Overhauling Counterproliferation

Statement of

Ashton B. Carter
Co-Director, Preventive Defense Project
John F. Kennedy School of Government
Harvard University

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Mr. Chairman and Members of the Committee on Foreign Relations, thank you for inviting me to appear before you today. Last time I testified before you, the topic was the North Korean nuclear crisis. Bill Perry and Brent Scowcroft indicated that we had been working together with Arnie Kanter recently on how to stop Iran's nuclear program. And, of course, much of the attention of all of us over the past year has been on the war to stop Iraq's weapons of mass destruction programs.

Today you have asked me to step back a bit and look beyond today's proliferation hotspots to the underlying policies and programs of the United States for counterproliferation (CP). I was deeply involved in launching the Pentagon's CP Initiative almost ten years ago, when there were few of us hawks on this subject. The way you have framed this hearing is a reminder that dealing with the so-called "rogues," though vitally important, is not the totality of the CP policy we need.

No Silver Bullets: A Comprehensive Approach to Counterproliferation

A clear indication that our approach to countering proliferation should not begin and end with the rogues is that most of the nearly 200 nations on earth have not, in fact, resorted to weapons of mass destruction (WMD). There are but a few rogues, fortunately. In one of Arthur Conan Doyle's famous novels, Sherlock Holmes sees a vital clue in the fact that a dog at the scene of the crime did *not* bark. In a similar way, we should see a clue to one aspect of a successful CP policy in the fact that such countries as Germany, Japan, Turkey, South Korea, and Taiwan have *not* resorted to WMD. They have not because they were <u>dissuaded</u> from doing so by a stable alliance relationship with the United States that offered better security for them than WMD. This is something the United States has been doing right and should keep doing right; later I will return to this point, because I have some concerns about the health of our alliances and partnerships.

Other nations have foregone WMD as part of a disarmament agreement like the Nuclear Nonproliferation Treaty that ensures them that if they forego WMD, their neighbors will also. If disarmament regimes can be strengthened and updated so they offer credible protection – Arnie Kanter will indicate later how this might be done for the NPT – they too can play a vital role in CP.

When dissuasion and disarmament fail and a nation heads down the road to WMD acquisition, focused diplomacy by the United States can sometime reverse its course. Recent decades give many examples: Ukraine, Kazakhstan, and Belarus after the collapse of the Soviet Union; South Korea and Taiwan in the 1980s; Argentina and Brazil in the 1990s; perhaps Libya in recent years.

Some proliferators cannot be turned back. At that point our approach must be to deny them the means to make WMD: keeping the worst weapons out of the hands of the worst people, to paraphrase President Bush. Export controls, covert action, the new Proliferation Security Initiative (PSI), and the highly successful Nunn-Lugar program all contribute to the strategy of denial.

Sometimes dissuasion, disarmament, diplomacy, and denial don't work, and despite our best efforts proliferation occurs. It was important to me during the time I served in the Defense Department that U.S. efforts to counter WMD not end when nonproliferation had failed, and that is one reason we coined the word "counterproliferation". At that point we need to offer protection to our forces, people, and allies against use of WMD. Elimination of hair-trigger alert postures, improved permissive action link (PAL) type technology, and other defusing measures can reduce the chances of accidental or unauthorized use of WMD – from Russia, for example, or between India and Pakistan. With respect to deliberate use, the United States should continue its current policy of threatening "overwhelming and devastating" retaliation against anyone who uses nuclear, chemical, or biological weapons against us, since in at least some cases deterrence might be effective. Where deterrence fails, defenses – ranging from chemical suits, inhalation masks, and vaccines to ballistic missile defense (BMD) – are needed. Finally, where the risk of use of WMD is imminent, preemptive destruction of hostile WMD might be a necessary last resort.

Mr. Chairman and Members of the Committee: dissuasion, disarmament, diplomacy, denial, defusing, deterrence, defenses, destruction – what the Department of Defense calls the "8 D's," are the tools of a comprehensive counterproliferation policy. Besides being an easy jog to the memory, the 8 D's are a reminder that there is no silver bullet for counterproliferation – not preemption (destruction), not arms control (disarmament), nor any other single tool. From listening to the public debate one might come to believe that one of these tools holds the key to protection against proliferation. But the dynamics driving proliferation in different countries are different enough that no single label or doctrine can cover them all. One might also infer from the public debate that the 8 D's are competing, alternative "doctrines." In fact we need them all.

Ingredients of a Needed Overhaul of Counterproliferation

Today a CP "hawk" should be trying to strengthen all tools in the toolbox. Many of them are in need of fundamental overhaul. One problem is that some date to the Cold War, when counterproliferation was a "B list" problem compared to the "A list" confrontation with the Soviet Union. Another problem is that we have not heeded a lesson of the attacks of 9/11: counterproliferation and counterterrorism are inseparable in the 21st century. As I indicated when I appeared before you to discuss the North Korean nuclear crisis, we must be concerned not only about what Kim Jong Il might do with nuclear weapons he obtains from the plutonium he is reprocessing, but also about the other hands into which North Korea's nukes might some day fall – either through sale or in the chaos of a collapse of the North Korean regime. The half-life of plutonium 239 is 24,400 years; surely the North Korean regime will not last that long. Today's proliferation threat is tomorrow's catastrophic terrorism threat. Who among us would not give a great deal now to return to the 1980s and stop the Pakistani nuclear program, which might be "talibanized" sometime in the future, in a nightmare scenario? 9/11 should have caused us to overhaul our approach to counterproliferation as fundamentally as our approach to counterterrorism. But so far the "worst people" have gotten more attention than the "worst weapons."

The counterproliferation hawk's agenda would have six priorities, which together cover all of the "8 D's."

1. Strengthen alliances and partnerships. I indicated earlier that the prospect of being embedded in a stable security relationship with the United States has been critical to preventing proliferation in such countries as South Korea, Turkey, Taiwan, and Ukraine. This underappreciated benefit of America's security partnerships is another reason to avoid the temptation to make a virtue of an Iraq war necessity, the so-called "coalition of the willing." Compared to standing partnerships and alliances, such coalitions do not serve U.S. interests well. Alliance partners train together to interoperate, so when they go to war they are not only willing but able to make a contribution to combined operations. Alliance partners routinely exchange threat assessments, making them more likely – not certain, to be sure, but more likely – to share our view when we believe use of force is necessary. And finally, alliance partners stably tied to the U.S. for their defense are unlikely to adopt a drastic, purely national approach to their defense like acquisition of WMD. For all these reasons, we should reject the notion that the United States can operate effectively through "coalitions of the willing" and use that concept only as a last resort when we have no success in leading our allies in our direction.

