

**Strategic Nuclear Forces in
U.S. National Security in the 21st Century**

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by Dr. Daniel Gouré

Executive Summary

The end of the Cold War brought with it a reduction in the size of strategic nuclear arsenals but not a diminution in the importance of nuclear forces in U.S. national security. The balance of terror has been replaced by the uncertainty associated with the potential proliferation of weapons of mass destruction into the hands of terrorist groups and rogue regimes and the prospect, albeit small at present, of a confrontation with a nuclear-armed Russia or China. The emergence of new threats has given rise to the need to think anew about the role strategic nuclear forces will play in the new U.S. national security strategy.

The United States needs a strategic nuclear force that is capable of addressing the broad range of current and prospective threats that confront or could challenge this nation in the next several decades. For this reason, this force must be relatively large and robust, as well as flexible. The size and character of the force must be such as to dissuade any would-be competitor from attempting to equal U.S. power through a new nuclear arms race. It must deter other nuclear powers, notably Russia and China, from any use of their strategic nuclear forces by the threat of unacceptable retaliatory damage. The U.S. strategic nuclear force must be able to execute a full range of preemptive and retaliatory strikes against rogue state or terrorist weapons of mass destruction (WMD) capabilities while continuing to maintain a capability to deter all other potential threats.

Strategic nuclear forces are a central element of the new strategic TRIAD. Their presence alone can serve to enable non-nuclear strategic strike capabilities by denying adversaries a viable escalatory option. They provide the means for attacking targets that are invulnerable to non-nuclear strike capabilities. They can enhance the effectiveness of defenses, either by reducing the threat through offensive action or complicating an attack by means of a diversified basing structure.

The U.S. strategic nuclear structure must continue to maintain a diversified force of bombers, ICBMs and submarine-based ballistic missiles. Of the three legs of the strategic nuclear TRIAD, ICBMs make unique contributions to the force of the future. The characteristics of the ICBM that once made them a central concern of arms control – high accuracy, responsiveness, selective employment - make the single warhead ICBM the most desirable weapons system in future conflict scenarios. ICBMs could be employed to deliver special payloads tailored to the requirement of defeating WMD proliferation. The current ICBM basing mode, 500 Minutemen III in hardened silos, is an important contributor to deterrence, constituting the overwhelming majority of aim points in the strategic nuclear force posture. Maintaining a strong and capable strategic nuclear force of some 2,200 deployed weapons dispersed across the three legs of the Triad would contribute powerfully to U.S. national security.

Introduction

U.S. national security strategy is in a period of revolutionary change unlike any this nation has experienced since the initial years of the Cold War. The events of September 11, 2002 accelerated the pace at which change is occurring, but did not fundamentally affect its scope or character. This revolution is being driven by changes in the international environment that have reduced old dangers while giving rise to a set of qualitatively new threats to U.S. interests, allies and even homeland. These threats include so-called rogue regimes and terrorist groups. The behavior of these new types of threats may be less predictable than were those of the Soviet Union and they may not be dissuaded from aggressive behaviors by the promise of unacceptable damage that was the cornerstone of U.S. deterrence strategy during the Cold War. These new threats cannot pose the same magnitude of danger to the United States, as did the Soviet Union and its allies. Nevertheless, the global proliferation of advanced technology may place weapons of mass destruction in the hands of unstable regimes and tyrannical leaders. As a result, the potential risk to the U.S. homeland, and to our friends and allies, is in some ways greater today than it was during most of the Cold War.

U.S. national security policy must consider not only the most likely threats but also less likely threats that could present dire consequences for the nation. The dominant potential threat is that of a confrontation with a state possessing a large strategic nuclear force. At present only Russia has the potential to pose such a threat to the United States. In the future, however, China may acquire sufficient strategic forces to pose such a threat. In an era of uncertainty, with Russia's democracy still in first flight and China's political future uncertain, ensuring the ability of the United States to deter or defeat any nuclear threat is mere prudence.

At the same time, advances in technology were seen as holding forth the prospect for orders-of-magnitude increases in the capabilities of U.S. military forces that, with the development of new concepts for their employment, are creating the possibility of a new "American Way of War." Under the overall umbrella of a strategy of "transforming" the U.S. military, the Bush Administration is seeking to create a military capable of addressing the full range of threats, both traditional and new, that it is expected to face in the 21st century.

The strategy of transformation is a work-in-progress. Its elements are still being defined. Some aspects of the strategy, such as the increased emphasis on and investment in information technology, precision munitions, and missile defenses, have been well defined and there is generally a consensus on the need to pursue these capabilities and maintain an advantage in them. Other aspects are not well defined. Most notable among these is the role and place of strategic nuclear forces in a transformed U.S. military and in a 21st century national security strategy. There is hardly a mention of strategic forces in the academic literature or even in the press.

This lack of attention to nuclear matters is troublesome given that the Bush Administration has made the most radical departures from traditional Cold War thinking and policy in this area. On May 1, 2001, President George W. Bush spoke the last words

on the national security strategy that had guided the nation through the fifty-odd years of the Cold War. In a speech to the National Defense University, he declared that Cold War deterrence, based on the “doctrine our very survival would be best ensured by leaving both sides completely open and vulnerable to nuclear attack,” was no longer relevant. He went on to say that “to maintain peace, to protect our own citizens and our own allies and friends, we must seek security based on more than the grim premise that we can destroy those who seek to destroy us.”

President Bush proposed a dramatic departure from the Cold War doctrine of deterrence through the threat of retaliation. He declared that:

“We need new concepts of deterrence that rely on both offensive and defensive forces. Deterrence can no longer be based solely on the threat of nuclear retaliation. Defenses can strengthen deterrence by reducing the incentive for proliferation.”

He proposed a new strategic framework based on two premises. The first of these was that the ability to massively retaliate with strategic nuclear forces against an aggressor was no longer the central requirement of deterrence. The second was that homeland vulnerability was no longer the cornerstone of stability.

“This new framework must encourage still further cuts in nuclear weapons. Nuclear weapons still have a vital role to play in our security and that of our allies. We can, and will, change the size that reflects the reality that the Cold War is over.”¹

The Administration has been as bold in its actions as it has in its ideas. In only eighteen months it produced a Quadrennial Defense Review (QDR) that recast national security policy and defense strategy, conducted a Nuclear Policy Review (NPR) that proposed a radical redefinition of the character of strategic forces, withdrew from the ABM Treaty and negotiated a new strategic arms limitation treaty with Russia.

Almost from the beginning of the Cold War, a political consensus existed regarding the role of strategic nuclear weapons in U.S. defense policy. It was generally agreed that for deterrence to be effective the threat to use nuclear weapons had to be both credible and certain. That is, the threat had to make sense militarily and there had to be no doubt in an aggressor’s mind that he could not avoid a retaliatory blow through any action on his part of either an offensive or defensive character. Ultimately, this led to the development of sophisticated theories of escalation and intra-conflict bargaining, and to the development of a complex set of escalatory options involving graduated attacks leading to a full-scale exchange.

The Cold War consensus has vanished, taking with it a common understanding of the roles and missions for strategic nuclear forces. There is a need to address squarely the implications of the revolution the Administration has unleashed in nuclear strategy on the future of the force. For the past decade, there has been only limited discussion about the place of strategic nuclear forces in U.S. national security and most of that has focused on

¹ President George W. Bush, “Speech at the National Defense University,” May 1, 2001, www.whitehouse.gov.

reductions and demilitarization of nuclear infrastructures. The Administration has made clear that it rejects virtually all the tenets of Cold War U.S. nuclear policy and doctrine, most notably the impossibility of defense, the importance of vulnerability to stability and even the absolute reliance on retaliation for deterrence.² At the same time, the Bush Administration acknowledges that nuclear weapons will continue to play a significant role, albeit at reduced numbers, in U.S. national security strategy and defense policy.

