

**Charles B. Curtis**  
**President of the Nuclear Threat Initiative**  
**“Putting First Things First: The Global Challenge of Reducing the Threats from Weapons  
of Mass Destruction”**  
**Scientific American Summit on Privacy, Security and Safety:  
Preserving an Open Society in an Age of Terrorism.**  
**March 6, 2002**

Good morning. I want to thank John Rennie and Scientific American for sponsoring this public discussion of the tradeoffs between security and civil liberty. Ever since the advent of electronic commerce and the invention of ever more sophisticated techniques of surveillance, the debate between security and liberty has been simmering. September 11 and its aftermath brought it to a boil.

I speak to you today as President of the Nuclear Threat Initiative, a charitable organization, co-chaired by former U.S. Senator Sam Nunn and CNN founder Ted Turner. Our mission is to help reduce toward zero the threat from nuclear, biological and chemical weapons. Civil liberties are not part of our mission explicitly, but implicitly, they are.

After all, we’re not just engaged in an effort to reduce a threat from something, we’re working to reduce a threat to something – not just a threat to life, but a threat to a way of life.

As the people in this forum understand very well, our best hope is not to find the right answer, but to find the right balance. The search for a balance between security and liberty will never be a settled affair. It is an endless process of adaptation and adjustment because a properly designed security system is one that will provide both an effective defense of our lives and our liberties. We have to identify an arrangement that maximizes our share of both values, and goes as far as possible to make sure one is not emphasized at too great a cost to the other. That precise balance will always be subject to debate. It is the quality of that debate that will determine how skillfully we strike the balance. And as we engage that debate in this important conference and elsewhere, we have to avoid falling into the old trap where people simply take sides and press for less of what makes them more nervous – either government intrusions or terrorist threats. This approach blinds one side to the legitimate concerns of the other, and puts more focus on “who’s winning” rather than on “what’s at stake.”

The best balance between security and liberty can never be achieved unless we all understand what’s at stake, and design our actions on a clear understanding of the threats. Indeed, one of America’s great defenders of civil liberties, Justice William Brennan once said that striking the right balance between liberty and security requires, and I quote: “an intimate familiarity with the national security threats that tests their bases in fact, explores their relation to the exercise of civil freedoms, and probes the limits of their compass.” This “intimate familiarity” of which Brennan speaks is a necessary analytic predicate to the design of a security

system that gets our priorities right and strikes the right balance between providing for our security and protecting our civil liberties.

The best possible defense against the full range of threats must start with an objective, comprehensive national security estimate that assesses each risk, ranks each threat, computes every cost, and confronts the full range of dangers in a way that defends against one without making us more vulnerable to another. From this analysis can be constructed a broad based strategy and measured defense – one that would allow us to direct the most resources to prevent threats that are the most immediate, the most likely, and the most potentially devastating. In the absence of an infinite budget, relative risk analysis must be the beginning point in shaping our strategy and allocating our resources – to defend our citizens at home and abroad.

Such a plan is essential not only for an informed debate of security spending and priorities, but also essential to the defense of civil liberties – as it gives the government the knowledge it needs in striking the right balance between security and civil liberties, and it gives the public the knowledge it needs to evaluate the balance. Of course, this knowledge also would enable an informed public to force change in any improvidently designed system.

For me, the need for such a plan is both compelling and urgent. Yet today it does not exist. I suggest that the defenders of security and the defenders of civil liberties have common interest in seeing to it that one is devised. In this, NTI can use your help. The creation of such a risk-based security plan is something we have advocated from the inception of our initiative.

From where we sit, we are convinced that any reasonable risk analysis will rank the threat from nuclear, chemical and biological weapons as our greatest threat – nothing else comes close. If we fail -- from lack of resources or lack of attention or lack of proper emphasis -- to protect our society from a terrorist attack with a weapon of mass destruction, we risk not only a catastrophic loss of life but also a catastrophic shift in the balance between security and liberty with grave implications for present and future generations. That is the core of the common ground between advocates of security and advocates of civil liberties. Our first line of defense against weapons of mass destruction is also our first line of defense against the loss of civil liberties – and that is to make sure weapons of mass destruction never fall into terrorist hands.

