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U.S. Air Force (Brett Snow)

Strategic Forces for Deterrence

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U.S. Air Force

EDITOR'S *Note*

Nuclear weapons have proven effective at preventing conflicts. In the wake of the Cold War, however, the role of these weapons and the concept of deterrence are being reexamined. Today deterrence requires a full, diverse set of options which are flexible and effective against a range of threats. Moreover, they must be readily perceptible to a potential enemy. While deterrence may depend more on conventional forces than in the past, the Nation must maintain credible nuclear capabilities into the future. As the United States reduces the size of its nuclear arsenal, care must be taken to guarantee that our capabilities contribute to the credibility and viability of deterrence.

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The United States has encountered new challenges in its efforts to shape a more stable and secure world in recent years. These include building a safer relationship with an independent but nuclear armed Russia and dealing with the proliferation of weapons of mass destruction as well as regional threats to our national interests. In a radically changed, complex, and volatile world, it is necessary though difficult to define security interests, craft a military strategy, and develop doctrine to organize, equip, and employ our forces.

For U.S. Strategic Command (STRATCOM)—a post-Cold War command responsible for the Nation's

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strategic nuclear deterrent—this challenge has special meaning. The establishment of STRATCOM in June 1992 consolidated command and control of our strategic nuclear forces under one CINC. The command has also been tasked to support the regional CINCs in nuclear planning and counterproliferation. The STRATCOM mission is basically the same as that of the other combatant commands—to deter military attack against the United States and its allies and, should that fail, to employ forces—although our assigned weapons certainly possess unique characteristics.

Joint doctrine is crucial in defining means—the kinds of forces the Nation requires—and how they should be employed to meet strategic ends. Now more than ever, the Armed Forces must be guided by a “unity of effort” as defined in joint doctrine. We need a clearer understanding of the contributions of all our forces—nuclear and non-nuclear, offensive and defensive—to this joint effort, both for deterrence and warfighting, in support of national rather than parochial interests. Doctrine contributes to this effort not only by adapting to change but by leading it.

Deterrence and Warfighting

Our national security strategy of engagement and enlargement has brought the capabilities of the military into a closer relationship with political and other instruments of national power. To former Secretary of Defense William Perry, this translated into three lines of defense—to prevent, deter, and defeat—which feature cooperative threat reduction, arms control, alliances, peace operations, and humanitarian assistance as complementary elements of defense strategy. Similarly, the Chairman has outlined a national military strategy with three elements: peacetime engagement, deterrence and conflict prevention, and fight and win. Both of these frameworks have established a role for the Armed Forces that is focused on proactive ways to keep the peace.

These ideas remind us that the refrain “to fight and win our Nation’s wars” is not the first responsibility of our military. As *Joint Vision 2010* states, “the primary task of the Armed Forces

will remain to deter conflict—but should deterrence fail, to fight and win our Nation’s wars.” This is not to suggest a contradiction between deterrence and warfighting; they complement each other but are not identical. Warfighting requires a capacity to wage war effectively, with options ranging across the conflict spectrum

nuclear weapons provide an essential complement to conventional forces

“commensurate with the scale or scope of enemy attacks and the nature of U.S. interests at stake.”¹ Such a capability involves the integration of every element of military power—weapons, people, command and control, communications, intelligence, plans, operational concepts, logistics, leadership, training, and readiness. Deterrence, for its part, requires that this capacity to wage war—as well as the will to wage it—be credible.

Deterrence is based on perception, so that a potential enemy will calculate that the likelihood of success is so uncertain and risks so excessive that there is no incentive to attack. If warfighting capabilities exist but are not apparent, or if vulnerabilities negate those capabilities at the outset of conflict, or if we appear unwilling to employ them, deterrence is more likely to fail. Thus effective deterrence requires a range of credible warfighting capabilities—suited to the circumstances, threat, and interests—with the clearly communicated determination to use them in the event of aggression. As experienced in countless cases, this requirement applies to both nuclear and non-nuclear forces.