The Administration conducted a Nuclear Policy Review (NPR) in 2001. The NPR proposed a new strategic Triad consisting of strategic nuclear forces and new, non-nuclear strike capabilities, strategic defenses and a responsive infrastructure. The NPR argued for retaining a robust nuclear force posture, maintaining the traditional Triad of ICBMs, bombers and SLBMs and ensuring an adequate and responsive nuclear infrastructure. The NPR also argued that the size of the U.S. nuclear arsenal could be reduced to a force of between 2,200 and 1,700 weapons.

The NPR essentially focused on a rationale for the sizing of the U.S. strategic nuclear posture. It did not make a strategic case for why strategic nuclear forces remain important to U.S. national security or how the force would be structured, postured or employed in support of the goals of deterrence, dissuasion, denial and defeat of potential adversaries. It is therefore quite difficult to know how much is enough with respect to strategic nuclear forces or what the structure of those nuclear forces should be or how they ought to be postured.

Strategic nuclear weapons remain the bedrock on which the transformation of the U.S. military will be conducted. The focus of the QDR on transformation of conventional forces and the NPR on non-nuclear strike capabilities has obscured this fact. Nevertheless, even at lower numbers, strategic nuclear weapons are still the ultimate guarantor of U.S. national security and that of our principal friends and allies. It is the combination of unequaled conventional power and an unrivaled strategic nuclear force structure that marks the United States as the world's foremost military power and its only superpower.

Although the central theme of both the QDR and NPR is the need to respond to changes in the international security environment, both documents also make a strong case for hedging against uncertainty. A large and well-structured strategic nuclear force is this nation's best hedge against a major adverse shift in the current strategic environment. Such a capability is necessary in order to deter any residual Russian nuclear threat. It is also vitally important as a means of setting the bar of strategic equality so high that no would-be aspirant to superpower status could meet the test of strategic parity unless the United States chose to allow it through additional reductions or a failure to compete. Finally, a robust strategic nuclear arsenal allows the U.S. the means to respond to any weapon of mass destruction (WMD) use by a rogue state without calling into question the ability of the remaining strategic nuclear capability to deter all other nuclear dangers.

This monograph develops the strategic case for nuclear forces as a critical element of U.S. national security and defense in the 21st century. It does so with a recognition that

² On the tenets of Cold War nuclear strategy, see Lawrence Freedman, *The Evolution of Nuclear Strategy*, St. Martins Press, London, 1987, pp. 4042.

the current international security environment is in a state of flux. Russia is not an adversary, but its path to democracy is far from certain. Russia's military doctrine emphasizes the early use of strategic nuclear weapons to control and terminate conventional conflicts. China's nuclear doctrine remains largely opaque. However, that country has programs underway to significantly enhance its strategic nuclear force in the next several decades. There remains the requirement to maintain a guaranteed capability to inflict unacceptable damage with respect to these two states. There are also the so-called asymmetric threats, rogue nations and terrorist groups that may not be influenced by any deterrent threat. Thus, any discussion of what constitutes an appropriate strategic force posture and doctrine must recognize that the U.S. faces a range of potential threats. The means by which each will be deterred, dissuaded, denied and defeated will quite likely differ in important respects from the others.

I. National Security in an Age of Uncertainty

The most important difference between the strategic environment of the 21st century and that of the Cold War era, with respect to the requirements for strategic nuclear forces, is the absence of a single, unifying political-military threat. During the Cold War, the principal, and many argued the sole, role of strategic nuclear forces was deterrence of aggression by the Soviet Union. All other scenarios were considered lesser cases.

At one time we viewed the relationship as a titanic struggle between two halves of the world, in which the stakes were our own liberty and the freedom of our friends and allies around the world. To defend liberty and freedom, the U.S. was willing to threaten the annihilation of the Soviet Union and its allies, and to place itself at risk of the same. This was the heart of U.S. deterrence doctrine, countering the political challenge posed by the Soviet Union with a military response. To ensure stability under such circumstances, it made sense to establish a regime of mutual assured destruction and, in that context, limit the sides' capability to defend themselves.

A traditional deterrence strategy, with its requirement for mutual vulnerability as the basis of stability, is less relevant and even unsuitable for the era in which we now find ourselves. Russia is not our old ideologically driven adversary, the Soviet Union. A situation of absolute mutual vulnerability does not accord either with realities of current U.S.-Russian relations nor with Washington's aspirations for their evolution. President Bush declared that:

“The 1972 ABM Treaty was signed by the United States and the Soviet Union in a much different time, in a vastly different world. One of the signatories, the Soviet Union, no longer exists and neither does the hostility that once led both our countries to keep thousands of nuclear weapons on hair-trigger alert, pointed at each other.

Today, as the events of September 11 made all too clear, the greatest threats to both our countries come not from each other, or from other big powers in the world, but from terrorists who strike without warning or rogue states who seek weapons of mass

destruction.”³

Nevertheless, Russia will continue for the foreseeable future to be the only nation in possession of a nuclear arsenal capable of annihilating the United States. While it is difficult at present to conceive of a scenario that would result in the threat of a massive nuclear strike, this certitude depends on the strength of Russian democracy. Just as political accommodation by the Soviet Union, and then Russia, led to a relaxation of tensions and a change in U.S. nuclear strategy, a return to the politics of animus could be the basis for a resurgent nuclear threat.

Moreover, Russia has sought to offset its conventional military weakness by relying more heavily on nuclear weapons. Moscow has renounced the no-first use pledge made by the Soviet leadership and has focused in its new military doctrine on the use of limited nuclear options as a means of controlling or de-escalating a regional conventional conflict.⁴ Thus, there remains the requirement for strategic nuclear forces of sufficient size and flexibility of character to deter any Russian use of strategic nuclear weapons.

Russia is not the only nation that poses a nuclear threat to the United States. China is engaged in a major missile modernization program. According to an unclassified Intelligence Community (IC) study:

“Beijing is concerned about the survivability of its strategic deterrent against the United States and has a long-running modernization program to develop mobile, solid propellant ICBMs. The IC projects that by 2015, most of China’s strategic missile force will be mobile. China has three new, mobile, solid-propellant strategic missiles in development—the road-mobile CSS-X-10 ICBM (also called the DF-31), which is now in the flight-test stage; a longer range version of the DF-31; and the JL-2 SLBM. This modernization effort, which dates from the mid-1980s, forms the foundation of Beijing’s efforts to field a modern, mobile, and more survivable strategic missile force.”⁵

As these missile programs begin deployment, they will allow China to substantially expand its strategic force posture. China could have as many as 100 strategic warheads deployed in the next 10-15 years. Moreover, China would have in place the necessary experience and industrial capacity to substantially increase that number through a combination of greater fractionation of missile payloads and the expansion of the overall missile force.

³Manuel Perez-Rivas, “U.S. Quits ABM Treaty,” CNN Washington Bureau, [CNN.com](http://www.cnn.com), December 14, 2001.

⁴Stephen A. Blank, “Undeterred: The Return of Nuclear War,” [Georgetown Journal of International Affairs](http://www.georgetownjournal.org), Summer/Fall 2000, pp. 58-60.

⁵Director of Central Intelligence, [Foreign Missile Developments and the Ballistic Missile Threat Through 2015](http://www.dodig.mil), NIE, U.S. Government Printing Office, Washington, D.C., 2000, p. 5.

Some Chinese military writings suggest that they are considering limited employment scenarios similar to those that now occupy the thoughts of Russian strategists. In these scenarios, nuclear weapons are employed in local conflicts by the weaker side to counter the opponent's conventional superiority. The threat of direct attacks on the opponent's homeland is meant to "cap" the conflict.⁶ The viability of such scenarios depends on the confidence the Chinese decision-makers have in their ability to maintain a secure second-strike capability.

According to classic deterrence theory, both Russia and China are considered to be rational actors. In addition, unlike during the Cold War, neither is in a state of conflict with the United States. It is therefore reasonable to assume that a strategic force posture on the order of the NPR proposed numbers of 1,700 to 2,200 warheads will be sufficient to ensure a high-confidence deterrent. In the event that aggression against the United States was contemplated, both Russia and China would confront the reality that not even a massive first strike could prevent the United States from executing an unacceptable retaliatory blow.

