennsylvania, he went to New York, where he worked at Henry Street Settlement House while studying law. This experience led him to choose a career in social work, and he came to Houston as Director of Houston Settlement Association in 1943.

Houston Settlement Association, now known as Neighborhood Centers Inc., was founded in 1907. NCI launched such programs as preschools and a visiting-nurse program, which were later taken over by the Houston Independent School District and the Visiting Nurses Association respectively. Harbach continued to explore ways of expanding this "settlement" tradition. "Settlers" within a community would keep in close contact with their neighbors, define community needs, and develop pilot programs to meet those needs. Today this methodology is known as "community-based initiative." Programs that grew out of this sort of initiative included early childhood education (a model for Headstart), recreation, social and nutrition services for the aged, after-school day care, and comprehensive services. Under Harbach's leadership, NCI expanded its services geographically, establishing centers and programs in other communities in Houston as well as in La Porte, Pasadena, and South Houston.

Mr. Harbach was a man of international influence. As president of the National Federation of Settlements during the 1950s, he served as a consultant to the U.S. government and traveled on several occasions to Germany, where he assisted in reestablishing social service programs following World War II.

NCI also served as a field-placement site for Master of Social Work candidates. This provided work-training experience for social workers from the local community and many international students from Central and South America who were sponsored by the U.S. State Department.

Harbach was among those instrumental in establishing the Graduate School of Social Work at the University of Houston. After retiring, he maintained a lifelong interest in NCI while serving as a consultant to the Ripley Foundation.

Franklin Harbach was a man of vision, and at the same time, eminently practical. His contribution to the development and the delivery of social services in Houston, as well as his influence on the thinking of professionals who worked with him and the people whose lives he touched, is immeasurable.

J.S.B.

### BISHOP JOHN E. HINES

1910-1997

The Right Reverend John Elbridge Hines, who was elected to this society in 1961, was a person of giant stature and one of the truly great bishops of the Episcopal Church. He was, however, about fifty years ahead of the thinking and concepts of some of the laity, and for that reason, he was not popular with a substantial segment. Nevertheless, history will, I think, regard him as truly great. He rose to be the presiding bishop of the Episcopal Church from 1965 to 1974.

John Hines was born in Seneca, South Carolina, on October 3, 1910. He was married to Helen Orwig of St. Louis, Missouri. They had five children, including the Rev. Chrys Hines, who served at All Saints, Austin. He died in Austin on July 19, 1997. He was eighty-seven. He received a B. A. degree from the University of the South, Sewanee, Tennessee, where he was elected to Phi Beta Kappa. He received B.D. and D.D. degrees from the Virginia Theological Seminary, and a D.D. from the University of the South, Sewanee, in 1946. He was ordained deacon in 1933 and priest in 1934. He served in churches in St. Louis and Hannibal, Missouri; in Augusta, Georgia; and at Christ Church, Houston. When he was thirty-four, he was elected bishop-coadjutor of the Diocese of Texas, to serve with Bishop Clinton S. Quin, another great bishop of Texas. In 1956, he was made bishop of the Diocese of Texas. He served until 1964, when he became presiding bishop of the National Episcopal Church.

The seat of the Bishop was at Christ Church Cathedral in Houston. But as coadjutor, Hines spent much time in Austin. Among other things, he was responsible for the establishment of the Seminary of the Southwest. The chancellor (lawyer) for the diocese was in Houston, but in the Austin area, Tom Gee and I were able to be legal assistance in seminary matters and the establishment of St. Andrews School. A neighbor to the Seminary property brought a lawsuit to enjoin the erection of the Charles Black Library Building at the Seminary on the grounds that the seminary and the library were, or would be, a noisy public nuisance. I represented

the Seminary, and Gee and I were successful in defending the seminary in the Supreme Court of Texas. He also had a large hand in the establishment of St. Stephen's School in Austin.

As a bishop, and as presiding bishop, he presided over the Episcopal Church during the social and cultural turmoil of the 1960s. He led the diocese through the process of racial integration. He urged Episcopalians to become advocates in the struggle for civil rights. He supported participation in the interfaith movement, the ordination of women as priests, and the inclusion of minority groups in church councils.

When I was first assistant attorney general of Texas, it became my duty to represent the university in *Sweatt v. Painter*, i.e., to represent Dr. Painter and the Board of Regents who excluded the black man from the law school. I argued the case against Thurgood Marshall in the U.S. Supreme Court. Though the churches, church schools, and other facilities of the Episcopal Church were segregated, Bishop Hines urged the filing of an *amicus* brief against the university's position. One was filed in the U.S. Supreme Court on behalf of the Federal Council of Churches, with the Episcopal Church listed as a participant. I talked with the Bishop about that. Both of us took professional positions: I was not a person championing my own views. I was a lawyer for a client. The Bishop was following his Christian duty as he saw it. We respected each other's views. Some members of the Episcopal Church were not so charitable toward Bishop Hines. His views led to dissension and caused some local congregations to withhold financial contributions from the church's national budget, but he was right.

Bishop Hines was conscious of the dissent. It must have caused him pain. Around 1981, I proposed William C. (Bill) Harvin for membership in this society, and I wrote to Bishop Hines for his help in getting Bill elected to it. The Bishop wrote back that he'd be for him and would support his election "if it did not hurt him." The Bishop's support did not hurt Bill, and he was elected to the society.

As bishop of the Diocese of Texas, Hines greatly expanded the property ownership of the diocese. He saw a need for new parishes and missions in this growing area of Texas. All real property of the diocese is held in the name of the bishop. I was privileged to serve on the Diocesan Board (Houston) when a lot of the property was bought. In addition to his advanced social views, some thought that he was fiscally irresponsible. He was not. There was a need for a new location of Camp Allen, a place mainly for a summer camp for retreats. The bishop selected acreage on the shores of Clear Lake nearest to the Galveston-Houston highway. It seemed fine to me, but "older and wiser heads" were against it. It was too expensive. It is now occupied by the Manned Space Center. The bishop knew good real estate better than the Diocesan Board did.

Bishop Hines had a brilliant mind. His wisdom greatly exceeded his popularity. His sermons were addressed to the future and his convictions

of Christian responsibility. *Christian Century* magazine said of the bishop that he "remained astride the bucking bronco of a polarized church during one of the most controversial decades in American History." In the long and broader view, it will be said of him, "well done." As a person, he was modest almost to a fault, cheerful, and great to be around. It was a pleasure to be associated with him and to have him as a friend.

J.R.G.

DOROTHY W. KNEPPER

1908-1998

Dorothy Wardell Knepper, daughter of Harold Forest and Hattie (Stockley) Wardell, was born on July 22, 1908, in New Orleans, Louisiana. She was graduated from the University of Texas summa cum laude in 1943, majoring in history, political science, and Spanish, and was elected to membership in Phi Beta Kappa, Sigma Delta Pi (Spanish honorary) and Pi Sigma Alpha (Political Science).

