

No First Use

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The Next Step for U.S. Nuclear Policy

A persistent theme in U.S. nuclear weapons policy is that the United States has always retained the option to use nuclear weapons first in conflict. The threat of nuclear first use played a key role in NATO's military strategy throughout the Cold War, and even after the collapse of the Soviet Union, successive U.S. administrations have retained—implicitly or explicitly—the first-use option. Yet, in a speech in Prague on April 5, 2009, President Barack Obama pledged to “put an end to Cold War thinking” and to “reduce the role of nuclear weapons in our national security strategy, and urge others to do the same.”¹ This commitment, coupled with President Obama's embrace of the vision of a nuclear weapons-free world, appeared to foreshadow important changes in U.S. nuclear policy—especially declaratory policy—in the administration's much-anticipated Nuclear Posture Review (NPR).²

The NPR, however, missed the opportunity to effect meaningful change in U.S. nuclear policy. In reality, the NPR's new declaratory formulation changes little from the past, as the United States can still threaten the first use of nuclear weapons in a variety of circumstances. The NPR declares that the “fundamental role” of U.S. nuclear weapons is for deterrence; that nuclear weapons would be used only “in extreme circumstances to defend the vital interests of the United States or its allies and partners”; and that “the United States will not use or threaten to use nuclear weapons against non-nuclear states that are party to the Nuclear Non-Proliferation Treaty (NPT) and in compliance with their nuclear non-proliferation obligations.”³ However, to contend that the “fundamental” purpose of U.S. nuclear weapons is deterrence does not mean

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For helpful comments on earlier drafts, the author would like to thank Elbridge Colby, Frank Gavin, Michael Glosny, Robert Jervis, James Lebovic, Jeffrey Lewis, Robert Litwak, Justin Logan, Patrick Morgan, David Palkki, George Perkovich, Joshua Pollack, George Quester, Brad Roberts, Scott Sagan, Victor Utgoff, Christopher Yeaw, and especially James Acton.

1. Office of the Press Secretary, “Remarks by President Barak Obama,” Hradcany Square, Prague, Czech Republic, April 5, 2009, http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/.

2. U.S. Department of Defense, *Nuclear Posture Review Report* (Washington, D.C.: U.S. Department of Defense, April 2010).

3. *Ibid.*, pp. 15–16.

that this is their only purpose. The NPR deliberately leaves open the option for the United States to use nuclear weapons to launch a preemptive—or, less likely, a preventive—first strike against Chinese, North Korean, Russian, and (perhaps) future Iranian nuclear forces. Equally important, the United States can still threaten the first use of nuclear weapons to deter and, if necessary, respond, to a variety of nonnuclear contingencies, including large-scale conventional aggression by another nuclear power such as China or Russia, and biological or chemical threats from states such as Iran and North Korea.⁴ Finally, by failing to specify the circumstances under which the United States might use nuclear weapons and instead only stipulating that nuclear weapons would be used in “extreme circumstances” to protect “vital interests,” the NPR has retained much of the imprecision and vagueness that was the hallmark of the previous declaratory policy, commonly known as “calculated ambiguity.” In this sense, the NPR’s new declaratory policy is little more than calculated ambiguity by another name.

Declaratory policy became one of the most contentious issues of the NPR process and was one of the reasons for the delay in the NPR’s release. Whereas some members of the Obama administration advocated that the United States retain maximum flexibility and as many options as possible in its nuclear policy, others contended that to fulfill the president’s vision set out in Prague, the United States should adopt a more restrictive nuclear policy such as no first use (NFU), perhaps in the form of a declaration that the “sole purpose” of U.S. nuclear weapons is to deter a nuclear attack.⁵ Although the administration considered several options for a new declaratory policy, the NPR ultimately concluded that the United States was not prepared “at the present time to adopt a universal policy that the ‘sole purpose’ of U.S. nuclear weapons is to deter nuclear attack on the United States and our allies and partners, but will work to establish conditions under which such a policy could be safely adopted.”⁶

4. Not surprisingly, Iran understood the implications of the new declaratory policy. Ayatollah Ali Khamenei said, “The recent statement by the U.S. president . . . implicitly intimidates the Iranian nation with the deployment of nuclear arms.” Khamenei continued, “The world should not ignore it, because in the 21st century . . . the head of a state is threatening a nuclear attack.” See “Iran Rails at New U.S. Nuclear Strategy,” *Global Security Newswire*, April 12, 2010; and Ali Akbar Dareini, “Tehran Blasts Obama Ahead of Nuclear Summit,” *Philadelphia Inquirer*, April 12, 2010.

5. See, for example, David E. Sanger and Thom Shanker, “White House Is Rethinking Nuclear Policy,” *New York Times*, February 28, 2010; “U.S. Seen Ruling Out ‘No First Use’ Nuke Policy,” *Global Security Newswire*, March 1, 2010; Mary Beth Sheridan and Walter Pincus, “Obama Must Decide Degree to Which U.S. Swears Off Nuclear Weapons,” *Washington Post*, March 5, 2010; and Mary Beth Sheridan and Walter Pincus, “Obama Faces Tough Decision on Nuclear Weapons,” *Washington Post*, March 6, 2010.

6. U.S. Department of Defense, *Nuclear Posture Review Report*, p. 16.

In this article, I argue that the United States can safely adopt a declaratory policy of no first use, and that such a policy would contribute significantly to U.S. national security and strategic stability. A credible NFU policy would entail a presidential declaration that the United States will not be the first to use nuclear weapons in conflict, and that the sole purpose of U.S. nuclear weapons is to deter—and, if necessary, respond—to the use of nuclear weapons against the United States and its allies and partners.

The traditional case for NFU rests on the argument that the threat of nuclear first use is unnecessary for the United States. U.S. conventional capabilities, NFU proponents contend, are more than sufficient to deter and respond to anything but a nuclear attack. I argue that leaving open the option to use nuclear weapons first is not only unnecessary but, more important, it is dangerous. Given the size and accuracy of the current U.S. nuclear arsenal, and the variation in the nuclear capabilities of current and potential adversaries, the continued option to use nuclear weapons first risks creating instabilities in a severe crisis that increase the chances of accidental, unauthorized, or deliberate nuclear use. In a future crisis with a nuclear-armed state, the fear—whether real or imagined—that the United States might attempt a disarming first strike increases the possibility of nuclear escalation.

The article proceeds as follows. After examining the historical debate over NFU, I identify four reasons why the United States might threaten to use, or actually use, nuclear weapons first and then evaluate each in detail. Next, the article analyzes the strategic consequences of retaining the option to use nuclear weapons first. I demonstrate that, for the United States, retaining the option to use nuclear weapons first undermines crisis stability, and I posit three potential pathways through which the fear of a U.S. nuclear first strike increases the possibility of nuclear escalation. The next section identifies the benefits of a U.S. NFU declaration beyond enhancing crisis stability. The article concludes by examining two obstacles to adopting NFU, both of which likely played a role in the Obama administration's deliberations on declaratory policy: the response of U.S. allies to an NFU declaration and the believability of an NFU pledge.

The NFU Debate

Proposals for NFU have been a constant feature of the nuclear age. NSC-68, for example, noted the argument for NFU but promptly rejected it because “in our present situation of relative unpreparedness in conventional weapons, such a declaration would be interpreted by the USSR as an admission of great weakness and by our allies as a clear indication that we intended to abandon

them.”⁷ The most influential argument for NFU came late in the Cold War. Whereas previous advocacy for NFU traditionally emanated from left-wing advocacy groups, this argument generated attention and debate because it came from four well-respected statesmen who played key roles in shaping U.S. national security policy. Indeed, before the current “four horsemen” on nuclear abolition—Henry Kissinger, Sam Nunn, William Perry, and George Shultz⁸—there was the “gang of four,” composed of McGeorge Bundy, George Kennan, Robert McNamara, and Gerard Smith, who advocated that NATO adopt NFU in an influential article published in 1982.⁹ Their argument focused on a particular criticism of NATO’s flexible response strategy, which held out the option of nuclear first use to help deter conventional aggression by the numerically superior Warsaw Pact forces in Europe. The problem, they argued, was that there was no reliable way to control nuclear war and prevent further escalation once the nuclear threshold had been crossed: “No one has ever succeeded in advancing any persuasive reason to believe that any use of nuclear weapons, even on the smallest scale, could reliably be expected to remain limited. . . . There is no way for anyone to have any confidence that such a nuclear action will not lead to further and more devastating exchanges.” Consequently, “there must be the gravest doubt about the wisdom of a policy which asserts the effectiveness of any first use of nuclear weapons by either side.”¹⁰

7. The document continues, “Furthermore, it is doubtful whether such a declaration would be taken sufficiently seriously by the Kremlin to constitute an important factor in determining whether or not to attack the United States. It is to be anticipated that the Kremlin would weigh the facts of our capability far more heavily than a declaration of what we proposed to do with that capability.” See National Security Council, “A Report to the National Security Council—NSC 68,” April 12, 1950, pp. 39–40 at p. 40, http://www.trumanlibrary.org/whistlestop/study_collections/coldwar/documents/pdf/10-1.pdf.

8. See Henry A. Kissinger, Sam Nunn, William J. Perry, and George P. Shultz, “Toward a Nuclear-Free World,” *Wall Street Journal*, January 15, 2008.

9. McGeorge Bundy, George F. Kennan, Robert S. McNamara, and Gerard Smith, “Nuclear Weapons and the Atlantic Alliance,” *Foreign Affairs*, Vol. 60, No. 4 (Spring 1982), pp. 753–768.

10. *Ibid.*, p. 757. For additional arguments about NFU in the 1980s, see John D. Steinbruner and Leon V. Sigal, eds., *Alliance Security: NATO and the No-First-Use Question* (Washington, D.C.: Brookings Institution, 1983); Robert S. McNamara, “The Military Role of Nuclear Weapons: Perceptions and Misperceptions,” *Foreign Affairs*, Vol. 62, No. 1 (Fall 1983), pp. 59–80; and *No First Use: A Report by the Union of Concerned Scientists* (Cambridge, Mass.: Union of Concerned Scientists, 1983). McGeorge Bundy later modified his view, instead arguing for a policy of “defensive last resort,” which would hold out the option of first use in case nuclear escalation was “the least bad choice.” See Bundy, William J. Crowe Jr., and Sidney Drell, “Reducing Nuclear Danger,” *Foreign Affairs*, Vol. 72, No. 2 (Spring 1993), pp. 140–155. For excellent analysis of the NFU debate, see Peter J. Liberman and Neil R. Thomason, “No-First-Use Unknowables,” *Foreign Policy*, No. 64 (Autumn 1986), pp. 17–36; and Josef Joffe, “Nuclear Weapons, No First Use, and European Order,” *Ethics*, Vol. 95, No. 3 (April 1985), pp. 606–618. For an analysis of NFU published before the “gang of four” article, see Richard H. Ullman, “No First Use of Nuclear Weapons,” *Foreign Affairs*, Vol. 50, No. 4 (July 1972), pp. 669–683.