Were the only potential strategic threats confronting the United States from Russia and China, it would be a relatively simple task to define an appropriate national security strategy, defense policy and strategic nuclear force posture. But the events of 9/11 demonstrated that the new century was one in which new and very dangerous threats could emerge suddenly and unexpectedly. According to the QDR, the current security environment is marked by a historically unique constellation of challenges posed by failed states, radical regimes, proliferation and terrorism. In the view of the QDR the combination of weak states and malevolent actors, including terrorist groups, with the proliferation of advanced technology, had created a new type of threat.

"Conditions in some states, including some with nuclear weapons, demonstrate that potential threats can grow out of the weakness of governments as much as out of their strength.

The attacks against the U.S. homeland in September 2001 demonstrate that terrorist groups possess both the motivations and capabilities to conduct devastating attacks on U.S. territory, citizens, and infrastructure. Often these groups have the support of state sponsors or enjoy sanctuary and protection of states, but some have the resources and capabilities to operate without state sponsorship. In addition, the rapid proliferation of CBRNE technology gives rise to the danger that future terrorist attacks might involve such weapons."⁷

⁶ Major General Wu Jianguo, "Nuclear Shadow on High-Tech Warfare," in Michael Pillsbury, ed., Chinese Views of Future Warfare, Institute for National Strategic Studies, National Defense University, Washington, D.C., 1999.

⁷ Department of Defense, Quadrennial Defense Review Report, U.S. Government Printing Office, Washington, D.C., 2001, p. 5.

The international security environment was becoming more complex, unpredictable and even dangerous. Reviewing the trends in the international security environment, the QDR concluded that:

“. . . these trends produce a geopolitical setting that is increasingly complex and unpredictable. Unlike the Cold War period, where the key geographic regions of competition were well defined, the current period has already imposed demands for U.S. military intervention or activity on virtually every continent and against a wide variety of adversaries. The United States will not be able to develop its military forces and plans solely to confront a specific adversary in a specific geographic area. Instead, the United States could be forced to intervene in unexpected crises against opponents with a wide range of capabilities. Moreover, these interventions may take place in distant regions where urban environments, other complex terrain, and varied climatic conditions present major operational challenges.”⁸

Military-technical trends also presented new challenges for U.S. security. According to the QDR:

“Together, these military-technical trends create an increased potential for miscalculation and surprise. In recent years, the United States has been surprised by the speed with which other states have progressed in developing weapons of mass destruction and ballistic missiles. In the future, it is unlikely that the United States will be able accurately to predict how successfully other states will exploit the revolution in military affairs, how rapidly potential or actual adversaries will acquire CBRNE weapons and ballistic missiles, or how competitions in space and cyber space will develop.”⁹

It is clear that the United States is a world power, indeed the preeminent international power, by virtue not merely of its unparalleled economic and military power, but because of its interests and relationships around the globe. The U.S. will be involved in the world because of its interests and the threats to them. Many of these involvements will not be in defense of vital interests but to maintain regional stability, deal with failing states, address security needs of friends and allies and prevent the proliferation of WMD or advanced technology weapons. It is all-but inevitable that in the conduct of its foreign and security policies the United States will come into conflict with other states and non-state actors. As the QDR observed:

“Although U.S. military forces enjoy superiority in many dimensions of armed conflict, the United States is likely to be challenged by adversaries who possess a wide

⁸ *Ibid.*, p. 6.

⁹ *Ibid.*, p. 7.

range of capabilities, including asymmetric approaches to warfare, particularly weapons of mass destruction.”¹⁰

These adversaries hope to conduct a new kind of strategic warfare against the United States based on their ability to threaten high-value targets both overseas and in the United States, particularly with WMD.¹¹ The lesson for potential adversaries is that they cannot hope to stand against the United States on a modern conventional battlefield. It is U.S. dominance in conventional military power that has sent potential adversaries in search of so-called asymmetric means of warfare. Chief among these are WMD, possibly combined with long-range delivery means. Such weapons could be quite primitive, for their primary purpose is not to achieve results on the battlefield but to deter or complicate any potential U.S. military action against the state deploying such means. The potential adversary need only threaten to raise the stakes for the United States in circumstances where vital interests may not be involved, in the hopes of preventing the United States from deploying its forces or of sowing discord in a regional coalition. In addition, such weapons have an inherent practical military value insofar as even fear of their presence may complicate U.S. deployments. In testimony before Congress, a senior intelligence official pointed out the unique strategic value of WMD and long-range ballistic missiles.

“Acquiring long-range ballistic missiles armed with a weapon of mass destruction will enable weaker countries to do three things that they might otherwise not be able to do: deter, constrain and harm the United States. To achieve these objectives, the missiles need not be deployed in large numbers; with even a few weapons, these countries would judge that they had the capability to threaten at least politically significant damage to the United States or its allies. They need not be highly accurate; the ability to target a large urban area is sufficient. They need not be highly reliable, because their strategic value is derived primarily from the implicit or explicit threat of their use, not the near certain outcome of such use.”¹²

The uncertainties with respect to U.S. national security created by adverse political and military-technical trends and, in particular, by the proliferation of WMD and long-range delivery systems, are compounded by the emergence of radicalized regimes and movements in possession of or seeking to acquire weapons of mass destruction. As President Bush noted in a recent speech, the combination of fanaticism and advanced technology is at the heart of the new national security challenge to the United States.

“The gravest danger to freedom lies at the perilous crossroads of radicalism and technology. When the spread of chemical and biological and nuclear weapons, along with ballistic missile technology –

¹⁰ *QDR Report*, op. cit., p. 3.

¹¹ The idea of a new form of strategic warfare was suggested in M. Elaine Bunn, David E. Mosher and Richard D. Sokolsky, “Regional Conflicts and Strategic Consequences,” unpublished paper.

¹² Robert D. Walpole, National Intelligence Officer for Strategic and Nuclear Programs, Testimony before the Senate Foreign Relations Committee, September 16, 1999.

when that occurs, even weak states and small groups could attain a catastrophic power to strike great nations. Our enemies have declared this very intention, and have been caught seeking these terrible weapons. They want the capability to blackmail us, or to harm us, or to harm our friends. . . .”¹³

Despite overwhelming U.S. conventional and strategic nuclear superiority, it is not certain that traditional notions of deterrence will be relevant in addressing the threat posed by these new adversaries.¹⁴ For classic deterrence to operate, there must exist a common perspective or understanding of the real world environment, a minimum set of shared values and expectations and an ability to communicate between the two sides. As some observers have suggested, this is not always the case, particularly with tyrants.¹⁵ As Secretary of Defense Donald Rumsfeld pointed out in recent testimony before Congress, the “rationality” of some prospective adversaries is open to question.

“Soon, for the first time in history, individuals who have no structure around them to serve as a buffer on their decision-making, will possess nuclear, chemical, biological weapons and the means to deliver them. This presents a very different challenge from the Cold War. Even in the old Soviet Union, the general secretary of the Communist Party, dictator though he was, had a Politburo to provide some checks and balances that might have kept him from using those weapons at his whim alone. What checks and balances are there on a Saddam Hussein or a Kim Jung Il? None that we know of, and certainly none that we believe we can influence.

The difference I tried to draw is that mutual assured destruction, when you're dealing with the Soviet Union of old, is different than, I think, mutual assured destruction when you're dealing with a Kim Jong Il or a Saddam Hussein. They do not have -- to the extent they have very powerful weapons, they do not have politburos, they do not have inhibitions and restraints on them. They have vastly more personal, individual ability to act at their own whim and determination, and do it repeatedly. They do things that we consider are totally outside the scope of human behavior with respect to their own people. They have used gas on their own people in Iraq, we know that. We know that in North Korea they're perfectly willing to starve their population to feed their war machine. That was my point, and not that in either case they were nice people.”¹⁶

WMD in the hands of tyrants, fanatics or terrorist groups, will pose a particularly difficult national security challenge for the United States. The United States must develop new approaches to meeting this challenge. In his address to the graduating class at the U.S.