After completing course work for a master's degree, on the recommendation of professors Eugene C. Barker and Charles W. Hackett, she was named acting director (later director) of the San Jacinto Museum of History Association, the private, nonprofit educational organization chartered in 1938 to provide a historical museum in the base of the San Jacinto Monument. Earlier professional leaders in the museum had been Ike Moore, Andrew Forest Muir, Joe B. Frantz, and Malcolm McLean. In 1958, Mrs. Knepper was elected to membership in the Philosophical Society of Texas. She was active in several professional organizations, including the Texas State Historical Association and the Texas Association of Museums.

At her retirement as director of the museum in 1979, Mrs. Knepper had supervised the cataloging of some 100,000 objects, 200,000 books, 10,000 items of visual art, and some 250,000 documents and manuscripts. According to Paul Gervais Bell, long time president of the San Jacinto Museum of History Association, "Dorothy Knepper made numerous landmark contributions to the Museum during her thirty years as director. Her meticulous care for the collections, from their original cataloging through the countless exhibits she prepared at the Museum, ensured their availability for future generations of Texans. A careful scholar of the early periods of our State's history, she was well known as a Texan of impeccable integrity and honor."

She was married to David W. Knepper, long-time professor at the University of Houston. She died on August 7, 1998.

J.C.M.

## POLLY ZACHRY

1917-1998

Mrs. H. B. Zachry was born Sarah Pauline Butte in Austin, Texas, the daughter of Dr. and Mrs. George C. F. Butte. As a child she lived in Puerto Rico, Washington, D.C., and the Philippine Islands, but returned to the United States to attend Vassar College. She was married to Charles Rapier Dawson in 1940 and moved to San Antonio, where she spent the rest of her life.

She was very active in the community and served on the boards of United Way, the Battle of Flowers Association, the San Antonio Conservation Society, the Junior League, the Mind Science Foundation, the Cancer Therapy and Research Center, St. Luke's Baptist Hospital Foundation, the National Planned Parenthood Association, and the National Association of College Admission Counselors. For many years she was a teacher and administrator at St. Mary's Hall in San Antonio. There she taught Latin, was director of admissions for eight years and assistant headmistress for five years.

In 1980 she married Henry Bartell Zachry Sr., who preceded her in death. She had three children, eight grandchildren, and seven great-grandchildren. She was a remarkable woman in so many ways. She was the first woman elected to the City Council of Alamo Heights and served there for nine consecutive terms. She was very active as a member of the First Presbyterian Church, where she was always willing to take responsibility. Polly was known for her wisdom, wit, and ability to keep up with what was going on in her community. She is greatly missed by all of us who knew her well.

A.B.D.

# OFFICERS OF THE SOCIETY

*For the Year 1999*

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*President*

PATRICIA HAYES

*First Vice-President*

A. BAKER DUNCAN

SECOND VICE-PRESIDENT

ELLEN C. TEMPLE

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WILLIAM D. SEYBOLD

WILLIAM C. LEVIN

J. CLIFTON CALDWELL

ELSPETH ROSTOW

J. CHRYS DOUGHERTY

# PAST PRESIDENTS

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* Mirabeau Buonaparte Lamar	1837-59
* Ira Kendrick Stephens	1936
* Charles Shirley Potts	1937
* Edgar Odell Lovett	1938
* George Bannerman Dealey	1939
* George Waverley Briggs	1940
* William James	1941
* George Alfred Hill Jr.	1942
* Edward Henry Cary	1943
* Edward Randall	1944
* Umphrey Lee	1944
* Eugene Perry Locke	1945
* Louis Herman Hubbard	1946
* Pat Ireland Nixon	1947
* Ima Hogg	1948
* Albert Perley Brogan	1949
* William Lockhart Clayton	1950
* A. Frank Smith	1951
* Ernest Lynn Kurth	1952
* Dudley Kezer Woodward Jr.	1953
* Burke Baker	1954
* Jesse Andrews	1955
* James Pinckney Hart	1956
* Robert Gerald Storey	1957
* Lewis Randolph Bryan Jr.	1958
* W. St. John Garwood	1959
George Crews McGhee	1960
* Harry Hunt Ransom	1961
* Eugene Benjamin Germany	1962
* Rupert Norval Richardson	1963
* Mrs. George Alfred Hill Jr.	1964
* Edward Randall Jr.	1965
* McGruder Ellis Sadler	1966
* William Alexander Kirkland	1967
* Richard Tudor Fleming	1968
* Herbert Pickens Gambrell	1969

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* Harris Leon Kempner	1970
* Carey Croneis	1971
* Willis McDonald Tate	1972
* Dillon Anderson	1973
* Logan Wilson	1974
* Edward Clark	1975
Thomas Hart Law	1976
* Truman G. Blocker Jr.	1977
Frank E. Vandiver	1978
* Price Daniel	1979
Durwood Fleming	1980
Charles A. LeMaistre	1981
* Abner V. McCall	1982
* Leon Jaworski	1983
Wayne H. Holtzman	1983
Jenkins Garrett	1984
Joe R. Greenhill	1985
William Pettus Hobby	1986
Elsbeth Rostow	1987
John Clifton Caldwell	1988
J. Chrys Dougherty	1989
* Frank McReynolds Wozencraft	1990
William C. Levin	1991
William D. Seybold	1992
Robert Krueger	1993
Steven Weinberg	1994
* William H. Crook	1995
Charles C. Sprague	1996
Jack S. Blanton	1997
William P. Wright Jr.	1998