After the Cold War, several scholars and commentators argued that the demise of the Soviet Union, coupled with significant advancements in conventional precision-guided weapons, marked an important opportunity to de-emphasize the role of nuclear weapons in U.S. and NATO security policy. Absent an overwhelming conventional threat to Europe, many analysts contended that the threat of nuclear first use was no longer necessary for deterrence. Moreover, “smart” conventional weapons, demonstrated with remarkable effectiveness in the 1990–91 Gulf War, could now provide a powerful deterrent to aggression and, in some cases, substitute for missions once relegated solely to nuclear forces.¹¹ Nuclear weapons, it was argued, could be used solely to deter nuclear attacks.¹²

In the last few years, U.S. nuclear policy has attracted new attention. Debates over whether and how to modernize the aging U.S. nuclear arsenal, the future of missile defense, a reinvigorated movement for global nuclear abolition, and the nuclear programs in Iran and North Korea have sparked a spirited debate over the future of U.S. nuclear policy and force posture. With renewed interest in nuclear issues, there have been new calls for NFU. Proponents have contended that NFU is an important first step on the path toward eventual global nuclear abolition, a logical manifestation of President Obama’s stated objective to reduce the role of nuclear weapons, and a useful policy mechanism to reestablish U.S. leadership on nonproliferation.¹³ While most

11. See William J. Perry, “Desert Storm and Deterrence,” *Foreign Affairs*, Vol. 70, No. 4 (Fall 1991), p. 66; Gary L. Guertner, “Deterrence and Conventional Military Forces,” *Washington Quarterly*, Vol. 16, No. 1 (Winter 1993), p. 142; and Seth Cropsey, “The Only Credible Deterrent,” *Foreign Affairs*, Vol. 73, No. 2 (March–April 1994), pp. 14–20. For a more recent argument along these lines, see Dennis M. Gormley, “Securing Nuclear Obsolescence,” *Survival*, Vol. 48, No. 3 (Autumn 2006), pp. 127–148.

12. Various arguments along these lines include Morton H. Halperin, “What’s the Use of ‘First Use?’” *New York Times*, October 1, 1991; Nina Tannenwald, “The Changing Role of U.S. Nuclear Weapons,” in Michele A. Flournoy, ed., *Nuclear Weapons after the Cold War: Guidelines for U.S. Policy* (New York: HarperCollins, 1993), p. 69; Lewis Dunn, “NPT 1995: Time to Shift Gears,” *Arms Control Today*, Vol. 23, No. 9 (November 1993), p. 19; National Academy of Sciences, *The Future of U.S. Nuclear Weapons Policy* (Washington, D.C.: National Academy Press, 1997); and *Report of the Canberra Commission on the Elimination of Nuclear Weapons* (Canberra: National Capital Printers, August 1996), p. 57, <http://www.dfat.gov.au/cc/CCREPORT.PDF>; and Paul H. Nitze, “Is It Time to Junk Our Nukes?” *Washington Quarterly*, Vol. 20, No. 3 (Summer 1997), pp. 97–101.

13. See, for example, Harold A. Feiveson and Ernst Jan Hogendoorn, “No First Use of Nuclear Weapons,” *Nonproliferation Review*, Vol. 10, No. 2 (Summer 2003), pp. 90–98; Ivo Daalder and Jan Lodal, “The Logic of Zero: Toward a World without Nuclear Weapons,” *Foreign Affairs*, Vol. 87, No. 6 (November/December 2008), p. 84; Scott D. Sagan, “The Case for No First Use,” *Survival*, Vol. 51, No. 3 (June–July 2009), pp. 163–182; Rong Yu and Peng Guangqian, “Nuclear No-First-Use Revisited,” *China Security*, Vol. 5, No. 1 (Winter 2009), pp. 78–87; Joshua Pollack, “Reducing the Role of Nuclear Weapons,” *Bulletin of the Atomic Scientists*, October 30, 2009, <http://www.thebulletin.org/web-edition/columnists/joshua-pollack/reducing-the-role-of-nuclear-weapons>; “New Think and Old Weapons,” *New York Times*, February 28, 2010; and Selig S. Harrison, “Should U.S. Keep ‘First Use’ Option?” *USA Today*, March 30, 2010. For an excellent review of many current

lawmakers have traditionally shied away from nuclear policy debates since the end of the Cold War, Senator Dianne Feinstein argued in the lead-up to the NPR that President Obama should declare that the United States “will not countenance a first use of nuclear weapons.”¹⁴

Despite sustained efforts, proponents have thus far been unable to persuade U.S. policymakers and defense officials to embrace NFU. During the Cold War, critics of NFU maintained that NATO needed to retain the threat of nuclear first use to help deter the Warsaw Pact from initiating a massive conventional assault on Europe. NFU, they argued, would weaken deterrence and make a Soviet-initiated conventional war more plausible.¹⁵ Although many experts concede that the threat of first use is no longer necessary to deter conventional aggression, critics contend that an NFU policy would weaken the credibility of U.S. extended deterrence commitments and might thereby encourage further nuclear proliferation by allies that come to believe that they can no longer depend on the United States for their security.¹⁶ As recently as January 2008, a group of former NATO generals argued that the alliance must retain the option to use nuclear weapons first.¹⁷ Equally important, NFU critics argue that a nuclear first-use option is an important component of deterrence against chemical and especially biological weapons threats, particularly because the United States no longer has the capabilities to respond in kind.¹⁸ According to

arguments for and against NFU, see *A New Look at No First Use*, Policy Dialogue Brief (Muscatine, Iowa: Stanley Foundation, July 2008), <http://www.stanleyfoundation.org/publications/pdb/NoFirstUsePDB708.pdf>.

14. Dianne Feinstein, “Russian Nuclear Agreement a Good Start,” *San Francisco Chronicle*, July 10, 2009. Senator Feinstein continues, “This would reverse a Bush administration policy of declining to rule out a nuclear first strike.” In fact, it has been the policy of every administration to retain the option of nuclear first use.

15. Karl Kaiser, Georg Leber, Alois Mertes, and Franz-Josef Schulze, “Nuclear Weapons and the Preservation of Peace: A Response to an American Proposal for Renouncing the First Use of Nuclear Weapons,” *Foreign Affairs*, Vol. 60, No. 5 (Summer 1982), pp. 1157–1170; and John J. Mearsheimer, “Nuclear Weapons and Deterrence in Europe,” *International Security*, Vol. 9, No. 3 (Winter 1984/85), pp. 19–46.

16. See, for example, George H. Quester and Victor A. Utgoff, “No-First-Use and Nonproliferation: Redefining Extended Deterrence,” *Washington Quarterly*, Vol. 17, No. 2 (Spring 1994), p. 111.

17. Gen. (ret.) Dr. Klaus Naumann, Gen. (ret.) John Shalikashvili, Field Marshal The Lord Inge, Adm. (ret.) Jacques Lanxade, and Gen. (ret.) Henk van den Breemen, with Benjamin Bilski and Douglas Murray, *Towards a Grand Strategy for an Uncertain World: Renewing Transatlantic Partnership* (Lunteren, Netherlands: Noaber Foundation, 2007), p. 94, http://csis.org/media/csis/events/080110_grand_strategy.pdf.

18. On the importance of maintaining ambiguity about the possible use of nuclear weapons to help deter chemical and biological attacks, see, for example, *U.S. Nuclear Weapons Policy*, Independent Task Force Project, No. 62 (New York: Council on Foreign Relations Press, April 2009), pp. 16–17; Keith B. Payne, *The Great American Gamble: Deterrence Theory and Practice from the Cold War to the Twenty-first Century* (Fairfax, Va.: National Institute Press, 2008), pp. 410–411; John Deutch, “A Nuclear Posture for Today,” *Foreign Affairs*, Vol. 84, No. 1 (January/February 2005),

the Strategic Posture Commission, a congressionally mandated committee led by former Defense Secretaries William Perry and James Schlesinger, NFU would “undermine the potential contributions of nuclear weapons to the deterrence of attack by biological weapons” and would be “unsettling to some U.S. allies.”¹⁹

These contemporary critiques of NFU merit careful consideration. Maintaining credible extended deterrence and assurance, preventing the further spread of nuclear weapons, and deterring chemical and especially biological attacks are central U.S. defense and foreign policy objectives. If NFU is to be taken seriously, it must be shown how renouncing the first-use option would enhance the security of the United States and its allies by strengthening deterrence and contributing to nonproliferation objectives.

The Uses of First Use

There are four reasons why the United States might decide to threaten, or actually use, nuclear weapons first: to deter or respond to conventional aggression; to deter or respond to chemical or biological attacks; to preempt an adversary’s use of nuclear weapons; and to hold at risk, and potentially destroy, underground targets.²⁰ An assessment of whether the United States should continue to reserve the first-use option requires an examination of the potential utility of each nuclear mission.

DETTERRING/RESPONDING TO CONVENTIONAL ATTACKS

When a state is faced with a conventionally superior opponent, the threat of first use can provide a useful asymmetric deterrent. In this context, the defender seeks to deter conventional aggression by introducing the possibility

p. 59; Richard Sokolsky, “Demystifying the U.S. Nuclear Posture Review,” *Survival*, Vol. 44, No. 3 (Autumn 2002), pp. 135–138; George H. Quester, “Mismatched Deterrents: Preventing the Use of Nuclear, Biological, and Chemical Weapons,” *International Studies Perspectives*, Vol. 1, No. 2 (August 2000), pp. 165–176; Michael Moodie, “Chemical and Biological Weapons: Will Deterrence Work?” (Alexandria, Va.: Chemical and Biological Arms Control Institute, 1998), pp. 50–52; and Bruno Tertrais, “The Trouble with No First Use,” *Survival*, Vol. 51, No. 5 (October–November 2009), pp. 24–25. A group of RAND analysts argued that the United States should adopt a policy of “No-First-Use of WMD,” which would allow for the continued use of nuclear weapons to deter chemical and biological attacks. See David Gompert, Kenneth Watman, and Dean Wilkening, “Nuclear First Use Revisited,” *Survival*, Vol. 37, No. 3 (Autumn 1995), pp. 27–44.

