

second careers in teaching. That experience has shown that people like Mr. Moore make great teachers and great role models.

I again want to thank all the Members of Congress—Secretary Riley mentioned them; one of them, Chet Edwards, is here—for the work that they have done in this regard. Congresswoman Mink and I were recently together in Korea visiting our troops. And I met a senior master sergeant who was about to retire after 29 years in the military. He was 49 years old; he could still run a 6-minute mile. *[Laughter]* And he was going home to Kentucky to teach children. He said, “I think I can do those kids some good.”

There are a lot of people like this. You go out into—if you visit with the people in the military, that make the military their career, you just can’t fail to be impressed with the accumulated weight of experience. They’ve dealt with every kind of human problem you can imagine. They understand, increasingly—and I must say, in the last several years, more and more—the importance of balancing discipline and creativity, letting people think for themselves but also reminding that they have to play on the team and with certain rules. And they understand how to manage people and resources—and limited resources—to do a job of limitless importance. They tend to have math and science backgrounds. And they have shown a remarkable willingness to teach in inner-city and rural schools that have difficulty recruiting teachers. So these 25 million veterans—and there will be more as time goes on, obviously, more and more every year—are an incredible pool of potential teacher talent.

The Secretary of Education always tells me that we’re going to have to hire 2 million more teachers in the next few years, because of the growth of the student population and the retirement of the existing teacher corps. So I think we should do more, and this is a big downpayment on it. And I must say, Members of Congress, if you think that we ought to spend even more money on it, I’ll support you. *[Laughter]* I think we should make it easier for people who have kept our Nation strong to provide for a strong American future in the 21st century.

Now let me just mention one other program that is very important to me, and that’s the master teacher program. The National Board for Professional Teacher Certification has received almost unanimous support from teachers and other educators throughout our country. We are trying to get 100,000 certified master teachers, enough so that we’ll have at least one in every school building in America. And when we do that, we know they will have a dramatic impact on improving the quality of the existing teacher corps. So I hope we will have support for that.

And if we do these things, in addition to the other proposals, I think that we will be doing our part to ensure that we’ll have the kind of schools our children need and our country needs in the 21st century, because it all starts with a teacher like Mr. Moore.

Thank you very much.

NOTE: The President spoke at 12:30 p.m. in the Presidential Hall (formerly Room 450) of the Old Executive Office Building. In his remarks, he referred to Sgt. Arthur Moore, USA (Ret.), teacher, Harlem Park Community School, Baltimore, MD, who introduced the President.

Remarks at the National Academy of Sciences *January 22, 1999*

Thank you very much. Jamie, Dr. Lederberg, I’d like to thank you for your service in this and so many other ways. I would like to thank Sandy Berger for many things, including indulging my nagging on this subject for the better part of 6 years now. I was so relieved that Dr. Lederberg, not very long ago—well, last year—brought a distinguished panel of experts

together to discuss this bioterrorism threat, because I then had experts to cite for my concern and nobody thought I was just reading too many novels late at night. *[Laughter]*

Madam Attorney General, Secretary Shalala, Secretary Richardson, Director Witt, Deputy Secretary Hamre, Commandant of the Coast Guard and our other military leaders who are

here, Mr. Clarke, ladies and gentlemen. I'm delighted to be here to discuss this subject—with some trepidation. Sandy Berger noted that Dr. Lederberg won a Nobel Prize at 33, and I was Governor; you can infer from that that I was not very good at chemistry and biology. [Laughter]

But any democracy is imbued with the responsibility of ordinary citizens who do not have extraordinary expertise to meet the challenges of each new age. And that is what we are all trying to do. Our country has always met the challenges of those who would do us harm. At the heart of our national defense, I have always believed, is our attempt to live by our values, democracy, freedom, equal opportunity. We are working hard to fulfill these values at home. And we are working with nations around the world to advance them, to build a new era of interdependence where nations work together not simply for peace and security but also for better schools and health care, broader prosperity, a cleaner environment, and a greater involvement by citizens everywhere in shaping their own future.

In the struggle to defend our people and values and to advance them wherever possible, we confront threats both old and new: Open borders and revolutions in technology have spread the message and the gifts of freedom, but have also given new opportunities to freedom's enemies. Scientific advances have opened the possibility of longer, better lives; they have also given the enemies of freedom new opportunities.