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\* Deceased



# MEETINGS OF THE PHILOSOPHICAL SOCIETY OF TEXAS

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| <p>1837 – Founded at Houston,<br/>December 5</p> <p>1840 – Austin, January 29</p> <p>1936 – Chartered, January 18</p> <p>1936 – Reorganizational meeting –<br/>Dallas, December 5</p> <p>1937 – Meeting and inaugural<br/>banquet – Dallas, January 29</p> <p>1937 – Liendo and Houston,<br/>December 4</p> <p>1938 – Dallas</p> <p>1939 – Dallas</p> <p>1940 – San Antonio</p> <p>1941 – Austin</p> <p>1942 – Dallas</p> <p>1943 – Dallas</p> <p>1944 – Dallas</p> <p>1945 – Dallas</p> <p>1946 – Dallas</p> <p>1947 – San Antonio</p> <p>1948 – Houston</p> <p>1949 – Austin</p> <p>1950 – Houston</p> <p>1951 – Lufkin</p> <p>1952 – College Station</p> <p>1953 – Dallas</p> <p>1954 – Austin</p> <p>1955 – Nacogdoches</p> <p>1956 – Austin</p> <p>1957 – Dallas</p> <p>1958 – Austin</p> <p>1959 – San Antonio</p> <p>1960 – Fort Clark</p> <p>1961 – Salado</p> <p>1962 – Salado</p> <p>1963 – Nacogdoches</p> | <p>1964 – Austin</p> <p>1965 – Salado</p> <p>1966 – Salado</p> <p>1967 – Arlington</p> <p>1968 – San Antonio</p> <p>1969 – Salado</p> <p>1970 – Salado</p> <p>1971 – Nacogdoches</p> <p>1972 – Dallas</p> <p>1973 – Austin (Lakeway Inn)</p> <p>1974 – Austin</p> <p>1975 – Fort Worth</p> <p>1976 – San Antonio</p> <p>1977 – Galveston</p> <p>1978 – Houston</p> <p>1979 – Austin</p> <p>1980 – San Antonio</p> <p>1981 – Dallas</p> <p>1982 – Galveston</p> <p>1983 – Fort Worth</p> <p>1984 – Houston</p> <p>1985 – College Station</p> <p>1986 – Austin</p> <p>1987 – Kerrville</p> <p>1988 – Dallas</p> <p>1989 – San Antonio</p> <p>1990 – Houston</p> <p>1991 – Galveston</p> <p>1992 – Dallas</p> <p>1993 – Laredo</p> <p>1994 – Austin</p> <p>1995 – Corpus Christi</p> <p>1996 – Dallas</p> <p>1997 – Houston</p> <p>1998 – Abilene</p> <p>1999 – Austin</p> |
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# PREAMBLE

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**W**e the undersigned form ourselves into a society for the collection and diffusion of knowledge—subscribing fully to the opinion of Lord Chancellor Bacon, that “knowledge is power”; we need not here dilate on its importance. The field of our researches is as boundless in its extent and as various in its character as the subjects of knowledge are numberless and diversified. But our object more especially at the present time is to concentrate the efforts of the enlightened and patriotic citizens of Texas, of our distinguished military commanders and travellers,—of our scholars and men of science, of our learned members of the different professions, in the collection and diffusion of correct information regarding the moral and social condition of our country; its finances, statistics and political and military history; its climate, soil and productions; the animals which roam over our broad prairies or swim in our noble streams; the customs, language and history of the aboriginal tribes who hunt or plunder on our borders; the natural curiosities of the country; our mines of untold wealth, and the thousand other topics of interest which our new and rising republic unfolds to the philosopher, the scholar and the man of the world. Texas having fought the battles of liberty, and triumphantly achieved a separate political existence, now thrown upon her internal resources for the permanence of her institutions, moral and political, calls upon all persons to use all their efforts for the increase and diffusion of useful knowledge and sound information; to take measures that she be rightly appreciated abroad, and acquire promptly and fully sustain the high standing to which she is destined among the civilized nations of the world. She calls on her intelligent and patriotic citizens to furnish to the rising generation the means of instruction within our own borders, where our children—to whose charge after all the vestal flame of Texian liberty must be committed—may be indoctrinated in sound principles and imbibe with their education respect for their country’s laws, love of her soil and veneration for her institutions. We have endeavored to respond to this call by the formation of this society, with the hope that if not to us, to our sons and successors it may be given to make the star, the single star of the West, as resplendent for all the acts that adorn civilized life as it is now glorious in military renown. Texas has her captains, let her have her wise men.

# MEMBERS OF THE SOCIETY

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(As of August, 1999)  
(Name of spouse appears in parentheses)

- ADKISSON, PERRY L. (FRANCES), former chancellor, Texas A&M University System; distinguished professor of entomology, Texas A&M University, *College Station*
- ALLBRITTON, JOE LEWIS (BARBARA), lawyer; board chairman, Riggs National Corporation, *Washington, D.C.*
- ANDERSON, THOMAS D. (HELEN), lawyer, *Houston*
- ARMSTRONG, ANNE LEGENDRE (TOBIN), former U.S. ambassador to Great Britain, *Armstrong*
- ARNOLD, DANIEL C. (BEVERLY), private investor, *Houston*
- ASHBY, LYNN COX (DOROTHY), former editor, editorial page, *Houston Post*; member, Houston Philosophical Society; author, columnist, *Houston*
- ASHWORTH, KENNETH H., commissioner of higher education, Texas College and University System, *Austin*
- ATLAS, MORRIS (RITA), lawyer; senior partner, Atlas and Hall, *McAllen*
- BAKER, JAMES ADDISON, III (SUSAN), former U.S. secretary of state; former U.S. secretary of the treasury; former White House chief of staff, lawyer, *Houston*
- BAKER, REX G., JR., lawyer, *Houston*
- BARNES, SUSAN J., independent curator and art historian; postulant for Holy Orders, Episcopal Diocese of Texas, *Austin*
- BARNETT, LYNN (RANDY), director of the Abilene Cultural Affairs Council, *Abilene*
- BARROW, THOMAS D. (JANICE), president, T-Bar-X, Ltd., *Houston*
- BASH, FRANK (SUSAN), director, McDonald Observatory, The University of Texas at Austin, *Austin*
- BASS, GEORGE FLETCHER (ANN), scientific director, Institute of Nautical Archaeology, Texas A&M University, *College Station*

- BATISTE, JOHN PAUL, executive director of the Texas Commission on the Arts, *Austin*
- BELL, HENRY M., JR. (NELL), banking consultant; retired senior chairman of the board, First City Texas, Tyler N.A.; chairman of the board, East Texas Medical Center Foundation, *Tyler*
- BELL, PAUL GERVAIS (SUE), president, P. G. Bell Company; president, San Jacinto Museum of History, *Houston*
- BENTSEN, LLOYD (BERYL ANN "B.A."), former U.S. senator and U.S. secretary of the treasury, *Houston*
- BERDAHL, ROBERT (MARGARET), president, The University of Texas at Austin; author; historian, *Austin*
- BLANTON, JACK S. (LAURA LEE), president, Scurlock Oil Company, *Houston*
- BOBBITT, PHILIP C., professor of law, The University of Texas at Austin; author, *Austin*
- BOLES, JOHN B. (NANCY), William Pettus Hobby Professor of History at Rice University, managing editor of the *Journal of Southern History*, *Houston*
- BOLTON, FRANK C., JR., lawyer; former head of legal department, Mobil Oil Company, *Houston*
- BONJEAN, CHARLES M., Hogg Professor of Sociology and executive director of the Hogg Foundation for Mental Health, The University of Texas at Austin, *Austin*
- BOWEN, RAY M., president, Texas A&M University, *College Station*
- BRANDT, EDWARD N., JR. (PATRICIA), physician-medical educator; Regents Professor, University of Oklahoma-Health Sciences Center, *Oklahoma City, OK*
- BRINKERHOFF, ANN BARBER, chair, UTMB Centennial Commission; Hogg Foundation national advisory board; vice president, Houston Community College Foundation, *Houston*
- BROWN, MICHAEL S. (ALICE), professor of molecular genetics and director, Jonsson Center for Molecular Genetics, the University of Texas Southwestern Medical Center at Dallas; 1985 Nobel laureate in physiology or medicine, *Dallas*
- BROWNELL, BLAINE A. (MARDI ANN), provost and vice president, University of North Texas, *Denton*
- BROYLES, WILLIAM, JR. (ANDREA), author; founding editor, *Texas Monthly*; former editor-in-chief, *Newsweek*; co-creator, *China Beach*; author, *Brothers In Arms*; co-screenwriter, *Apollo 13*, *Austin*
- BRYAN, J. P., JR. (MARY JON), president, Gulf Canada Resources Limited; former president, Texas State Historical Association, *Houston*
- BURNS, CHESTER R. (ANN) James Wade Rockwell Professor of the History of Medicine, University of Texas Medical Branch, *Galveston*