19. *America’s Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States* (Washington, D.C.: U.S. Institute of Peace Press, 2009), p. 36. Secretary Perry was the chairman and Secretary Schlesinger was the vice-chairman of the commission.

20. For a broader list of reasons why a nuclear-armed state might want to threaten first use, see Steven E. Miller, “The Utility of Nuclear Weapons and the Strategy of No-First-Use,” paper presented at Pugwash meeting, No. 279, London, United Kingdom, November 15–17, 2002.

of nuclear escalation into an adversary's cost-benefit calculations. This strategy has historical precedent in NATO's concept of flexible response. Despite U.S. and NATO conventional deployments throughout Western Europe during the Cold War, the Warsaw Pact's military manpower vastly outnumbered that of the West.²¹ With NATO forces outgunned (or at least perceived to be outgunned) at the conventional level, NATO relied on the threat to escalate a conventional conflict to the nuclear level to deter Soviet conventional adventurism. Under flexible response, NATO would first respond to aggression with proportionate force, seeking to "defeat the aggression on the level at which the enemy chooses to fight."²² But if "direct defense" failed, flexible response called for "deliberate escalation" of the scope and intensity of the conflict. The implication was that if NATO conventional forces could not adequately defend against a Warsaw Pact conventional assault, NATO would escalate the conflict by crossing the nuclear threshold.²³ The objective of first use was to influence the Soviet Union's political and military calculations by sending a strong signal that NATO deeply valued the issue at stake and was willing to run the risk of nuclear war to defend it. By raising the shared risk of all-out nuclear war, NATO's nuclear escalation was intended to prompt both sides to seek ways to end the conflict.²⁴

DETERRING/RESPONDING TO CHEMICAL AND BIOLOGICAL ATTACKS

The threat of nuclear first use might also be used to deter or respond to attacks using chemical (CW) or biological (BW) weapons. This rationale has received a

21. As it turns out, the Kennedy administration learned that the balance of conventional forces in Europe was not as lopsided as originally believed. Nevertheless, the belief that Soviet conventional forces might overrun NATO persisted, which necessitated a continued threat of NATO nuclear first use. See John Lewis Gaddis, *Strategies of Containment: A Critical Appraisal of Postwar American National Security Policy* (Oxford: Oxford University Press, 1982), p. 207; David N. Schwartz, *NATO's Nuclear Dilemmas* (Washington, D.C.: Brookings Institution Press, 1983), pp. 145–149; and John J. Mearsheimer, *Conventional Deterrence* (Ithaca, N.Y.: Cornell University Press, 1983).

22. North Atlantic Military Committee, "MC 14/3 (Final): Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area," January 16, 1968, in Gregory W. Pedlow, ed., *NATO Strategy Documents, 1949–1969*, p. 358, <http://www.nato.int/docu/stratdoc/eng/a680116a.pdf>.

23. It is important to note, however, that "deliberate escalation" as defined in MC 14/3 did not automatically mean nuclear escalation. MC 14/3 suggests five possible mechanisms of escalation, the first of which is "broadening or intensifying a non-nuclear engagement, possible by opening another front or initiating action at sea." The other four options involved the use of nuclear weapons. See *ibid.*, p. 359. If NATO did choose some form of initial nuclear escalation, it would have likely involved the use of NATO's theater nuclear weapons.

24. See, for example, J. Michael Legge, *Theater Nuclear Weapons and the NATO Strategy of Flexible Response* (Santa Monica, Calif.: RAND, 1983), pp. 9–10, 43–44; Mearsheimer, "Nuclear Weapons and Deterrence in Europe," pp. 20, 24; and T.C. Schelling, "Nuclear Strategy in Europe," *World Politics*, Vol. 14, No. 3 (April 1962), pp. 421–432. The target(s) selected for the initial nuclear escalation, however, would have likely been chosen based on maximum military impact.

great deal of attention because the United States has destroyed its biological weapons stockpile and is in the process of destroying its chemical arsenal in accordance with both the chemical and biological weapons conventions. Without an option to retaliate in kind, and given the potential devastation of a chemical and especially a biological attack, some analysts argue that the implicit or explicit threat of a nuclear response is necessary for deterrence.²⁵

Prior to the new NPR, the United States had been deliberately vague about whether it would use nuclear weapons in response to a chemical or biological attack, regardless of whether the state has nuclear weapons or is in compliance with its NPT obligations. This policy, commonly called “calculated ambiguity,” was touted by its proponents to be the best of both worlds: the United States receives the deterrent benefits of leaving open the option of a nuclear response, while committing itself to nothing if deterrence fails.²⁶ With calculated ambiguity, the United States does not guarantee that it would use nuclear weapons in response to a chemical or biological attack, but it does not rule it out. According to a declassified report from 1995 prepared for U.S. Strategic Command, “We must be ambiguous about details of our response (or preemption) if what we value is threatened, but it must be clear that our actions would have terrible consequences.”²⁷ Similarly, in 1998 Defense Secretary William Cohen said, “We think that the ambiguity involved in the issue of nuclear weapons contributes to our own security, keeping any potential adversary who might use either chemical or biological [weapons] unsure of what our response would be. We think that this is a sound doctrine.”²⁸

25. See, for example, *U.S. Nuclear Weapons Policy*, pp. 16–17; Payne, *The Great American Gamble*, pp. 410–411; Deutch, “A Nuclear Posture for Today,” p. 59; Sokolsky, “Demystifying the U.S. Nuclear Posture Review,” pp. 135–138; Quester, “Mismatched Deterrents,” pp. 165–176; Moodie, “Chemical and Biological Weapons,” pp. 50–52; Tertrais, “The Trouble with No First Use,” pp. 24–25; and Gompert, Watman, and Wilkening, “Nuclear First Use Revisited,” pp. 27–44.

26. On calculated ambiguity, see William M. Arkin, “Calculated Ambiguity: Nuclear Weapons and the Gulf War,” *Washington Quarterly*, Vol. 19, No. 4 (Autumn 1996), pp. 3–18; Scott D. Sagan, “The Commitment Trap: Why the United States Should Not Use Nuclear Threats to Deter Biological and Chemical Weapons Attacks,” *International Security*, Vol. 24, No. 4 (Spring 2000), pp. 85–115; Lt. Col. Harry W. Conley, U.S. Air Force, “Not with Impunity: Assessing U.S. Policy for Retaliating to a Chemical or Biological Attack,” *Air and Space Power Journal*, Vol. 17, No. 1 (Spring 2003), pp. 69–79; and Stephen I. Schwartz, “Miscalculated Ambiguity: U.S. Policy on the Use and Threat of Use of Nuclear Weapons,” *Disarmament Diplomacy*, No. 23 (February 1998), <http://www.acronym.org.uk/dd/dd23/23uspol.htm>.

27. “Essentials of Post-Cold War Deterrence,” report prepared by the Policy Subcommittee of the Strategic Advisory Group of the United States Strategic Command (1995). The document continues, “The fact that some elements may appear to be potentially ‘out of control’ can be beneficial to creating and reinforcing fears and doubts in the minds of an adversary’s decision makers. This essential sense of fear is the working of deterrence. That the U.S. may become irrational or vindictive if its vital interests are attacked should be part of the national persona we project to all adversaries.”

28. Quoted in Dana Priest and Walter Pincus, “U.S. Rejects ‘No First Use’ Atomic Policy: NATO Needs Strategic Option, Germany Told,” *Washington Post*, November 24, 1998.

PREEMPTING A NUCLEAR ATTACK

The third rationale is preemption—a nuclear first strike intended to eliminate an adversary’s nuclear capabilities before they could be used. The typical scenario involves a crisis in which an adversary is believed to be preparing to launch a nuclear strike, and U.S. nuclear weapons are used to preempt the attack and destroy the adversary’s weapons before they can be launched. For some NFU opponents, the potential, however remote, for a scenario to arise in which the only option is to use nuclear weapons first in an attempt to forestall an attack necessitates reserving the first-use option.

The concept of preemptive and preventive war took prominence in the George W. Bush administration as one of the central pillars of the controversial Bush Doctrine,²⁹ but this line of reasoning has been a long-standing tradition in U.S. foreign policy.³⁰ During the Cold War, U.S. policymakers briefly considered preventive war against the Soviet Union in the 1950s, and in the 1960s, the United States considered preemptive first-strike options in the Berlin crisis and against China’s nascent nuclear program before its nuclear test in October 1964.³¹ Today, some believe that the United States can (and should) develop

29. Many critics viewed the Bush administration’s controversial NPR, which advocated the development of a new generation of low-yield warheads and weapons capable of destroying hard and deeply buried targets, as a further manifestation of its preference for preemption over deterrence. To some extent, however, this criticism of the NPR was misplaced. The authors of the 2001 NPR reasoned that low-yield weapons would be a more credible deterrent, especially against rogue states with rudimentary nuclear capabilities, because they would produce less collateral damage than higher-yield weapons. Low-yield weapons, proponents argued, would be more credible because they would reduce the possibility that an adversary would calculate that U.S. leaders would be “self-deterred” from using nuclear weapons by the prospect of causing significant civilian casualties. The problem, however, was that the NPR was classified and was not well explained by administration officials; also, it was too focused on the debate about preemption and Iraq. In addition, the 2001 NPR’s proposed “New Triad” combined both nuclear and conventional weapons into a single conceptual category, thereby mixing “useable” conventional forces with nuclear weapons. This conceptual mixing of nuclear and conventional weapons led some to believe that the administration wanted low-yield nuclear weapons for counterforce preemption and war fighting rather than for deterrence. For the debate over the 2001 NPR and the Bush administration’s proposals for new nuclear capabilities, see, for example, Michael R. Gordon, “Nuclear Arms for Deterrence or Fighting?” *New York Times*, March 11, 2002; Roger Speed and Michael May, “Dangerous Doctrine,” *Bulletin of the Atomic Scientists*, Vol. 61, No. 2 (March/April 2005), pp. 38–49; Keith B. Payne, “The Nuclear Posture Review: Setting the Record Straight,” *Washington Quarterly*, Vol. 28, No. 3 (Summer 2005), pp. 135–151; Keith B. Payne, “The Nuclear Jitters,” *National Review*, June 30, 2003, pp. 22–25; and David S. McDonough, *Nuclear Superiority: The “New Triad” and the Evolution of Nuclear Strategy*, Adelphi Papers, No. 383 (London: International Institute for Strategic Studies, 2006).

