
Beyond the Cold War Nuclear Legacy: Offense-Defense and the role of Nuclear Deterrence

In collaboration with the Atomic Energy Commission (CEA)

Lewis A. Dunn

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Institut français des relations internationales
27 rue de la Procession - 75740 Paris Cedex 15 - France
Tél. : 33 (0)1 40 61 60 00 - Fax: 33 (0)1 40 61 60 60

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ROLE OF NUCLEAR
DETERRENCE?***

Dr. Lewis A. Dunn

Proliferation Papers

Though it has long been a concern for security experts, proliferation has truly become an important political issue over the last decade, marked simultaneously by the nuclearization of South Asia, the strengthening of international regimes (TNP, CW, MTCR) and the discovery of fraud and trafficking, the number and gravity of which have surprised observers and analysts alike (Iraq in 1991, North Korea, Libyan and Iranian programs or the A. Q. Khan networks today).

To further the debate on complex issues that involve technical, regional, and strategic aspects, Ifri's Security Studies Department organizes each year, in collaboration with the Atomic Energy Commission (*Commissariat à l'énergie atomique*, CEA), a series of closed seminars dealing with WMD proliferation, disarmament, and non-proliferation. Generally held in English these seminars take the form of a presentation by an international expert. The *Proliferation Papers* is a collection, in the original version, of selected texts from these presentations.

The following text is based on a presentation given by Lewis A. Dunn at Ifri, on January, 21st, 2001

Dr. Lewis A. Dunn is a Senior Vice President and Deputy Group Manager at Science Applications International Corporation in McLean, VA. Dr. Dunn is a former Assistant Director of the U.S. Arms Control and Disarmament Agency and served as Ambassador to the 1985 Nuclear Non-Proliferation Treaty Review Conference. He has worked extensively on nuclear arms control issues, including most recently on non-treaty based approaches to achieving U.S. arms control goals vis-a-vis Russia.

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Introduction

The views herein are those of the author not necessarily those of SAIC or any of its sponsoring agencies

Since the September 11th terrorist attacks on the World Trade Center and the Pentagon, the defense community of the United States focused overwhelmingly on countering the threat of global terrorism. This focus rightly reflects the danger of additional terrorist attacks against the American homeland, including conceivably even with nuclear weapons or radiological devices. At the same time, the December, 2001 announcement of the U.S. decision to withdraw from the 1972 Anti-Ballistic Missile (ABM) Treaty after the six month waiting period serves as a reminder that there still is considerable other outstanding “defense business” confronting the United States and its European allies. In particular, it is increasingly essential to re-craft the Cold War nuclear weapons legacy, not only in its own right but because doing so can also have important payoffs for the success of the U.S.-led global anti-terrorist campaign.

The following paper first describes some of the main features of the Cold War nuclear legacy. It then sketches a number of different schools of thought or camps that exist within the U.S. defense community in answer to the question, “what next with nuclear weaponry?” In light of those contending positions, it then sets out a possible way ahead – moving to re-craft U.S. strategic dealings with Russia toward a non-adversarial relationship, to avoid a new Cold War with China, and to put in place the right mix of offensive and defensive, nuclear and non-nuclear capabilities to contain 21st century proliferation dangers.

The Cold War Nuclear Legacy

A decade after the end of the Cold War, its nuclear legacy continues to cast a broad shadow. Change has occurred but many fundamentals remain.

Throughout the Cold War confrontation, nuclear deterrence was the central, overriding strategic concept that governed the political and military relationship between Washington and Moscow, or more broadly between the Atlantic Alliance and the Warsaw Pact. For the United States, the threat of nuclear retaliation served to deter direct attack upon it. For the United States and its allies, the threat of escalation to an all-out nuclear war was at the core of Western strategy in confronting Soviet power in the heart of Europe. Today, the basic concept of nuclear deterrence still remains essentially in place – in Washington, in Brussels, and in Moscow.

The Cold War strategy of nuclear deterrence rested upon very robust strategic offensive nuclear forces. For the United States, large numbers of nuclear warheads were deployed, in multiple systems, kept at a high level of operational readiness and alert, and backed by continuing investment in intelligence, warning, and command and control systems. Doctrine emphasized redundant targeting of all Soviet assets – leadership, political control, military capabilities, and economic strength. Over the past decade, significant changes have occurred in the size and operational status of U.S. – and for that matter Russian – strategic offensive nuclear forces. Even so, both countries still possess the genocidal strategic nuclear postures that they created in the course of their four decades of Cold War confrontation. In both countries, day to day nuclear planning continues for nuclear war with the other.

Tactical or non-strategic nuclear weapons also were a prominent element of Cold War Western deterrence strategy. U.S. deployment of many thousands of non-strategic nuclear weapons in Europe was seen as a means of linking the United States to Europe's defense, sharing nuclear burdens within the alliance, and providing limited or selective nuclear options short of escalation to strategic offensive systems. Still larger numbers of Soviet tactical or non-strategic nuclear weapons were produced and deployed. Decades later, the United States now retains a residual level of non-strategic nuclear warheads in Europe. By contrast, Russia's legacy is estimated to be between 7,000-14,000 non-strategic nuclear warheads on its own territory. Russia's doctrine also has come in recent years to place greater emphasis on non-strategic nuclear weapons to compensate for conventional weakness vis-à-vis the West – an ironic throw-back to NATO's reliance on nuclear weapons to balance Soviet conventional preponderance.

From the 1972 Anti-Ballistic Missile Defense (ABM) Treaty onward, Cold War strategy in both Washington and Moscow severely constrained the pursuit of national missile defenses. In part, this reflected technical realities. Cost-effective defenses were unattainable against the threat posed by the other side's nuclear offensive forces. In varying degrees, these constraints also reflected a conscious policy choice on the part of Washington and Moscow. Stable nuclear deterrence was thought dependent on mutual nuclear vulnerability, making national missile defenses *a priori* bad. In stated pursuit of limited missile defenses, the Bush Administration has rejected this strategic logic and exercised the U.S. right to withdraw from the ABM Treaty. Even so, given technical realities, Cold War mutual vulnerability persists.

With regard to China, Washington adapted to the emergence of a nuclear-armed Beijing within the framework of existing Cold War strategic nuclear doctrine, operations, and force postures. In that vein, very little public debate occurred concerning U.S. nuclear strategy and planning in regard to China. Since the mid-1990s, China's modernization of its nuclear forces has increasingly opened these issues up.

Somewhat similarly, throughout the Cold War, U.S. defense planning to confront hostile regional states armed with nuclear, chemical, or biological weapons (NBC) was given a low priority. If needed, the already available robust nuclear forces geared to deterrence of the Soviet Union could be brought to bear to buttress deterrence or to carry out specific warfighting missions against hostile proliferators. Post Gulf War revelations about Saddam Hussein nuclear, biological, and chemical weapons (NBC) programs focused heightened attention on the defense planning aspects of proliferation. In Washington, counter-proliferation became a new term of art. But a decade later, whether and how nuclear deterrence should be brought to bear in dealing with future regional NBC aggressors – and the adequacy of Cold War legacy nuclear forces for those tasks – remains a matter of continuing debate.

A meshwork of legally binding, formal arms control agreements comprises a final element of the Cold War nuclear legacy. Beginning with the 1963 Limited Test Ban Treaty, arms control was an essential element of regulating the nuclear relationship between Washington and Moscow as well as of global efforts to enhance stability in the Cold War world. For the most part, the resulting agreements were codified as either treaties or other formal agreements. Taken together, they regulate virtually the full spectrum of nuclear weapons activities, from testing to elimination. Increasingly, this arms control meshwork brought with it a mix of formal verification measures, exchanges of information, procedures for implementation, and confidence-building actions. Over the past decade, this formal structure of agreements has been complemented by a newer process of Cooperative Threat Reduction (CTR) activities. Tied initially to the treaty process, threat reduction has entailed direct technical and financial support to enhance the security and control of nuclear materials and nuclear weapons in Russia.