- BUSH, GEORGE (BARBARA), former president of the United States; former director, Central Intelligence Agency; former ambassador to United Nations; former congressman, *Houston*
- BUSH, GEORGE W. (LAURA), governor of Texas, *Austin*
- BUSH, LAURA WELCH (GEORGE), first lady of Texas, founder of the Texas Book Festival, *Austin*
- BUTT, CHARLES C., chairman of the board and chief executive officer, H. E. Butt Grocery Company, *San Antonio*
- CALDWELL, JOHN CLIFTON (SHIRLEY), rancher; president, Aztec Foundation; former chairman, Texas Historical Commission; director, Texas Historical Foundation, *Albany*
- CALGAARD, RONALD KEITH (GENIE), president, Trinity University, *San Antonio*
- CARLETON, DON E. (SUZANNE), director, Center for American History, The University of Texas at Austin, *Austin*
- CARPENTER, ELIZABETH "LIZ," former assistant secretary of education, Washington correspondent, White House press secretary; consultant, LBJ Library; author, *Austin*
- CARSON, RONALD (UTE), Harris L. Kempner Distinguished Professor in the Humanities in Medicine and director of the Institute for the Medical Humanities, the University of Texas Medical Branch at Galveston, *Galveston*
- CASEY, ALBERT V., former U.S. postmaster general; chairman and C.E.O., AMR Corporation and American Airlines, Inc.; director, Colgate-Palmolive Company, *Dallas*
- CATTO, HENRY E. (JESSICA), former U.S. ambassador to Great Britain and El Salvador; vice chairman, Aspen Institute; vice chairman, National Public Radio, *San Antonio*
- CAVAZOS, LAURO F. (PEGGY ANN), former U.S. secretary of education; former president, Texas Tech University and Texas Tech University Health Sciences Center, *Port Aransas*
- CHRISTIAN, GEORGE (JO ANNE), writer and political consultant; former press secretary and special assistant to President Lyndon B. Johnson *Austin*
- CIGARROA, JOAQUIN G., JR. (BARBARA), physician, internal medicine and cardiology, *Laredo*
- CISNEROS, HENRY G. (MARY ALICE), former mayor, San Antonio; faculty member, Trinity University, *San Antonio*
- CLEMENTS, WILLIAM P., JR. (RITA), former governor of Texas; former chairman, SEDCO, Inc.; former U.S. deputy secretary of defense, *Dallas*

- COOK, C. W. W. (FRANCES), company director, former chairman, General Foods Corporation, *Austin*
- CRAVEN, JUDITH LYNN BERWICK (MORITZ), professor of public health administration, The University of Texas Health Science Center, Houston; director of public health, Houston, *Houston*
- CRIM, WILLIAM ROBERT (MARGARET), investments, *Kilgore*
- CROOK, MARY ELIZABETH (MARC LEWIS), author; member, Texas Institute of Letters, *Austin*
- CRUTCHER, RONALD A. (BETTY), professor of music and director of the School of Music, The University of Texas at Austin; cellist, *Austin*
- CUNNINGHAM, ISABELLA C. (WILLIAM), professor of communications, The University of Texas at Austin, *Austin*
- CUNNINGHAM, WILLIAM H. (ISABELLA), former president, The University of Texas at Austin; chancellor, the University of Texas System, *Austin*
- CURTIS, GREGORY (TRACY), editor, *Texas Monthly*; author, *Austin*
- DANIEL, JEAN BALDWIN, former first lady of Texas; author, *Liberty*
- DAVIDSON, CHANDLER (SHARON L. PLUMMER), professor of sociology and political science at Rice University, *Houston*
- DEAN, DAVID (MARIE), lawyer; former secretary of state, Texas, *Dallas*
- DEBAKEY, MICHAEL E., surgeon; chancellor, Baylor College of Medicine, *Houston*
- DECHERD, ROBERT W. (MAUREEN), president, A. H. Belo Corporation, *Dallas*
- DELCO, WILHELMINA (EXALTON), former member, Texas House of Representatives; civic leader, *Austin*
- DENIUS, FRANKLIN W. (CHARMAINE), lawyer; former president, the University of Texas Ex-Students' Association; member, Constitutional Revision Committee, *Austin*
- DENMAN, GILBERT M., JR., lawyer, partner, Denman, Franklin & Denman; chairman of the board, Southwest Texas Corporation and Ewing Halsell Foundation, *San Antonio*
- DE WETTER, MARGARET BELDING (PETER), artist and poet, *El Paso*
- DICK, JAMES, founder-director, International Festival-Institute at Round Top; concert pianist and teacher *Round Top*
- DOBIE, DUDLEY R., JR. (SAZA), of counsel, Brorby & Crozier, P. C., *Austin*
- DOUGHERTY, J. CHRYS, III, retired attorney; former Honorary French Consul in Austin; former trustee, St. Stephen's Episcopal School, Austin; the University of Texas Law School Foundation; Texas Supreme Court Historical Society, *Austin*