2. Expand the scale and scope of Nunn-Lugar. Nunn-Lugar is now recognized to be not just a DOD program focused on the former Soviet Union, the way it began a dozen years ago, but a novel approach to eliminating WMD of wide applicability. At the time the United States formed a coalition against al Qaeda after 9/11, it should have formed a parallel coalition against WMD based on the Nunn-Lugar approach. In fact, such a Coalition Against WMD Terrorism was proposed at the time by none other than Senators

Lugar and Nunn. The United States missed a major opportunity to transform counterproliferation while it had the attention and sympathies of the world.

It is not too late to expand the scale and scope of Nunn-Lugar. The expansion would plan for and fund: the final and complete safeguarding of all former Soviet fissile materials, in weapons and non-weapons forms; bolder inroads into former Soviet biological and chemical stockpiles and facilities; collection of all significant caches of highly enriched uranium worldwide, eliminating these "sleeper cells" of nuclear terrorism; complete and verifiable elimination of WMD programs in Iraq, Libya, Iran, and North Korea as and when circumstances permit; promulgation and adoption of world-class standards for inventory control, safety, and security for all weapons and weapons-usable materials; strengthening border and export controls; and devising cooperative international responses (NEST teams, radiological public health measures, forensics, and so on) in the event of an incident of nuclear terrorism.

As you have noted, Mr. Chairman, Nunn-Lugar is much praised but little funded in Washington and other capitals. Here in Washington there are tenacious opponents in Congress and even in the administration, despite the fact that President Bush has voiced his support for the program.

3. Update and upgrade the Nuclear Nonproliferation Treaty. The NPT is sometimes disparaged because, it is said, the "bad guys" can ignore it with impunity (since it has inadequate verification and enforcement provisions) and the "good guys" would be good with or without an agreement. This contention is wrong for two reasons.

First, the world does not divide neatly into "good guys" and "bad guys" in regard to proliferation behavior: there is a substantial "in-between" category. This group has been represented over time by Ukraine, Kazakhstan, and Belarus (which chose to forsake the nuclear weapons they inherited from the Soviet Union); Argentina and Brazil (which mutually agreed to give up nuclear their nuclear programs); Taiwan and South Korea (which chose U.S. protection over nuclear weapons); and South Africa (which changed regimes and thus its sense of external threat). In all these cases, the allure of greater international acceptance if they abandoned their nuclear ambitions and signed the NPT was one of the deciding factors.

Secondly, it is important to note that agreements like the NPT are, in fact, useful even in dealing with the "bad guys" in an indirect way. When it becomes necessary for the United States to lead action against the rogues, the international consensus against WMD embodied in arms control agreements provides a framework for the United States to marshal the support of other nations.

While the NPT has great value in its current form, its provisions can and should be strengthened. One problem is that the concept of a so-called "peaceful atom," dating to the 1960s when the NPT was negotiated, constitutes a huge loophole in the regime that must be closed. Bill Perry has mentioned this problem, and Arnie Kanter will cover it in

more detail. A second problem with the NPT is the weaknesses of its verification and enforcement provisions, which need to be addressed.

Arms control plays a limited role in the counterproliferation toolbox. But in this it is not different from all the other tools. Each tool has its limitations, but also its place. The United States should be taking the lead in fixing the NPT, not in disparaging it.

4. Make counterproliferation an integral part of Pentagon Transformation. In the 1990s the term "counterproliferation" was coined in the Pentagon to signify that contending with WMD was an important DOD mission in the post-Cold War world. A number of counterproliferation programs were created within DOD to try to focus research, development, and acquisition on producing non-nuclear counters to WMD on the battlefield. Nuclear retaliation for use of WMD against U.S. troops was always an option, but not all opponents will necessarily be deterred in this way, and in the event of WMD use against us the President deserves better options than firing U.S. nuclear weapons.

Over time, the counterproliferation programs were expanded to protecting rear areas – ports and airfields in the theater of war – against chemical and biological weapons attack. Subsequently, the technologies for protecting allied rear areas were recognized to be applicable to protection of the U.S. homeland from WMD attack. Thus, by 9/11, DOD was recognized as the lead agency in the federal government for developing and fielding technology for countering WMD wielded by both state and non-state actors, both on foreign battlefields and on U.S. territory. Examples of counterproliferation programs, both research and acquisition, were chemical and biological warning sensors, improved vaccines against bioattack, individual and collective protective coverings, special munitions for attacking and neutralizing enemy WMD, radiochemical forensics, and active defenses such as ballistic missile defense.

Today the Pentagon is quite rightly devoting a portion of its growing budget to "transforming" the military to anticipate future threats and field dramatically new technologies. But the core of the effort remains long-range precision strike, close integration of intelligence information with operations, and closer working of Army, Navy, and Air Force units together in "joint" operations. These worthy transformation goals for conventional warfare have not been matched by any comparable counter-WMD emphasis. DOD's counterproliferation programs remain small and scattered among the Services, OSD, "joint" program offices, and the Defense Threat Reduction Agency. Excluding missile defense, these programs amount to only a few billion out of the $400 billion defense budget, far too small a fraction given the importance of the mission. Counterproliferation needs more resources and a clearer management structure in DOD.

5. Increase focus on WMD terrorism within the Homeland Security program. A similar observation can be made about the priority given to WMD in the new homeland security agencies and budget. If the worst kind of terrorism imaginable is WMD terrorism, why is so small a fraction of the new homeland security program devoted to innovative efforts to prevent and respond to WMD terrorism?

6. Overhaul WMD Intelligence: The Specter of Policymaking in the Dark. No policy tool – neither preemptive destruction, nor disarmament arms control, nor missile defense, nor denial – can be effective if the existence and nature of WMD efforts is unknown or imprecise.

Secretary of Defense Donald Rumsfeld became convinced in the course of his work on ballistic missile proliferation before he took office that adequate intelligence on WMD programs is unlikely to be present in most cases. Given the stakes, he concluded, the U.S. must assume the worst in formulating its policy responses. This logic, encapsulated in the maxim "absence of evidence [of WMD] is not evidence of absence," was the main intellectual argument in the Rumsfeld Commission report leading to the deployment of a National Missile Defense. According to this maxim, intelligence regarding the timetable for the development of an intercontinental ballistic missile threat originating in Iran or North Korea was uncertain enough that it was deemed imprudent for the United States merely to be prepared to deploy a missile defense within a few years (the Clinton administration policy), but instead necessary to undertake deployment immediately.