If a conflict breaks out despite our best efforts to prevent it, deterrence does not cease to be a strategic objective. We seek to “control escalation and terminate the conflict on terms favorable to the United States and its allies.”² Regardless of the nature of the difficulty, the United States seeks to deter an enemy from escalating the intensity or scope of any conflict and, once our objectives are met, to deter it

from continuing hostilities at all. In the case of the Persian Gulf War, for example, President Bush told Saddam Hussein that the United States would not tolerate the use of chemical or biological weapons. And though never explicitly threatened, Iraq believed that the United States was prepared to use nuclear weapons if it did not heed

America’s warning. This demonstrates that deterrence is inherently strategic, aimed at directly influencing enemy decisions on

using force even in the midst of conflict. Warfighting also must not be understood in only operational or tactical terms—vis-à-vis its effect on opposing forces in the battlespace—but in terms of its strategic effect on enemy leaders, where the ultimate decision is made on using force.

In considering military strategy and doctrine, planners legitimately emphasize conventional warfighting. For example, having recognized the contribution of nuclear weapons to deterrence, *JV 2010* argues that “we will largely draw upon our conventional warfighting capabilities . . . to deter, contain conflict, fight and win, or otherwise promote American interests and values.” Such a position is understandable, especially given that developing, training, and sustaining the requisite conventional forces consumes the largest share of the defense budget. It also highlights a desire to reduce reliance on nuclear weapons. But the experience of the past few years confirms that nuclear weapons continue to provide an essential complement to conventional forces. Notwithstanding new technology, the strategic end is the same—to convince an enemy that the result of aggression against the United States or its interests is dangerous.

Nuclear Weapons

From the advent of the atomic age, it has been clear that nuclear weapons changed warfare. As Bernard Brodie recorded in 1946, “Thus far the chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them. It can have almost no other useful purpose.”³ Yet nuclear weapons proved effective in preventing war. In

the first half of this century the world experienced two global conflicts. World War I resulted in an estimated nine million dead, twice the cumulative wartime fatalities of the previous 500 years. World War II took a toll of nearly 55 million dead. While the world has not seen the end of war, there have been no conflicts with anywhere near the scale of casualties of those two global contests. Any crisis that punctuated the Cold War could have been many times more devastating, but nuclear weapons appear to have had a restraining effect. As Sir Michael Quinlan recently noted:

*The absence of war between advanced states is a key success. We must seek to perpetuate it. Weapons are instrumental and secondary; the basic aim is to avoid war. Better a world with nuclear weapons but no major war than one with major war but no nuclear weapons. . . .*⁴

More than any other weapon in America's arsenal, nuclear arms have remained morally and politically contentious. In the view of the U.S. Government and the International Court of Justice there is no customary or conventional international law that prohibits nations from employing them in armed conflict.⁵ Nonetheless, these weapons have represented a paradox since their inception. On the one hand, their deterrent value derives from their immensely destructive nature—the ability to kill more people in a few hours than perished during World War II. On the other hand, that very destructiveness decries their usability, placing into question whether a democratic society would resort to such weapons, especially in defense of others.

Recently the United States has demonstrated its conventional warfighting capability, most notably in the Persian Gulf. Nuclear deterrence, however, cannot depend upon such demonstrated capability—indeed, the premise of nuclear strategy is that victory loses much of its meaning. Yet despite their special character, considerations regarding their employment must conform to the laws of armed conflict, including military necessity,

proportionality, and avoidance of collateral damage and unnecessary suffering.⁶ Thus, regarding nuclear weapons as instruments of terror rather than purpose is unacceptable to the Nation; we cannot simply possess a small number of these weapons to threaten the destruction of population centers. We must preserve the capability to hold at risk a range of legitimate targets and

U.S. interests mandate a nuclear capability that offers diverse and flexible options

the flexibility to employ forces consistent with the circumstances.

New Threats and Challenges

The nuclear genie did not escape from the proverbial bottle because of the Cold War, and the end of superpower confrontation did not put it back. Nuclear weapons certainly dominated the U.S.-Soviet relationship throughout the Cold War, and remain central to the U.S.-Russian strategic relationship. The DOD Nuclear Posture Review acknowledged the reduced role of nuclear weapons in U.S. security but emphasized that as long as they remain on the international scene, deterring attack on the United States and its allies must be our objective. Moreover, in successive national security strategy statements, Presidents have reaffirmed that the United States will retain a triad of strategic nuclear forces for deterrence.