- DOUGHERTY, J. CHRYS, IV (MARY ANN), assistant professor, Lyndon Baines Johnson School of Public Affairs, The University of Texas at Austin; director, School Information Project, Just for the Kids, *Austin*
- DOYLE, GERRY (KATHERINE), former chairman, foreign trade committee, Rice Millers Association, *Beaumont*
- DUGGER, RONNIE E. (PATRICIA BLAKE), author, *Wellfleet, MA*
- DUNCAN, A. BAKER (SALLY), chairman, Duncan-Smith Company, *San Antonio*
- DUNCAN, CHARLES WILLIAM, JR. (ANNE), chairman, Duncan Interests; former secretary, U.S. Department of Energy; deputy secretary, U.S. Department of Defense; president, The Coca-Cola Company; chairman, Rotan Mosle Financial Corporation, *Houston*
- DUNCAN, JOHN HOUSE (BRENDA), businessman; chairman, board of trustees, Southwestern University, *Houston*
- ELKINS, JAMES A., JR., trustee, Baylor College of Medicine; trustee, Menil Foundation, *Houston*
- EMANUEL, VICTOR LLOYD, naturalist and founder of Victor Emanuel Nature Tours, *Austin*
- ERICKSON, JOHN R. (KRISTINE), author; lecturer; owner, Maverick Books publishing company, *Perryton*
- EVANS, STERLING C., ranching and investments, *Castroville*
- FARABEE, KENNETH RAY (MARY MARGARET), vice chancellor and general counsel, the University of Texas System; former member, Texas Senate, *Austin*
- FEHRENBACH, T. R. (LILLIAN), author; historian; former chairman, Texas Historical Commission; former chairman, Texas Antiquities Committee; member, Texas State Historical Association, *San Antonio*
- FEIGIN, RALPH D. (JUDITH), president and chief executive officer of Baylor College of Medicine, *Waco*
- FINCH, WILLIAM CARRINGTON, retired dean, Vanderbilt Divinity School; former president, Southwestern University, *Nashville, TN*
- FISHER, JOE J. (KATHLEEN), chief judge emeritus, U.S. District Court, Eastern District of Texas; former district attorney and state district judge, First Judicial District of Texas, *Beaumont*
- FISHER, RICHARD (NANCY), managing partner, Fisher Capital Management; former executive assistant to U.S. secretary of the treasury; adjunct professor, Lyndon Baines Johnson School of Public Affairs, The University of Texas at Austin; democratic nominee for U.S. Senate, 1994; founder, Dallas Committee on Foreign Relations, *Dallas*
- FLATO, TED (KATY), architect, Lake/Flato, *San Antonio*

FLAWN, PETER T. (PRISCILLA), president emeritus, The University of Texas at Austin, *Austin*

FLEMING, DURWOOD (LURLYN), former president and chancellor, Southwestern University, *Dallas*

FLEMING, JON HUGH (CHERYL), educator; consultant; businessman; former president, Texas Wesleyan College; former member, Governor's Select Committee on Public Education, *North Zulch*

FLY, EVERETT L. (LINDA), landscape architect/architect, *San Antonio*

FONKEN, GERHARD JOSEPH (CAROLYN), former executive vice president and provost, The University of Texas at Austin, *Austin*

FROST, TOM C. (PAT), senior chairman of the board, Cullen/Frost Bankers, Inc., *San Antonio*

FURMAN, LAURA (JOEL BARNA), associate professor of English, University of Texas at Austin, *Austin*

GALBRAITH, JAMES K. (YING TANG), professor, Lyndon Baines Johnson School of Public Affairs, The University of Texas at Austin, *Austin*

GALVIN, CHARLES O'NEILL (MARGARET), centennial professor of law, emeritus, Vanderbilt University, Nashville; of counsel, Haynes and Boone, L.L.P., Dallas; adjunct professor of law, The University of Texas at Austin, *Dallas*

GARNER, BRYAN ANDREW (PAN), author; lecturer; lawyer; president, Law-Prose, *Dallas*

GARRETT, JENKINS (VIRGINIA), lawyer; former member, board of regents, the University of Texas System; former chairman, board of trustees, Tarrant County Junior College, *Fort Worth*

GARWOOD, WILLIAM L. (MERLE), judge, U.S. Court of Appeals, Fifth Circuit, *Austin*

GILLIS, MALCOLM (ELIZABETH), president, Rice University, *Houston*

GOLDSTEIN, E. ERNEST (PEGGY), formerly: professor of law, The University of Texas at Austin; special assistant to President Lyndon B. Johnson; senior partner, Coudert Frères, Paris, France; currently: advisor to the director, Harry Ransom Humanities Research Center, The University of Texas at Austin, *Austin*

GOLDSTEIN, JOSEPH L., professor of medicine and molecular genetics, the University of Texas Southwest Medical Center; Nobel laureate in medicine or physiology, *Dallas*

GORDON, WILLIAM EDWIN (ELVA), distinguished professor emeritus, Rice University; foreign secretary (1986-1990), National Academy of Sciences, *Houston*

GRANT, JOSEPH M., executive vice president and chief financial officer, Electronic Data Systems, *Plano*



- GRAY, JOHN E. (MARY), president emeritus, Lamar University; chairman emeritus, First City National Bank, Beaumont; former chairman, Coordinating Board, Texas College and University System, *Beaumont*
- GREENHILL, JOE R. (MARTHA), lawyer; former chief justice, Supreme Court of Texas, *Austin*
- GRUM, CLIFFORD J. (JANELLE), chairman of the board and chief executive officer, Temple-Inland, Inc.; former publisher, *Fortune* magazine, *Diboll*
- GUEST, WILLIAM F. (AMY), attorney; chairman, American Capitol Insurance Company, *Houston*
- HACKERMAN, NORMAN (JEAN), former president, Rice University; former president and vice chancellor, The University of Texas at Austin, *Austin*
- HALL, WALTER GARDNER, chairman of the board, Citizens State Bank, Dickinson; former president, San Jacinto River Authority, *Dickinson*
- HAMM, GEORGE FRANCIS (JANE), president, the University of Texas at Tyler, *Tyler*
- HANNAH, JOHN, JR. (JUDITH GUTHRIE), U.S. district judge, Eastern District of Texas, *Tyler*
- HARDESTY, ROBERT L. (MARY), former president, Southwest Texas State University; former assistant to the president of the United States; former chairman, board of governors, United States Postal Service, *Washington, D.C.*
- HARGROVE, James W. (MARION), investment counselor; former U.S. ambassador to Australia, *Houston*
- HARRIGAN, STEPHEN MICHAEL (SUE ELLEN), author; contributing editor, *Texas Monthly*, *Austin*
- HARRISON, FRANK, physician; former president, the University of Texas Health Science Center at San Antonio; former president, the University of Texas at Arlington, *Dallas*
- HARTE, CHRISTOPHER M., investments, *Portland, ME*
- HARTE, EDWARD HOLMEAD (JANET), former publisher, *Corpus Christi Caller*, *Corpus Christi*
- HARVIN, WILLIAM C. (HELEN), lawyer, *Houston*
- HAY, JESS (BETTY JO), chairman, HCB Enterprises, Inc.; chairman, Texas Foundation for Higher Education; former member, board of regents, the University of Texas System, *Dallas*
- HAYES, PATRICIA A., president, St. Edward's University, *Austin*
- HECHT, NATHAN LINCOLN, justice, Supreme Court of Texas, *Austin*
- HERSHEY, JACOB W. (TERESE), board chairman, American Commercial Lines (retired); past chairman, advisory committee, Transportation Center, Northwestern University, *Houston*