30. As several scholars have noted, the idea of preventive and preemptive war has been around for hundreds of years. See, for example, George H. Quester, “Two Hundred Years of Preemption,” *Naval War College Review*, Vol. 60, No. 4 (Autumn 2007), pp. 15–28; and John Lewis Gaddis, *Surprise, Security, and the American Experience* (Cambridge, Mass.: Harvard University Press, 2004). The Bush administration’s concept of “preemption” is in reality much closer to the concept of preventive war. See Lawrence Freedman, “Prevention, Not Preemption,” *Washington Quarterly*, Vol. 26, No. 2 (Spring 2003), pp. 105–114.

31. See Fred Kaplan, “JFK’s First-Strike Plan,” *Atlantic Monthly*, October 2001, pp. 81–86; Marc

nuclear capabilities and corresponding doctrine designed for a nuclear first strike against an adversary's nuclear forces. By capitalizing on highly accurate delivery systems capable of delivering a nuclear payload with pinpoint accuracy, the United States could launch a counterforce first strike that would destroy an adversary's nuclear forces before they can be used, while also minimizing collateral damage.³² This view is apparently strengthened by the belief that some nations might not be deterrable, and therefore the United States must have the ability to preempt nuclear use, as well as the fact that "rogue" states do not have the resources to build large, diverse nuclear arsenals, which increases the ability of the United States to find, target, and destroy all of their weapons. Unlike the Cold War context, in which the United States and the Soviet Union had thousands of nuclear weapons deployed on land, sea, and air platforms, the small number of weapons possessed by rogue nations suggests that forceful disarmament through a preemptive strike might be feasible.

DESTROYING HARD AND DEEPLY BURIED TARGETS

The United States could use nuclear weapons to threaten to destroy, or actually destroy, hard and deeply buried targets (HDBTs). This argument was especially popular in the George W. Bush administration, which included in its NPR the need to hold these targets at risk and advocated for the development of the now-defunct Robust Nuclear Earth Penetrator (RNEP), a new nuclear "bunker buster."³³ Proponents contend that the ability to destroy HDBTs will contribute to deterrence by convincing adversaries that they cannot "ride out" or otherwise withstand a U.S. retaliatory strike by going underground. According to Keith Payne, one of the principal architects of the Bush administration's NPR, with underground sanctuaries, "some hardened opponents might doubt the deterrent's credibility and be emboldened to aggression." Consequently, "nuclear capabilities capable of holding hard and deeply buried targets at risk and minimizing the threat to civilians may be critical to maintaining a credible, effective deterrent."³⁴

Trachtenberg, "Preventive War and U.S. Foreign Policy," *Security Studies*, Vol. 16, No. 1 (January–March 2007), pp. 1–31; Marc Trachtenberg, *History and Strategy* (Princeton, N.J.: Princeton University Press, 1991), pp. 100–152; and William Burr and Jeffrey T. Richelson, "Whether to 'Strangle the Baby in the Cradle': The United States and the Chinese Nuclear Program, 1960–64," *International Security*, Vol. 25, No. 3 (Winter 2000/01), pp. 54–99.

32. See, for example, Keir A. Lieber and Daryl G. Press, "The End of MAD? The Nuclear Dimension of U.S. Primacy," *International Security*, Vol. 30, No. 4 (Spring 2006), pp. 7–44.

33. The Bush administration's NPR, released in December 2001, remains classified, but leaked portions are available at <http://www.globalsecurity.org/wmd/library/policy/dod/npr.htm>. Despite vigorous efforts by the Bush administration, Congress ultimately refused to fund the RNEP.

34. Payne, "The Nuclear Posture Review," p. 143.

Evaluating Nuclear First-Use Options

Do any of these rationales for the threat of nuclear first use continue to provide U.S. policymakers and defense officials with significant strategic advantages? Is there good evidence or strategic logic to suggest that holding out the option for the first use of nuclear weapons increases the security of the United States and U.S. allies?

DETERRENCE OF/RESPONSES TO CONVENTIONAL ATTACKS

For the United States, deterrence of conventional aggression—the original justification for the threat of first use—is a Cold War relic. Whereas in the Cold War strong arguments could be made that NATO’s threat of nuclear escalation was necessary to bolster deterrence because of the perceived conventional imbalance in Europe, the situation today is reversed. Since the end of the Cold, the United States is the dominant conventional power. The United States rightly places great importance on maintaining conventional superiority and global power projection, and despite the ongoing development of anti-access and area-denial capabilities—especially China’s development of an antiship ballistic missile³⁵—U.S. conventional military capabilities and defense spending vastly outstrip those of every other nation. Consequently, the threat of nuclear first use is unnecessary to deter conventional aggression, and, if deterrence fails, unnecessary to help win the conflict because there is no country that can defeat the United States in a major conventional war.³⁶

In an interesting and perhaps ironic twist, the threat of nuclear use to deter a conventionally superior opponent is one of the reasons why the United States has been so concerned with nuclear proliferation to regional rogue states. In a crisis with a nuclear-armed rogue state, the possibility of nuclear escalation might constrain the range of military options available to U.S. leaders. In this context, the threat from nuclear-armed adversaries has less to do with the threat of a surprise nuclear strike (although this cannot be ruled out), but rather from the potential that rogues might use the threat of nuclear first use to prohibitively raise the stakes and potential costs to the United States of project-

35. See, for example, Andrew S. Erickson and David D. Yang, “On the Verge of a Game-Changer,” *Proceedings*, Vol. 135, No. 5 (May 2009), pp. 26–32.

36. To be sure, overall U.S. conventional superiority itself might not always be sufficient for successful conventional deterrence. In many cases, the “local” balance of military power—the balance of conventional forces between the attacker and defender in and around the immediate vicinity of the potential conflict—is more important for deterrence than overall superiority. Nevertheless, the importance of a favorable local balance of power does not mean that the threat of a nuclear response would be an effective or credible deterrent in situations in which an adversary believes that the United States could not respond rapidly to regional aggression.

ing conventional power in a regional crisis.³⁷ Thus, the use of nuclear threats to deter conventional aggression—a concept so central to NATO security policy during the Cold War—might now be used by others to deter, or at least complicate, U.S. intervention in a regional conflict. Rogue states, it would appear, have unwittingly taken a page out of the NATO’s Cold War playbook.

DETERRENCE OF/RESPONSES TO CHEMICAL AND BIOLOGICAL ATTACKS

In recent years, the strongest argument for retaining the first-use option has been that nuclear weapons are necessary to help deter, and possibly respond to, CW and especially BW attacks on the United States and its allies. The NPR rules out the use of nuclear weapons to deter or respond to CW or BW use by nonnuclear NPT member states in compliance with their nuclear nonproliferation obligations, but deliberately reserves the right to use nuclear weapons to deter and respond to CW or BW attacks by nuclear states and nonnuclear states in violation of their nonproliferation commitments. In the event of a CW or BW attack by a nonnuclear state in compliance with its nonproliferation obligations, the perpetrator would “face the prospect of a devastating conventional military response” and “any individuals responsible for the attack, whether national leaders or military commanders, would be held fully accountable.”³⁸ The NPR does not explain why a large-scale conventional response is deemed sufficient to deter one category of states but is insufficient to deter the others. If anything, the threat to use nuclear weapons to deter CW or BW attacks by a nuclear-armed state is less credible and more dangerous than a conventional response, given that the use of U.S. nuclear weapons in retaliation could result in a nuclear reply. At least before entering office, several high-ranking members of the Obama administration appeared to agree. According to a 2007 report by the National Security Advisory Group, which included Kurt Campbell, Ashton Carter, Robert Einhorn, Michele Flournoy, Susan Rice, and James Steinberg, “Nuclear weapons are much less credible in deterring conventional, biological, or chemical weapon attacks. A more effective way of deterring and defending against such nonnuclear attacks—and giving the President a wider range of credible response options—would be to rely

37. See Robert Jervis, “Deterrence, Rogue States, and U.S. Policy,” in T.V. Paul, Patrick M. Morgan, and James J. Wirtz, eds., *Complex Deterrence: Strategy in the Global Age* (Chicago: University of Chicago Press, 2009), pp. 147–149.

38. U.S. Department of Defense, *Nuclear Posture Review Report*, pp. 15–16. The NPR also states, however, “Given the catastrophic potential of biological weapons and the rapid pace of biotechnology development, the United States reserves the right to make any adjustments in the assurance that may be warranted by the evolution and proliferation of the biological weapons threat and U.S. capacities to counter that threat.” *Ibid.*, p. 16.

on a robust array of conventional strike capabilities and strong declaratory policies.”³⁹

The necessity of retaining the first-use option for some CW and BW threats is grounded in part on the supposed success of nuclear deterrence in the 1990–91 Gulf War, where the United States deliberately implied that it might consider a nuclear response if Saddam Hussein used CW or BW. The details of this episode are now well known. On January 9, 1991, Secretary of State James Baker delivered to Iraqi Foreign Minister Tariq Aziz a letter from President George H.W. Bush to Saddam in which the president warned, “The United States will not tolerate the use of chemical or biological weapons, support of any kind for terrorist actions, or the destruction of Kuwait’s oilfields and installations. The American people would demand the strongest possible response. You and your country will pay a terrible price if you order unconscionable actions of this sort.”⁴⁰ Similarly, Baker told Aziz, “If there is any use of weapons like that, our objective won’t be the liberation of Kuwait, but the elimination of the current Iraqi regime, and anyone responsible for using those weapons would be held accountable.”⁴¹ As Baker later wrote in his memoirs, at that meeting he “deliberately left the impression that the use of chemical or biological agents by Iraq could invite tactical nuclear retaliation.”⁴²

New evidence contained in captured Iraqi documents demonstrates that Saddam was determined to have CW and BW weapons prepared to launch. In a January 1991 meeting with senior Iraqi officials, Saddam said, “I want to make sure that . . . the germ and chemical warheads, as well as the chemical and germ bombs, are available to [those concerned], so that in case we ordered an attack, they can do it without missing any of their targets.” Saddam said that if the order to launch is given, “you should launch them all against their targets.” He concluded the meeting by stating, “We will never lower our heads as long as we are alive, even if we have to destroy everybody.”⁴³

In the aftermath of the Gulf War, several observers argued that the ambiguous threat of a nuclear reprisal effectively deterred Saddam from using his unconventional weapons.⁴⁴ This view is based largely on postwar interviews

39. National Security Advisory Group, “Reducing Nuclear Threats and Preventing Nuclear Terrorism,” October 19, 2007, <http://belfercenter.ksg.harvard.edu/files/Reducing%20Nuclear%20Threats-FINAL.pdf>.