During the Cold War, defense planners alternated between depending on nuclear weapons to compensate for more expensive conventional military assets and relying on them less to reduce risks. At the time we were conscious not just of strategic nuclear threats to the American homeland but the overwhelming conventional military power opposing the United States and its allies. Today that latter concern is virtually forgotten. In NATO, the revision of the strategy of flexible response reflected reduced reliance on nuclear weapons, even though the Alliance still declares that they “make a unique contribution in rendering the risks of any aggression incalculable and unacceptable.”⁷

Since the Cold War ended, likely threats involve use of nuclear, biological, and chemical weapons against the United States, its forces, or its allies by regional powers, rogue states, and non-state actors. Thus, joint doctrine asserts that “the fundamental purpose of U.S. nuclear forces is to deter the use of weapons of mass destruction, particularly nuclear weapons, and to serve as a hedge against the emergence of an overwhelming conventional threat.”⁸ This is not to say that the Nation would necessarily employ nuclear weapons in response to an attack. As in Desert Storm, declaratory policy on use remains intentionally ambiguous, neither prescribing nor proscribing it.

Current and projected threats to U.S. interests, therefore, mandate a nuclear capability that offers a diverse and flexible set of options rather than the large exchange scenarios that dominated Cold War nuclear planning.

Arms Control and Force Reductions

To meet the demands of this new world, the United States needs fewer nuclear weapons than during the Cold War. In fact, Washington and Moscow will reduce their strategic arsenals by some 50 percent under the START I Treaty which went into effect in December 1994, and the new force levels will be reduced by over 40 percent once Russia ratifies START II. Moreover, since the late 1980s the United States has unilaterally reduced its non-strategic nuclear forces by roughly 90 percent. In addition, bombers and tankers have been off alert since September 1991, and ballistic missiles have been detargeted since May 1994.

We anticipate further reductions. Within the context of the Nuclear Nonproliferation Treaty (NPT), the United States—like the other parties—is committed:

*. . . to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.*⁹

But such reductions are not ends in themselves. The ultimate determinant of their utility is the extent to which they serve security and stability. Both NPT and recent appeals for the complete elimination of nuclear weapons acknowledge certain hurdles that must be negotiated before such steps can be taken, including political conflicts which motivate the acquisition of nuclear weapons, as well as questions of verification and various technical issues.

In conjunction with NPT, the United States has affirmed its intent to assist any non-nuclear weapons state that becomes a victim of nuclear aggression or intimidation. In addition, nuclear weapons underpin explicit extended deterrence commitments to alliances like NATO. Precipitous reductions in nuclear deterrent capabilities which undermine the credibility of such assurances may cause states that have foregone such weaponry to reconsider whether they need their own nuclear arms to guarantee security.

Thus, as the United States draws down its nuclear forces to meet treaty obligations, the pace and form of the reductions—as well as the character of remaining forces—are more important than the numbers that dominate the headlines. We must ensure that our remaining forces are effective against the threats and challenges which characterize the post-Cold War world. It is the role of doctrine to outline how this might be done—and the responsibility of the defense establishment to turn that doctrine into real capability.

Credible Options

To preserve a credible, effective deterrent—with or without nuclear weapons—the Nation must maintain the perceived capability to serve a political purpose with military effect, with a range of credible options that can be controlled in their use and tailored to meet the objective. Ultimately, the President alone makes decisions on

using nuclear weapons and thus requires the widest possible range of options and clear understanding of their political and military consequences. In doctrinal terms, forces and related command, control, communications, computers, and intelligence must be diverse, flexible, effective, survivable, enduring, and responsive.¹⁰ But the simplicity of such needs can obscure the difficulty of sustaining requisite capabilities. And while the United States downsizes its nuclear infrastructure, certain factors will be critical to the viability of the deterrent.

Strategic Forces

Contrary to conventional wisdom, strategic arms control agreements over the past quarter century did not actually limit nuclear weapons; rather, they eventually restricted delivery vehicles, namely, the triad of land-based intercontinental ballistic missile (ICBM) launchers, ballistic missile submarines (SSBNs), and bombers. Each of these weapons platforms contributes

Anyone who considers using a weapon of mass destruction against the United States or its allies must first consider the consequences. We would not specify in advance what our response would be, but it would be both overwhelming and devastating.

—William J. Perry

Test launching
Minuteman III.

Ballistic missile
submarine.

B-2 taking off
from Whiteman
Air Force Base.



DOD (Helene Stikkel)

unique benefits to overall deterrent posture, but it may become more difficult in time to sustain each leg of the triad as forces are drawn down further.