- HERSHEY, TERESE (JACOB), civic leader; Houston Parks Board; Texas Women's Hall of Fame; former board member, National Audubon Society; Trust for Public Lands, Texas Parks and Wildlife Commission, *Houston*
- HEYER, GEORGE STUART, JR., emeritus professor of the history of doctrine, Austin Presbyterian Theological Seminary, *Austin*
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- HOLTZMAN, WAYNE H. (JOAN), professor of psychology and education; president, Hogg Foundation for Mental Health, The University of Texas at Austin, *Austin*
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- WITTLIFF, WILLIAM DALE (SALLY), typographer and publisher; president, Encino Press; movie script writer and film producer; councillor, Texas Institute of Letters, *Austin*
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\* As of August 1999

- HENRY CORNICK COKE JR. (1982)  
 MARVIN KEY COLLIE (1990)  
 JAMES COLLINSWORTH  
 ROGER N. CONGER (1996)  
 JOHN BOWDEN CONNALLY JR. (1994)  
 TOM CONNALLY (1963)  
 ARTHUR BENJAMIN CONNOR  
 JOHN H. COOPER (1993)  
 MILLARD COPE (1963)  
 CLARENCE COTTAM (1974)  
 MARGARET COUSINS (1996)  
 MARTIN MCNULTY CRANE (1943)  
 CAREY CRONEIS (1971)  
 WILLIAM H. CROOK (1997)  
 JOSEPH STEPHEN CULLINAN (1937)  
 NINA CULLINAN  
 ROBERT B. CULLOM  
 MINNIE FISHER CUNNINGHAM  
 THOMAS WHITE CURRIE (1943)  
 PRICE DANIEL (1992)  
 WILLIAM E. DARDEN (1998)  
 HARBERT DAVENPORT  
 MORGAN JONES DAVIS (1980)  
 GEORGE BANNERMAN DEALEY (1946)  
 JAMES QUAYLE DEALEY  
 EVERETT LEE DeGOLYER (1957)  
 EDGAR A. DeWITT (1975)  
 ROSCOE PLIMPTON DeWITT  
 ADINA DeZAVALA (1955)  
 FAGAN DICKSON  
 CHARLES SANFORD DIEHL (1946)  
 FRANK CLIFFORD DILLARD (1939)  
 J. FRANK DOBIE (1964)  
 EZRA WILLIAM DOTY (1994)  
 HENRY PATRICK DROUGHT (1958)  
 FREDERICA GROSS DUDLEY  
 KATHARYN DUFF (1995)  
 J. CONRAD DUNAGAN (1994)  
 CLYDE EAGLETON (1958)  
 DWIGHT DAVID EISENHOWER  
 EDWIN A. ELLIOTT  
 ALEXANDER CASWELL ELLIS (1948)  
 JOE EWING ESTES (1991)  
 HYMAN JOSEPH ETTLINGER (1986)  
 LUTHER HARRIS EVANS  
 WILLIAM MAURICE EWING (1973)  
 WILLIAM STAMPS FARISH (1942)  
 SARAH ROACH FARNSWORTH  
 CHARLES W. FERGUSON  
 STERLING WESLEY FISHER  
 LAMAR FLEMING JR. (1964)  
 RICHARD TUDOR FLEMING (1973)  
 FRED FARRELL FLORENCE (1960)  
 JAMES LAWRENCE FLY  
 PAUL JOSEPH FOIK (1941)  
 LITTLETON FOWLER  
 CHARLES INGE FRANCIS (1969)  
 JOE B. FRANTZ (1993)  
 LLERENA BEAUFORT FRIEND (1998)  
 JESSE NEWMAN GALLAGHER (1943)  
 HERBERT PICKENS GAMBRELL (1983)  
 VIRGINIA LEDDY GAMBRELL (1978)  
 WILMER ST. JOHN GARWOOD (1989)  
 MARY EDNA GEARING (1946)  
 SAMUEL WOOD GEISER (1983)  
 EUGENE BENJAMIN GERMANY (1970)  
 ROBERT RANDLE GILBERT (1971)  
 GIBB GILCHRIST (1972)  
 JOHN WILLIAM GORMLEY (1949)  
 MALCOLM KINTNER GRAHAM (1941)  
 IRELAND GRAVES (1969)  
 MARVIN LEE GRAVES (1953)  
 WILLIAM FAIRFAX GRAY  
 LEON A. GREEN (1979)  
 NEWTON GRESHAM (1996)  
 DAVID WENDELL GUION (1981)  
 CHARLES WILSON HACKETT (1951)  
 RALPH HANNA  
 HARRY CLAY HANSZEN (1950)  
 FRANKLIN ISRAEL HARBACH (1998)  
 THORNTON HARDIE (1969)  
 HELEN HARGRAVE (1984)  
 HENRY WINSTON HARPER (1943)  
 MARION THOMAS HARRINGTON  
 GUY BRYAN HARRISON JR. (1988)  
 TINSLEY RANDOLPH HARRISON  
 JAMES PINCKNEY HART (1987)  
 HOUSTON HARTE (1971)  
 RUTH HARTGRAVES (1995)  
 FRANK LEE HAWKINS (1954)  
 WILLIAM WOMACK HEATH (1973)  
 ERWIN HEINEN (1997)  
 J. CARL HERTZOG (1988)  
 JOHN EDWARD HICKMAN (1962)  
 GEORGE ALFRED HILL JR. (1949)  
 GEORGE ALFRED HILL III (1974)  
 GEORGE W. HILL (1985)  
 MARY VAN DEN BERGE HILL (1965)  
 ROBERT THOMAS HILL (1941)  
 JOHN E. HINES (1998)  
 OVETA CULP HOBBY (1995)  
 WILLIAM PETTUS HOBBY (1964)  
 ELA HOCKADAY (1956)  
 WILLIAM RANSOM HOGAN (1971)  
 IMA HOGG (1975)  
 THOMAS STEELE HOLDEN (1958)  
 EUGENE HOLMAN (1962)  
 JAMES LEMUEL HOLLOWAY JR.  
 PAUL HORGAN (1997)  
 A. C. HORTON  
 EDWARD MANDELL HOUSE (1939)  
 ANDREW JACKSON HOUSTON (1941)  
 SAM HOUSTON  
 WILLIAM VERMILLION HOUSTON (1969)