I myself applied the same logic to the need for a preemptive war in Iraq. I believed it was safer to assume Saddam Hussein was trying to fulfill his long-demonstrated quest for WMD than to interpret the scanty intelligence available as evidence of a scanty WMD program. I still believe my judgment to support the invasion of Iraq was sound on the basis of the information available at the time. But we now know that the overall picture that information painted was incorrect.

The matter of pre-war intelligence on Iraq's WMD is the subject of several ongoing inquiries, and my purpose in raising it is not to anticipate their results but to point to the larger issue of how to improve WMD intelligence in general.

WMD activities are inherently difficult to monitor. It is comparatively easy to monitor the size and disposition of armies, the numbers and types of conventional weaponry like tanks and aircraft, and even the operational doctrines and plans of military establishments (since these generally need to be rehearsed to be effective, and exercises and training can be monitored). By their nature, WMD concentrate destructive power in small packages and tight groups. Both the manufacturing of chemical and above all biological weapons can take place in small-scale facilities. The plutonium route to nuclear weapons requires reactors and reprocessing facilities that are large and relatively conspicuous, but the uranium route can be pursued in facilities that are modest in size and lack distinctive tell-tale external features.

A profound question bearing upon all of the 8 D's is therefore whether adequate intelligence is likely to be available to make any of them effective; or, alternatively, whether WMD spread is by its nature too difficult to monitor. If the latter is true, the world is doomed to a perpetual situation reminiscent of the "missile gap" of the 1950s,

where uncertainties outweigh certainties and policymaking is forced into worst-case scenario mode.

The uncertainties of the 1950s missile gap were substantially dispelled by the invention of satellite reconnaissance. The Soviet Union's missile silo construction and flight tests were visible from space. Today, there are some emerging intelligence technologies that will potentially make a substantial contribution to the collection of quality intelligence on WMD. They are "close-in" technologies as opposed to "from-the-outside-looking-in" like satellite photography. They are described in rough outline in an article I wrote for *Technology in Society*, which will be published soon and which I have appended to this statement.

But no technology in the offing holds the promise of lifting the veil of WMD activities completely the way satellite photography lifted the veil from the Soviet Union's nuclear missile and bomber programs. Accurate intelligence on WMD would therefore be enhanced by two additional ingredients that are matters of policy, not technology.

One ingredient is active cooperation by the parties under surveillance. Just as the Soviet Union allowed overflight of its territory by satellites, governments around the world will have to allow greater access to their territory, facilities, and scientists if there is to be any kind of accurate underpinning of counterproliferation. At a minimum, governments that wish to avoid suspicion (and thus coercion and even preemptive attack) will need to allow the kind of access promised to U.N. inspectors in Iraq before the 2003 war. Access involves the ability to inspect facilities by surprise, take material samples for forensic analysis, install monitoring equipment, and other physical means. It must be complemented by required data declarations, document searches, and interviews of scientists. These are tall orders, since they involve compromises with sovereignty and legitimate military secrecy for the nations inspected, but they are the only way North Korea's WMD ambitions will be verifiably eliminated, or Iran's nuclear power activities fully safeguarded.

The second ingredient must be the shifting of the burden of proof from the international community to the party under suspicion. To make an inspection system of carefully managed, if not totally unfettered, access based on active cooperation succeed, it must be the responsibility of the inspected party to dispel concerns, and not the responsibility of the United States or the international community to "prove" that dangerous WMD activities are underway.

Since proliferation is essentially a scientific activity, we also need to increase the number and level of technical training of the scientists and engineers in the intelligence community, as well as the linkages between the intelligence community and the broader scientific community.

Finally, a great spur to quality and motivation of an intelligence effort is a clear link to action. Since 9/11, as you know, the counterterrorism intelligence effort has become more "actionable." To simplify somewhat, the counterterrorism effort has

moved from producing papers characterizing terrorist groups to supporting operations to interdict terrorists. As the counterpoliferation efforts gets more operational through covert action, the PSI, expanded Nunn-Lugar, and verifying WMD elimination in Iraq, Libya, and hopefully elsewhere, the demand for "actionable" intelligence will increase. If history is any guide, the intensity and quality of collection and analysis by the intelligence community will increase in response.

Taken together and with urgency, I am optimistic that such steps to overhaul our WMD-related intelligence effort can provide accurate intelligence to undergird all of the 8 D's.

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Mr. Chairman and Members of the Committee, the war on terrorism and the war on proliferation are strongly linked in the 21st century. But they are not identical. So far we are waging the war on terrorism much more vigorously than the war on WMD, attacking the "worst people" much more than the "worst weapons." I hope this series of hearings results in an overhaul of counterproliferation that is as far-reaching as the overhaul of counterterrorism that began on 9/11, and that the measures I have recommended provide an agenda for action.

THE HONORABLE ASHTON B. CARTER

Dr. Ashton Carter is Co-Director (with former Secretary of Defense William J. Perry) of the Preventive Defense Project, a research collaboration of Harvard's Kennedy School of Government and Stanford University, and he teaches national security policy at the Kennedy School where he is Ford Foundation Professor of Science and International Affairs.

Dr. Carter served as Assistant Secretary of Defense for International Security Policy during President Clinton's first term. His Pentagon responsibilities encompassed: countering weapons of mass destruction worldwide, oversight of the U.S. nuclear arsenal and missile defense programs, arms control, controls of sensitive U.S. exports, policy regarding the collapse of the former Soviet Union (including its nuclear weapons and other weapons of mass destruction), and chairmanship of NATO's High Level Group. He oversaw military planning during the 1994 crisis over North Korea's nuclear weapons program; was instrumental in removing all nuclear weapons from the territories of Ukraine, Kazakhstan, and Belarus; directed the establishment of defense and intelligence relationships with the countries of the former Soviet Union when the Cold War ended; and participated in the negotiations that led to the deployment of Russian troops as part of the Bosnia Peace Plan Implementation Force. Dr. Carter oversaw the multi-billion dollar Cooperative Threat Reduction (Nunn-Lugar) program to support elimination of nuclear, chemical, and biological weapons of the former Soviet Union, including the secret removal of 600 kilograms of highly enriched uranium from Kazakhstan in the operation code-named Project Sapphire. Dr. Carter also directed the Nuclear Posture Review and oversaw the Department of Defense's (DOD's) Counterproliferation Initiative. He directed the reform of DOD's national security export controls. His arms control responsibilities included the agreement freezing North Korea's nuclear weapons program, the extension of the Nuclear Nonproliferation Treaty, the negotiation of the Comprehensive Test Ban Treaty, and matters involving the START II, ABM, CFE, and other arms control treaties.