40. “Text of Letter from Bush to Hussein,” *New York Times*, January 13, 1991.

41. James A. Baker III, *The Politics of Diplomacy: Revolution, War, and Peace, 1989–1992* (New York: G.P. Putnam and Sons, 1995), p. 359.

42. *Ibid.*

43. “Regime Strategic Intent, Annex D: Saddam’s Personal Involvement in WMD Planning,” in *Comprehensive Report of the Special Advisor to the DCI on Iraq’s WMD*, Vol. 1 (Washington, D.C.: Central Intelligence Agency, September 30, 2004), pp. 97–100.

44. See, for example, Arkin, “Calculated Ambiguity,” pp. 8–9; Keith B. Payne, “Nuclear Deter-

with former high-level Iraqi officials, some of whom contended that Saddam did not order chemical or biological attacks because he believed that the United States would respond with nuclear weapons. For example, Gen. Wafic al-Samarrai, the former head of Iraqi Military Intelligence, said in an interview after the war, "I do not think that Saddam was capable of taking a decision to use chemical weapons or biological weapons, or any other type of weapons against the allied troops, because the warning was quite severe, and quite effective. The allied troops were certain to use nuclear arms and the price will be too dear and too high."⁴⁵

Although it may be correct that something effectively deterred Saddam from using CW or BW,⁴⁶ the argument that nuclear threats were the causal factor remains open to debate. President Bush and Secretary Baker made two threats against the Hussein regime—an ambiguous threat to use nuclear weapons and an explicit threat of regime change. Opponents of NFU focus on the former threat while ignoring or downplaying the latter. As Scott Sagan has argued, there are several reasons to be skeptical of the claim that ambiguous nuclear threats, rather than the unequivocal threat of regime change, deterred Saddam. Most important, the Hussein regime had good international and domestic political reasons to claim after the war that the threat of nuclear retaliation, rather than the possibility of being removed from power, prevented the use of CW and BW. From an international perspective, claiming that U.S. nuclear threats were the primary deterrent helped portray Iraq as the victim of a militant and hegemonic United States bent on interfering in regional affairs, undermining the Iraqi regime, and willing to do anything—including using nuclear weapons—to ensure access to the region's oil. By arguing that nuclear threats were the reason, the regime could claim that it did not use chemical and biological weapons because the United States would have used even more destructive weapons that Iraq did not possess in response, and this explana-

rence Provides U.S. Irreplaceable Option," *Defense News*, April 13–19, 1998, p. 21; and Robert G. Joseph and John F. Reichart, *Deterrence and Defense in a Nuclear, Biological, and Chemical Environment* (Washington, D.C.: National Defense University Press, 1999), p. 19.

45. Gen. Wafic al-Samarrai, in "The Gulf War: An Oral History," *Frontline*, <http://www.pbs.org/wgbh/pages/frontline/gulf/oral/samarrai/3.html>. In addition, Tariq Aziz, the former Iraqi minister of foreign affairs, told the UN Special Commission that Iraq did not use chemical or biological weapons because Saddam believed that the United States would use nuclear weapons. See R. Jeffrey Smith, "UN Says Iraqis Prepared Germ Weapons in Gulf War," *Washington Post*, August 26, 1995; Sagan, "The Commitment Trap," p. 95; and David Szabo, "Disarming Rogues: Deterring First-Use of Weapons of Mass Destruction," *Parameters*, Vol. 37, No. 4 (Winter 2007–08), p. 76.

46. Some scholars argue that deterrence "worked" against Saddam, but they are unclear or ambiguous as to whether nuclear threats were the primary reason. See, for example, Robert Jervis, *American Foreign Policy in a New Era* (New York: Routledge, 2005), pp. 66, 72; and Derek D. Smith, *Deterring America: Rogue States and the Proliferation of Weapons of Mass Destruction* (Cambridge: Cambridge University Press, 2006), p. 57.

tion might create international sympathy and support for Iraq.⁴⁷ Moreover, if Saddam were interested in garnering international support, the use of unconventional weapons would likely have shattered any hope he had of portraying Iraq as a victim.

From a domestic standpoint, pointing to the U.S. nuclear threat was useful for Saddam in explaining to the Iraqi military why it was not ordered to unleash chemical or biological weapons. It was more politically palatable for the Hussein regime to claim that it did not order the use of unconventional weapons because it wanted to spare Iraq from a nuclear holocaust, rather than because it was worried about maintaining its grip on power.⁴⁸ Moreover, the regime might have also wanted to claim that nuclear threats prevented it from using chemical or biological weapons because admitting that it was fearful of regime change would make the government look weak, which might encourage future uprisings from the minority Kurdish or Shiite populations in Iraq or perhaps encourage future provocations by Iran. In addition, an explanation that focused on nuclear intimidation as the reason for inaction could be used by domestic proponents of Iraq's indigenous nuclear program as further evidence of the necessity of a nuclear arsenal. In sum, if Iraq had to give some explanation for why it did not use unconventional weapons, the threat of U.S. nuclear retaliation provided a convenient, beneficial, and face-saving rationale.

Even if nuclear threats did play a role in Iraqi decisionmaking, postwar statements by senior U.S. officials involved in the conflict have likely undermined the credibility of similar threats in future scenarios. In memoirs published after the war, Brent Scowcroft, Colin Powell, and James Baker admitted that they never intended to use nuclear weapons even in response to a CW or BW attack. According to Scowcroft, "No one advanced the notion of using nuclear weapons, and the President rejected it even in retaliation for chemical or biological attacks."⁴⁹

Beyond this oft-cited empirical case for maintaining the first-use option, some specialists nevertheless maintain that the threat of a conventional-only response might not be sufficient for deterring CW or BW attacks. Conventional weapons, some argue, might not be powerful enough to induce caution and

47. Sagan, "The Commitment Trap," p. 95; and Scott D. Sagan, "Reply: Evidence, Logic, and Nuclear Doctrine," *Survival*, Vol. 51, No. 5 (October–November 2009), pp. 39–40. See also Schwartz, "Miscalculated Ambiguity."

48. Sagan, "The Commitment Trap," pp. 95–96.

49. See George Bush and Brent Scowcroft, *A World Transformed* (New York: Alfred A. Knopf, 1998), p. 463; Colin L. Powell, *My American Journey* (New York: Random House, 1995), p. 486; and Baker, *The Politics of Diplomacy*, p. 359.

restraint.⁵⁰ These authors fail to appreciate, however, that among the many reasons why states might want nuclear weapons, one of the most important motivations vis-à-vis the United States is to deter U.S. conventional strength. The fact that the threat of U.S. conventional capabilities is powerful enough to motivate some states to expend the financial and political capital to seek nuclear weapons suggests that states have a healthy respect for U.S. conventional power, and therefore the threat of an overwhelming conventional response to nonnuclear aggression is likely to be a potent deterrent.

NFU opponents also contend that the nuclear option might be necessary to respond to a catastrophic BW or, less likely, CW attack that inflicted significant casualties. There are four reasons why a state might use nuclear weapons in response to a CW or BW attack: to inflict high costs (either because the initial CW or BW attack caused high casualties requiring an equally high cost exacted in response, or because the state wishes to purposefully inflict disproportionate costs); to prevent defeat; to avoid the potentially high fiscal and human costs of continuing to fight a conventional war against an adversary employing unconventional weapons; or to destroy the opponent's remaining CW or BW weapons, stockpiles, and production facilities.⁵¹

Compared to conventional alternatives, nuclear weapons do not provide additional military utility toward achieving these objectives, and in all cases the use of nuclear weapons would have political and military drawbacks. The United States should not want to respond to the breaking of the taboo against the use of CW and BW by shattering an even bigger and longer-running taboo. A vigorous conventional bombing campaign provides the necessary means to impose severe costs without resorting to nuclear weapons, and sustained efforts to maintain conventional dominance should ensure that the United States would not be forced to accept defeat.⁵² Although an adversary's use of CW or BW might compel U.S. leaders to seek a quick end to the war, the motivation for war termination would be because cost-benefit calculations had been tipped in an unfavorable direction, rather than because all military options had been exhausted and the United States was on the verge of defeat. Nuclear

50. See, for example, Gompert, Watman, and Wilkening, "Nuclear First Use Revisited," p. 35; and Richard J. Harknett, "The Logic of Conventional Deterrence and the End of the Cold War," *Security Studies*, Vol. 4, No. 1 (March 1994), pp. 86–114.

51. The first three reasons are from Victor A. Utgoff, "Nuclear Weapons and Deterrence of Biological and Chemical Warfare," Occasional Paper, No. 36 (Washington, D.C.: Henry L. Stimson Center, October 1997), p. 8.

52. To be sure, a conventional response cannot cause as much damage as quickly as nuclear weapons, but the speed with which costs are inflicted is not a compelling factor. In fact, a conventional campaign would likely start sooner than a nuclear response because there would be fewer political and moral qualms about the use of conventional force, and, as a result, the initial punishment would be felt more quickly than if nuclear weapons were used.

retaliation would not change this political calculation. With regard to the potential costs of fighting in a CW or BW environment, nuclear use would likely only complicate the battlespace by creating risks of nuclear contamination, radioactive fallout, and fire. Moreover, the mass hysteria and confusion caused in the immediate area of the nuclear detonation, as well as in other parts of the country as people fear that they might be the next target of a follow-on nuclear strike, could destabilize the country and increase the complexity of prosecuting the war and, ultimately, winning the peace.