Contending Approaches to the Cold War Nuclear Legacy

The Cold War nuclear legacy is under increasingly critical scrutiny. The answers it provides to questions ranging from the nature of the nuclear threat to the role of arms control in helping to meet it all are being reexamined. That scrutiny is well founded. While that nuclear legacy provided a sound answer to meeting the mid-20th century threat of Soviet power in the heart of Europe, many of its central elements appear increasingly ill-suited to the security and political challenges of the early 21st century. At the same time, within the American defense and arms control community, there are significantly different schools of thought concerning the reasons for change and the “right” new directions to pursue. Consider briefly the main contenders – the Civilian Defenses Advocates; the Nuclear Priesthood; the Arms Control Traditionalists; the Nuclear Revisionists; and the Quiescent Abolitionists and nuclear apostates

A. The Civilian Defenses Advocates

For the Civilian Defenses Advocates, today’s Russia is yesterday’s Cold War threat. Though acknowledging that Russia’s ongoing political and economic transition will take decades, Russia should no longer be considered an enemy of the United States. Instead, the principal state-level threat to the security of the United States and its allies and friends is the possession of NBC weapons and missiles by rogue nations. Though still an undercurrent, there also is concern among some of the Civilian Defenses Advocates that a future military confrontation with China may be unavoidable – whether brought about by the question of Taiwan’s status in the near-term or by Chinese efforts to reduce the U.S. presence in Asia over the longer-term.

Confronting these new threats, so this line of argument continues, traditional Cold War nuclear deterrence based on the threat of offensive nuclear retaliation is insufficient. For the future, U.S. deterrence strategy needs to be based on a mix of defenses and offenses, with the latter comprised in turn of nuclear weapons, advanced conventional weaponry, and information operations. So viewed, top priority is to move rapidly to develop and deploy missile defenses both at home and abroad. Missile defenses are most essential lest regional aggressors miscalculate the vulnerability of the American leadership to NBC blackmail. Missile defenses

are seen to provide, as well, critical reassurance to U.S. allies and friends should they doubt the readiness of the United States to come to their support in a clash with an NBC armed neighbor. In turn, missile defenses can provide insurance against possible revenge use of nuclear or bio-armed weapons by such a regional aggressor.¹

Not surprisingly, the ABM Treaty stands out as a now fatally-flawed throwback to the Cold War era. The Treaty is rightly seen to constrain the type of free-wheeling exploration of missile defense technologies that offers the best chance to develop and deploy effective defenses against rogue state threats. Perhaps equally important, the ABM Treaty is seen to enshrine an adversarial way of thinking about U.S.-Russian relations that is at odds with the end of the Cold War confrontation.

Among the Civilian Defenses Advocates, as was evident at the Crawford Summit between Presidents Bush and Putin, there is considerable readiness to reduce U.S. nuclear force levels. The Cold War legacy forces are regarded to be inconsistent with the new U.S.-Russian relationship as well as wasteful of defenses resources that could be better spent elsewhere.² For this group, so-called “capabilities-based planning” of nuclear force levels and structure – planning not for a stated adversary but for a broad spectrum of potential deterrence requirements – also is appealing. Given the lack of precision of the term, capabilities-based planning provides a convenient rationale for making changes sought otherwise. Its eschewing a particular adversary also is more consistent with President Bush’s decision no longer to treat Russia as an enemy and instead to pursue a non-adversarial relationship with Russia.

In implementing reductions of U.S. and Russian nuclear forces, reciprocal unilateral actions are regarded to be the preferred means. This reflects a deep skepticism about the traditional nuclear arms control process – characterized by the slow and painstaking negotiation of politically controversial and hard to ratify treaties. For these advocates of unilateral actions the loss of formal verification measures as well as lessened irreversibility of the results can be accepted in dealing with today’s Russia not yesterday’s Soviet Union.

B. The Nuclear Priesthood

Comprised of individuals that have spent most of their professional lives in the “business” of nuclear deterrence, especially within the U.S. military and the nuclear weapons laboratories, the Nuclear Priesthood also

¹ Consistent with this emphasis on a strong defenses component of future deterrence, the Civilian Defenses Advocates argue not only for missile defenses, but also for enhanced passive protection, medical prophylaxis, operational adaptation, and other defensive responses to the use of chemical or biological weaponry.

² There are differences within the Civilian Defenses Advocates, however, concerning how far to cut nuclear forces. Overall, this group appears prepared to countenance deeper cuts and more significant nuclear restructuring than the “Nuclear Priesthood.” It also appears to have contemplated an end to the SIOF against Russia.

rejects significant elements of the Cold War nuclear legacy.³ Like the Civilian Defenses Advocates, this camp supports the rapid development and deployment of missile defenses – to the extent that such defenses prove feasible and cost-effective. It also highlights the threat posed by regional NBC proliferators. It also signs on to the idea of capabilities-based nuclear planning. What sets the Nuclear Priesthood apart, however, is greater skepticism about Russia’s future (with implications for how this group would modify but not set aside traditional offense-based deterrence). Moreover, contrasted with the Civilian Defenses Advocates, its priority defense initiative is not so much deployment of national missile defense. Instead, the Nuclear Priesthood seeks most to adapt the U.S. nuclear stockpile to counter the new regional NBC threat and to ensure that the process of nuclear reductions is paralleled by retention or investment in a robust capability rapidly to rebuild (or reconstitute) U.S. nuclear forces should a hostile Russian regime reemerge.⁴

Reductions, Restructuring, and Hedging against a Russian Recidivism.

The Nuclear Priesthood readily acknowledges that the Cold War is over and that Russia is changing. At the same time, it points to the great uncertainty that still characterizes Russia’s future – its prospects in a transition to a more market-oriented, more democratic society that could be a stable partner for the West. No longer an enemy, Russia still is a country of potential concern. Though far less likely, military conflict between the United States and Russia – with possible use of nuclear weapons -- is still conceivable.

This mixture of continuing uncertainty and lingering uneasiness, in the eyes of the Nuclear Priesthood, necessitates continued reliance on “nuclear” as the organizing concept for U.S.-Russian nuclear relations. But how deterrence is implemented can and should be adapted to the post Cold War world. Credible offensive nuclear capabilities are required but nuclear force levels can be cut (how sharply is a matter of debate within the Nuclear Priesthood) and the levels of operational readiness can be further reduced (again how far is debated). Both Washington and Moscow also should be exploring steps to provide mutual reassurance to each other (e.g., via transparency measures, joint warning activities, and other steps). Over time, still further changes in U.S. and Russian nuclear force postures are conceivable – geared to their evolving political relationship.

For the Nuclear Priesthood, however, these types of steps need to be complemented by hedges to permit a rapid reconstitution of U.S. nuclear capabilities, should that be required. Hedging could range from retaining legacy capabilities in virtual “cold storage” (as is reported to be proposed within the U.S. Nuclear Posture Review) to investing in needed

³ The term “nuclear priesthood” was first applied to these individuals over a decade ago by the late Bob Linhard, a former USAF Major General, National Security Council senior staff member, and START negotiator. It highlighted not only their special expertise but also their commitment to a sound nuclear posture in a changed world. It is used here in the non-pejorative sense intended by Linhard.