Dr. Carter was twice awarded the Department of Defense Distinguished Service Medal, the highest award given by the Department. For his contributions to intelligence, he was awarded the Defense Intelligence Medal. In 1987 Carter was named one of Ten Outstanding Young Americans by the United States Jaycees. He received the American Physical Society's Forum Award for his contributions to physics and public policy.

A longtime member of the Defense Science Board and the Defense Policy Board, the principal advisory bodies to the Secretary of Defense, Dr. Carter continues to serve DOD as an adviser to the Secretary of Defense, a consultant to the Defense Science Board, and a member of the National Missile Defense White Team. In 1997 Dr. Carter co-chaired the Catastrophic Terrorism Study Group with former CIA Director John M. Deutch, which urged greater attention to terrorism. From 1998 to 2000, he was deputy to former Secretary of Defense William J. Perry in the North Korea Policy Review and traveled with him to Pyongyang. In 2001-2002, he served on the National Academy of Sciences Committee on Science and Technology for Countering Terrorism and advised on the creation of the Department of Homeland Security. In 2003 he was a member of the National Security Advisory Group to the U.S. Senate Democratic Leadership, with William Perry, Gen. Wesley K. Clark, Madeleine Albright, and others.

In addition to his public service, Dr. Carter is currently a Senior Partner of Global Technology Partners, Chairman of the Advisory Board of MIT's Lincoln Laboratories, a member of the Draper Laboratory Corporation, and a member of the Board of Directors of Mitretek Systems. He is a consultant to Goldman, Sachs and the MITRE Corporation on international affairs and technology matters, and speaks frequently to business and policy audiences. Dr. Carter is also a member of the Aspen Strategy Group, the Council on Foreign Relations, the American Physical Society, the International Institute of Strategic Studies, and the National Committee on U.S.-China Relations. Dr. Carter was elected a Fellow of the American Academy of Arts and Sciences.

Carter's research focuses on the Preventive Defense Project, which designs and promotes security policies aimed at preventing the emergence of major new threats to the United States. Carter and former Secretary of Defense William J. Perry co-authored *Preventive Defense: A New Security Strategy for America*, which identified and prioritized the threats to U.S. national security in the 21st century.

Before his latest government service, Dr. Carter was Director of the Center for Science and International Affairs at Harvard University's John F. Kennedy School of Government, and Chairman of the Editorial Board of *International Security*. Previously, he has held positions at the Massachusetts Institute of Technology, the Congressional Office of Technology Assessment, and Rockefeller University.

Dr. Carter received bachelor's degrees in physics and in medieval history from Yale University, summa cum laude, Phi Beta Kappa. He received his doctorate in theoretical physics from Oxford University, where he was a Rhodes Scholar.

In addition to authoring numerous articles, scientific publications, government studies, and Congressional testimonies, Dr. Carter co-edited and co-authored eleven books, including *Keeping the Edge: Managing Defense for the Future* (2001), *Preventive Defense* (1997), *Cooperative Denuclearization: From Pledges to Deeds* (1993), *A New Concept of Cooperative Security* (1992), *Beyond Spinoff: Military and Commercial Technologies in a Changing World* (1992), *Soviet Nuclear Fission: Control of the Nuclear Arsenal in a Disintegrating Soviet Union* (1991), *Managing Nuclear Operations (1987), Ballistic Missile Defense* (1984), and *Directed Energy Missile Defense in Space* (1984).

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Ashton B. Carter
Co-Director, Preventive Defense Project
Kennedy School of Government
Harvard University

The Need for an Overhaul of Counterproliferation

President Bush has rightly proclaimed that keeping the worst weapons – weapons of mass destruction – out of the worst hands – state or non-state actors inclined to use them – is the highest security priority of the era. The policy response to this imperative, however, has been feeble in both the United States and around the world. One would have thought that the sequel of 9/11 would have been a comprehensive overhaul of the world's toolbox of counters to proliferation of WMD to state and non-state parties. But no such overhaul was undertaken.

To be sure, there have been overhauls of parts of the U.S. government in response to 9/11, some of them – though not all -- constructive. A truly global coalition took the offensive against al Qaeda and other Islamic extremist terrorists, with great effect. An overhaul of the FBI, intended to redirect it from "cracking the case" of terrorist crimes already committed to preventing future terrorist attacks, is at least apparently underway. The redirected FBI domestic counterterrorism effort is, in turn, supposed to be coupled to the CIA's foreign intelligence in new ways through the "Terrorism Threat Integration Center" announced in President Bush's State of the Union Address in January, 2003, at last bridging the false divide between "domestic" and "foreign" intelligence in a globalized world. A new cabinet Department of Homeland Security has been created, the first mission-oriented restructuring of the federal bureaucracy since the founding of the Department of Energy, and the most wide-ranging since the reorganization of the national security establishment following World War II. There has been a total overhaul of U.S. policy towards the Middle East; the results here are not yet in. There has been a reevaluation by the United States and its allies of their alliance relationships, mostly to the detriment of all. And most of all, there has been an acrimonious global debate over the application of one proliferation tool, preemption, to one WMD concern, Iraq's suspected chemical and biological programs and nuclear ambitions.

What is remarkable about the post-9/11 response is how little of the overhaul has focused on WMD. There has been no international coalition to corral all the wherewithal of WMD terrorism – most importantly, nuclear weapons and fissile material -- akin to the coalition against al Qaeda. There has yet been no reckoning with the evident fact that intelligence on Saddam Hussein's WMD arsenal differed markedly from what was found immediately after the war. The Department of Homeland Security, despite its new title, remains the amalgam of its diverse constituent bureaucracies rather than an engine of innovative policy. Its focus has been airline security and border control, not WMD. The preoccupation with preemption in Iraq has left the agenda of international cooperation against WMD – export controls and arms control – in the imperfect state in which it was found before 9/11.

As if to highlight the feebleness of this response, North Korea and Iran are boldly moving forward with large-scale nuclear weapons programs, next to which Iraq's chemical and biological weapons ambitions pale in significance. The plutonium and highly enriched uranium made by these governments in coming years will be a threat to humanity not only in their hands, but for generations to come (the half-life of plutonium 239 is 24,000 years; that of uranium 235, 317 million years). It is impossible to know whose hands these materials will fall into in future turns of the wheel of history. Proliferation to states and non-states are linked in the post-9/11 world. A proliferation and counterterrorism disaster of enormous proportions, and a massive failure of U.S. security policy, is in the making.