¹³ President George W. Bush, “Speech at West Point,” June 6, 2002.

¹⁴ On the relevance of deterrence theory to 21st Century threats see Loren Thompson, “Rethinking the Unthinkable,” *San Diego Union-Tribune*, March 24, 2002.

¹⁵ Stephen P. Rosen, “How to Deal with Tyrants: Kill them if you can; deter them if you must,” *The Weekly Standard*, January 21, 2002, pp. 27-29.

¹⁶ Secretary of Defense Donald Rumsfeld, “Testimony Before the Senate Armed Services Committee,” June 21, 2001.

Military Academy, President Bush argued persuasively that the Cold War approach to the threat of WMD was no longer adequate.

“For much of the last century, America's defense relied on the Cold War doctrines of deterrence and containment. In some cases, those strategies still apply. But new threats also require new thinking. Deterrence -- the promise of massive retaliation against nations -- means nothing against shadowy terrorist networks with no nation or citizens to defend. Containment is not possible when unbalanced dictators with weapons of mass destruction can deliver those weapons on missiles or secretly provide them to terrorist allies.

We cannot defend America and our friends by hoping for the best. We cannot put our faith in the word of tyrants, who solemnly sign non-proliferation treaties, and then systemically break them. If we wait for threats to fully materialize, we will have waited too long.”¹⁷

The challenge confronting U.S. national leaders is to develop the full range of military capabilities that can respond to the both current and prospective future threats to national security. Because there is no longer a single animating threat, the focus of defense planning has shifted from threat-driven to a capabilities-driven model. With respect to U.S. strategic nuclear forces, the breadth of potential WMD challenges means that the nation requires a robust and sizeable arsenal if it is to meet not only the demands for residual deterrence of the Russian nuclear threat, but those related to dissuading new competitors from seeking a WMD option or, failing that, ensuring the capability for a full spectrum of options for preemption or retaliation.

II. Transformation and U.S. National Security in the 21st Century

At the dawn of the nuclear age, one of first and foremost philosophers of nuclear strategy, Bernard Brodie delivered the famous observation that became the essential statement on national security policy for the Cold War. “Thus far,” he stated, “the chief purpose of a military establishment has been to win wars. From now on, its chief purpose must be to avert them.”¹⁸

Now we appear to be entering an era in which Brodie's dictum may no longer be valid. The new security environment, combining, in President Bush's words, radicalism and technology, does not allow for a classic deterrence/containment paradigm. Rather, a more nuanced strategy is required, one in which nuclear weapons have, if anything, a broader role to place. As a result, the ability to defeat potential WMD threats, through defensive actions if possible but by preemptive operations, if necessary, is an important new measure of adequate security. According to President Bush,

“Homeland defense and missile defense are part of stronger security, and they're essential priorities for America. Yet the war on

¹⁷ President George W. Bush, “Remarks by the President at 2002 Graduation Exercise of the United States Military Academy, West Point, New York,” www.whitehouse.gov, June 1, 2002.

¹⁸ Bernard Brodie cited in [Freedman, op. cit.](#), p. 49.

terror will not be won on the defensive. We must take the battle to the enemy, disrupt his plans, and confront the worst threats before they emerge.”¹⁹

In the 2002 National Security Strategy, the Administration went even further, defining what it termed a “proactive” counterproliferation strategy. This new strategy all but dismissed the concept of deterrence as applied to rogue state WMD threats. Instead, it called for the application of a range of measures to defeat a foe armed with WMD.

“We must deter and defend against the threat before it is unleashed. We must ensure that key capabilities—detection, active and passive defenses, and counterforce capabilities—are integrated into our defense transformation and our homeland security systems. Counterproliferation must also be integrated into the doctrine, training, and equipping of our forces and those of our allies to ensure that we can prevail in any conflict with WMD-armed adversaries.”²⁰

The Bush Administration came into office mindful of the changing national security environment and determined to pursue a qualitative transformation of the U.S. military. Within a few weeks of taking office, President Bush outlined his national security philosophy:

“We are witnessing a revolution in the technology of war. Power is increasingly defined not by size but by mobility and swiftness. Advantage increasingly comes from information . . . Safety is gained in stealth and force is projected on the long arc of precision-guided weapons . . .

We will modernize some existing weapons and equipment . . . but we will do this judiciously and selectively. Our goal is to move beyond marginal improvements to harness new technologies that will support a new strategy.

... Our defense vision will drive our defense budget, not the other way around.”²¹

The Bush Administration, in the QDR, has articulated a persuasive case on the need to transform the U.S. military. The heart of its argument is that the challenges and opportunities that confront the U.S. military are quite different from those they encountered during the Cold War and Desert Storm, or even during the 1990s, and that greater change is clearly on the horizon. Consequently, merely improving upon today’s capabilities will not suffice to meet tomorrow’s challenges. Moreover, the Administration argues that the U.S. military also has the opportunity to make dramatic qualitative

¹⁹ George W. Bush, “Speech at the West Point Graduation,” White House Press Office, p. 4.

²⁰ National Security Strategy of the United States, U.S. Government Printing Office, Washington, D.C., 2002, p. 14.

²¹ President George W. Bush, “Speech at the Norfolk Naval Air Station,” www.whitehouse.gov, February 13, 2001.

improvements in its capabilities, regardless of the threat's character. Finally, since the character of the threat is changing, improvements in U.S. military capabilities must be linked to addressing these changes.

A strategy of transformation is intended not only to extend and enhance the current capabilities of U.S. forces, but to counter the threat posed by asymmetric means and methods of attack that adversaries in the future may employ, and to create conditions that both deter attack and, most importantly, dissuade prospective adversaries and competitors from pursuing strategies and a weapons program that could pose a future threat to U.S. forces or the homeland. Secretary of Defense Rumsfeld recently described the key elements of the transformation strategy:

“Our experience on September 11th, and indeed in the Afghan campaign, have served to reinforce the importance of moving the U.S. defense posture in these directions. Our challenge in the 21st Century is to defend our cities and our infrastructure from new forms of attack while projecting force over long distances to fight new and perhaps distant adversaries.

To do this, we need rapidly deployable, fully integrated joint forces capable of reaching distant theaters quickly and working with our air and sea forces to strike adversaries swiftly, successfully, and with devastating effect. We need improved intelligence, long-range precision strikes, sea-based platforms to help counter the access denial capabilities of adversaries.

Our goal is not simply to fight and win wars, it is to try to prevent wars. To do so, we need to find ways to influence the decision makers of potential adversaries, to deter them not only from using existing weapons, but to the extent possible, try to dissuade them from building dangerous new capabilities in the first place.

Just as the existence of the U.S. Navy dissuades others from investing in competing navies – because it would truly cost a fortune and would not succeed in providing a margin of military advantage – we must develop new capabilities that merely by our possessing them will dissuade adversaries from trying to compete.”²²

Transformation is concerned with more than simply improving the capability of the U.S. military to meet the threats of the future. It seeks to reshape the U.S. military into a new strategic instrument, one capable of supporting a broad-based strategy of influencing the evolution of the national security environment as well as responding to threats. A transformed force is one capable of exercising strategic influence not only over the behavior of prospective adversaries but over their acquisition and force structure decisions, as well.

²² Secretary of Defense Donald Rumsfeld, “21st Century Transformation,” National Defense University, Fort McNair, Washington, D.C., January 31, 2002.