- WILLIAM EAGER HOWARD (1948)  
 LOUIS HERMAN HUBBARD (1972)  
 JOHN AUGUSTUS HULEN (1957)  
 WILMER BRADY HUNT (1982)  
 FRANK GRANGER HUNTRESS (1955)  
 PETER HURD  
 HOBART HUSON  
 JOSEPH CHAPPELL HUTCHESON JR.  
 JUNE HYER (1980)  
 JULIA BEDFORD IDESON (1945)  
 FRANK N. IKARD SR. (1990)  
 R. A. IRION  
 WATROUS HENRY IRONS (1969)  
 PATRICK C. JACK  
 HERMAN GERLACH JAMES (1966)  
 LEON JAWORSKI (1982)  
 JOHN LEROY JEFFERS (1979)  
 JOHN HOLMES JENKINS III (1991)  
 HERBERT SPENCER JENNINGS (1966)  
 LYNDON BAINES JOHNSON (1973)  
 WILLIAM PARKS JOHNSON (1970)  
 ANSON JONES  
 CLIFFORD BARTLETT JONES (1973)  
 ERIN BAIN JONES (1974)  
 EVERETT HOLLAND JONES (1996)  
 HOWARD MUMFORD JONES  
 JESSE HOLMAN JONES (1956)  
 JOHN TILFORD JONES JR. (1993)  
 MARVIN JONES (1977)  
 MRS. PERCY JONES (1978)  
 JOHN ERIK JONSSON (1996)  
 DAVID S. KAUFMAN  
 PAGE KEETON  
 HERBERT ANTHONY KELLAR (1955)  
 ROBERT MARVIN KELLY (1958)  
 LOUIS WILTZ KEMP (1956)  
 HARRIS LEON KEMPNER SR. (1987)  
 THOMAS MARTIN KENNERLY (1966)  
 DANIEL E. KILGORE (1995)  
 WILLIAM JACKSON KILGORE (1993)  
 EDWARD KILMAN (1969)  
 FRANK HAVILAND KING  
 WILLIAM ALEXANDER KIRKLAND (1988)  
 ROBERT JUSTUS KLEBERG JR. (1974)  
 DOROTHY W. KNEPPER (1998)  
 JOHN FRANCIS KNOTT  
 LAURA LETTIE SMITH KREY (1985)  
 ERNEST LYNN KURTH (1960)  
 POLYKARP KUSCH (1993)  
 LUCIUS MIRABEAU LAMAR III (1978)  
 MIRABEAU B. LAMAR  
 FRANCIS MARION LAW (1970)  
 F. LEE LAWRENCE (1996)  
 CHAUNCEY DEPEW LEAKE (1978)  
 UMPHREY LEE (1958)  
 DAVID LEFKOWITZ (1956)  
 MARK LEMMON (1975)
- JEWEL PRESTON LIGHTFOOT (1950)  
 DENTON RAY LINDLEY (1986)  
 EUGENE PERRY LOCKE (1946)  
 JOHN AVERY LOMAX (1948)  
 WALTER EWING LONG (1973)  
 JOHN TIPTON LONSDALE (1960)  
 EDGAR ODELL LOVETT (1957)  
 H. MALCOLM LOVETT  
 ROBERT EMMET LUCEY (1977)  
 WILLIAM WRIGHT LYNCH  
 ABNER VERNON MCCALL (1995)  
 JOHN LAWTON MCCARTY  
 JAMES WOOTEN MCCLENDON (1972)  
 L. F. MCCOLLUM (1996)  
 CHARLES TILFORD MCCORMICK (1964)  
 IRELINE DEWITT MCCORMICK  
 MALCOLM MCCORQUODALE JR. (1990)  
 JOHN W. MCCULLOUGH (1987)  
 TOM LEE MCCULLOUGH (1966)  
 EUGENE McDERMOTT  
 JOHN HATHAWAY MCGINNIS (1960)  
 ROBERT C. MCGINNIS (1994)  
 GEORGE LESCHER MACGREGOR  
 STUART MALOLM MACGREGOR  
 ALAN DUGALD MCKILLOP (1974)  
 BUKNER ABERNATHY MCKINNEY (1966)  
 HUGH MCLEOD  
 LEWIS WINSLOW MACNAUGHTON (1969)  
 AYLMER GREEN MCNEESE JR. (1992)  
 ANGUS McNEILL  
 JOHN OLIVER McREYNOLDS (1942)  
 HENRY NEIL MALLON  
 GERALD C. MANN (1989)  
 FRANK BURR MARSH (1940)  
 HARRIS MASTERSON III (1997)  
 WATT R. MATTHEWS (1997)  
 MAURY MAVERICK (1954)  
 BALLINGER MILLS JR. (1992)  
 BALLINGER MILLS SR. (1947)  
 MERTON MELROSE MINTER (1978)  
 PETER MOLYNEAUX  
 JAMES TALIAFERRO MONTGOMERY  
 (1939)  
 DAN MOODY (1966)  
 BERNICE MILBURN MOORE (1993)  
 FRED HOLMSLEY MOORE (1985)  
 MAURICE THOMPSON MOORE  
 TEMPLE HOUSTON MORROW  
 WILLIAM OWEN MURRAY (1973)  
 FRED MERRIAM NELSON  
 CHESTER WILLIAM NIMITZ (1965)  
 PAT IRELAND NIXON (1965)  
 MARY MOODY NORTEN (1991)  
 JAMES RANKIN NORVELL (1969)  
 CHILTON O'BRIEN (1983)  
 DENNIS O'CONNOR (1997)  
 CHARLES FRANCIS O'DONNELL (1948)