Strategic bombers provide the greatest flexibility. B-52s with cruise missiles have a range of capabilities against both strategic and theater targets, thus offering critical options to the National Command Authorities (NCA). As B-2s replace B-1s in the nuclear force, they will furnish unique capabilities to various contingencies. Bombers are capable of nuclear and conventional operations and accordingly pose special issues. They are not on alert and may be tasked to support regional CINCs in conventional operations in crises. Placing them on nuclear alert may thus necessitate difficult choices between strategic deterrence and operational requirements of CINCs. Moreover, the transition to alert status must be managed carefully to ensure that the action serves deterrence rather than being viewed as provocative.

Ballistic missile submarines remain the most potent weapon system in the force, with each Trident SSBN carrying 24 ballistic missiles, each armed with up to eight warheads. The last of 18 Tridents are now being readied for operational deployment. When START II goes into effect, the Navy will retain 14 Tridents—based on both coasts—able to respond to contingencies anywhere in the world. The most significant attribute of the submarine leg of the triad is its survivability. With eight boats usually at sea, we maintain a

powerful assured retaliatory capability. In port, however, a ballistic missile sub is potentially one of the most destabilizing weapons since it is an extremely lucrative target which makes it crucial to preserve a force large enough for two-ocean operations.

Intercontinental ballistic missiles remain on full alert in some 550 silos in the United States. Fifty silos have the Peacekeeper with up to ten warheads that will be eliminated under START II. The balance have the Minuteman III, each with up to three warheads that

doctrine prescribes a combination of attributes represented by the triad

will be reduced to single warheads under START II. These weapons remain the most responsive in the force. To some, ICBMs are a vestige of the Cold War, the least survivable leg of the triad. They must be on alert to pose a credible threat lest they be seen as certain kills in a preemptive strike. At the same time, they contribute to the stability of the deterrent by forcing an enemy to take them into account when contemplating a strike. Without ICBMs, the Nation has two SSBN bases, three strategic bomber bases, and only a handful of relatively soft command and control and other support nodes. Even though we would still have a potent retaliatory capability at sea, the prospect of destroying the bulk of our

nuclear infrastructure with a handful of weapons could be too tempting even for a state with a few dozen weapons, never mind Russia's arsenal.

In short, doctrine prescribes that forces have a combination of attributes represented by the triad. Moreover, as forces are drawn down we must maintain a sufficiently diverse mix as a hedge against the unforeseen loss of a particular platform, weapon, or capability, especially given the lack of nuclear testing and new weapons under development. The ability to preserve and sustain a triad as forces are reduced is increasingly significant for a stable deterrent, independent of warfighting implications that might be agreed to in arms control negotiations.

Information

Though weapons themselves typically draw the most attention, information is increasingly the glue that binds forces and enables them to be employed consistent with their strategic purpose. *JV 2010* properly highlights the role of ensuring information superiority. C² became C³ and then C⁴ reflecting greater interconnectivity among command, control, communications, and computers.

Now we need to integrate information about our own forces and capabilities with information on enemy forces from intelligence, surveillance, and reconnaissance (ISR). The integration of C⁴ and ISR (C⁴ISR) systems ultimately is key to ensuring that CINCs are tied together and to NCA with free-flowing data on threats, targets, forces, and decisions. This effort is focused on offensive capabilities; ultimately, we must integrate defensive capabilities to ensure unity of effort.

An integrated and enduring C⁴ISR architecture is increasingly important to STRATCOM, which has always had responsibility for providing NCA with various options regarding the use of nuclear weapons and advice on the consequences. Now with the task of supporting theater CINCs in a crisis,

we will likely find ourselves in a teleconference with regional CINCs, other supporting CINCs, and NCA to consider a full range of options involving targets, weapons packages, and the impact of each. Critical to this interchange is the ability to plan based on dynamic intelligence and force data and the capacity to share information in a timely manner with supported decisionmakers.

Such connectivity must also be sustainable—and thus survivable—throughout a conflict to ensure that force is used consistent with military necessity. The most critical targets, for example, may be relocatable, requiring timely information on their location and disposition. Forces that are incapable of being controlled and employed purposefully over time are relatively inept instruments of deterrence or warfighting. In this respect, advances in protecting, exploiting, and employing information will be increasingly important.

Readiness

A growing challenge is ensuring that strategic forces remain able to do their job if needed. Strategic exercises such as Global Guardian have proven their worth—by offering opportunities to measure strategic force readiness and providing senior decisionmakers experience in the complex issues of crisis management and strategic force employment. Strategic force readiness continues to be excellent, with alert forces maintaining necessary alert rates and dual-capable forces balancing competing demands on conventional and nuclear missions. The greater challenge is in long term readiness—whether the weapons platforms will be sustainable over the next two decades or more, and whether the nuclear weapons themselves will continue to be safe and reliable.