Secretary Rumsfeld described the strategy for transformation as follows:

“Before the terrorist attacks on New York and Washington, we had decided that to keep the peace and defend freedom in the 21st Century our defense strategy and force structure must be focused on achieving six transformational goals: First, to protect the U.S. homeland and our bases overseas. Second, to project and sustain power in distant theaters. Third, to deny our enemies sanctuary, making sure they know that no corner of the world is remote enough, no mountain high enough, no cave or bunker deep enough, no SUV fast enough to protect them from our reach. Fourth, to protect our information networks from attack. Fifth, to use information technology to link up different kinds of U.S. forces so that they can in fact fight jointly. And sixth, to maintain unhindered access to space and protect our space capabilities from enemy attack.”²³

Clearly, one objective of the transformation strategy is to create strategic capabilities of sufficient breadth and depth that they address the full range of potential threats and conflict scenarios that might arise in the next several decades. No single force element can dominate a capabilities-driven force structure. Indeed, the central goal of a capabilities-driven approach is to broaden the array of forces in the U.S. military thereby expanding the range of options available to decision makers and military planners.

The Bush Administration has sought to create a full range of strategic capabilities, not only both offensive and defensive, but both nuclear and non-nuclear. The QDR discussed the transformation of the U.S. global posture and the implications of greater reliance on conventional forces for both deterrence and warfighting purposes. It did not make the case that these new capabilities and methods of deterrence would completely replace strategic nuclear forces and plans. Rather, they would address some of the new and more complex circumstances that confronted the United States in the new international security environment.

“Transforming the U.S. global military posture begins with the development of new ways to deter conflict. Deterrence in the future will continue to depend heavily upon the capability resident in forward-stationed and forward-deployed combat and expeditionary forces, including forcible entry forces, along with the rapidly employable capabilities that the U.S. military possess throughout the globe. U.S. forces must possess a wide range of offensive and defensive capabilities that can achieve strategic and operational objectives in the face of determined adversaries, to include those armed with asymmetric weapons of war. DOD will pursue new deterrence tools that not only hold at risk an adversary's military forces and other valued assets, but also extend greater protection to allies

²³ Secretary of Defense Donald Rumsfeld, “21st Century Transformation of the United States Military,” Speech at the National Defense University, January 11, 2002.

and friends in crisis through capabilities such as missile defenses, defensive information operations, and counter-terrorist operations.

Capabilities and forces located in the continental United States and in space are a critical element of this new global posture. Long-range strike aircraft and special operations forces provide an immediately employable supplement to forward forces to achieve a deterrent effect in peacetime. New forms of deterrence, emphasizing the strategic and operational effects that U.S. capabilities can impose upon an adversary, can incorporate globally- distributed capabilities and forces to rapidly strike with precision mobile and fixed targets at various distances.”²⁴

The NPR was intended to be the complement of the QDR, addressing the transformation of U.S. strategic forces. The NPR proposed a new strategic Triad consisting of both a strategic nuclear and non-nuclear strike force, strategic defenses and a responsive infrastructure. Assistant Secretary of Defense J.D. Crouch described the new role of non-nuclear forces.

“The non-nuclear strike forces, we believe, have the potential, if fully exploited, fully developed, to reduce our dependence on nuclear forces for the offensive strike leg of the force. And even defenses give us some options that allow us to do the same.”²⁵

Major General Franklin Blaisdell, then the Air Force’s director of nuclear and counterproliferation operations made a similar comment.

“As advanced conventional weapons are fielded – along with the intelligence and command-and-control systems to support them – the Air Force will be able to bring down our nuclear forces because we are balancing the full spectrum of capabilities. . . As we get better and better at conventional strike, we may be able to take down some of the nuclear systems.”²⁶

The critical observation in General Blaisdell’s statement is that by fielding advanced conventional weapons the United States may be able to take down some nuclear systems. But strategic nuclear forces will remain a central element of U.S. national security strategy and of the new Triad. In the 21st century, strategic nuclear forces will remain important both as an enabler for other capabilities and operations and as a force instrument in their own right. Only a robust and multifaceted strategic nuclear force posture will be able to meet the demands of the new strategy laid out in the QDR, NPR and Presidential statements. Such a force is vital to deter residual nuclear threats from former Cold War

²⁴ QDR Report, op. cit., pp. 25-26.

²⁵ Assistant Secretary of Defense J. D. Crouch, Briefing on the Results of the Nuclear Posture Review, January 9, 2002.

²⁶ Quoted in Adam J. Herbert, “The Responsive Force,” Air Force Magazine, July 2002, p. 51.

adversaries. It also enables a transformational force posture by providing a full range of escalatory options that could be employed in the event of a conflict with a rogue state in possession of WMD. Nuclear weapons are likely to be required as a means of guaranteeing the ability to successfully preempt rogue states' efforts to acquire or employ WMD. The tendency of these states to harden and bury critical military facilities and assets means that there are targets that no non-nuclear conventional strike capability can hold at risk. Only with a large and flexible strategic nuclear force structure, one that is transformed over time through the introduction of new technologies, can the United States hope to meet the broad spectrum of future security challenges in an era of uncertainty.

The QDR and the NPR lays out the framework for a defense policy and force structure designed to both shape the future strategic environment in ways congenial to U.S. strategic interests and to ensure U.S. strategic advantage in the event of war. The key enabler for this new policy is the new strategic Triad. The Administration believes that there is strategic synergy to be gained from the close integration of nuclear and non-nuclear strike capabilities with defenses. As described in both documents, this combination of capabilities – particularly advanced conventional systems – provides the means to assure allies, dissuade competitors, deter aggressors and defeat enemies while reducing the risk to the United States.

This new Triad provides the basis for meeting the range of challenges that could confront the United States and to control the unfolding of events. An unparalleled conventional capability allows the United States, in some cases, to prosecute strategic campaigns without resort to nuclear weapons. Improvements in precision targeting, powered flight and payloads means that non-nuclear strike forces not only are capable of dominating the conventional battlefield but of holding at risk a broad range of strategic targets. This alone may be sufficient to deter the use of WMD. But if not, the combination of strategic defenses and non-nuclear strike capabilities could deny some adversaries a credible escalatory option. Non-nuclear strike systems such as the BIG BLU deep earth penetrator offer an option for preemptive action against WMD targets.²⁷

The second leg of the new Triad, strategic defenses will complement the strategic offensive leg. Limited defenses consisting of only a few tens of interceptors could defeat an attack by a rogue state armed with a very small strategic arsenal. Such a defense could also complicate an aggressor's "cheap shot," that is an attempt to employ a small number of strategic weapons against the most extremely high value U.S. strategic targets, such as the National Command Authority (NCA). A somewhat more robust defense on the order of 100 interceptors, in conjunction with the proper basing mode for strategic offensive forces, could effectively eliminate any serious first strike threat even from nations possessing large nuclear arsenals. The current posture of the ICBM force, presenting an attacker with 500 aim points would, in conjunction with limited strategic defenses, present a would-be first-strike planner with an insurmountable targeting problem.

While the inclusion of strategic non-nuclear forces into the new strategic Triad has allowed the United States to reduce its reliance on nuclear weapons, it has not changed the central role of those weapons in U.S. national security strategy and defense policy.

²⁷ On BIG BLU see Thompson, *op. cit.*

Strategic nuclear forces continue to be the single guarantor of U.S. survival in a nuclear-armed world. So long as other nations maintain large nuclear arsenals, capable of wreaking intolerable damage on the United States, this nation must have a capability to respond in kind. U.S. strategic nuclear forces provide the ultimate deterrent and an absolute capability of defeating an adversary that no combination of non-nuclear forces and defenses could match. While the kind of strategic defenses envisioned by this Administration could provide protection for a very limited number of targets, and then only when confronted by relatively simple offensive forces, the United States will have to rely on strategic offensive forces to provide a damage limiting capability in the event of conflict with a nuclear-armed adversary of any size.

The new strategic Triad provides an expanded range of capabilities with which to counter any effort by adversaries to deter the United States from active involvement in any region of the world, whether to reassure allies and friends, protect vital interests, deter aggression or defeat an attack. In essence, it is also an attempt to apply the concept of asymmetry to defeat attempts to use direct or indirect threats to deny the United States access to regions of interest. With this new Triad, the United States will be able to hold the initiative in virtually any future conflict involving conventional forces and/or WMD. Moreover, because of the mutually reinforcing character of this joint strategic capability, prospective adversaries will be left with few viable options in attempting to engage the United States at the conventional level or, failing there, escalate to the use of WMD.