A nuclear attack intended to destroy CW or BW weapons, stockpiles, and production facilities is an extremely difficult task, and there is little reason to believe that it could be done, if at all, without causing significant collateral damage. Such a strike would require exquisite real-time intelligence, given that a leader who chooses to escalate with CW or BW will likely disperse remaining weapons and stockpiles to avoid attack. If CW or BW assets can be located, a nuclear strike risks potentially high levels of civilian casualties by dispersing, rather than destroying, chemicals or pathogens, and by the prompt and long-term effects of a nuclear blast.⁵³ For CW and BW assets stored in underground bunkers, a nuclear weapon would have to detonate in the same room as the agents to completely destroy them; otherwise, chemicals and pathogens will be vented and dispersed into the atmosphere.⁵⁴ If weapons, stockpiles, or production laboratories are located in above-ground structures, a nuclear weapon detonated nearby could destroy them, but not without also causing collateral damage that in many instances would be disproportionate to the initial attack. For example, a 10-kiloton (kt) weapon can eliminate biological agents within a radius of about 50 meters,⁵⁵ but not without also destroying reinforced concrete structures within approximately a half-mile from the detonation, as well as demolishing ordinary homes out to distances of about 1 mile.

Even if a CW or BW attack on the United States or its allies inflicted substantial civilian casualties, why would the United States inflict severe costs on innocent civilians for the actions of their government? And why would imposing such costs be a punishment—or a deterrent—for the adversary regime? A state that is willing to deliberately kill U.S. or allied civilians with

53. See, for example, Robert W. Nelson, "Nuclear 'Bunker Busters' Would More Likely Disperse Than Destroy Buried Stockpiles of Biological and Chemical Agents," *Science and Global Security*, Vol. 12, Nos. 1–2 (January 2004), pp. 69–89.

54. *Ibid.*, p. 72; and National Research Council, *Effects of Nuclear Earth-Penetrator and Other Weapons* (Washington, D.C.: National Academies Press, 2005), p. 93.

55. H. Kruger, *Radiation-Neutralization of Stored Biological Warfare Agents with Low-Yield Nuclear Weapons*, UCRL-ID-140193 (Livermore, Calif.: Lawrence Livermore National Laboratory, August 2000), p. 7.

chemical or biological weapons is unlikely to care much about large segments of its own population. In the event of a CW or BW attack, it is more likely that the United States would focus the brunt of its retaliatory campaign against the adversary's military and leadership—which the United States explicitly threatened in the Gulf War—and for this objective there is little, if any, added military value from responding with nuclear weapons.

In future crises involving CW- or BW-armed adversaries, a more credible and potent threat would be for the United States to employ a combination of conventional denial and punishment strategies. First, the United States should forcefully communicate that its deployed forces are equipped with appropriate defenses that will deny any potential benefits of the battlefield use of CW and BW.⁵⁶ Second, similar to the explicit threats to Iraq in the Gulf War, U.S. decisionmakers should threaten an overwhelming conventional response to the use of unconventional weapons, coupled with the threat that CW or BW use runs the risk of forceful regime change. Potential adversaries should be made to understand that the United States and the international community will not tolerate the use of weapons of mass destruction (WMD); that CW or BW use will strengthen, not weaken, U.S. resolve; and that the full force of U.S. (and perhaps allied) conventional power will be brought to bear if these weapons are used. The message should be that CW or BW use not only will be ineffective, but will undoubtedly cost those who employ such weapons against the United States or its allies dearly and might even be an act of regime suicide.⁵⁷

PREEMPTION OF A NUCLEAR ATTACK

The third rationale for retaining the nuclear first-use option revolves around the concept of a “splendid” nuclear first strike—a nuclear counterforce attack intended to destroy or disable the adversary's nuclear capabilities. In the recent discourse on U.S. nuclear policy and force structure, NFU opponents typically make two arguments for keeping open the option for nuclear preemption. First, analysts contend that the threat of nuclear preemption would contribute to deterrence. This argument rests on a rather expanded conception

56. According to Joseph and Reichart, one reason that Iraq did not use CW in the Gulf War was because of the perceived effectiveness of U.S. passive defenses. See Joseph and Reichart, *Deterrence and Defense in a Nuclear, Biological, and Chemical Environment*, p. 18.

57. For similar arguments about the role of defenses and the threat of regime change, see, for example, Paul I. Bernstein and Lewis A. Dunn, “Adapting Deterrence to the WMD Threat,” in Peter L. Hays, Vincent J. Jodoin, and Alan R. Van Tassel, eds., *Countering the Proliferation and Use of Weapons of Mass Destruction* (New York: McGraw-Hill, 1998), pp. 158–162; and Lawrence Scheinmann, “Possible Responses to Chemical and Biological Weapon Attacks,” in Jozef Goldblat, ed., *Nuclear Disarmament: Obstacles to Banishing the Bomb* (London: I.B. Tauris, 2000), p. 76. Interestingly, both articles suggest that the United States should maintain “calculated ambiguity.”

of what deterrence is and how it works. Whereas the standard view of deterrence is that it is based on threats that will be imposed if an opponent acts—a response to an unwanted action that promises the infliction of prohibitively high costs, a low probability of success, or both—this conception posits that deterrence can be achieved by threatening to strike before the opponent attacks. The idea is that, by threatening to take preemptive action to thwart an attack, the United States can deter the opponent from even attempting it. Preemption, according to this logic, is a form of deterrence by denial. The second argument rests on a more traditional view of preemption, which posits that the option to use nuclear weapons first is necessary to prevent—or at least limit—damage if the United States believes that an opponent is about to launch a nuclear attack. Proponents contend that, if it appears that an adversary is preparing to launch nuclear weapons, the United States should have the option to strike first.⁵⁸

A nuclear first strike is fraught with risk and uncertainty. Could a U.S. president, the only person with the power to authorize nuclear use and a political official concerned with re-election, his or her political party, and their historical legacy, ever be entirely confident that the mission would be a complete success? What if the strike failed to destroy all of the weapons, or what if weapons were hidden in unknown areas, and the remaining weapons were used in retaliation? A successful first strike would require near-perfect intelligence, surveillance, and reconnaissance (ISR) to detect, identify, and track all of the adversary's nuclear forces; recent events surrounding U.S. assessments of Iraq's suspected WMD capabilities forcefully demonstrate the challenges of reliable, accurate, and unbiased information.⁵⁹ Intelligence regarding where an adversary's nuclear weapons are located and if the state is actually planning to attack could be wrong or incomplete, and an attempted first strike based on inaccurate or incomplete information could have far-reaching negative consequences.

The United States could never be absolutely confident in its ability to fully neutralize the nuclear threat in a disarming first strike, and the possibility that

58. According to one analyst, preemptive and preventive options against adversaries' weapons of mass destruction were incorporated into the George W. Bush administration's defense guidance and military planning. See Hans M. Kristensen, "U.S. Strategic War Planning after 9/11," *Nonproliferation Review*, Vol. 14, No. 2 (July 2007), pp. 373–389.

59. On the many intelligence and operational challenges of preemptive or preventive attacks against an adversary's WMD, see James H. Lebovic, *Deterring International Terrorism and Rogue States: U.S. National Security Policy after 9/11* (London: Routledge, 2007), pp. 44–54. On Iraq, see Robert Jervis, *Why Intelligence Fails: Lessons from the Iranian Revolution and the Iraq War* (Ithaca, N.Y.: Cornell University Press, 2010), chap. 3.

even just one or two nuclear weapons survive and are used in retaliation against the U.S. homeland or U.S. allies should be enough to induce extreme caution.⁶⁰ The uncertainty of complete success, coupled with the possibility that an unsuccessful strike could bring costs that would outweigh the potential gains by way of nuclear retaliation, should cast serious doubt on first-strike options. Even if a surviving nuclear warhead were unable to reach the U.S. homeland, nuclear weapons could be used on an ally as a way of punishing the United States, and no president should want to risk being responsible for a nuclear detonation on another country in retaliation for U.S. actions.⁶¹ In the end, if an attempted disarming first strike leaves some of the adversary's weapons intact, the United States may have started the nuclear war that it had hoped to prevent.

The problem of successfully executing a nuclear first strike becomes even more challenging as current and potential adversaries develop and deploy mobile and relocatable ballistic missiles—a measure designed to enhance survivability and ensure a minimum second-strike capability. The ability to disperse nuclear-tipped missiles, and to quickly relocate them in the field, significantly increases the chances that some weapons will survive a preemptive attack and could be used in retaliation. Past experiences with targeting mobile (and fixed) ballistic missiles should temper contentions that the United States could launch a successful first strike. During the Gulf War, U.S. efforts to locate and attack both fixed and mobile Iraqi Scud missile launchers presented enormous intelligence and targeting challenges. “Scud hunting,” as the effort came to be called, proved remarkably difficult, and, as if locating targets was not difficult enough, Iraq employed terrain concealment tactics and decoys to ensure survivability. Coalition air forces launched approximately 1,500 sorties against Iraq's fixed and mobile Scud missile launchers, and there was not a single confirmed kill of a mobile Scud launcher.⁶² According to the *Gulf War*

60. See, for example, Kenneth N. Waltz, “More May Be Better,” in Scott D. Sagan and Waltz, *The Spread of Nuclear Weapons: A Debate Renewed* (New York: W.W. Norton, 2003), chap. 1; Kenneth N. Waltz, “Nuclear Myths and Political Realities,” *American Political Science Review*, Vol. 84, No. 3 (September 1990), p. 734; Robert Jervis, “Why Nuclear Superiority Doesn't Matter,” *Political Science Quarterly*, Vol. 94, No. 4 (Winter 1979–1980), p. 621; John Steinbrunner, “Beyond Rational Deterrence: The Struggle for New Conceptions,” *World Politics*, Vol. 28, No. 2 (January 1976), p. 238; and Devin T. Hagerty, *The Consequences of Nuclear Proliferation: Lessons from South Asia* (Cambridge, Mass.: MIT Press, 1998), p. 27. For a more recent argument along these lines, see David Ochmanek and Lowell H. Schwartz, *The Challenge of Nuclear-Armed Regional Adversaries* (Santa Monica, Calif.: RAND, 2008), p. 53.

61. See Robert E. Harkavy, “Triangular or Indirect Deterrence/Compellence: Something New in Deterrence Theory?” *Comparative Strategy*, Vol. 17, No. 1 (January 1998), pp. 63–81.

62. Thomas A. Keaney and Eliot A. Cohen, *Gulf War Air Power Survey: Summary Report* (Washington, D.C.: U.S. Government Printing Office, 1993), p. 83.