⁴ Nonetheless, there is considerable overlap between these two camps. Many of the Civilian Defenses Advocates also would consider themselves members of the Nuclear Priesthood; at least some of the Nuclear Priesthood are defenses advocates.

infrastructure, personnel training, and skill maintenance to permit production of new strategic assets. It could entail, as well, an accelerated capability to resume nuclear testing. It is acknowledged that U.S. nuclear hedging could be misinterpreted by the Russians and might even create the very threat to be hedged against. In partial response, direct discussions between U.S. and Russian defense officials as well as transparency measures are seen as one way to reassure Moscow.

Within the Nuclear Priesthood attitudes vary toward the traditional arms control process. Overall, like the Civilian Defenses Advocates, this school of thought would rely heavily on a mixture of unilateral measures and ad hoc agreements in its downward restructuring of U.S. and Russian Cold War nuclear forces. However, possibly because of the heavy representation of serving or former military professionals, the Nuclear Priesthood appears more prepared to take advantage of some aspects of the Cold War arms control legacy. In particular, the verification procedures, elimination procedures, transparency measures, declarations of holdings and activities all are seen to be worth carrying over into a new era of unilateral nuclear reductions.

With regard to China, the Nuclear Priesthood remains concerned about the risk of a military confrontation over Taiwan. Uncertainties about Beijing's future political-military choices, particularly as a new generation of leaders comes to power, reinforces its concern. For both reasons, nuclear deterrence remains a valid concept. In contrast to some of the Civilian Defenses Advocates, however, there appears a greater readiness to accept China's nuclear modernization rather than succumbing to the temptation of greatly expanding U.S. missile defenses in an attempt to trump China's ability to hold the United States at risk.

Tailored Nuclear Weapons for Proliferation Contingencies.

Not least, the Nuclear Priesthood stands apart because of its stress on adapting the legacy U.S. nuclear stockpile to the new proliferation-driven threats that will need to be deterred – or dealt with – in the coming years. Today's nuclear stockpile was developed and configured for an all-out war with the Soviet Union. For the most part, it is characterized by high-yield warheads, on the order of hundreds of kilotons. Absent a more "tailored" stockpile, there is concern among the Nuclear Priesthood that in a conflict with an NBC-armed regional rogue, an American President could be self-deterred. As a result, the leadership of such a regional aggressor could be emboldened. In turn, should the need arise to think seriously about the use of a nuclear weapon in a conflict with such a country, e.g., as a means to destroy stockpiles of biological weapons lest those weapons be used to inflict mass casualties, to strike other deeply-buried targets, or to bring such a war to a close, the U.S. president would lack the full set of options required to make a decision.

It is an open question whether developing tailored nuclear weapons to meet new regional counter-proliferation requirements would demand nuclear testing. Some members argue that adapting the U.S. nuclear stockpile to provide low yield, more discriminate nuclear weapons will

demand a resumption of nuclear testing; but others believe that a great deal of adaptation can be done by modifications of the existing legacy stockpile.

C. The Arms Control Traditionalists

Though differences exist, the Arms Control Traditionalists are bound together by their belief in arms control and the arms control process. For them, arms control has a key role to play in providing stability, predictability, and irreversibility as Washington and Moscow reduce and restructure their Cold War nuclear legacy. This sets them apart from both the Civilian Defenses Advocates and the Nuclear Priesthood.

More specifically, the Arms Control Traditionalists are deeply concerned about the Civilian Defenses Advocates' unilateral pursuit of national missile defenses at the risk of destroying an established structure of arms control agreements. In part, they remain unconvinced that traditional nuclear deterrence based on the threat of offensive nuclear retaliation will not suffice to deter nuclear-armed rogue states. The Arms Control Traditionalists also are skeptical that the technology is advanced enough to develop and deploy cost-effective national missile defenses even if limited in scope. To the extent that there is a case for pursuing national missile defenses, such defenses can and should be pursued within the framework of a modified 1972 ABM Treaty or by pursuing some new agreement. This would avoid, according to the Arms Control Traditionalists, possible adverse Russian military responses, from re-MIRVing systems to punitive withdrawals from other arms control agreements. But reliance on arms control is also seen to provide a useful framework of predictability concerning U.S. intentions, thereby providing reassurance to Moscow and serving the broader goal of transforming the U.S.-Russian relationship.

On the other hand, for the Arms Control Traditionalists, the Nuclear Priesthood's interest in developing tailored nuclear weapons is seen to be unnecessary at best and dangerous at worst. This judgment rests partly on far greater confidence in the adequacy of the existing nuclear stockpile to deter use of nuclear weapons by regional aggressors. For deterrence of chemical or biological weapons use, conventional military options are thought to be sufficient. Perhaps most important, the Arms Control Traditionalists believe that breaking the half-century nuclear taboo would exact too heavy a price. It would all but certainly, they contend, accelerate proliferation and set a precedent for further use of nuclear weapons.

Restructured Deterrence.

With some exceptions, the Arms Control Traditionalists accede to a continued reliance on a strategy of deterrence for managing a changing U.S.-Russian nuclear relationship. Nonetheless, contrasted with either of

the preceding schools of thought, this camp believes that an even more fundamental restructuring of Cold War nuclear postures can be prudently pursued. Numbers of deployed nuclear weapons can be reduced to a thousand or less, alert levels and operational status can be cut back across most of the residual deterrent, and steps taken to eliminate non-strategic nuclear weapons. Equally so, such restructuring can and should be pursued via the traditional arms control process. That process is seen to offer a number of benefits that remain useful, including formal verification means to provide assurance that agreed actions are being taken, far-reaching exchanges of information to enhance transparency, and an element of irreversibility to manage uncertainties about Russia's future. By contrast, the supposed virtues of unilateral action – rapidity, flexibility, and ease of implementation – are thought exaggerated and in any case, not necessarily at odds with a more formal arms control negotiating process.

D. The Nuclear Revisionists

The Nuclear Revisionists are distinguished by their readiness to question the logic of nuclear deterrence as an organizing concept of today's U.S.-Russian nuclear relationship. Though strong supporters of robust deterrence during the Cold War confrontation, this camp would replace deterrence by mutual reassurance as the central strategy for dealing with Moscow.

In part, this revisionist approach reflects a belief that the very logic of nuclear deterrence, with its emphasis on potential military confrontation if not conflict, is at odds with today's realities. Russian military power is out of the heart of Europe and Russia no longer is viewed as an enemy of the United States. By contrast, a strategy of mutual reassurance would emphasize measures to reassure Washington and Moscow about the other's nuclear intentions, programs, plans, and capabilities. This, so the argument runs, would be more consistent with today's political relationship. Equally important, reassurance would reinforce other political, military, and economic actions to integrate Russia into the West and to encourage its transition toward a more open, politically democratic civil society.⁵

Granted, uncertainties may persist for some time about Russia's future. Contrasted with the Nuclear Priesthood, however, considerably less emphasis is placed on a hedging strategy. In part, this appears to reflect a greater readiness to assume that if Russia took a turn for the worse, there would be sufficient strategic warning to respond. Budgetary constraints also affect the extent of support for a reconstitution capability. Moreover, the Nuclear Revisionists are more concerned that the dedicated hedging investments and programs proposed by the Nuclear Priesthood could produce the very threat being hedged against.

⁵ In some respects, those of the Civilian Defenses Advocates that are more prepared to act on their assertion that Russia no longer is an enemy are quite close in this respect to the Nuclear Revisionists.