Last August, at Andrews Air Force Base, I grieved with the families of the brave Americans who lost their lives at our Embassy in Kenya. They were in Africa to promote the values America shares with friends of freedom everywhere, and for that they were murdered by terrorists. So, too, were men and women in Oklahoma City, at the World Trade Center, Khobar Towers, on Pan Am 103.

The United States has mounted an aggressive response to terrorism, tightening security for our diplomats, our troops, our air travelers; improving our ability to track terrorist activity; enhancing cooperation with other countries; strengthening sanctions on nations that support terrorists.

Since 1993, we have tripled funding for FBI antiterrorist efforts. Our agents and prosecutors, with excellent support from our intelligence

agencies, have done extraordinary work in tracking down perpetrators of terrorist acts and bringing them to justice. And as our airstrikes against Afghanistan—or against the terrorist camps in Afghanistan last summer showed, we are prepared to use military force against terrorists who harm our citizens. But all of you know the fight against terrorism is far from over. And now, terrorists seek new tools of destruction.

Last May, at the Naval Academy commencement, I said terrorist and outlaw states are extending the world's fields of battle from physical space to cyberspace, from our Earth's vast bodies of water to the complex workings of our own human bodies. The enemies of peace realize they cannot defeat us with traditional military means, so they are working on two new forms of assault, which you've heard about today: cyber attacks on our critical computer systems, and attacks with weapons of mass destruction, chemical, biological, potentially even nuclear weapons.

We must be ready—ready if our adversaries try to use computers to disable power grids, banking, communications and transportation networks, police, fire, and health services, or military assets. More and more, these critical systems are driven by and linked together with computers, making them more vulnerable to disruption. Last spring, we saw the enormous impact of a single failed electronic link when a satellite malfunctioned: disabled pagers, ATM's, credit card systems, and television networks all around the world. And we already are seeing the first wave of deliberate cyber attacks, hackers break into Government and business computers, stealing and destroying information, raiding bank accounts, running up credit card charges, extorting money by threats to unleash computer viruses.

The potential for harm is clear. Earlier this month, an ice storm in this area crippled power systems, plunging whole communities into darkness and disrupting daily lives. We have to be ready for adversaries to launch attacks that could paralyze utilities and services across entire regions.

We must be ready if adversaries seek to attack with weapons of mass destruction, as well. Armed with these weapons, which can be compact and inexpensive, a small band of terrorists could inflict tremendous harm. Four years ago, the world received a wake-up call when a group unleashed a deadly chemical weapon, nerve gas,

in the Tokyo subway. We have to be ready for the possibility that such a group will obtain biological weapons. We have to be ready to detect and address a biological attack promptly, before the disease spreads.

If we prepare to defend against these emerging threats, we will show terrorists that assaults on America will accomplish nothing but their own downfall.

Let me say first what we have done so far to meet this challenge. We've been working to create and strengthen the agreement to keep nations from acquiring weapons of mass destruction, because this can help keep these weapons away from terrorists, as well. We're working to ensure the effective implementation of the Chemical Weapons Convention, to obtain an accord that will strengthen compliance with the Biological Weapons Convention, to end production of nuclear weapons material. We must ratify the Comprehensive Test Ban Treaty to end nuclear tests once and for all.

As I proposed Tuesday in the State of the Union Address, we should substantially increase our efforts to help Russia and other former Soviet nations prevent weapons material and knowledge from falling into the hands of terrorists and outlaw states. In no small measure we should do this by continuing to expand our cooperative work with the thousands of Russian scientists who can be used to advance the causes of world peace and health and well-being but who, if they are not paid, remain a fertile field for the designs of terrorists.

But we cannot rely solely on our efforts to keep weapons from spreading. We have to be ready to act if they do spread. Last year, I obtained from Congress a 39 percent budget increase for chemical and biological weapons preparedness. This is helping to accelerate our ongoing effort to train and equip fire, police, and public health personnel all across our country to deal with chemical and biological emergencies. It is helping us to ready Armed Forces and National Guard units in every region to meet this challenge and to improve our capacity to detect an outbreak of disease and save lives, to create the first-ever civilian stockpile of medicines to treat people exposed to biological and chemical hazards, to increase research and development on new medicines and vaccines to deal with new threats.

Our commitment to give local communities the necessary tools already goes beyond paper

and plans. For example, parked just outside this building is a newly designed truck we have provided to the Arlington, Virginia, Fire Department. It can rapidly assist and prevent harm to people exposed to chemical and biological dangers.