Air Power Survey, “[E]ven in the face of intense efforts to find and destroy them, the mobile launchers proved remarkably elusive and survivable.”⁶³ A declassified assessment of the Scud hunt by the Defense Intelligence Agency states, “[T]he inherently mobile nature of these targets will probably not support the translation of mobile missile targeting to a ‘fixed target’ type solution.”⁶⁴ Similar challenges occurred in the 1999 campaign against Yugoslavia. In Operation Allied Force, components of Serbian air defense systems were routinely relocated to avoid destruction, and the Serbs employed decoys and camouflage tactics. According to NATO estimates, only three of the known twenty-five mobile SA-6 surface-to-air missile batteries were destroyed in the campaign.⁶⁵

Notwithstanding improvements in mobile target detection and tracking capabilities and changes in operational procedures since the Gulf War⁶⁶ (including advances in ISR capabilities such as the Joint Surveillance and Target Attack Radar System and the Global Hawk unmanned aerial vehicle)⁶⁷ the nature of the target—relatively small, mobile equipment traveling on an uncertain trajectory—will present significant targeting challenges for the foreseeable future. If U.S. military planners were unsure of the exact location of the adversary’s nuclear weapons, a preemptive attack would require the use of many relatively high-yield nuclear weapons to cover a wide area of terrain. Such an attack would still not guarantee destruction of the weapons, and the large number of high-yield warheads used in the attack might justify a more powerful response from the adversary with any remaining nuclear forces. If U.S. intelligence regarding the location of the opponent’s mobile nuclear capabilities is robust, the use of nuclear weapons is unnecessary because conventional forces would be sufficient to destroy (or at least disable) mobile missile launchers. In sum, if intelligence were uncertain or incomplete, the United States would have to use so many high-yield nuclear weapons as to make the potential benefits prohibitively risky and costly; and if intelligence is believed to be

63. Ibid.

64. “Mobile Short-Range Ballistic Missile Targeting in Operation DESERT STORM,” Defense Intelligence Agency, November 1, 1991, p. 11, <http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB39/document8.pdf>.

65. See Christopher J. Bowie, “Destroying Mobile Ground Targets in an Anti-Access Environment” (Arlington, Va.: Northrop Grumman Analysis Center, December 2001), p. 3.

66. On improvements in attacking time-sensitive targets, see Dennis M. Gormley, *The Path to Deep Nuclear Reductions: Dealing with American Conventional Superiority*, Proliferation Papers, No. 29 (Paris: Security Studies Center, Institut français des relations internationales, Fall 2009), p. 23, <http://www.ifri.org/downloads/pp29gormley1.pdf>.

67. Bowie, “Destroying Mobile Ground Targets in an Anti-Access Environment,” pp. 5–6.

accurate and complete, nuclear weapons are unnecessary for attacking mobile targets.⁶⁸

Despite the challenges of executing a completely successful disarming first strike, some advocates contend that even a partially successful strike, if combined with a missile defense system, could mitigate many of the risks and uncertainties associated with the first-strike option. According to this view, an effective missile defense system could be used to “mop up” any remaining adversary weapons that were used in retaliation. In addition, some proponents contend that the United States could deter nuclear retaliation with any remaining weapons by threatening additional nuclear strikes. These arguments are incorrect for three reasons. First, like the uncertainty inherent in a disarming first strike, U.S. leaders could never be entirely confident that a missile defense system would be completely effective. A warhead or two could get through, and the costs might severely offset the potential gains. Moreover, an adversary could either choose to attack a U.S. ally that was not protected by the missile shield or attempt to sneak a bomb into the United States by other means, such as on a cargo ship.⁶⁹

Second, the argument that the United States could deter a retaliatory strike with any remaining weapons suffers from an important logical flaw: if a U.S. president were willing to authorize a nuclear first strike and effectively break the long record of nuclear nonuse, there would have already been strong indications that the adversary was seriously preparing to use nuclear weapons. In this case, U.S. nuclear superiority would have already appeared to have failed in deterring an attack. Consequently, if a nation were perceived to be willing to initiate a nuclear strike on the U.S. homeland or U.S. allies at a time when the United States already possessed a substantial nuclear advantage, there is little reason to believe that the United States could then deter the opponent from retaliating with any remaining weapons after it was attacked and the nuclear balance was further shifted in the United States’ favor.

Third, a country that had just suffered a nuclear first strike might want to respond, if it could, for domestic and international political reasons. A leader whose country had just suffered a nuclear strike might fear that a failure to respond would weaken his or her domestic political position and potentially lead to an overthrow. From an international perspective, a country that did not

68. See Charles L. Glaser and Steve Fetter, “Counterforce Revisited: Assessing the Nuclear Posture Review’s Nuclear Missions,” *International Security*, Vol. 30, No. 2 (Fall 2005), pp. 96–97; and James Acton, “Managing Vulnerability,” *Foreign Affairs*, Vol. 89, No. 2 (March/April 2010), p. 147.

69. James H. Lebovic, “The Law of Small Numbers: Deterrence and National Missile Defense,” *Journal of Conflict Resolution*, Vol. 46, No. 4 (August 2002), p. 475.

retaliate (again, assuming it had workable weapons that survived the strike) would show the world that it could be coerced by the threat or actual use of nuclear weapons. If there were no response, then other countries might assume that all of the state's weapons were destroyed, and then attempt to coerce or invade the country for profit. Even if the state had just one workable weapon remaining, there may be incentives to use it. If the state could demonstrate that it had at least one weapon that it were willing to use in retaliation, it could easily claim—and it would be virtually impossible to reliably refute—that it had more weapons left in reserve. Such a demonstration might restore deterrence and buy time for the state to reconstitute its arsenal.

HOLDING OF HDBTs AT RISK

The proliferation of underground facilities—including command and control bunkers, leadership sanctuaries, and weapons stockpiles and weapons production programs—has been a cause of concern in recent years.⁷⁰ This trend toward underground bunkers has a clear logic: as the United States has increased its ability to successfully attack above-ground targets, current and potential adversaries have sought new ways to protect their prized assets. Iran, for example, appears to be increasingly going underground to protect its nuclear program. It has purchased tunneling equipment from European firms through companies owned by the elite Iranian Revolutionary Guards Corps; its formerly secret nuclear facility near Qom is buried inside a mountain; and the head of the Iranian Atomic Energy Organization recently announced that Iran is planning to begin construction of two new nuclear facilities that “will be built inside mountains.”⁷¹

Although the ability to attack HDBTs might contribute to deterrence, there are two reasons why nuclear weapons do not provide a militarily effective or politically feasible solution. First, there are sharp physical limits on the penetration depth of any nuclear earth-penetrating weapon (EPW). EPWs simply cannot get deep enough to destroy HDBTs. The maximum penetration depth an EPW can reach is approximately 10–20 meters, which, even with a high-yield warhead, limits the depths at which an underground facility can be reli-

70. See, for example, Secretary of Defense in Conjunction with the Secretary of Energy, “Report to Congress on the Defeat of Hard and Deeply Buried Targets,” July 2001, http://www.nukewatch.org/facts/nwd/HiRes_Report_to_Congress_on_the_Defeat.pdf.

71. See, for example, David Albright and Paul Brannan, “New Tunnel Construction at Mountain Adjacent to the Natanz Enrichment Complex,” *ISIS Report* (Washington, D.C.: Institute for Science and International Security, July 9, 2007); Emanuele Ottolenghi, “The Iranian Shell Game,” *Commentary*, July/August 2008, pp. 51–54; William J. Broad, “Iran Shielding Its Nuclear Efforts in Maze of Tunnels,” *New York Times*, January 6, 2010; and David E. Sanger and William J. Broad, “Agencies Suspect Iran Is Planning Atomic Sites,” *New York Times*, March 27, 2010.

ably destroyed.⁷² The existing nuclear EPW in the U.S. arsenal—the B-61 Mod 11, an air-dropped gravity bomb reported to have a variable yield between 0.3–300 kt and a penetration capability of 2–3 meters—cannot reliably destroy underground facilities beyond approximately 235 meters.⁷³ Although this is sufficient to hold some HDBTs at risk, others reside at much lower depths (500–700 meters), and digging even deeper is not an especially complicated process. In fact, states concerned about the possibility of a U.S. attack on their underground facilities are likely to respond by digging to depths well below where even megaton-yield weapons could be effective, or by adopting different methods of protecting highly valued assets, such as using mobile facilities.⁷⁴

Second, the use of any nuclear EPW risks causing significant collateral damage, particularly from radioactive fallout. EPWs cannot penetrate deep enough underground to contain the blast and prevent fallout.⁷⁵ For example, to avoid fallout a 300 kt weapon would have to be detonated at 800 meters below ground, a depth 267 times greater than the reported penetration capability of the B-61 Mod 11.⁷⁶ If detonated in a highly populated area, even a 10 kt EPW could cause 100,000 casualties, and detonations in less populous areas could still cause substantial casualties if a high-yield weapon is used in unfavorable winds.⁷⁷ Given that the U.S. desire to avoid civilian casualties is well known, current and potential adversaries could attempt to increase the disincentives of a nuclear EPW attack, such as purposefully locating strategic underground facilities in highly populated areas to ensure that a nuclear strike against an HDBT would cause maximum collateral damage.

With all of the problems associated with nuclear EPWs, the United States should place primary reliance on other weapons and tactics to defeat HDBTs. Conventional EPWs are sufficient to reliably destroy relatively shallow targets,

72. Nelson, "Nuclear 'Bunker Busters' Would More Likely Disperse Than Destroy Buried Stockpiles of Biological and Chemical Agents," p. 70.

73. National Research Council, *Effects of Nuclear Earth-Penetrator and Other Weapons*, p. 46. The hypothetical target in this calculation is buried in granite with a hardness of 1 kilobar. On the capabilities of the B-61 Mod 11, see Robert W. Nelson, "Low-Yield Earth-Penetrating Nuclear Weapons," *Science and Global Security*, Vol. 10, No. 1 (January–April 2002), p. 4.

74. Even a 1-megaton weapon detonated at 3 meters can only destroy targets located at or above 300 meters. See Glaser and Fetter, "Counterforce Revisited," pp. 92–93. See also Ivan Oelrich, "Missions for Nuclear Weapons after the Cold War," Occasional Paper, No. 3 (Washington, D.C.: Federation of American Scientists, January 2005), pp. 35–39.