For the most part, the Nuclear Revisionists are not opposed to missile defenses, particularly as one element in an overall strategy of confronting regional proliferation threats. But national defenses need to be limited and pursued in a manner consistent with broader U.S. political and strategic goals toward both Moscow and Beijing. Closely related, there is considerable support among many of the Nuclear Revisionists for an arms control process. This may entail traditional formal agreements or it may involve unilateral actions but pursued within a broader framework of agreements, verification, and other predictability measures. In that regard, great caution is seen to be needed before discarding out of hand the legacy of traditional arms control as a means to provide reassurance and predictability whether in the process of deploying limited defenses (ABM or an ABM surrogate), restructuring the Cold War nuclear postures (START follow-ons), or confronting regional proliferation threats (the BWC, CTBT, or the NPT).

The Nuclear Revisionists acknowledge that Chinese miscalculation could result in a U.S.-China military clash triggered by events related to Taiwan's future. But it would be preferable politically to avoid heightening the deterrent component in the U.S.-China strategic relationship. Moreover, it would be both unwise and eventually unsuccessful to seek to trump China's nuclear modernization by pursuit of an increasingly robust U.S. national missile defense. Not only would such an attempt worsen political relations between Beijing and Washington but Beijing would almost certainly invest whatever is needed to trump in turn U.S. NMD. Here, too, mutual strategic reassurance is seen to offer an alternative path.

E. The Quiescent Abolitionists and the Nuclear Apostates

In contrast with many other countries, or for that matter with the United States a decade ago, nuclear abolitionism is relatively quiescent. It comprises at best a deep undercurrent in today's U.S. thinking about nuclear weaponry. In that regard, these now quiescent abolitionists focus less on the complete elimination of all nuclear weaponry than on truly radical reductions and operational modifications of the Cold War nuclear legacy – typified by proposals to retain only a total of several hundred nuclear warheads, all on systems off alert.

Such a virtual renunciation of the Cold War legacy is thought desirable and feasible for several reasons. Given U.S. conventional military superiority over potential adversaries, the United States has the most to gain from marginalizing nuclear weaponry. The Quiescent Abolitionists are dubious, moreover, that any U.S. president would be prepared to be the second American leader to use nuclear weapons. Support for the NPT also is seen to require such far-reaching changes, which would be consistent with the nuclear-weapon states' pledges in both 1995 and 2000 to eliminate nuclear weaponry. In particular, the Quiescent Abolitionists strongly believe

that the choice ahead is between the eventual elimination of all nuclear weapons and their ultimate virtual universalization.

The Nuclear Apostates.

Though quite different in motivation from the Quiescent Abolitionists, the Nuclear Apostates, particularly within the American military, frequently come to very similar operational judgments. Within all three of the U.S. military Services, high-level interest in nuclear weaponry is decidedly mixed. The U.S. Army has been out of the nuclear weapon business for nearly a decade – and is quite content to be so. For its part, the U.S. NAVY welcomed the 1991 U.S. decision to pull nuclear weapons off surface ships, while reductions of the number of ballistic missile submarines would provide an opportunity to reconfigure such ships as cruise-missile carriers. For its part, the U.S. Air Force remains committed to its ICBM role, but might not be dissatisfied with giving up responsibility for residual air-launched tactical nuclear weaponry. At a different level, it is becoming increasingly difficult to maintain staff-level expertise in nuclear matters within the military – becoming a “nuclear officer” is no longer a career enhancing step.

Fostering Cooperative Reassurance, Managing Residual Deterrence – A Possible Way Ahead

The most fundamental Cold War strategic questions are again open – from the relative contributions of offensive and defensive forces to effective deterrence to the role of nuclear weapons in deterring or defeating new threats from NBC-armed regional aggressors. In different ways, all the schools of thought just presented now contending in the U.S. defense and arms control communities would re-craft the Cold War nuclear legacy. Each provides some insights into how to proceed; each has its limitations. But a consensus on how to proceed still needs to be hammered out. Consider some of the elements that could make up such a new strategic consensus – reflecting both a vision for success in dealing with Russia, China, and the proliferation challenge as well as some guidelines for action.

A. Cooperative Strategic Reassurance with Russia

President Bush has rightly stated what should be the U.S. goal – to put in place a non-adversarial, cooperative relationship between the two countries. Until the 1917 Bolshevik revolution diverted Russia into communist totalitarianism, this was the case. Now that Soviet power is out of the heart of Europe and Russia is moving toward a more open, market-oriented society, there is no inherent fundamental clash of interests between Washington and Moscow. Nonetheless, there still remains considerable uneasiness if not outright suspicion in each country about the other's intentions. For that reason, it is probably premature to propose, as do some of the Nuclear Revisionists, a complete break with nuclear deterrence. But it should be feasible to put in place a wide-ranging set of measures aiming at mutual cooperative reassurance, while steadily making nuclear deterrence an increasingly residual element of U.S. strategy toward Russia and to the extent possible of Russian strategy toward the United States.

There would be a number of payoffs from so revamping Cold War nuclear thinking. In particular, heightened emphasis on cooperative strategic reassurance as a dominant adjunct to residual deterrence would clearly signal a U.S. intention to move as rapidly as possible toward a non-adversarial relationship with Russia. The specific measures of reassurance

would entail steps designed to make it militarily and politically easier for each side truly to treat the other no longer as an “enemy.” This approach would demonstrate, as well, a U.S. intention to deal with Russia as an emerging partner and not as a potential adversary. Not least, by increasingly making nuclear deterrence a residual element of the U.S.-Russian strategic relationship, this strategic approach would gradually remove an important psychological impediment moving beyond Cold War nuclear legacy. This is so because the logic of mutual deterrence, as already suggested, is inherently confrontational, emphasizing as it does the possibility of a nuclear conflict between Russia and the United States.

With regard to specifics, cooperative reassurance could entail a mix of political, military, and economic actions. At the political level, the Bush Administration’s readiness to treat Russia as a partner is an important step. NATO’s decision to transform the Joint Consultative Council into a body of 20, again treating Russia an equal partner, is another important measure of political reassurance. Militarily, the announced U.S. readiness to reduce its deployed nuclear forces is an initial step. But a strategy of cooperative reassurance should go further. It would call for a greater readiness to find means to reassure Moscow about U.S. pursuit of national missile defenses. For instance, as described below, a non-traditional arms control process could be used to provide Russia with windows into U.S. missile defenses plans, programs, and implementation. The possibilities for cooperation in defense technology development between Washington and Moscow could be explored. Still other measures of military reassurance exist, including joint actions to reduce the operational readiness of each side’s nuclear forces, to develop and field a new joint warning system, and to put in place a process of routine military planning, liaison, and partnership.⁶ Economic actions also have a part to play, from support to Russian debt relief to cooperation in energy exports. Not only would such actions reinforce Russia’s economic turn-around, they would again treat Moscow as a partner and not an enemy.

B. Toward Residual Deterrence with Russia.

Measures of cooperative strategic reassurance should be complemented by other actions to make deterrence a residual rather than the central aspect of the U.S. nuclear relationship with Russia. Here, too, the ultimate goal of these changes would be to facilitate the emergence of a non-adversarial U.S.-Russian relationship. In particular, in a geopolitical environment in which the prospect of military conflict – let alone nuclear conflict – between Washington and Moscow is extremely remote, a shift away from Cold War nuclear planning demands consideration. Both countries could announce their intention to no longer plan on a day-to-day basis for nuclear war with each other – in effect, “putting on the shelf” the

⁶ This could take the form of a U.S.-Russian Strategic Planning Group, possibly modeled on NATO’s Nuclear Planning Group. Another possibility would be to create a P-5 Strategic Planning Group, including all of the major nuclear powers or those that would be prepared to participate.

process of continuing updates and maintenance of the U.S. SIOP and its Russian counterpart. Going a step further, both Presidents Bush and Putin could announce their intention to “sideline the football,” that is no longer to be accompanied at all times by a military aide with the codes instantly to launch nuclear weapons against the other side.