## **The greatest threat: terrorist use of nuclear, biological or chemical weapons.**

What changed on September 11 was not the terrorist threat, but our awareness of it and our resolve to do something about it. The greatest shock was perhaps not even the sheer loss of life, which was staggering, but the murderous intent behind it. We know now that the terrorist capacity for killing is limited only by the power of their weapons. The question is not whether we must prepare for terrorism or for attacks with weapons of mass destruction. These two threats are not separate, but interrelated and reinforcing, and if joined together, become our worst nightmare. So we are now engaged in a new arms race; a race between those who seek to acquire weapons of mass destruction and those who seek to deny them. The outcome of this race will determine security in the 21<sup>st</sup> Century.

How real is the danger? Many Americans are now aware that Osama bin Laden has said acquiring weapons of mass destruction is “a religious duty.” Few understand how far bin Laden has come in pursuing his so-called duty. According to recent reports,

In January, the U.S. uncovered rudimentary diagrams of nuclear weapons at a suspected safe house for Al Qaeda in Kabul.

The U.S. also uncovered documents confirming that Al Qaeda was exploring ways to make low-grade, nuclear devices – so-called “dirty bombs”.

And materials that could be used to make such a device were found in an underground Al Qaeda base near Kandahar in South Afghanistan.

The U.S. recovered other documents that include details of a biological and chemical weapons program along with a memo, apparently written by bin Laden’s number two, saying: “the destructive power of these weapons is no less than that of nuclear weapons.”

We need to remind ourselves that these are only the documents they left behind. We don’t know what they took with them.

We not only know that terrorists are seeking weapons of mass destruction. We also know where they are looking:

Ten years ago, the Soviet Union broke apart, leaving as its legacy more than 20,000 strategic nuclear warheads, and enough highly enriched uranium and plutonium to make 40,000-60,000 more, stored in over 250 buildings at more than 50 sites distributed throughout the Russian Federation across 11 time zones.

Russia today also possesses thousands of tactical nuclear weapons, some small enough to fit in a backpack, and others powerful enough to destroy a small city. These weapons have never been the subject of arms control regimes and are largely unaccounted for. We simply don’t know how many there are, where they are or how secure they are.

Russia also has 40,000 metric tons of chemical weapons awaiting disposition; an elaborate bioweapons apparatus, and tens of thousands of scientists who know how to make weapons and missiles, but no longer have secure jobs or secure futures.

Over the last decade, Russia's dysfunctional economy and eroded security systems have undercut controls on these weapons, materials, and know-how – and increased the risk that they could flow to terrorist groups or hostile forces. Things have improved under a concerted, decade-long program of U.S.-Russian cooperative threat reduction – but both sides know we have a long way to go.

And the vulnerabilities reach beyond Russia. Forty-three nations have research reactors fueled by highly-enriched uranium – the raw material of nuclear terrorism. Global inventories of separated plutonium derived from the spent fuel of civilian nuclear reactors total more than 200 metric tons and are growing daily. We have more confidence about the security of the plutonium than we do of the highly enriched uranium. But to put these numbers in perspective: it would take only pounds of this material to make a nuclear device capable of devastating much of Manhattan or to lay waste to a mid-sized city – like, for example, Washington, D.C.

We have developed international standards to govern the security of materials in transit from state to state. Yet, there are no international standards or requirements for the physical protection of nuclear material within a state. Nations are free to select whatever level of security they may choose. That may have been an acceptable balance between sovereign rights and the obligation states have to each other in a bygone era. It is no longer an acceptable or rational “state of affairs.” The worldwide system of security for nuclear materials is no stronger than the system of security at the weakest, worst-defended site, which in many cases is nothing more than an underpaid, unarmed guard sitting inside a chain-link fence. Clearly, we must do better and to do better will require a much higher-level commitment of diplomatic initiative and resources by the international community.