Had the world taken the direct path from 9/11 to President Bush's imperative, what would the overhaul of counter-WMD policies have been? What should we do now to get back on the direct path?

No Single Tool Will Suffice

The most conspicuous step the U.S. government took after 9/11 to fulfill President Bush's commitment to keeping the worst weapons out of the hands of the worst people was to conduct a preemptive war on Iraq's chemical and biological weapons programs. This was necessary to prevent a reversion over time to their previous level of malignant activity, since fatigue would inevitably have set in to the international community's efforts at inspections and sanctions, even assuming these could have been effective at containing Iraq's programs. But however justified, the war in Iraq involved the application of one tool – the last resort of preemptive military force – in one place, Iraq. This tool, while a necessary option of last resort, is hardly a general solution or "doctrine" since it fits so few of the relevant cases.

Proliferation of weapons of mass destruction to states and sub-state terrorists is a complex and varied phenomenon. It therefore calls for a policy approach that is multi-faceted. The stakes are great enough that no tool can be ignored.

For one thing, the "worst weapons" come in degrees. Chemical weapons are not much worse, pound-for-pound or gallon-for-gallon, than ordinary explosives and deserve only the adjective "bad," not "worst." Biological weapons are fearsome and becoming more so: advances in technology make the "old" types of bioweapons like anthrax prone to small-scale cottage industry fabrication that small groups of deviants – even individuals – can muster; while advanced bioscience will create new germs resistant to

vaccines and antibiotics. The key to security against this type of "worst" weapon is public health detection and quick response, since bioagents take time to spread and kill.

Time and medicine won't work, however, against a nuclear detonation. It has a deadly finality that puts a premium on prevention before the fact, not response after the fact. But here Nature has been kind: nuclear weapons are made from two metals, plutonium and enriched uranium, that do not occur in nature. These materials must be man-made, and it turns out that in both cases the process of making them is comparatively expensive and difficult to conceal. So far, accomplishing it has only been within the reach of governments, not terrorist groups. The key to nuclear security is therefore to ensure that more governments don't make fissile materials, and that all governments that do make fissile materials keep them out of the hands of terrorists.

If you dissect the notion of "worst weapons," therefore, you find a somewhat more complex picture. Likewise if you unpack the idea of "worst people."

Terrorists are easy to include. In this category will figure not only organized and well-funded groups like al Qaeda, but small splinter groups of super-extremists, cults, and ultimately individuals as the destructive power of technology formerly reserved to nations becomes available to smaller and smaller groups. (The perpetrator of the anthrax mailings of October 2001 might have been a lone individual. The Aum Shinrikyo cult in Japan used sarin in the Tokyo subway and attempted release of anthrax spores.)

But when it comes to governments, complexity enters. The most obvious category are the so-called rogue states that seem determined to get nuclear weapons to pose a direct threat to the United States and its interests – surely North Korea and Iran fill this bill today. They must be the object of intense U.S.-led international pressure to prevent them from making enriched uranium or plutonium and, failing that, military force that preempts their ambitions.

But what about Ukraine, Kazakhstan, South Africa, Argentina, Brazil, Taiwan, South Korea, and a host of other nations that might today be nuclear powers – and thus potential sources of "loose nukes" for terrorists as well as a danger in themselves – but were turned back through U.S.-led efforts in the 1980s and 1990s? These efforts included addressing their legitimate security concerns through alliances and security agreements, denying them technology to make nuclear weapons, and applying the weight of international opprobrium for further spread of nuclear weapons embodied in the Nuclear Nonproliferation Treaty. Without this effort these borderline cases might have ended up in the "worst" category.

A third category is represented by all of the other countries on the globe – nearly two hundred of them -- that have not made and are not seeking to make nuclear weapons. Powerful leading nations like Germany, Turkey, and Japan – far from rogues – have not gone nuclear despite their clear technical ability to do so. This fact should not be taken for granted. Our policy against WMD must include continuing to dissuade the great bulk of nations from resorting to this extreme. Doing so means maintaining stable and reliable alliances that these nations can depend upon (not just "coalitions of the willing"), and using U.S. power to create an international climate of security and justice.

These examples illustrate the complexity of the problem of WMD, but also the richness of the toolbox for combating them. This toolbox spans dissuasion, prevention, diplomacy, arms control, denial of access to critical technology and materials, defenses, deterrence, and, yes, preemption. All of these tools need to be buttressed with solid intelligence.

What the U.S. should have done after the wake-up call of 9/11 is undertake a comprehensive overhaul of the entire toolbox for combating WMD. We would be much safer today if we had moved outside the one-tool, one-place tunnel-vision approach that characterized preemption in Iraq, however necessary that instance might have been.

Overhauling WMD Intelligence: The Specter of Policymaking in the Dark

No policy instruments – neither preemption, nor arms control, nor missile defense, nor interdiction -- can be effective if the existence and nature of WMD efforts is unknown or imprecise.

Secretary of Defense Donald Rumsfeld became convinced in the course of his work on ballistic missile proliferation before he took office that adequate intelligence on WMD programs is unlikely to be present in most cases. Given the stakes, he concluded, the U.S. must assume the worst in formulating its policy responses. This logic, encapsulated in the maxim "absence of evidence [of WMD] is not evidence of absence," was the main intellectual argument in the influential Rumsfeld Commission report leading to the deployment of a National Missile Defense.[1] According to this maxim, intelligence regarding the timetable for the development of an intercontinental ballistic missile threat originating in Iran or North Korea was uncertain enough that it was deemed insufficient for the United States to be prepared to deploy a missile defense within a few years (the Clinton administration policy), but instead necessary to undertake deployment immediately. Later, when Rumsfeld became Secretary of Defense, this same logic led the United States to preemptive war in Iraq: Better to assume Saddam Hussein was fulfilling his long-demonstrated quest for WMD than to interpret the scanty evidence available as evidence of a scanty WMD program (especially in view of Iraq's persistent and obvious concealment and deception efforts). At the time of this writing, evidence has not been found of the scale and scope of WMD activities that were widely suspected to be taking place in Iraq before the war. This disturbing circumstance underscores the difficulty of obtaining good intelligence on WMD.