Emphasis on a mix of mutual reassurance and residual deterrence in managing nuclear relations with Russia should shape in turn the extent and characteristics of U.S. hedging against a reversal of U.S.-Russian political-military relations. Given the political risks acknowledged by the Nuclear Priesthood, a first rule of thumb should be to err toward less not more extensive hedging actions. In turn, to lessen the risk of misinterpretation, it is important that any hedging measures be transparent. Indeed, the very issue of hedging could form part of the dialogue within a U.S.-Russian Strategic Planning Group along the lines proposed above. Rather than hedging by retaining extensive legacy capabilities in virtual “mothballs”, e.g., large numbers of non-deployed nuclear warheads as well as associated delivery systems, it could be preferable to hedge by acquiring infrastructure that would permit building new warheads and systems – should strategic warning so demand. Since it would not raise fears of a rapid surge expansion of U.S. nuclear forces, investment in new infrastructure would likely be perceived as less threatening. (The availability of that infrastructure would also greatly reduce today’s industrial constraints on U.S. capabilities to eliminate in a timely fashion nuclear warheads removed from deployed systems.)

C. Coordinated Security Management.

Contrary to the arguments of the skeptics among the Civilian Defenses Advocates and the Nuclear Priesthood, a new and revamped arms control process can contribute to the overall goal of a non-adversarial U.S.-Russian relationship. Properly crafted, a new arms control process can complement other measures of mutual reassurance and lessen lingering political-military uneasiness. It can reduce uncertainty. The overall process would be an important symbol, moreover, of both sides’ commitment to a restructuring of their Cold War nuclear legacies. Not least, by fostering a continuing dialogue about each side’s nuclear activities, most broadly defined, a new arms control process can temper the potentially negative impacts of residual reliance on deterrence and hedging.⁷

But there is a need, as well, to adapt yesterday’s approaches, defended by the Arms Control Traditionalists, to today’s changed circumstances. To do so, the starting point should be a recognition that our choices are far wider than simply following a course of unfettered unilateral changes of the Cold War nuclear legacy and that of exclusive reliance on treaty-based agreements. Instead, a new approach to arms control would emphasize a process of coordinated security management. This would

⁷ For a more detailed discussion, see Lewis A. Dunn, “Coordinated Security Management,” *Survival*, Fall, 2001.

draw on a mix of formal and informal, treaty-based and non-treaty based, written and consultative means.

More specifically, cooperative security management would take advantage of the benefits of unilateral actions to break the nuclear reductions stalemate, as Presidents Bush and Putin did in their Crawford, Texas commitments. At the same time, it should be possible to back-fill behind such unilateral actions with a mixture of non-treaty but still binding agreements; exchanges of information, transparency and confidence-building measures; and other steps to provide greater predictability and irreversibility of the results. The ongoing Cooperative Threat Reduction program could be utilized, moreover, to provide a means of “verification in practice” for such reductions. With regard to the testing, development, and eventual deployment of limited missile defenses, a comparable mix of non-traditional means could also be pursued to replace the ABM Treaty with a new framework to regulate U.S. and Russian activities. Here, the types of reassurance measures discussed above – combined with serious exploration of possible cooperative U.S.-Russian or NATO-Russian technology and program development – would contribute, as well, to providing Moscow with windows into U.S. thinking, plans, and programs and serving, thereby, the overall goal of a non-adversarial U.S.-Russian strategic relationship.

Reassurance, Deterrence, and a “Rising” China

As for China, the successful integration of a modernizing, changing, and “rising” China into global institutions and norms comprises one of the most critical challenges in the coming decades. Properly handled on both sides, China’s re-emergence as a global power can be a force for peace and stability. Poorly handled, the result could be growing tension between China, the United States, and its regional allies; Chinese adventurism on key global security challenges such as proliferation; and possibly even outright military conflict between the United States and China over Taiwan. Though many aspects of U.S.-China dealings will impact the outcome, the strategic policy choices made by the United States – and for that matter, China – will be a key factor. Here, too, overall U.S. strategy should combine a mix of enhanced reassurance and traditional though low key deterrence, modulated to reflect the evolution of the overall U.S.-China relationship.

A. The Need for Enhanced Mutual Reassurance.

More specifically, one critical choice concerns the extent to which the United States is prepared to accept in practice a degree of limited vulnerability to Chinese nuclear forces. This would not be Cold War mutual assured destruction: the asymmetry of strategic capability between the United States and China is too great. However, as already noted, at least some of the Civilian Defenses Advocates continue to be attracted to the idea of expanding U.S. missile defenses in an attempt to “trump” China’s ongoing steps to modernize its nuclear forces and to deny Beijing a capability to hold some number of U.S. cities at risk.⁸

A U.S. attempt to expand limited missile defenses in that fashion would be both futile and counter-productive. Faced with expanding U.S. missile defenses (or even the perception thereof), China’s leaders would all but certainly make whatever incremental investments in their offensive nuclear forces that were needed to ensure some measure of U.S. vulnerability.⁹ In turn, already strong nationalist sentiment in China and fears of U.S. intentions would be further exacerbated, prospects set back

⁸ This term is used by Brad Roberts to describe one position in the current Bush Administration debate on China’s nuclear modernization. I also thank Brad for his insights which have shaped what follows.

⁹ In the ensuring competitive investments in offenses vs. defenses, offensive forces can be expected to be more cost effective.

for successfully integrating China into global security and non-proliferation efforts, and a new if different Cold War made more likely.

Nonetheless, it is also important to acknowledge that there may be legitimate uneasiness about China's own longer-term intentions. Though so far Beijing's leadership appears to have been content with a limited capability to hold U.S. cities at risk, China's nuclear modernization could ultimately extend far beyond such a limited deterrent capability. There are proponents of such a change of doctrine and capabilities within the Chinese defense establishment. Within both the Civilian Defenses Advocates and the Nuclear Priesthood, if not more widely within the U.S. defense community, moreover, uncertainty about China's ultimate nuclear intentions is reinforced by uneasiness that some Chinese leaders view nuclear weapons as a means to blackmail the United States to stand aside to Beijing's use of military force to reintegrate Taiwan into China. More broadly, there is uneasiness that the ultimate goal of a nationalist, rising China is to bring about a U.S. withdrawal from Asia.

Given these realities, to an even greater degree than in managing a post Cold War U.S.-Russian nuclear transformation, cooperative strategic reassurance needs to be a central element of future U.S.-China strategic dealings. On the one hand, if the U.S. was to decide not to pursue a missile defense option toward China, that decision would need to be convincingly conveyed to Beijing. This would undoubtedly require that official assurances be backed by more specific measures of reassurance. On the other hand, strategic reassurance is not necessarily a one-way street. There is also a need on China's part to lessen the uncertainties that persist concerning the scope of its nuclear modernization, its readiness to accept a peaceful resolution of the Taiwan question, and ultimately its acceptance of an American presence in Asia.