Nuclear theft is more than a worry; it's a reality. The International Atomic Energy Agency's illicit trafficking database records 16 thefts involving plutonium or enriched uranium. Sixteen cases is a disturbing number, but it also may not tell us what we really need to know: what percentage of the actual thefts do we uncover? Is it close to one hundred percent – or closer to one percent?

And this disturbing story gets even more disturbing. Biological weapons, as Al Qaeda now knows, can also present a grave a risk. Secretary Rumsfeld said in his confirmation hearings: “I would rank bioterrorism quite high in terms of threats ... It does not take a genius to create agents that are enormously powerful, and they can be done in mobile facilities, in small facilities.”

Hundreds of labs and repositories around the world sell biological agents for legitimate research – and some of the same substances used in legitimate research can be turned into weapons. In addition, the massive biological weapons program of the former Soviet Union remains a threat. At its peak, the program employed 70,000 scientists and technicians in more than fifty locations, and made tons of smallpox and other deadly pathogens. Today, we believe

the bioweapons materials have largely been destroyed. We believe this; we don't know this. We do know the deadly recipes remain – as do more than 700 scientists who have been officially classified as security risks. And tighter security today can't fully protect us from the impact of poor security in the past. As one Russian official said some years ago of Soviet smallpox stocks: "There were plenty of opportunities for staff members to walk away with an ampule." We also know now that the top biological defense labs in the United States had the same porous approach to security. One microbiologist recently told the *Washington Post*: "I could have lifted vials of anything, and they never would have been missed."

And those are just the dangers from our past. The bioweapons threat from the future may prove to be even more difficult to contain or counter. Rapid advances in bio science, bio technology, genomic research and bio medicine are overcoming historic barriers to the weaponization of generally available pathogens and agents. Indeed the bioweapons threat may prove to be the greatest danger we face in the future. Of course, having a future assumes we deal effectively with the present danger.

### **Our highest priority: keeping weapons of mass destruction out of terrorist hands.**

In providing for the Nation's security, we have to put first things first. And our first priority, our first line of defense, must be to deny the world's most dangerous people and their state sponsors access to the world's most dangerous weapons. This is the most effective way to defend ourselves against "catastrophic terrorism."

Nearly six months before September 11, in his first major speech as co-chair of the Nuclear Threat Initiative, former Senator Sam Nunn asked: "Is keeping nuclear, biological and chemical weapons out of the hands of rogue nations and terrorists a priority or is it an after-thought? If it's an after-thought, after what?"

Two months after September 11, President Bush appeared at a joint White House press conference with President Putin, said, and I quote: "Our highest priority is to keep terrorists from acquiring weapons of mass destruction." A *Scientific American*/NTI poll conducted last month found that nearly three-quarters of Americans surveyed agreed.

And these polling numbers preceded last week's *Washington Post* report that heightened security concerns about Al Qaeda's focus on weapons of mass destruction have led the Bush Administration to activate "contingency plans to maintain a cadre of senior federal managers in underground bunkers away from Washington." The *Post* also reports that following a late October briefing, the President ordered his national security team "to give nuclear terrorism priority over every other threat to the United States."

However, keeping the world's most dangerous weapons out of the hands of the world's most dangerous people is not yet a budget priority. The President's budget priorities should reflect his stated priorities – and they do not. There is still a dangerous lag between the President's words, and our dollars and our deeds. The total threat reduction programs at the Department of Defense, the Department of Energy and the Department of State focused on Russia's proliferation vulnerabilities are proposed in the President's budget for fiscal year 2003

at roughly the same levels appropriated last year after adjusting for inflation. And these aggregate numbers conceal cuts in some of the more vital programs designed to secure weapons materials and stem the spread of weapons know-how. The explanation for these cuts – put forth in the budget document – is that the Administration cannot efficiently spend the dollars it already has in materials security and in Russia’s nuclear cities. This argument is unpersuasive, and implies a business-as-usual approach to an increasingly urgent, time-sensitive threat.