The United States has no new strategic weapons systems under development. We expect our existing missile, submarine, and aircraft systems to remain viable for another quarter century, provided that we continue to sustain and modernize them. This also requires careful attention to the industrial base to ensure that our expertise and capacity to sustain these

systems and to develop follow-on programs is not lost. The next generation of strategic systems need not look anything like our current systems, but within the next decade we must decide on the form they will take and commit the necessary resources.

Nor does the United States have new nuclear weapons under development. As a signatory of the Comprehensive Test Ban Treaty (CTBT), we face additional challenges in making sure that the nuclear weapons stockpile remains safe and reliable over the long term without nuclear testing. In announcing a “zero yield” test ban, the President declared that “the safety and reliability of the nuclear weapons stockpile is a supreme national interest,” indicating that the United States reserves the right to withdraw from CTBT if a nuclear test becomes necessary to restore confidence in the stockpile.¹¹ Withdrawal from CTBT would constitute a major political step. Thus it is all the more imperative to invest in a science-based stockpile stewardship program and associated infrastructure and capabilities to ensure continuing safety and reliability. STRATCOM advises the Secretary of Defense annually on confidence in the stockpile. The issues involved are complex but bear directly on the readiness and viability of our deterrent posture.

The Chairman has often referred to STRATCOM as “America’s ultimate insurance policy.” It has special responsibilities with respect to nuclear weapons, such as the non-strategic stockpile which would be deployed on platforms not under STRATCOM operational control. Nonetheless, nuclear weapons are means rather than ends of policy. Fundamentally, the Nation needs a strategic military capability regardless of technology—a capability to directly affect enemy decisionmakers that goes beyond destroying opposing forces. Rather, it is the ability to cause an enemy to choose peace over war, restraint over escalation, and termination of conflict over continuation.

Nuclear weapons will be an indispensable part of that capability for the foreseeable future. Yet amid the swirling debate over their relevance, or

the maximum number of deployable strategic weapons according to the next arms control treaty, it is important to recall that strategic capability requires more than weaponry. Joint doctrine does frame the attributes of nuclear forces—such as survivable and sustainable platforms, responsive planning and control systems, integrated C⁴ISR capabilities, and readiness. Each is fundamental to our total capability, and each is all the more significant as force levels are reduced. Together they underpin a deterrent strategy designed to ensure that conflicts do not turn excessively violent and destructive. As the Nation again conducts a systematic review of defense investment priorities, we should not ignore this reality. **JFQ**

NOTES

¹ Joint Pub 3-12, *Doctrine for Joint Nuclear Operations*, pp. I-2 and II-1.

² *Ibid.*, p. II-4.

³ Bernard Brodie, editor, *The Absolute Weapon: Atomic Power and World Order* (New York: Harcourt, Brace, 1946), p. 76.

⁴ Michael Quinlan, “The Future of Nuclear Weapons in World Affairs,” *The Atlantic Council of the United States Bulletin*, vol. 7, no. 9 (November 20, 1996), p. 2.

⁵ Joint Pub 3-12, p. II-1. For a summary of its findings, see International Court of Justice, Year 1996, *Legality of the Threat or Use of Nuclear Weapons*, July 8, 1996, general list no. 95, pp. 35–36.

⁶ Joint Pub 3-12.1, *Doctrine for Joint Theater Nuclear Operations*, p. I-1. See also CJCSI 5810.01 (August 12, 1996).

⁷ North Atlantic Treaty Organization, *The Alliance’s Strategic Concept: Statement Agreed by the Heads of State and Government Participating in the Meeting of the North Atlantic Council in Rome, November 7–8, 1991* (Brussels: NATO Office of Information and Press, 1991), p. 10.

⁸ Joint Pub 3-12, p. I-1.

⁹ U.S. Arms Control and Disarmament Agency, *Arms Control and Disarmament Agreements: Texts and Histories of the Negotiations*, in article VI, Nuclear Non-Proliferation Treaty, 1968 (Washington: Government Printing Office, 1990), p. 110.

¹⁰ See Joint Pub 3-12, pp. II-2-4.

¹¹ “Statement by the President on the Comprehensive Test Ban Treaty” (Washington: The White House, August 11, 1995).