III. Roles and Missions for Strategic Nuclear Forces

The focus in both the QDR and NPR on new conventional capabilities might give rise to the erroneous impression that not only the number, but the role of strategic nuclear forces, as well, was being diminished in the Bush Administration's new national security strategy and defense policy. This is far from the truth. In a number of ways strategic nuclear forces are more relevant to U.S. national security today than they were during the Cold War. In particular, strategic nuclear forces may be critical to the ability of the U.S. to shape the international security environment in ways conducive to U.S. political interests and military strategy. Thus, the U.S. strategic nuclear force must be viewed as a political instrument, as a tool for shaping the arms acquisition behavior of other states, as a shield against WMD threats by rogue states, as a hedge against the resurgence of larger strategic threats and as a finely honed implement of war.

The United States requires a sizeable strategic nuclear force that is robust, flexible and responsive. Employing a capabilities-based method of assessing requirements, this strategic nuclear force must be of a size and character so as to leave no doubt that the U.S. is the world's foremost superpower and that no combination of events or threats can prevent the nation from being able to defend itself and its vital interests. This force must be designed with an eye to deterring the full range of threats, from rogue nations with small arsenals of WMD to the Russian strategic nuclear force. This means that the strategic nuclear forces must be structured and postured to avoid vulnerabilities that might give rise to first strike incentives. It must also be sufficiently responsive and flexible so as to convince any would-be aggressor that he cannot escape retaliation of a kind and at a time of our choosing. Finally, it must be large enough both to inhibit arms race incentives on the part of would-be peer competitors and to ensure that regardless of what retaliatory option

it may be called on to exercise, that it will possess a residual capability sufficient to maintain deterrence of even a large nuclear force.

The practical utility of strategic nuclear weapons is likely to grow as the United States pursues an international security strategy based on confronting rogue regimes and a military strategy of transformation. The most important role for strategic forces now as during the Cold War is to undergird the U.S. strategy of defending regional interests by projecting and maintaining military power forward, often within close proximity to adversary conventional and nuclear forces. That role has become more central to U.S. national security in some ways as adversaries seek to employ a wide range of means, including WMD threats to the homeland, to deter the U.S. from defense of its vital interests. They are also important as a means of empowering and protecting the conventional superiority the United States now enjoys and expects to maintain for the next several decades.²⁸

States seeking WMD and long-range delivery systems do so primarily for the political value of such weapons, rather than for their war fighting utility. It is generally recognized that the United States is capable of destroying any state employing WMD against U.S. forces, friends and allies or the homeland. It is all too readily assumed by many that this imbalance in capabilities is sufficient to deter WMD use against U.S. interests or the homeland. Nevertheless, so-called rogue states are pursuing WMD because they believe that they can exploit a likely disparity of interests between themselves and the United States. Under circumstances in which the survival of the regime is threatened, these otherwise paltry WMD arsenals acquire additional credibility as deterrents. As U.S. conventional superiority grows, the incentives to proliferate are likely to become overwhelming. In those instances where the United States contemplates regime change it must address the very real risk that the targeted state will employ WMD early in the conflict. As a result, the ability to deny the rogue regime the ability to employ its WMD assets through a combination of defenses and preemption may be more important as a deterrent, than a large strategic nuclear arsenal devoted to inflicting retaliatory damage.

The existence of a large, flexible and responsive strategic nuclear force poses a direct counter to any attempts by prospective regional opponents to obtain and deploy WMD and delivery systems as a means of influencing a U.S. strategic calculus in the event of a regional crisis or conflicts. Such an adversary cannot contemplate the threat or use of WMD without the realization that he risks retaliation in kind. In order to make such a threat viable, the United States must make credible limited nuclear strike options that can reasonably be expected to deter the use of WMD by an opponent facing conventional defeat²⁹. If he seeks to escalate, he faces annihilation. The risks of attempting to neutralize the U.S. conventional capability by means of an asymmetric threat rapidly outweigh any possible gains.³⁰

²⁸ Bunn, et al, *op. cit.*, p. 3.

²⁹ It should be remembered that Iraq used chemical weapons extensively during its war with Iran to defeat that country's conventional forces.

³⁰ This may have been the reason Saddam Hussein did not use WMD against coalition forces or Israel in 1991. See Keith Payne, "Post-Cold War Requirements for U.S. Nuclear Deterrence Policy," *Comparative Strategy*, No. 17, 1998, pp. 239-240.

In the future, strategic nuclear forces also could play a role in neutralizing any political value a regional opponent might expect from the possession of WMD. There has been speculation that Iraq, in particular, could exploit WMD to sustain and expand its already declared policy of extended deterrence.³¹ Such a move would be intended to counter the deterrent of other regional powers, in this case Israel and, in the future, Iran. It would also be presented as a counter to the threat posed by U.S. conventional forces. With an appropriate declaratory policy, U.S. strategic nuclear forces could negate the political utility of regional WMD.

In a world of rapidly expanding conventional force options, the presence of a robust strategic nuclear force also could be exploited as a means of complicating proliferators' acquisition strategy and force planning. Planning for the possibility of future conflict, a regional opponent would have to contend with the possible use by the United States either of its advanced conventional capabilities or elements of its strategic nuclear posture. That state would have to weigh its investments in programs to counter the U.S. conventional advantage as well as the likely success of its efforts to acquire WMD. This may result in the diversion of resources from more threatening programs to others with which the United States could more readily cope.³² The combination of superior conventional forces and a large and capable strategic nuclear force could pose an insurmountable problem to the would-be proliferator.

The presence of a large and sophisticated strategic nuclear force, particularly as part of a strategic Triad, could persuade would-be proliferators or those with an interest in a nuclear arms race with the United States from pursuing such a strategy. The U.S. strategic force envisioned by the NPR presents a very high bar to any state seeking to develop a nuclear capability sufficient to gain it the political and military advantages of being a nuclear "superpower."

In light of the President's Remarks at West Point in June 2002, the preemptive use by the United States of some elements of its strategic nuclear arsenal to preempt a WMD attack on the United States itself or against friends and allies must be given serious consideration. Damage limitation, a strategy abandoned early in the Cold War, makes increased sense in a world populated by rogue regions that could be armed with a small number of nuclear weapons or other WMD.

If the United States is to seriously pursue a policy of preempting WMD threats, it needs to consider a range of investments in its new strategic TRIAD and supporting command and control and intelligence. Over the next decade or two, the United States intends to invest in C4ISR capabilities of such scope and capability as to give it, in all likelihood, extremely high confidence warning of an impending attack. Indeed, under the banner of Persistent ISR, the Air Force is designing capabilities and concepts of operation that could allow for near birth-to-death tracking of WMD and their delivery means. Despite the improvements in effectiveness of non-nuclear weapons, the use of a strategic

³¹ Dr. Khidhir Hamza, "Possible Ways for Iraq to use its Nuclear Option", unpublished paper.

³² On the subject of strategies to influence weapons proliferation behavior, see Henry D. Sokolosky, ed., Prevailing in a Well-Armed World: Devising Competitive Strategies Against Weapons Proliferation, U.S. Army War College, Carlisle, PA, 1994.

system could be required depending on the character of the target. However, creation of a Persistent ISR capability would also support the development of small, precision nuclear weapons.

For at least the next several decades, the United States is unlikely to face the oft-mentioned “peer competitor.” Its primary security problem will be ensuring the security of friends, allies and other vital interests. The focus of defense planning must be on deterring or defeating local aggression that could include the limited use of WMD. Although most scenarios for future regional conflict focus on so-called rogue states, it is possible that the United States could find itself in a limited conflict with either Russia or China. This requires retaliatory threats of a kind and magnitude appropriate to these limited circumstances. The threat of massive retaliation is increasingly incredible as a response to limited use of WMD, even against the U.S. homeland. Yet, it is not clear that the threat of an all-conventional response would be sufficient to deter some adversaries. It is important to consider limited nuclear options that would be of a sufficient size and character to thwart an adversary’s plans but so constrained as to not result in massive casualties. The dynamic international environment makes it difficult to arrive at a force-sizing criterion adequate for the broad range of potential situations in which nuclear weapons might be relevant.