An NTI/Scientific American poll completed a few weeks ago determined that fewer than half of those surveyed believed the government was doing enough to protect Americans from weapons of mass destruction. When informed about the security risks in the former Soviet Union, the number saying the government was doing enough dropped to slightly more than a quarter. These polling numbers reflect the intuition and inherent good sense of the American people. Our government is not doing enough, the Russian government is not doing enough to address these vulnerabilities, nor are our friends in Europe or Japan.

Can we fix our spending priorities so the greatest dangers we face draw our greatest investments? Yes. But it will take time, which is a depleting commodity in the arms race of the 21<sup>st</sup> Century. And it will take an informed public to provide the political will and political reward necessary for the type of sustained commitment required to get the job done. It’s not enough to have a public informed of the threat. We need a public informed on what’s being done, and what ought to be done. We will need the voice and the support of the people in this room to strengthen our first line of defense.

### **A common agenda: supporting a global coalition against catastrophic terrorism**

Getting our spending priorities right is but one piece of a larger mosaic. To counter the threat from catastrophic terrorism, we will need an unprecedented level of international security cooperation and cooperation between the public and private sectors.

President Bush and President Putin will meet in Moscow this spring. This is their opportunity to define a new security framework, one that has real meat on the bones.

To address the threat from catastrophic terrorism, we need a multi-layered global coalition, with Russia and the United States joined together as lead partners. No effective effort is possible without Russian-U.S. participation and cooperation. Nor will any U.S.-Russian cooperative effort be truly effective without the participation of other nations.

The U.S. and Russia, as stewards of the world’s greatest arsenals, should commit to making sure our weapons and materials are safe, secure, and accounted for, with reciprocal monitoring sufficient to assure each other and the rest of the world that this is the case. President Putin and President Bush can also accelerate U.S.-Russian cooperation on biological weapons defense.

But this is only a beginning. Russia and the U.S. should bring together all nations in a broad based cooperative alliance. NTI Board member Senator Richard Lugar has made clear the

challenge: “We have to make sure that every nation with nuclear, biological, or chemical weapons capacity, accounts for what it has, secures what it has, and pledges that no other nation or group will be allowed access.”

Such an effort will require a system of inventory accounting and accountability absent in today’s world. It will require cooperation on interdiction and consequence management if controls fail. And, importantly, it will require the participation of nations not today joined in mutual treaty commitments on these matters. In short, it will necessitate a much higher level of international security cooperation than the world has ever known.

We require a comparable level of cooperation between the public and private sectors, and *within* the private sector, if we are to make the world safer from the threat from catastrophic terrorism. This is particularly needed to address the risks associated with chemical and biological terrorism. Chemical and biological materials and technologies are mostly in the hands of industry and university researchers. Responsible members of these communities must be the authors, the implementers, and the enforcers of normative standards for scientific practice and requirements for the safe transfer and handling of dangerous pathogens and materials. Failing that, university researchers and industry risk a governmental response that may put in jeopardy the very mechanisms on which we depend to create effective defenses or to advance the human condition.

No one knows infallibly the precise degree of security called for in restricting access to dangerous pathogens, or the right level of caution in publishing the results of laboratory experiments with germs or agents that can be weaponized. The right result will require case-by-case judgment that is beyond the ability of even the most carefully drawn regulation. It can’t be assumed that there are just two levels of secrecy – either fully classified or fully open. There must be some level in between – let’s call it “common sense security.” Common sense cannot be mandated by regulation. It must be developed as a behavioral norm and enforced by peers.