In both regards, the process of coordinated security management suggested above should be extended to help structure U.S.-China strategic dealings. One possibility to explore would be to include China into any future U.S.-Russian non-treaty agreements or understandings on limits on U.S. pursuit of missile defenses. Appropriate ways to associate China with future U.S. and Russian commitments to reduce and restructure their nuclear postures might be examined, e.g., by having China commit to not building up to reduced U.S. and Russian force levels. At the least, in parallel with U.S. actions to demonstrate the limits of missile defenses, China could be urged to take steps to make the limits of its nuclear modernization clear.¹⁰ Or China could associate itself with the political decision by the other four NPT nuclear powers to cease production of nuclear weapons materials. Routine strategic consultations, if not yet the type of joint Strategic Planning Group proposed for Russia and the United States (or NATO), should be expanded. This would provide a venue to allow each side to obtain a better understanding of the other's intentions, doctrine, and programs in both offensive and defensive strategic systems. Extension of Cooperative Threat Reduction programs to China as well as

¹⁰ In theory and over time, there are other treaty-based actions that could be part of cooperative strategic reassurance. Adherence of the United States and China to the Comprehensive Nuclear Test Ban Treaty would be an important signal – and acceptance of significant constraints – on each country's future nuclear posture choices. China's readiness to negotiate a cutoff on the production of nuclear weapons materials would be a comparable means of reassurance concerning its longer-term nuclear ambitions. For now, both steps are out of favor respectively in Washington and Beijing.

other cooperation on a Nuclear Weapon Laboratory-to-Laboratory basis might again be explored.¹¹

There is little doubt that it will be difficult to engage China in such a process of coordinated security management. In part, this reflects the weaker military position of China. In part, it reflects the very early stage of overall U.S.-China strategic exchanges as well as the suspicions, misunderstandings, and simply different ways of thinking on both sides. But over the past decade, China has shown increased willingness to engage on these issues with the other P-5 NPT nuclear weapon states – for instance, in the context of the NPT and the negotiation of the CTBT. This could be built on should it prove too controversial for China to engage the United States bilaterally on these issues or such a P-5 dialogue could be used to complement other approaches. (Such a process of coordinated security management should also play a part in managing the type of low-visibility deterrence relationship between Washington and Beijing discussed next as well as in fostering the broader goal of China’s global integration.)

B. Low-Visibility, “Capabilities-Based” Deterrence.

From wanting to avoid war in North Korea as well as in South Asia to concern about terrorism, Washington and Beijing have many shared security interests. Setting aside the issue of Taiwan, there would be no source of a major, war-threatening political and military clash between them. China’s economic modernization, its number one goal, also depends greatly on access to the American economy as well as U.S. economic support and cooperation. Thus the relationship between the U.S. and China is very different from the old Cold War East-West confrontation when Soviet divisions were present daily in the center of Europe and the two competed across the world’s regions.

Nonetheless, China’s leaders have made amply clear that a declaration of independence by Taiwan would be considered a *casus belli* to be met with military force. In the mid-1990s, Beijing made this point by firing missiles into waters near Taiwan, leading to an American show of military force in support for Taiwan. Since then, Beijing has built up its military posture in the region across from Taiwan, including by deploying large numbers of shorter-range missiles.¹² For now, Taipei appears to have “gotten the message.” In turn, the prevailing opinion within Beijing’s leadership also appears more prepared to accept an extended process of reintegration, in the meantime taking advantage of significant economic flows from Taiwan to help fuel China’s economic transformation. Beijing’s hosting of the 2008 Olympics provides, as well, another breathing space. However, the more nationalist, younger-generation that will soon take power in China could ultimately re-visit this timing. Possible precipitous action by the leadership in Taipei comprises another wild card. For the

¹¹ This possibility was set aside in the late 1990s because of U.S. concerns about Chinese nuclear spying.

¹² It also repeatedly expressed its opposition to U.S. provision of missile defenses to Taiwan.

foreseeable future, therefore, Taiwan will remain a potential trigger to an escalating political, perhaps military, confrontation and clash that neither Washington nor Beijing want.

Given this possibility, an element of nuclear deterrence remains an essential part of American strategy toward Beijing – and conversely, though perhaps not so labeled, it will be part of Beijing's overall strategy toward Washington. For the United States, strategic offensive forces strengthen the overall U.S. military presence and help to ensure that China's leadership continues to conclude that the military option for reintegration of Taiwan is too risky. Should the fears of some in the U.S. defense community be correct, the U.S. deterrent also provides leverage to convince the Chinese leadership that the risks of nuclear blackmail or even limited use of nuclear weapons against U.S. forces in the region are too high.¹³ For China, the capability to hold at risk some limited number of American cities is seen to provide a deterrent to potential U.S. nuclear coercion. It may also be thought in some quarters to offer China its own nuclear blackmail capability.

Looking ahead, the successful management of this nuclear deterrence relationship between Washington and Beijing raises at least three questions for U.S. officials: How much official visibility should be given to deterrence as an element in the U.S.-China political-military relationship? What are the implications for U.S. nuclear force posture? Is there a role for arms control – especially non-traditional coordinated security management?

Contrasted with the Cold War nuclear confrontation with the Soviet Union, deterrence for the most part still remains a backdrop of the U.S.-China relationship. In that regard, the type of "capabilities-based nuclear planning" now being contemplated as part of the Nuclear Posture Review would not single out China or for that matter Russia as deterrent threats. Instead, in so describing U.S. nuclear planning, that approach seeks to avoid singling out any country as an enemy and instead emphasizes access to a broad range of capabilities to meet a spectrum of future deterrence requirements.

There are good reasons, moreover, for taking this low-visibility approach to deterrent planning and declaratory policy. By its very nature, as the Nuclear Revisionists rightly contend, the logic of nuclear deterrence is confrontational. Its emphasis on nuclear conflict scenarios of varying plausibility reinforces mutual uneasiness and is likely to make it harder, not easier, to manage the areas of tension between the two countries. As a result, pressure is likely to grow to expand (for China) or otherwise adapt (for the United States) existing nuclear force postures to provide greater deterrence or counter-deterrence leverage. As a consequence, suspicions in each country about the other's intentions would be heightened, especially among a new generation of more nationalistic Chinese leaders about to take power. (Within the U.S. debate, the arguments for trumping China with defenses would also be reinforced to the extent that the logic of deterrence generates the above effects.)

¹³ Those fears reflect, in part, an oft-quoted, sometimes said to have been misinterpreted, comment by a senior Chinese official to a former senior U.S. diplomat that the United States would not risk Los Angeles for Taipei. This had the ring of the old NATO debates about whether the United States would risk New York for Paris or Bonn.

For similar reasons, it would be preferable not to pursue the concept put forward by at least some members of the Nuclear Priesthood to create “a China-specific deterrent force.” Highly visible changes of U.S. nuclear force posture aimed at China would almost certainly heighten Chinese concerns about U.S. intentions. If any changes in U.S. nuclear posture were needed to provide additional options, such changes would be better justified generically under the overall “capabilities-based” planning approach.

C. Non-Traditional Arms Control?

With regards to the role of arms control in helping to manage the deterrence component of the U.S.-China strategic relationship, treaty-based arms control supported by the Arms Control Traditionalists offers little promise for now. Somewhat paradoxically, though China’s adherence to the Comprehensive Test Ban Treaty (CTBT) would constrain that very nuclear modernization of concern to the Nuclear Priesthood, there is little likelihood that the Bush Administration will revisit its opposition to that treaty.¹⁴ Conversely, China has continued to block negotiation of a ban on the production of fissile material, linking it not simply to the issue of missile defenses (which conceivably can be resolved) but to the broader issue of the military uses of Space (which most probably cannot be). Moreover, China’s position continues to be that the nuclear superpowers still have a very long way to go in their nuclear reductions before China should become involved in any nuclear reductions process.

Nonetheless, there may well be opportunities, along the lines already suggested to help manage the issue of defenses, for moving towards a non-treaty based process of coordinated security management with Beijing. This could be particularly helpful initially in providing each side with windows into the other side’s thinking, perceptions, and misperceptions. Coordinated security management could be extended, as well, to encompass a regularized dialogue on the full spectrum of proliferation, terrorism, and other global security threats not only to the United States but also to a China whose economic goals presuppose international stability. As such, this process could play an important part in advancing the overall goal of successfully integrating a rising China into global political, economic, and security cooperation.