- JOSEPH GRUNDY O'DONOHUE (1956)  
 LEVI ARTHUR OLAN (1984)  
 TRUMAN EDGAR O'QUINN (1989)  
 JOHN ELZY OWENS (1951)  
 WILLIAM A. OWENS (1991)  
 LOUIS C. PAGE (1982)  
 JUBAL RICHARD PARTEN (1993)  
 ADLAI McMILLAN PATE JR. (1988)  
 ANNA J. HARDWICK PENNYBACKER  
 (1939)  
 HALLY BRYAN PERRY (1966)  
 NELSON PHILLIPS (1966)  
 GEORGE WASHINGTON PIERCE (1966)  
 EDMUND LLOYD PINCOFFS (1991)  
 BENJAMIN FLOYD PITTINGER  
 KENNETH S. PITZER  
 GEORGE FRED POOL (1984)  
 CHARLES SHIRLEY POTTS (1963)  
 HERMAN PAUL PRESSLER JR. (1996)  
 HARRY MAYO PROVENCE (1996)  
 MAURICE EUGENE PURNELL  
 CHARLES PURYEAR (1940)  
 CLINTON SIMON QUIN (1956)  
 COOPER KIRBY RAGAN  
 HOMER PRICE RAINEY (1985)  
 CHARLES WILLIAM RAMSDELL (1942)  
 EDWARD RANDALL (1944)  
 EDWARD RANDALL JR. (1970)  
 KATHARINE RISHER RANDALL (1991)  
 LAURA BALLINGER RANDALL (1955)  
 HARRY HUNTT RANSOM (1976)  
 EMIL C. RASSMAN  
 FANNIE ELIZABETH RATCHFORD  
 SAM RAYBURN (1961)  
 JOHN SAYRES REDDITT (1972)  
 LAWRENCE JOSEPH RHEA (1946)  
 WILLIAM ALEXANDER RHEA (1941)  
 JAMES OTTO RICHARDSON  
 RUPERT NORVAL RICHARDSON (1987)  
 JAMES FRED RIPPY  
 SUMMERFIELD G. ROBERTS (1969)  
 FRENCH MARTEL ROBERTSON (1976)  
 CURTICE ROSSER  
 JOHN ELIJAH ROSSER (1960)  
 JOSEPH ROWE  
 JAMES EARL RUDDER (1969)  
 THOMAS J. RUSK  
 McGRUDER ELLIS SADLER (1966)  
 JEFFERSON DAVIS SANDEFER (1940)  
 MARLIN ELIJAH SANDLIN  
 HYMAN JUDAH SCHACHTEL (1991)  
 EDWARD MUEGGE "BUCK" SCHIWETZ  
 (1985)  
 VICTOR HUMBERT SCHOFFELMAYER  
 (1966)  
 ARTHUR CARROLL SCOTT (1940)  
 ELMER SCOTT (1954)  
 JOHN THADDEUS SCOTT (1955)  
 WOODROW BRADLEY SEALS (1991)  
 TOM SEALY (1992)  
 GEORGE DUBOSE SEARS (1974)  
 WILLIAM G. SEARS (1997)  
 ELIAS HOWARD SELLARDS (1960)  
 DUDLEY CRAWFORD SHARP  
 ESTELLE BOUGHTON SHARP (1965)  
 JAMES LEFTWICH SHEPHERD JR. (1964)  
 MORRIS SHEPPARD (1941)  
 JOHN BEN SHEPPERD (1989)  
 STUART SHERAR (1969)  
 PRESTON SHIRLEY (1991)  
 ALLAN SHIVERS (1985)  
 RALPH HENDERSON SHUFFLER (1975)  
 JOHN DAVID SIMPSON JR.  
 ALBERT OLIN SINGLETON (1947)  
 JOSEPH ROYALL SMILEY (1991)  
 A. FRANK SMITH JR. (1993)  
 A. FRANK SMITH SR. (1962)  
 ASHBEL SMITH  
 FRANK CHESLEY SMITH SR. (1970)  
 HARLAN J. SMITH (1991)  
 HENRY SMITH  
 HENRY NASH SMITH  
 THOMAS VERNON SMITH (1964)  
 HARRIET WINGFIELD SMITHER (1955)  
 ROBERT S. SPARKMAN (1997)  
 RALPH SPENCE (1994)  
 JOHN WILLIAM SPIES  
 TOM DOUGLAS SPIES (1960)  
 STEPHEN H. SPURR (1990)  
 ROBERT WELDON STAYTON (1963)  
 ZOLLIE C. STEAKLEY (1991)  
 RALPH WRIGHT STEEN (1980)  
 IRA KENDRICK STEPHENS (1956)  
 ROBERT GERALD STOREY (1981)  
 GEORGE WILFORD STUMBERG  
 HATTON WILLIAM SUMNERS (1962)  
 ROBERT LEE SUTHERLAND (1976)  
 HENRY GARDINER SYMONDS (1971)  
 MARGARET CLOVER SYMONDS  
 WILLIS M. TATE (1989)  
 JAMES U. TEAGUE (1996)  
 ROBERT EWING THOMASON (1974)  
 J. CLEO THOMPSON (1974)  
 BASCOM N. TIMMONS (1987)  
 LON TINKLE (1980)  
 CHARLES RUDOLPH TIPS (1976)  
 MARGARET LYNN BATTS TOBIN (1994)  
 JOHN G. TOWER (1991)  
 HENRY TRANTHAM (1961)  
 FRANK EDWARD TRITICO SR. (1993)  
 GEORGE WASHINGTON TRUETT (1944)  
 RADOSLAV ANDREA TSANOFF (1976)  
 EDWARD BLOUNT TUCKER (1972)  
 WILLIAM BUCKHOUT TUTTLE (1954)



- THOMAS WAYLAND VAUGHAN (1952)  
ROBERT ERNEST VINSON (1945)  
LESLIE WAGGENER (1951)  
AGESILAUS WILSON WALKER JR. (1988)  
EVERETT DONALD WALKER (1991)  
RUEL C. WALKER  
THOMAS OTTO WALTON  
FRANK H. WARDLAW (1989)  
ALONZO WASSON (1952)  
WILLIAM WARD WATKIN (1952)  
ROYALL RICHARD WATKINS (1954)  
WALTER PRESCOTT WEBB (1963)  
HARRY BOYER WEISER (1950)  
PETER BOYD WELLS JR. (1991)  
ELIZABETH HOWARD WEST (1948)  
CLARENCE RAY WHARTON (1941)  
JOHN A. WHARTON  
WILLIAM H. WHARTON  
WILLIAM MORTON WHEELER (1937)  
GAIL WHITCOMB (1994)  
JAMES LEE WHITCOMB  
WILLIAM RICHARDSON WHITE (1977)  
WILLIAM MARVIN WHYBURN (1972)  
HARRY CAROTHERS WIESS (1948)  
DOSSIE MARION WIGGINS (1978)
- PLATT K. WIGGINS  
JACK KENNY WILLIAMS (1982)  
ROGER JOHN WILLIAMS (1987)  
LOGAN WILSON (1992)  
JAMES BUCHANAN WINN JR. (1980)  
JAMES RALPH WOOD (1973)  
DUDLEY KEZER WOODWARD JR. (1967)  
WILLIS RAYMOND WOOLRICH (1977)  
BENJAMIN HARRISON WOOTEN (1971)  
SAM PAUL WORDEN (1988)  
GUS SESSIONS WORTHAM (1976)  
LYNDALL FINLEY WORTHAM  
FRANK McREYNOLDS WOZENCRAFT  
(1993)  
FRANK WILSON WOZENCRAFT (1967)  
WILLIAM EMBRY WRATHER (1963)  
ANDREW JACKSON WRAY (1981)  
RALPH WEBSTER YARBOROUGH  
RAMSEY YELVINGTON (1972)  
HUGH HAMPTON YOUNG (1945)  
SAMUEL DOAK YOUNG  
STARK YOUNG  
HENRY B. ZACHRY (1984)  
PAULINE BUTTE ZACHRY (1998)