[1] The Honorable Donald H. Rumsfeld, Chairman, Barry M. Blechman, Lee Butler, Richard L. Garwin, Williarm R. Graham, William Schneider, Jr., Larry Welch, Paul D. Wolfowitz, R. James Woolsey *Report of the Commission to Assess the Ballistic Missile Threat to the United States* (Washington, D.C., July 15, 1998), 104th Congress.

WMD activities are inherently difficult to monitor. It is comparatively easy to monitor the size and disposition of armies, the numbers and types of conventional weaponry like tanks and aircraft, and even the operational doctrines and plans of military establishments (since these generally need to be rehearsed to be effective, and exercises and training can be monitored). But by their nature WMD concentrate destructive power in small packages, and tight groups. The manufacturing of chemical and above all biological weapons can take place in small-scale facilities. The plutonium route to nuclear weapons requires reactors and reprocessing facilities that are inherently large and relatively conspicuous. But the uranium route can be pursued in facilities that are modest in size and lack distinctive tell-tale external features.

A profound question affecting all of the tools in the counter-WMD toolbox is therefore whether adequate intelligence is likely to be available to make them effective; or, alternatively, whether WMD spread is inherently too difficult to monitor. If the latter is true, the world is doomed to a perpetual situation reminiscent of the "missile gap" of the 1950s, where uncertainties outweigh certainties and policymaking is forced into worst-case mode.

The uncertainties of the 1950s missile gap were substantially dispelled by the invention of satellite reconnaissance. The Soviet Union's missile silo construction and flight tests were visible from space. Less often appreciated is that the Soviet Union also conducted these activities, in the main, openly and in strictly regimented patterns. Where the Soviet Union wished to practice deception, as in their biological weapons programs, they were largely successful. Satellite reconnaissance also depended on the Soviet Union's cooperation in an essential respect: maintaining the openness of space and the right of uncontested U.S. overflight of its territory.

There are some intelligence technologies emerging that are going to make a substantial contribution to the collection of quality intelligence on WMD. They are "close-in" in nature, rather than "from-the-outside-looking-in" like satellite photography. Many are forensic in nature. They involve, for example, taking material samples and analyzing them for traces of suspicious chemicals, biological material, or radionuclides. The samples can be taken from the air by aircraft (as with krypton 80 air sampling for evidence of spent nuclear fuel reprocessing) or from the ground (plucking a leaf from a bush, wiping a handkerchief across a countertop) overtly or covertly. From a distance, the spectrum of light transmitted through an effluent plume downwind of a smokestack or backscattered from a laser might reveal something about the composition of the plume and thus the activities underway within the building.

Unattended ground sensor (UGS) with a variety of transducers (chemical, acoustic, seismic, radio-frequency, imaging, etc.) can be emplaced by hand or dropped covertly from unmanned aerial vehicles (UAVs). The UGS can have enough on-board data processing capability to require only low-bandwidth exfiltration of their data back to intelligence agencies. This low-bandwidth communication can, in turn, be made very difficult for the nation being spied upon to detect. Cellular telephone technology permits clusters of UGS to be networked. By combining the data from several networked UGS, it might be possible to reduce the rate of false alarms dramatically. UGS can even be made mobile by attaching them to robots, animals, or birds.

Another lucrative technique is "tagging," involving the covert placement of identifying features, transmitters, or chemical markers on objects destined for WMD laboratories or other facilities, and then monitoring the tag remotely or by close-in sample collection.

Finally, there is a revolution underway in close-in signals intelligence, in which cell phones, laptop computers, local area networks, and other information infrastructure of a WMD program are penetrated and exploited.

Miniaturization, as with micro-electro-mechanical (MEMS) devices, is making such close-in techniques easier. Because their use involves a covert dimension, these techniques are more highly classified than the techniques used for verifying superpower arms control agreements. Information from these specialized WMD-specific techniques can be combined with the usual types of intelligence from intercepted communications, defectors, and the occasional spy.

Unfortunately, no technology in the offing appears to have the promise of lifting the veil of WMD activities the way satellite photography lifted the veil from the Soviet Union's nuclear missile and bomber programs. Accurate intelligence on WMD would therefore be enhanced by two additional ingredients that are matters of policy, not technology.

One ingredient is active cooperation by the parties under surveillance. Just as the Soviet Union allowed overflight of its territory by satellites, governments around the world will have to allow greater access to their territory, facilities, and scientists if there is to be any kind of accurate underpinning of counterproliferation. At a minimum, governments that wish to avoid suspicion (and thus coercion and even preemptive attack) will need to allow the kind of access promised to U.N. inspectors in Iraq before the 2003 war. Access involves the ability to inspect facilities by surprise, take material samples for forensic analysis, install monitoring equipment, and other physical means. It must be complemented by required data declarations, document searches, and interviews of scientists. These are tall orders, since they involve compromises with sovereignty and legitimate military secrecy for the nations inspected. But they are the only way North Korea's WMD ambitions will be verifiably eliminated, or Iran's nuclear power activities fully safeguarded.

Accompanying the first ingredient must be a second: the shifting of the burden of proof from the international community to the party under suspicion. To make an inspection system of carefully managed, if not totally unfettered, access based on active cooperation succeed, it must be the responsibility of the inspected party to dispel concerns, and not the responsibility of the United States or the international community to "prove" that dangerous WMD activities are underway.

A Coalition Against WMD Terrorism: Spreading Nunn-Lugar Worldwide

The U.S.-led coalition against terrorism formed after 9/11 has been directed almost single-mindedly against al Qaeda and other Islamist fundamentalist terrorists. A parallel coalition aimed at WMD terrorism should have been spearheaded by the United States after 9/11, capitalizing on the widespread sympathy around the world for the victims of the attacks on the United States. The United States missed a major opportunity to transform counterproliferation.

Such a global coalition against WMD terrorism was in fact proposed by Senator Richard Lugar and former Senator Sam Nunn as the logical extension of the Nunn-Lugar program, which has successfully eliminated or safeguarded much of the former Soviet Union's WMD. Rather than seeking out and neutralizing cells of al Qaeda terrorists, the coalition against WMD terrorism would aim to eliminate all unsafeguarded "cells" of the wherewithal of WMD terrorism, especially fissile materials. It would also aspire to global membership, since all governments should share a deep common interest in preventing WMD from falling into non-governmental hands.