¹⁴ This opposition reflects a mix of concern about verification, a desire to retain the option to resume nuclear testing, and a more general skepticism about treaty-based arms control.

Meeting the Proliferation Danger – Defenses and Deterrence, of What?

Since the Gulf War, the threat of chemical, biological, and nuclear weapons proliferation has come to be accepted as a major threat to regional and global security in the 21st century. Across the spectrum of American opinion, this reflects in large part concerns about so-called asymmetric threats to U.S. forces, U.S. allies and friends, and our respective homelands. For regional aggressors, the threat or use especially of biological or nuclear weaponry may well be seen to offer a potent means of blackmail, terror, disruption, and revenge. Since the September 11th attacks, this threat has receded somewhat into the background. But it is still there. Indeed, one of the ways that a sub-national terrorist group could acquire either biological or nuclear materials, weaponry, and know-how would be from a proliferator sponsor. Faced with the proliferation threat, the United States and likeminded countries should try and contain the further spread of NBC capabilities, while taking action to ensure that future regional aggressors “shall not gain” from NBC threats or use. This will call for a mix of measures – from enhanced defenses to far more serious steps to create an enforceable taboo against the first use of NBC weapons.

A. Defenses, Deterrence, and Reassurance.

Enhanced defenses, as the Civilian Defenses Advocates contend, do have an important part to play in any strategy to deal with the proliferation danger from regional adversaries. Given today’s limited understanding of how the most likely regional adversaries truly think about the threat and use of NBC weapons, it would be ill-advised to reject out of hand the contention that missile defenses can lessen the risk of miscalculation by such adversaries and thereby buttress deterrence. In turn, by reducing the likelihood that particular aggressors will attain their goals by use of NBC weaponry, enhanced defensive capabilities of many sorts – whether it be passive protection of military forces or improved medical capabilities to deal with the impact on forces and populations of the use of biological weapons – augment deterrence.¹⁵ Perhaps equally important, enhanced defenses (including protection and consequence management measures) can contribute to the reassuring possibly

¹⁵ This conclusion is supported by a series of deterrence case studies done by one of my colleagues, Mr. Gregory Weaver.

threatened neighbors – both indirectly by strengthening deterrence and directly by alleviating the impacts of bioweapons use. Such reassurance may be especially important in such countries as the Gulf countries fearful of Iraq and Iran or a South Korea concerned about North Korea, where there could be pressure to seek their own matching or compensating proliferation capabilities.¹⁶

Nonetheless, deterrence of regional aggressors and reassurance of friends and allies will depend most on the threat of retaliation based on offensive military capabilities. This is especially so with regard to deterring the use of biological or nuclear weapons, due to defenses' limits and uncertainties. Here, the most critical question remains the role of nuclear weapons not in deterring the use of nuclear weapons – which is broadly if not universally accepted – but in contributing to the deterrence of biological weapons. (In defining the issue in this fashion, it is posited both that chemical weapons can be adequately countered with enhanced defenses and that the impact of use of chemical weapons would fall below the threshold at which a nuclear response would be warranted or proportionate).

B. The Nuclear Dimension in Bio Deterrence.

Other things being equal, it would be preferable to avoid too explicit an emphasis on the threat of nuclear retaliation to deter use of biological weapons by a hostile proliferator. Too explicit reliance on nuclear deterrence could generate additional proliferation pressures and some countries could conclude that they, too, need nuclear weapons for biological weapons deterrence. Pre-crisis rhetoric and high-level commitments might also create a situation in which it would later be difficult not to respond to use of biological weapons with nuclear weapons, even though it might not be desirable at the time. Conversely, possible uses of biological weapons would clearly fall below the threshold at which a nuclear response would or should be seriously contemplated. If so, placing too much emphasis on nuclear deterrence could result in a breakdown of deterrence. Not least, as many of the Arms Control Traditionalists fear, too visible an emphasis on nuclear deterrence could weaken the overall nuclear taboo. Indeed, the sense that nuclear weapons are uniquely dangerous and remain outside the boundaries of traditional military means has been a useful constraint on both their acquisition and use.

At the same time, the threat of conventional retaliation alone under some conditions may well be an insufficient deterrent to uses of biological weapons. Early in a clash with a regional aggressor, e.g., Iraq, U.S. conventional military power present in the theater and able to retaliate decisively to the use of biological weapons is likely to be limited. Later, after the build-up of theater assets, at least some regional aggressors could have prepared themselves to resist conventional military retaliation. This

¹⁶ Partly illustrating the role of defenses in reassurance, there has been continuing interest on the part of the Gulf countries in U.S. deployments of theater missile defenses.

would especially be the case since the United States and its coalition partners would probably already be engaged in very extensive conventional air strikes. Not least, as a means of deterrence, nuclear weapons bring with them a unique psychological “fear factor” and demonstrated capability to do horrific damage.

Balancing these considerations, the first Bush Administration and the Clinton Administration afterwards left the threat of nuclear retaliation ambiguous – emphasizing only that use of biological weapons would be met with an “overwhelming and devastating” response. There is little reason to change this declaratory posture. It brings the “nuclear shadow” into play but in a way that avoids the risks of too explicit an emphasis on nuclear deterrence. A number of political steps could also be taken to reinforce the credibility of U.S. readiness to stand by friends or allies threatened by regional proliferators and as a result to provide needed reassurance. Strengthened political ties and enhanced NBC defense cooperation are two such steps. Shows of nuclear force, should a crisis threaten to turn into overt military conflict, might be considered at the time.

But deterrence could fail and chemical, biological, or even nuclear weapons might be used in a future conflict with a regional proliferator. Faced with this prospect, most attention has focused on how to limit damage and manage the consequences. Depending on the specifics, however, use of either biological or nuclear weapons could result in tens of thousands or even hundreds of thousands of deaths. In such a situation, there would almost certainly be great pressure from many quarters – allied governments, the public in the United States and other countries, and Congress as well as other legislative bodies – to find a way to “end it fast.” Virtually no attention has been paid within U.S. counter-proliferation planning to this issue of war termination, despite its implications for U.S. and coalition war aims, for conventional escalation options, and for nuclear operations – implications that urgently need to be explored. The key challenge is to think through how to shatter an adversary’s military and political centers of gravity to prevent or preclude further devastating uses of nuclear or biological weaponry. Given the stakes, no option should be off the table, including use of nuclear weapons.¹⁷

B. Deterrence, War Termination, and U.S. Nuclear Posture.

Perhaps the most controversial issue in today’s U.S. nuclear debate is whether – and if so, how – to develop and deploy a new generation of nuclear weapons for deterrence or use in proliferation contingencies. Despite the contending positions of the Nuclear Priesthood and the Arms Control Traditionalists, the answer is not clear-cut. The answer may also

¹⁷ This is a different question from the possible need for nuclear weapons as the most effective or only means to destroy certain hard or unique targets, such as deeply-buried targets or biological weapons storage sites. The latter dimension has been the focus of thinking about the role of nuclear weapons in proliferation contingencies.

differ depending on whether the focus is on buttressing U.S. pre-war deterrence or providing *in extremis* options for war-ending use.

Regarding pre-war deterrence, successful deterrence with whatever means depends partly on the credibility of response. The use of any nuclear weapon would be one of the most difficult decisions that any U.S. President would have to make. No U.S. President will want to go down in history as the second American leader to order the use of nuclear weapons.¹⁸ Even in the case of conventional military strikes, moreover, limiting collateral damage to civilians has been an overriding requirement. This would be all the more so in any deliberations about use of nuclear weapons.