This means it is vital for scientific researchers not just to oppose a plan put forward by others, but to propose one of their own – it is imperative to keep initiative and control in the hands of those who best understand the damage improper regulation could do to scientific research. Here, as in the case of security and civil liberties, a balance must be found. I have been privileged to serve as Chairman of the Laboratory Operations Board, which oversees our National Laboratories, and also as member of the Commission on Science and Security. I believe you can have both excellent science and excellent security. To do so, however, the scientists in our national laboratories must “buy in” to the program, exercise reasonable judgment, and make the program work. In dealing with the chemical and biological threat, no less is required of our Nation’s research universities and the science community. Any doubt or resistance should be put to rest by a June 1999 memo discovered by the *Wall Street Journal* on the hard-drive of a computer left in Kabul by Al-Qaeda. It recommended that the Al-Qaeda biological weapons program seek cover and talent in educational institutions, which the memo said “allow easy access to specialists, which will greatly benefit us in the first stage, God willing.”

As in the case of the threat from nuclear weapons, measures that will deter or prevent terrorist access to dangerous biological or chemical materials or know-how are the most cost-effective short-term means to counter threats to public health and social order. We need to protect against this danger in part by strengthening intelligence gathering against such threats, but also by providing peaceful research options to scientists in the former Soviet Union. And here, as is the case in addressing Russia's nuclear vulnerabilities, we are not doing nearly enough to strengthen our first line of defense. Let me be clear, this statement and my earlier remarks are not a criticism of the President's priorities. He has charted the right course but the bureaucratic troops have not yet followed his lead – and they must for our future's sake.

### **Conclusion**

So let me summarize. Al Qaeda has established a loosely affiliated network of terrorists on every continent, including our own. These terrorists have made clear they are seeking weapons of mass destruction. The materials and know-how they need are spread around the world in abundant and poorly-secured supply.

This is an obvious threat to our security, and a corresponding threat to our civil liberties. September 11 has already sparked new encroachments into our civil liberties, and many fear this is just the first wave of the post-9/11 world. The public is understandably conflicted about this. The NTI/Scientific American poll I cited earlier showed that more than three-quarters of those surveyed fear an attack with weapons of mass destruction. Yet an almost equal number of those surveyed expressed worry over the loss of individual freedoms. The way out of this apparent contradiction is not to sacrifice security for liberty or vice versa. As I said earlier, the path forward is to understand the threat so well, and tailor a risk-based response so well constructed, that it achieves a reasoned and accepted balance between security and civil liberty. We can do this, if the defenders of security and the defenders of civil liberty keep in mind what's at stake and work to a common purpose.

Throughout history, great invasions into civil liberties have been sparked by attacks on the nation. President Lincoln suspended the writ of habeas corpus during the Civil War; the Espionage Act -- passed during World War I -- led to prosecution of Americans for opposing the draft or stating religious objections to the war; World War II saw the internment of Japanese Americans, which ultimately led to payment of reparations. We should learn from this history. The greatest losses in civil liberties throughout history have been precipitated by an attack. Consequently, the best preservation of civil liberties is prevention of new attacks. If we find it difficult after September 11 to bring reason into the debate over the sacrifice of civil liberties, imagine the difficulty after a terrorist attack with a nuclear weapon, or a nerve agent, or a deadly contagious virus. Not only would emotion then call for a dramatic tightening of security at great cost in civil liberties, but reason itself would have a strong argument for an immediate, perhaps irreversible shift in the balance between liberty and security.

It should be our common bond to avoid that day of reckoning. And that common bond grows out of common sense: we cannot protect ourselves piecemeal. No single approach can serve our country or save what we most want preserved – whether it is civil liberties, national security, or unfettered scientific research. We cannot focus only on what's most important to us

individually, because it's all important to us collectively, and it's all at risk. Either we act to preserve each part of it, or we might lose all of it.

As I close these remarks, I am reminded of the exchange between two of our founding fathers at a time of great danger. John Hancock reportedly said: "We must be unanimous. There must be no pulling different ways. We must all hang together." To which Ben Franklin answered: "Yes, we must, indeed, all hang together, or most assuredly we shall all hang separately." This is truly a time to "hang together," to emphasize what unites us and work for the defense of the nation while preserving the values we hold most dear. Thank you very much.

###