Our commitment on the cyber front has been strong, as well. We've created special offices within the FBI and the Commerce Department to protect critical systems against cyber attack. We're building partnerships with the private sector to find and reduce vulnerabilities, to improve warning systems, to rapidly recover if attacks occur. We have an outstanding public servant in Richard Clarke, who is coordinating all these efforts across our Government.

Today I want to announce the new initiatives we will take to take us to the next level in preparing for these emerging threats. In my budget, I will ask Congress for \$10 billion to address terrorism and terrorist-emerging tools. This will include nearly \$1.4 billion to protect citizens against chemical and biological terror, more than double what we spent on such programs only 2 years ago.

We will speed and broaden our efforts, creating new local emergency medical teams, deploying in the field portable detection units the size of a shoebox to rapidly identify hazards, tying regional laboratories together for prompt analysis of biological threats. We will greatly accelerate research and development, centered in the Department of Health and Human Services, for new vaccines, medicines, and diagnostic tools.

I should say here that I know everybody in this crowd understands this, but everyone in America must understand this: The Government has got to fund this. There is no market for the kinds of things we need to develop, and if we are successful, there never will be a market for them. But we have got to do our best to develop them. These cutting-edge efforts will address not only the threat of weapons of mass destruction but also the equally serious danger of emerging infectious diseases. So we will benefit even if we are successful in avoiding these attacks.

The budget proposal will also include \$1.46 billion to protect critical systems from cyber and other attacks. That's 40 percent more than we were spending 2 years ago. Among other things, it will help to fund four new initiatives: first, an intensive research effort to detect intruders

trying to break into critical computer systems; second, crime—excuse me—detection networks, first for our Defense Department, and later for other key agencies so when one critical computer system is invaded, others will be alerted instantly, and we will urge the private sector to create similar structures; third, the creation of information centers in the private sector so that our industries can work together and with Government to address cyber threats; finally, we'll ask for funding to bolster the Government's ranks of highly skilled computer experts, people capable of preventing and responding to computer crises.

To implement this proposal, the Cyber Corps program, we will encourage Federal agencies to train and retrain computer specialists, as well as recruiting gifted young people out of college.

In all our battles, we will be aggressive. At the same time I want you to know that we will remain committed to uphold privacy rights and other constitutional protections, as well as the proprietary rights of American businesses. It is essential that we do not undermine liberty in the name of liberty. We can prevail over terrorism by drawing on the very best in our free society: the skill and courage of our troops, the genius of our scientists and engineers, the strength of our factory workers, the determination and talent of our public servants, the vision of leaders in every vital sector.

I have tried as hard as I can to create the right frame of mind in America for dealing with this. For too long the problem has been that not enough has been done to recognize the threat and deal with it. And we in Government, frankly, weren't as well organized as we should have been for too long. I do not want the pendulum to swing the other way now and for people to believe that every incident they read about in a novel or every incident they see in a thrilling movie is about to happen to them within the next 24 hours.

What we are seeing here, as any military person in the audience can tell you, is nothing

more than a repetition of weapons systems that goes back to the beginning of time. An offensive weapons system is developed, and it takes time to develop the defense; and then another offensive weapon is developed that overcomes that defense, and then another defense is built up—as surely as castles and moats held off people with spears and bows and arrows and riding horses, and the catapult was developed to overcome the castle and the moat.

But because of the speed with which change is occurring in our society, in computing technology, and particularly in the biological sciences, we have got to do everything we can to make sure that we close the gap between offense and defense to nothing, if possible. That is the challenge here.

We are doing everything we can, in ways that I can and in ways that I cannot discuss, to try to stop people who would misuse chemical and biological capacity from getting that capacity. This is not a cause for panic. It is a cause for serious, deliberate, disciplined, long-term concern. And I am absolutely convinced that if we maintain our clear purpose and our strength of will, we will prevail here.

And thanks to so many of you in this audience and your colleagues throughout the United States and like-minded people throughout the world, we have better than a good chance of success. But we must be deliberate, and we must be aggressive.

Thank you very much.

NOTE: The President spoke at 10:30 a.m. at the National Academy of Sciences. In his remarks, he referred to Jamie Gorelick, vice chair, Federal National Mortgage Association (Fannie Mae), and former Cochair, Advisory Committee of the President's Commission on Critical Infrastructure Protection, who introduced the President; Dr. Joshua Lederberg, Nobel laureate and Sackler Foundation scholar; and Richard A. Clarke, National Coordinator for Security, Infrastructure Protection, and Counterterrorism.