The report of a conference sponsored by the Nuclear Threat Initiative described the activities of such a coalition.[2] For nuclear terrorism, the cooperative activities of the global coalition would include:

- Establishing common, "world-class" standards for inventory control, safety, and security for weapons and weapons-usable materials – standards of the kind worked out between Russia and the United States in the Nunn-Lugar program.
- Establishing progressively stronger standards of transparency, to demonstrate to others that standards are being met.
- Providing assistance to those who need help meeting the Coalition's standards.
- Cooperating to provide effective border and export controls regarding nuclear materials.
- Devising cooperative procedures to find and regain control of bombs or fissile materials if they are lost or seized by terrorists. One possibility is a Coalition version of the U.S. Department of Energy's Nuclear Emergency Search Team (NEST) – a "global NEST." Another possibility is to agree to facilitate deployment of national NEST teams, in the way that many nations deploy canine search teams to earthquake sites to search for survivors.
- Planning and researching cooperative responses to a nuclear or radiological explosion, such as mapping the contaminated area, addressing mass casualties, administering public health measures like iodine pills and cleaning up contaminated soil.
- Cooperating on forensic radiochemical techniques to find the source of a nuclear incident from its residue.

For bioterrorism, Nunn and Lugar envisioned the following Coalition activities:

- Establishing common, "world-class" techniques for safeguarding biological materials in preparation, handling, and scientific use.
- Developing public health surveillance methods on a global scale to detect an incident of bioterrorism in its early stages. Such methods would also provide important benefits in combating infectious disease and improving global public health.
- Shaping normative standards for the conduct of scientific practice in the area of biotechnology and microbiology, including the possibility of making it a universal crime, punishable under national laws, to make or assist the making of bioweapons.
- Cooperating in research on diagnosis, prophylaxis (e.g., vaccines against bioagents), and treatment (e.g., antibiotics and antivirals).
- Cooperating in developing protective techniques like inhalation masks and filtered ventilation systems.
- Cooperating in developing techniques for decontaminating buildings that have been attacked (as was needed in the Hart Senate Office Building after anthrax-contaminated mail was sent there).
- Cooperating in forensic techniques for identifying the perpetrators of a bioattack (as was needed in the analysis of the anthrax mailings in the United States).

While much of the momentum behind U.S. diplomacy in the wake of 9/11 has dissipated through the passage of time and the war in Iraq, it is not too late for the United States to attempt to create a new framework for international cooperative action against WMD – a global coalition against WMD terrorism.

WMD and Homeland Security

Besides striking at Islamist terrorists worldwide, the other main U.S. response to 9/11 has been the creation of a White House Office of Homeland Security (OHS) and a new Department of Homeland Security (DHS). In 1958, the shock of the Soviet launch of Sputnik led to the creation of the President's Science Advisory Committee, the Defense Advanced Research Projects Agency, the National Reconnaissance Office, and the National Aeronautics and Space Administration. These institutions in turn spurred new technologies, techniques, and policies to counter the Soviet strategic threat. A comparable spurt of innovative energy does not seem likely from the OHS and DHS, especially with respect to the worst type of terrorism – WMD terrorism.

Little focus on WMD is apparent in the fledgling DHS. Its organization chart contains no overall office devoted to WMD terrorism, even though this is the most important kind of terrorism. Most of its energy to date has seemingly been devoted to merging the different traditions and bureaucracies of its constituent parts. In the main, these constituents are concerned with airline security, border control, and emergency response, not WMD. Some small offices concerned with WMD have been transferred to the new Department from other agencies, where they reside in a tiny "Science and Technology" Undersecretariat that disposes of only 2% of

[2] Ashton B. Carter, *Trip Report: Nunn Lugar Sites in Russia*, a memo to colleagues of the Preventive Defense Project (3 June 2002); and Ashton B. Carter, "Throw the Net Worldwide." *The Washington Post* (12 June 2002), A-31..

the DHS budget. But there is no evidence that this new bureaucracy, heralded as the most revolutionary governmental reconfiguration since the late 1940s, will revolutionize counterproliferation..

Meanwhile, the bureaucratic exertions associated with the new Department have entirely eclipsed the White House OHS. OHS is supposed to orchestrate the investments of the major departments that already have responsibility and technical capability in WMD -- DHS, DOD, the Department of Energy, the Department of Health and Human Services, the Intelligence Community, and others – to create new capabilities, new strategies, and new technologies for counterproliferation.[3] But in the absence of a strong White House hand as a consequence of the withering of OHS, these departments will revert to fitting countering WMD in at the margins of their traditional activities.

Counterproliferation in the Pentagon

One department besides DHS that has important capabilities and responsibilities for countering WMD, and especially for the development of new technology, is the Department of Defense. The term "counterproliferation" was coined by former Secretary of Defense Les Aspin to signify that contending with WMD was an important DOD mission in the post-Cold War world.[4] In the 1990s, a number of counterproliferation programs were created within DOD to try to focus research, development, and acquisition on producing non-nuclear counters to WMD on the battlefield. Over time the programs expanded to protecting rear areas – ports and airfields in the theater of war – against chemical and biological weapons attack. Next, the technologies for protecting allied rear areas were recognized to be applicable to protection of the U.S. homeland from WMD attack. Thus, by 9/11 DOD was recognized as a lead agency in the U.S. for developing and fielding technology for countering WMD wielded by both state and non-state actors, both on foreign battlefields and on U.S. territory. Yet DOD's counterproliferation programs remained small and fragmented. The great bulk of DOD's post-Cold war investments in new technology ignored WMD. Under the 1990s slogan "revolution in military affairs," most of the innovative thinking and spending in DOD was directed at perfecting conventional joint military operations.

Surprisingly little changed in DOD after 9/11. Secretary of Defense Donald Rumsfeld has proclaimed "transformation" to be the successor to "revolution in military affairs." But the core of the effort is long-range precision attack, close integration of intelligence information with operations, and closer working of Army, Navy, and Air Force together in "joint" operations. These worthy transformation goals have not been matched by any comparable counter-WMD emphasis. DOD's counterproliferation programs remain small and scattered. Excluding missile defense, these programs amount to only a few billion out of the $400 billion defense budget, far too small a fraction given the importance of the mission.

U.S. Nuclear Weapons Programs

An important question for counterproliferation is whether U.S. deployments and doctrine for its own nuclear arsenal influence the spread of WMD elsewhere in the world. In the main, the influence is marginal.