“ . . . the types of U.S. threats and underlying capabilities that may be necessary over the next twenty-five years will be as varied as the challenges and contexts likely to confront Washington. Some foes in the future may be deterred by threats to their counter-value targets, requiring few if any U.S. nuclear weapons. Other foes, highly motivated and notably cost and risk tolerant, may be deterred only by severe threats to many types of targets, requiring significant U.S. nuclear capabilities.”³³

One of the major themes of the QDR is the difficulty of predicting where, when and against whom U.S. forces might become engaged in conflict. Another is the strong possibility that the United States will be the victim of strategic surprise. Strategic nuclear forces stands as a strong hedge against those surprises that might otherwise result in the defeat of U.S. power-projection capabilities, the loss of access to regions of interest or an unexpected attack on the homeland. Nuclear forces might be called on to defend forward-deployed U.S. forces in danger of being overrun and defeated in detail.

After the Cold War, it seemed natural to view strategic nuclear forces only as means of deterrence, and then of declining relevance. In the face of a growing danger of WMD proliferation, the rise of fanatical regimes and non-state groups, and the resilience of rogue state regimes, it is increasingly important to view strategic nuclear forces as instruments of dissuasion and denial. Properly structured and postured strategic nuclear forces can act as a break on the WMD ambitions of potential adversaries and rogues. With adequate responsiveness and precision, those same forces can also act to deny an adversary’s operational and strategic goals by preempting his use of WMD or, together with

³³ National Institute for Public Policy, Rationale and Requirements for U.S. Nuclear Forces and Arms Control, Volume I: Executive Report, January 2001, p. 12.

strategic defenses, engaging in a counterforce campaign.

IV. The Future Nuclear Force Posture and Structure

In an era characterized by strategic uncertainty, the high likelihood for strategic surprise and adversaries that may not be deterred by the threat of national annihilation, how should U.S. strategic nuclear forces be structured and postured? What are the appropriate features of a strategic force posture that must support the four defense policy objectives of reassurance, deterrence, dissuasion and defeat as they relate to a widening set of threats? The force must be able simultaneously to address the four objectives as they relate to the legacy threat posed by Russian strategic forces, the growing threat of China's modernizing strategic force and the emergent WMD capability of a range of rogue regimes.

In this new era, the United States requires strategic nuclear forces that are, above all else, usable. A usable force is one characterized by a high state of alert, responsiveness to changes in circumstances and targets, an ability to reach targets rapidly, and precision in its effects. These capabilities are necessary in order to establish credible 21st century deterrence. The credibility of deterrence will be based not on automaticity of use, or the massiveness of response, but on the capability to engage an adversary swiftly, yet selectivity. Threats to turn adversaries into glass parking lots may not be credible in light of new circumstances, stakes involved in conflicts, or the role of U.S. as intervening party. Instead against states such as Russia, should it seek to employ its nuclear forces to dominate a regional conflict or a rogue state attempting to deter U.S. intervention, a credible deterrent is one that poses the threat of precision strikes with low collateral damage.³⁴

The credibility of the new deterrent and the effectiveness of the strategic forces will depend not only on the speed and precision of the response, but also the ability to hold-at-risk an extremely wide range of targets. The new Bush strategy makes places a renewed focus on the so-called counter force – or better put, counter-WMD – mission. The targeting requirements of counter-WMD targeting, even in the case of a regional adversary, could be quite challenging. Counter-WMD means the ability to attack both fleeting targets, such as mobile missile transporter-erector-launchers (TELs), and deeply buried/hardened targets, including WMD production sites, command and control facilities and even silos.

The force must also be able to respond to a wide variety of scenarios including those that fall into strategic gray areas as a result, for example, of the type of WMD involved, the means of delivery, the targets or the identity of the attacker.³⁵ These types of scenarios do not lend themselves to the targeting plans that were created to support classic Cold War deterrence. STRATCOM began to address this new reality in the late 1990s. According to then CINC STRATCOM, Admiral Richard Mies:

“We continue to plan a range of options to ensure that the United States can deter potential aggression in a manner appropriate to various levels of provocation rather than being

³⁴ Thompson, *op. cit.*

³⁵ Bunn, et al., *op. cit.*

left with an 'all or nothing' response. Among those options is the capability to respond promptly to any attack, thus complicating an adversary's offensive and defensive planning calculations."³⁶

The United States needs a strategic force that both dissuades those without strategic capabilities of their own from seeking to acquire them and counters any arms race or first-strike ambitions that may arise in states with strategic capabilities. Dissuasion is achieved by ensuring that the bar is too high to cross. The current U.S. strategic force posture, based on the TRIAD, each leg of which has a different operational mode and survivability characteristics, creates such a high bar. The height of the bar could be adjusted upward by the addition of even limited strategic missile defenses.

For the first time in decades, the presence of strategic defenses must be taken into account in the shaping of strategic offensive forces. The presence of defenses, in itself, could be a sufficient factor to dissuade some states from acquiring WMD or from seeking first-strike capabilities. A mix of defenses and offensive forces in multiple basing modes would present any aggressor with an impossible first-strike problem. Highly responsive offensive force elements could be used in conjunction with defenses to degrade and defeat an adversary's offensive capability. Such offensive capabilities could also be employed to reduce the number of weapons with which a limited defense would have to contend, thereby increasing the possibility of limiting or even preventing damage from a WMD attack.

Ultimately, U.S. strategic nuclear forces must contribute to the defeat of an aggressor's strategic attack and, should it become necessary, retaliate under any circumstances with a devastating blow in the event of large-scale use of WMD. Both the size and structure of the force are extremely important matters. The force must be large enough to ensure unacceptable retaliatory damage even after absorbing a first strike, or first having engaged in a series of more limited strikes. Moreover, the force must be postured so as to deny an adversary any first-strike incentives that might arise if the force is deployed at too few locations. Finally, in an era of uncertainty and surprise, the force must have a reconstitution capability.

Recognizing the broad range of potential roles and missions for the strategic forces, the NPR proposed a new way addressing force requirements. U.S. nuclear forces would be sized based on the need to meet both current and potential contingencies. The force structure will consist of an operationally deployed force intended to meet not only planned scenarios, but unexpected contingencies, as well. There would also be a responsive force to meet potential contingencies.³⁷

For these reasons, the United States requires a strategic nuclear force that is flexible, relatively large, first strike insensitive and capable of change in the face of a

³⁶ Admiral Richard Mies quoted in Hans M. Kristensen, The Matrix of Deterrence: U.S. Strategic Command Force Structure Studies, Nautilus Institute, May 2001, p. 19.

³⁷ Crouch, op. cit.

greater-than-expected threat. While some have argued that even at between 1,700 and 2,200 deployed weapons the force is too large, this is not the case. A relatively large U.S. strategic arsenal can be an important contributing factor to both dissuasion and deterrence. A large force structure could dissuade any would-be competitor, most particularly China, from attempting to achieve strategic parity with the United States. Such a force, properly distributed among mutually supporting “legs,” would serve to deny any would-be attackers’ strike planning. In the event of a nuclear conflict, the arsenal envisioned by the NPR can insure that no potential adversary would see any advantage from attacking the United States in the aftermath of a U.S. nuclear strike on another state.

In light of the uncertainties that mark the present period and the clear recognition strategic forces must address an unprecedented spectrum of potential scenarios, the NPR quite correctly chose to maintain the traditional strategic Triad of ICBMs, bombers and submarines. As suggested in a recent study, a force structure based on a variety of platforms ensures against sudden changes in the threat that might make one leg of the vulnerable.³⁸ A Dyad consisting of bombers and submarines, one often suggested by those that seek further reductions, could result in the creation of a first-strike incentive because of the basing constraints that would exist for such a force. A triad also provides for flexibility and responsiveness, critical characteristics in a force that must deal with uncertainty and even surprise.