What is less clear is whether a Saddam Hussein or some other future regional aggressor contemplating use of NBC weapons would be more inclined to take the risk of U.S. nuclear response seriously if he knew that the options available to the U.S. President included possibilities for highly selective, non-city busting retaliation. At least in principle, the availability of such options could lessen the perception that a U.S. President would refuse to cross the nuclear threshold in response to anything short of use of a nuclear weapons, in effect, being “self-deterred.” At the same time, it is very difficult to gainsay how any President would act *in extremis*. Nor is it self-evident that public pressures would argue against rather than in favor of the strongest possible retaliation, especially if very large numbers of Americans had been killed by bio use. History, as well as current events such as the U.S.-led campaign against al Qaeda, the Taliban, and global terrorism, also affirms the risks of underestimating American will. Furthermore, a highly visible shift toward tailored nuclear weapons could paradoxically undermine one of the roots of successful nuclear deterrence – the very fear associated with the post-Hiroshima image of nuclear weapons as weapons of doom. Here, the case for the deterring benefits of tailored nuclear weapons appears unproved.

Regarding intra-conflict use, under certain extreme conditions, resort to nuclear weapons in a regional proliferation clash could well be seriously debated by a U.S. President and his closest advisors. This could be so, for instance, if use of a nuclear weapon were the only means available to destroy one or more critical targets and thereby, to avoid or limit large-scale loss of life from biological or nuclear attack. (This would be all the more so if nuclear or biological weapons had already been used by a regional adversary). Or, use of nuclear weapons could be contemplated were it the only means available for prompt war termination and, again, the avoidance of far greater losses of innocent lives. Under these conditions, the case appears considerably stronger for a U.S. President to have options for selective use of more discriminate nuclear weapons in extremis – once again, as a regrettable and proportionate means to head off even further destruction.

Whatever the merits, how the United States pursues such a capability, should it decide to do so, matters. There is little doubt that moving to acquire selective nuclear options of this sort would be politically controversial at home and abroad, including with many U.S. allies. Such

¹⁸ It has been reported in that regard that the first President Bush made this clear in deliberations about use of nuclear weapons in response should Saddam Hussein use biological weapons in the Gulf War.

controversy would be all the greater were the United States to resume nuclear testing as part of a high-visibility program to develop a new generation of “tailored nuclear weapons”. A high-visibility new initiative would also have greater costs for U.S. own goal of containing proliferation, if only by raising more questions about the U.S. commitment to the NPT and by heightening even more so perceptions in other countries of the necessity of nuclear weaponry.

Balancing all of these considerations, a more cautious first step would be to adapt warheads and delivery systems from the existing nuclear stockpile to meet any such new military requirements. Within some limits, there will probably be considerable room for such adaptation to ensure that whatever the ultimate decision, the president has a full set of options. Moreover, given the small numbers of nuclear warheads involved, such a “boutique program” could be readily encompassed within ongoing activities with little additional visibility. If stockpile adaptation proves inadequate, the need for other steps could be reassessed.

D. An Enforceable Taboo against Use of Biological Weapons.

Looking out over the next decades, however, the package of defensive and deterrence actions may not suffice to deal with the biological weapons threat. These weapons are already relatively easy for countries to acquire and will only become more so as the peaceful biological revolution continues. Defenses, deterrence, and protection are all subject to breakdowns and limitations, aside from the cost of their full-scale pursuit. For all of these reasons, it is increasingly necessary to consider what else can be done to shape all countries’ perceptions of the usability of biological weapons – in effect, to create an enforceable global taboo against such use.

There are several possible ways to proceed worth considering. At the very least, as discussed at last November’s Biological and Toxin Weapons Review Conference, the countries of the world could declare that use of biological weapons is unacceptable and that the civilized nations will respond decisively. As a more ambitious step, the members of the United Nations Security Council could so commit themselves to take action, consistent with their responsibilities under the United Nations Charter. A Security Council Resolution could be backed by a wider endorsement from the United Nations General Assembly. Still another possibility would be for the United States and likeminded great powers – or the P-5 – to undertake to respond decisively on the behalf of the victim to the use of biological weapons.

Each of these possibilities has both pluses and minuses – as does the broader idea of an enforceable global taboo against biological weapons use. Pursuit of any one of them would presuppose close consultations between not simply the United States and its close allies but more widely

including such countries as Russia, China, and others. How to respond would need to be discussed, though the actual response would undoubtedly be shaped by the specific circumstances at the time. Responses could range from imposition of international isolation through use of military force to holding the user's leadership accountable and bringing them to justice. Intelligence and forensics requirements would need to be assessed and met in order to be able to identify the perpetrator. We should resolve the issue of whether to move to establish an enforceable ban against the first use of any weapon of mass destruction. All of these questions are legitimate and they need to be addressed. But time is short. How the global community responds to the use of biological weapons will have a major impact on all countries views of the risks of using these weapons, their potential payoffs, and the importance of national self-help in meeting this threat. For that reason, time is now to move ahead in this area.

E. The Terrorist Dimension.

The links between proliferation and terrorists constitute an issue that exceeds the scope of this discussion and warrants a treatment of its own. Nonetheless, the September 11th attacks – and the continuing flow of information that al Qaeda had been seeking chemical, biological, and nuclear weapons – cannot but shape our perceptions of the broader proliferation challenge. The optic of a “now serious” or “for real” concern about NBC terrorism provides an additional perspective on moving beyond the Cold War nuclear legacy. In some instances, that perspective serves to reinforce the importance of some of the more instrumental steps that already are underway or likely to occur, e.g., putting in place effective nuclear materials and weapons controls in Russia, enhancing medical protection from biological weapons agents, and improving consequence management capabilities. But what is even more important, considering the threat of NBC terrorism, is to make the transition successfully to more cooperative, non-adversarial relationships with both Russia and China. Both countries, as well as many others, have a key contribution to make in defeating global terrorism.

Conclusion

The last half of the 20th century was labeled the nuclear age – a period of Cold War confrontation, intense U.S.-Soviet military competition, and a continuing nuclear danger. As the new century begins, there are new opportunities to put the Cold War nuclear legacy behind us and to build a cooperative, non-adversarial relationship with a changing if still uncertain Russia. China's ongoing transition also opens up new opportunities to pursue a comparable relationship between Beijing and Washington. In both cases, strategic reassurance of many sorts – drawing heavily on a process of cooperative security management via non-traditional means – has a central part to play in achieving those goals. But as long as uncertainties persist about Russia's longer-term future, nuclear deterrence will likely need to remain – if only for political reasons – a residual but different element of Washington's interaction with Moscow. Somewhat similarly, as long as the possibility exists of a U.S.-China confrontation over Taiwan, strategic deterrence will provide the backdrop to evolving relations. The challenge in both cases will be to manage that deterrent element in such a manner that it does not undermine the longer-term goal of a bringing Russia and China into a cooperative partnership with the United States, its allies, and others.

In contrast with these opportunities, dealing with the danger of proliferation increasingly stands out as the central security challenge of the 21st century. Indeed, the 21st century may prove to be the biological age, whether for better or for worse. Compared to Cold War deterrence, defenses (including protection) may make a greater contribution to deterrence of regional proliferators and to reassurance of their concerned neighbors. However, the crux of successful deterrence of proliferator threats seems likely to remain a credible capability to exact a high price for NBC use. In sending that signal, particularly in the face of new biological weapons threats, it will remain important to take advantage of the nuclear shadow cast by today's nuclear arsenals. But equally so, it will be important to avoid too-visible a reliance on nuclear deterrence that could undercut wider political efforts to contain still additional proliferation. Not least, it will be important to build an enforceable global taboo against the use of biological weapons lest the advance of science – as it did throughout the nuclear age – again threaten to outpace the international community's ability to control its consequences.