It is unlikely that Pyongyang's or Teheran's calculations, let alone al Qaeda's, are significantly dependent on whether the United States has 6000, 3500, or 2200 deployed strategic weapons (these are the numbers permitted under the last three rounds of U.S.-Russian nuclear arms control), retains tactical nuclear weapons deployed in Europe, researches or develops earth-penetrating or other new types of nuclear weapons, or has a doctrine that either threatens or foreswears nuclear retaliation if chemical or biological weapons are used against the U.S. or its allies. The fear that the United States would or could use nuclear weapons against them if they used WMD is a useful component of deterrence against proliferating governments. But the United States has another tool of deterrence besides nuclear weapons -- its unmatched conventional military power. Terrorists, for their part, are likely not deterred by threats of punishment at all.

On the other hand, countering North Korean and Iranian WMD ambitions can be assisted with the support of the international community. Defeating al Qaeda positively depends upon cooperation by foreign governments in intelligence and law enforcement; in this area a unilateral option is not available. International support for these U.S.-led efforts against WMD is influenced, again perhaps only at the margin, by U.S. nuclear policy. To the extent that the United States suggests a growing reliance of its own on nuclear weapons for security, it makes the job of marshaling international cooperation in a coalition against WMD terrorism or an overhaul of WMD arms control more difficult.

These marginal costs of emphasizing the role of U.S. nuclear weapons in its own security should therefore be weighed against the marginal benefits of changes in the U.S. nuclear posture. Recently the United States has embarked on three changes that do not meet this test.

One change is to combine nuclear weapons, missile defenses, and long-range conventional weapons into a "new Triad," replacing the traditional nuclear "Triad" of land-based missiles, submarine-based missiles, and strategic bombers. This construct accomplishes little, but it has the detrimental and misleading effect of suggesting to the world that U.S. presidents will regard use of nuclear weapons and use of conventional weapons as differing in degree rather than in kind.

Another change with little benefit is to accelerate the schedule for the resumption of underground nuclear testing. The new schedule allows weapons scientists to test at the earliest time they can be ready to take useful data from the detonation. But given the

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[3] Ashton B. Carter, "Roles for the White House and the New Department." Testimony on the Relationship between a Department of Homeland Security and the Intelligence Community before the Governmental Affairs Committee, U.S. Senate, 26 June 2002.Footnote to ABC Senate Gov Affairs Testimony

[4] Footnote to Aspin, Remarks by the Honorable Les Aspin, Secretary of Defense, National Academy of Sciences Committee on International Security and Arms Control, December 7, 1993, speech.

stakes involved, the schedule for resuming underground testing should instead be driven by considerations of military necessity, and here the case for the change has not been made.

The third change is to embark on research and development of a new type of earth-penetrating nuclear warhead, ostensibly to destroy deeply buried WMD facilities. Once again, the military rationale for this move is not strong, since the United States already has earth-penetrating nuclear weapons and the focus on munitions begs the larger question problem of finding such targets in the first place. The political enormity (and much of the fallout contamination) of a decision to cross the nuclear divide would not be much reduced by changing the design of the nuclear weapon. Once again, the benefit of the proposed innovation in U.S. nuclear programs is marginal.

The better U.S. military strategy would be to seek to widen and prolong the huge gap between U.S. conventional military capabilities and those of any other nation, and to use transformational technology to narrow, not widen, the range of circumstances in which this nation would resort to use of nuclear weapons.

Strengthening the Role of Arms Control

Another tool is arms control regimes like the Nuclear Nonproliferation Treaty (NPT), the Chemical Weapons Convention (CWC), and the Biological Weapons Convention (BWC). These are sometime disparaged as useless tools, since, the argument goes, the "rogues" ignore them with impunity (since they have inadequate verification and enforcement provisions) and the rest of the "good" countries are unaffected by them. But this argument is wrong for two reasons.

First, the world does not consist of "rogue" and "good" states as regards proliferation behavior: there is an important "in-between" category. This category has been represented over time by Ukraine, Kazakhstan, and Belarus (which chose to forsake the nuclear weapons they inherited from the Soviet Union); Argentina and Brazil (which mutually agreed to give up nuclear their nuclear programs); Taiwan and South Korea (which chose U.S. protection over nuclear weapons); and South Africa (which changed regimes and thus sense of external threat). In all these cases, the allure of greater international acceptance if they abandoned their nuclear ambitions was one important factor in their decision.

The second reason those who disparage counterproliferation arms control are wrong is that the agreements are, in fact, useful even in dealing with the "rogues": When it comes time for the United States to lead action against the rogues, the international consensus against WMD embodied in the NPT, CWC, and BWC helps the United States to marshal the support of other nations in confronting the rogue.

Therefore the arms control regimes have some value even if their provisions are far from perfect. But these provisions can be strengthened, and the U.S. should be leading the way to strengthen them rather than disparaging them. One problem affecting the NPT is dual use of nuclear technology. The "peaceful atom," dating to the 1960s when the NPT was negotiated, constitutes a huge loophole in the regime that must be closed. Non-nuclear states are today permitted by the NPT to have closed nuclear fuel cycles. They may enrich uranium to make reactor fuel, and they may reprocess spent reactor fuel to extract plutonium – provided they declare their activities to the IAEA and allow the IAEA to confirm the declaration. But possession of enrichment and reprocessing facilities positions a country dangerously close to achieving nuclear weapons capability. Iran is an important case in point. In the future, non-nuclear weapons states should be obliged to import enriched fuel from supplier states and ship spent fuel back to the suppliers, foregoing both enrichment and reprocessing. In return, the supplying nations would be obliged to provide fuel services on an economically fair basis, which will invariably be cheaper for the importer than building their own facilities.

Verification and enforcement provisions of the arms control agreements should also be strengthened. This, like improving intelligence, will not be an easy task given the inherent ease of concealment of WMD programs. But inspections called for by arms control agreements, and the international pressure shifting the burden of proof to potential proliferators, can strengthen intelligence, as noted above. And accurate intelligence is as necessary to all the other tools of counterproliferation as it is to arms control. Arms control plays a limited role in the toolbox. But in this it is not different from all the other tools, each of which has its limitations, but each its place.

Conclusion: Overhaul Counterproliferation Before It's Too Late

In stating that keeping the worst weapons out of the hands of the worst people is the highest security imperative for the world in this era, President Bush has made the appropriate call to action. But to date the action itself has been lacking when it comes to policies specifically designed to keep WMD out of hostile hands, either nation-states or terrorists. After 9/11 the United States regretted that it had not taken steps to overhaul its counterterrorism capabilities years earlier, steps that seemed tragically obvious after the World Trade Center towers were gone. An overhaul of counterproliferation is needed now. It will be unfortunate if the overhaul is undertaken only after the need for it is made tragically obvious by an incident of mass destruction.