Moreover, each leg of the Triad will continue to have a unique role in U.S. defense strategy and contribute in particular ways to the fulfillment of strategic force missions. Without question, submarine launched ballistic missiles (SLBMs) are the ultimate deterrent. With the collapse of the Soviet Union, their survivability is assured into the indefinite future. They will contribute to the responsive force insofar as the Trident SLBM could carry additional warheads above the number proposed by the NPR. The strategic bomber force is a hedge against both the failure of one of the other two legs and the possibility that potential adversaries are able to deploy highly effective missile defenses. It should be noted that as a result of the Bush decision to make the B-1 a conventional-only bomber, the nuclear-capable bomber fleet will consist of approximately 100 B-2 and B-52 bombers.

The ICBM leg of the Triad is emerging as the most relevant to the new strategic environment. It is somewhat ironic that many of the characteristics that once gave war planners and arms controllers the greatest concerns are now characteristics that make ICBMs attractive in the new security environment. High accuracy, counterforce potential, speed and responsiveness were all characteristics of ICBMs that gave rise to problems in the context of the old East-West confrontation. ICBMs, specifically highly-MIRVed, were considered the principal threat to superpower stability. Much of the energy invested in strategic arms control in the 1970s and 1980s was focused on limiting the capabilities of ICBMs.

Now, those same operational characteristics must be considered as positive benefits in the context of the new security environment and the emerging U.S. national security strategy. The operational characteristics of the ICBM, prompt responsiveness, speed, precision and the ability to deliver unique payloads, are highly desirable when

³⁸ National Institute for Public Policy, *op. cit.*, p. 8.

considering the range of strategic scenarios the United States could confront. Unless planners anticipate the need to employ strategic forces and pre-deploy bombers, only the ICBM force can be responsive to a dynamic scenario. ICBMs can be employed singly against the full range of potential targets. The ICBM force also is best suited to make effective use of the adaptive nuclear planning capability being developed by STRATCOM.

The size and posture of the ICBM force enables it to contribute to the missions of deterrence and dissuasion in ways that are both unique and extremely powerful. Deployed in large numbers in hardened silos and geographically dispersed, the ICBM force negates any possibility for an adversary to conduct a surprise disarming strike. Without a large and geographically dispersed ICBM force, deployed in hardened silos, the entire U.S. strategic force posture would consist of as few as a dozen or so strategic targets. Even an adversary with only a limited arsenal could contemplate a first-strike intended to eviscerate the U.S. strategic force posture. In the face of the ICBM force as currently sized and deployed, an adversary seeking a counter force capability must recognize the need to expend a large number of weapons (at least 2 on each of 500 silos for a total of 1,000 weapons) against the ICBM force alone. Such numbers are likely to be unattainable for virtually all nuclear weapons states, save Russia. In the case of Russia, in the current arms control environment the cost of attacking the ICBM force, between fifty and sixty percent of the permissible total weapons, would still be prohibitive. With the addition of strategic defenses, strategic forces become an extremely unattractive first-strike target even at offensive force numbers substantially higher than those proposed for the new strategic arms limitation treaty.

An aggressor also must contend with the fact that an attack on U.S. strategic forces would of necessity be extremely large. Even if effective at eliminating land-based forces, the aggressor would face an inevitable massive retaliatory blow from the U.S. SLBM force.

While it is true that the ICBM is not the only means of attacking targets, particularly in a regional scenario where air defenses are likely to be limited, their presence, not to even mention their use, could be useful as a means of reassuring allies and signaling adversaries. The threat of ICBM use informs allies that the United States is willing to place its homeland at risk by launching weapons from its own territory in their defense. To an adversary, it states that the United States intends to employ all means at its disposal and to exploit any advantage, such as sanctuary basing in the continental United States, to defeat them.

The ICBM leg can most readily provide the responsiveness to potential contingencies called for in the NPR. The Minuteman III could be upgraded with two additional warheads. A force of 500 ICBMs would support as much as a 60 per cent increase in the number of available weapons. This could serve as a powerful dissuasion to Russia or China should those nations consider breakout from START III or an arms race. Admiral Mies described the reasons why ICBMs remain so important in U.S. strategic nuclear plans thus:

“Intercontinental ballistic missiles continue to provide a reliable, low cost, prompt response capability with a high readiness rate. They also promote stability by ensuring that a potential adversary takes their geographically dispersed

capabilities into account if contemplating a disarming first-strike. Without a capable ICBM force, the prospect of destroying a significant percentage of America's strategic infrastructure with a handful of weapons might be tempting to a potential aggressor in a crisis."³⁹

Some have suggested reducing the number of ICBMs from 500 to 350 or even 250. In view of the broad range of missions confronting strategic forces and the need to respond to potential contingencies as well as immediate and unexpected ones, this would be a mistake. There is only a small cost associated with maintaining the full 500 ICBMs and much to gain. The present size of the force sets a high bar for those who might seek a first-strike capability. It also provides a significant hedge against a future arms race. Finally, they can be employed in regional contingencies with only a small impact on the overall deterrent value of the force.

Both in its size and structure, the U.S. strategic nuclear force must be capable of ensuring victory regardless of the level of the conflict. This means that the force must be capable of being employed selectively to prevent hostile use of WMD. It must also be capable of supporting U.S. conventional forces and protecting allies that are threatened with conventional defeat. Finally, the force must be demonstrably capable of executing a seamless sequence of escalatory options that presents potential adversaries with no perceivable gaps that they might seek to exploit.

V. Conclusions

Strategic nuclear forces are likely to be as relevant to U.S. national security in the future as they have been in the past, albeit with lower overall numbers of weapons. A large, responsive, employable and survivable strategic nuclear force posture is central to meeting the QDR's strategic goals of reassurance, deterrence, dissuasion and defeat. Such a force enables the United States to maintain its nuclear guarantees to allies. No adversary can consider the use of WMD, whether against U.S. forces, friends and allies, or the homeland, without clearly understanding that under any circumstances the United States will be able to respond appropriately and, potentially, massively. A large force consisting of ICBMs, bombers and submarines can serve as a powerful disincentive to adversaries contemplating breakout or an arms race with the United States. Finally, in the event of war, this is a force that will maintain the full range of capabilities necessary to ensure the defeat of any prospective opponent.

Strategic nuclear forces are a central element of the new strategic Triad, along with defenses and non-nuclear strike capabilities. Their presence alone can serve to enable the non-nuclear strike leg of the new Triad by denying adversaries a viable escalatory option. They provide the means for attacking targets that are invulnerable to non-nuclear strike capabilities.

In an era of uncertainty, with a heightened possibility of strategic surprise, it would be an act of wisdom to retain the existing strategic Triad and to maintain overall a large

³⁹ "The Changing World of Nuclear Deterrence," *Air Force Magazine*, September 2001, p. 93.

force. It must be recognized that once a leg of the Triad is eliminated, it is likely to be impossible to resurrect the lost capability. All three legs serve unique roles in U.S. nuclear strategy. They also are mutually reinforcing, serving to reduce the threat of attack on the other legs and providing employment flexibility.

Far from being the least relevant leg of the Triad, ICBMs appear to be the most critical to the new U.S. defense strategy and force employment concept. ICBMs are most suited to the dynamics of strategic and operational environment envisioned in the QDR and NDP. Their responsiveness, high alert rate, speed and precision would make them the weapon of choice in meeting the new requirement for “preemptive” capabilities against rogue state or terrorist WMD. ICBMs can carry unique payloads that may be particularly suited to new types of targets. Finally, the presence of a large, dispersed and hardened ICBM force in the United States presents any would-be attacker with a nearly insoluble problem and a potential proliferator with a very high bar to cross.

President Bush noted in a recent speech that although he sought to reduce the overall number of strategic nuclear weapons, a strong and capable strategic nuclear force was essential to the maintenance of deterrence. Such a force in the form of some 1,700-2,200 deployed weapons dispersed across the three legs of the Triad would contribute powerfully to deterrence and to the QDR strategy.