75. Nelson, "Low-Yield Earth-Penetrating Nuclear Weapons"; and Michael A. Levi, "Fire in the Hole: Nuclear and Non-nuclear Options for Counter-proliferation," Carnegie Paper, No. 31 (Washington, D.C.: Carnegie Endowment for International Peace, 2002), p. 13.

76. National Research Council, *Effects of Nuclear Earth-Penetrator and Other Weapons*, p. 33.

77. *Ibid.*, pp. 2, 75. This figure is based on a hypothetical attack in Washington, D.C., with a 10 kt EPW detonated at 3 meters below ground.

and the capabilities of conventional EPWs are increasing. The laser-guided GBU-28, for example, can penetrate 100 feet of earth or 20 feet of concrete, and the BLU 118/B contains a thermobaric explosive that generates a higher sustained blast pressure in confined spaces such as underground facilities.⁷⁸ The U.S. military is currently developing the Massive Ordnance Penetrator, a 30,000-pound air-dropped bomb with 5,300 pounds of explosives that is believed to be able to penetrate 200 feet of earth.⁷⁹ Furthermore, beyond direct attack weapons, the United States can employ other tactics to deal with HDBTs. If an underground facility is beyond the reach of conventional (or nuclear) EPWs, the United States can employ “functional defeat” tactics, such as targeting the facility’s power sources, communications lines, and entrances and exits.⁸⁰ In some cases, this approach might even be preferable to destroying the facility because the United States could potentially collect valuable intelligence should it be able to examine the bunker’s contents.⁸¹ Another option is to capitalize on the accuracy of laser-guided conventional EPWs by using multiple weapons to repeatedly strike the same spot, thereby “burrowing” down to the desired depth.⁸²

The Strategic Consequences of Retaining the First-Use Option

Beyond specific military rationales, opponents of NFU also contend that the United States should retain the first-use option simply because keeping it on the table will make adversaries cautious. The ever-present possibility of nuclear escalation, the argument goes, will induce restraint and discourage military adventurism. In promulgating these kinds of arguments, however, analysts overstate the benefits for the United States and downplay the risks. A core element of U.S. nuclear declaratory and operational policy is that it must be both credible and stable. Current and potential adversaries (and allies) must believe that the United States has both the necessary military capabilities and political resolve to act on its threats, and, equally important, U.S. nuclear pol-

78. See “BLU-118/B Thermobaric Weapon,” *GlobalSecurity.org*, <http://www.globalsecurity.org/military/systems/munitions/blu-118.htm>; and “Guided Bomb Unit-28 (GBU-28),” *GlobalSecurity.org*, <http://www.globalsecurity.org/military/systems/munitions/gbu-28.htm>.

79. “Pentagon Presses Congress for Faster Bunker-Buster Deployment,” *Global Security Newswire*, August 3, 2009.

80. See Levi, “Fire in the Hole,” pp. 20–21; and Stephen M. Younger, “Nuclear Weapons in the Twenty-First Century,” LAUR-00-2850 (Los Alamos, N.Mex.: Los Alamos National Laboratory, June 27, 2000).

81. Levi, “Fire in the Hole,” p. 21.

82. Gormley, “Securing Nuclear Obsolescence,” p. 134; and Whitney Raas and Austin Long, “Osirak Redux? Assessing Israeli Capabilities to Destroy Iranian Nuclear Facilities,” *International Security*, Vol. 31, No. 4 (Spring 2007), pp. 17–18.

icy and posture must not unnecessarily frighten or provoke states such that they undertake measures that increase the possibility of nuclear use. Crafting U.S. nuclear policy and force posture has always required striking a delicate balance between credibility and stability, because efforts to increase one might simultaneously decrease the other.⁸³

With regard to credibility and stability, a U.S. nuclear declaratory policy that includes the option to use nuclear weapons first is either not credible, in which case it adds nothing to the security of the United States or its allies; or, if it is credible, it is potentially dangerous against nuclear-armed states because it risks creating instabilities in an intense crisis that increase the chances of nuclear use.

CREDIBILITY

The threat to use nuclear weapons first may lack credibility in the minds of many current and potential adversaries. The first-use option can contribute to deterrence and security only if the opponent believes that there is at least some reasonable chance that the United States might actually use nuclear weapons first. In today's international security environment, no state can doubt that the United States possesses sufficient nuclear capabilities to inflict severe costs, but a state reasonably could question whether the United States has the requisite political resolve to use nuclear weapons first, especially over stakes that do not directly threaten U.S. national security interests.⁸⁴

The incredibility of U.S. first-use threats rests on several grounds. First, as discussed above, there are no realistic military contingencies that would require the first use of nuclear weapons. Absent a compelling military need to use nuclear weapons first, U.S. nuclear threats are unnecessary and will therefore lack credibility. Conversely, U.S. conventional capabilities are highly credible and have been demonstrated in numerous post-Cold War operations to be more than sufficient to inflict substantial costs, and it is unlikely that an opponent would believe that the United States would use nuclear weapons if there were effective conventional options. In fact, the emphasis in recent

83. For example, during the Cold War proposals to enhance deterrence credibility, especially the credibility of U.S. extended deterrence, through robust war-fighting and war-winning capabilities (especially counterforce and missile defense) were criticized on the grounds that significant war-fighting forces increased the chances of war by generating instability and preemption incentives in a crisis. On the other hand, those who advocated for a force posture designed for maximum strategic stability, which in its purest form emphasized a force consisting solely of countervalue second-strike weapons, were criticized because such a posture was not credible.

84. Robert Jervis identified four reasons why credibility may be more difficult today than it was during the Cold War. See Jervis, "What Do We Want to Deter and How Do We Deter It?" in L. Benjamin Ederington and Michael J. Mazarr, eds., *Turning Point: The Gulf War and U.S. Military Strategy* (Boulder, Colo.: Westview, 1994), pp. 129–131.

years on developing a new generation of high-precision, long-range conventional weapons—exemplified by the U.S. military’s Prompt Global Strike mission, which seeks to develop conventional capabilities that can strike targets anywhere in the world within one hour⁸⁵—demonstrates how hard the United States is working to preclude having to use nuclear weapons in any contingency short of a response to a nuclear attack.

Second, there are potentially significant political costs to the United States for using nuclear weapons first, especially regarding U.S. efforts to lead the charge against nuclear proliferation, and these costs diminish the credibility of U.S. first use.⁸⁶ Given that the United States has traditionally been the most globally active nation in the realm of nonproliferation, the threat to use nuclear weapons first and risk undermining U.S. leadership of the NPT regime, legitimizing the use of nuclear weapons, and potentially spurring further proliferation will likely ring hollow. It would be difficult, if not impossible, for the United States to reconcile its first use of nuclear weapons with continued leadership on nonproliferation. Despite the national and international security benefits of U.S. activism against the further spread of nuclear weapons, an unintended consequence of these efforts has likely been to further weaken the credibility of U.S. threats to use nuclear weapons first.

Third, whereas implicit or explicit nuclear threats from rogue states have some inherent credibility because of the belief that these regimes are fanatical and risk acceptant—that is why, after all, they are rogues—in the nuclear realm the United States is generally perceived to be rational, risk averse, and sensitive to civilian casualties and other collateral damage.⁸⁷ These beliefs reduce the credibility of first-use threats by further strengthening the view that U.S. political leaders are bound by the “nuclear taboo,” a normative constraint against using nuclear weapons that emerged after World War II.⁸⁸ For the United States, the nuclear taboo influences the range of military options considered by decisionmakers by imposing criteria of proportionality and domestic and international legitimacy on the use of force, and such constraints are

85. On conventionally armed ballistic missiles, see Bruce M. Sugden, “Speed Kills: Analyzing the Deployment of Conventional Ballistic Missiles,” *International Security*, Vol. 34, No. 1 (Summer 2009), pp. 113–146.

86. For similar arguments, see, for example, Jervis, “What Do We Want to Deter and How Do We Deter It?” p. 128; and Bernstein and Dunn, “Adapting Deterrence to the WMD Threat,” p. 156.

87. On the impact of risk aversion and casualty sensitivity in the nuclear context, see, for example, Daniel Byman and Matthew Waxman, *The Dynamics of Coercion: American Foreign Policy and the Limits of Military Might* (Cambridge: Cambridge University Press, 2002), chap. 8.

88. On the nuclear taboo, see, for example, Nina Tannenwald, *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons since 1945* (Cambridge: Cambridge University Press, 2008); and T.V. Paul, “Nuclear Taboo and War Initiation in Regional Conflicts,” *Journal of Conflict Resolution*, Vol. 39, No. 4 (December 1995), pp. 696–717.

not lost on current and potential adversaries.⁸⁹ Unlike rogue states, the United States does not readily benefit from the “rationality of irrationality,”⁹⁰ which increases the credibility of nuclear threats by convincing decisionmakers that the opponent might not make logical cost-benefit calculations, and therefore might not be constrained by the logic of appropriateness on which the nuclear taboo depends. Despite the contention of one high-level advisory panel to U.S. Strategic Command arguing that “it hurts to portray ourselves as too fully rational or cool-headed,” and that “the fact that some elements may appear to potentially be ‘out of control’ can be beneficial,” U.S. policymakers have been reluctant to send these kinds of signals in the nuclear arena since the end of the Cold War.⁹¹

CRISIS STABILITY

On the other hand, if states do believe that the United States might use nuclear weapons first in a disarming first strike, a severe crisis against a nuclear-armed adversary could be especially dangerous and unstable. If nuclear weapons are used in anger, the most likely pathway is in the context of a severe international or political crisis, perhaps in the context of an ongoing conventional war, rather than a “bolt-from-the-blue” nuclear attack. Consequently, an especially appropriate lens through which to evaluate U.S. nuclear policy and posture is

89. According to T.V. Paul, nonnuclear states have engaged in aggression against nuclear-armed states in part based on the belief that the opponent is “self-deterred” from using nuclear weapons by moral and political constraints associated with the nuclear taboo. See Paul, “Nuclear Taboo and War Initiation in Regional Conflicts.” See also Byman and Waxman, *The Dynamics of Coercion*.

90. See Thomas C. Schelling, *The Strategy of Conflict* (Cambridge, Mass.: Harvard University Press, 1960), p. 18; and Thomas C. Schelling, *Arms and Influence* (New Haven, Conn.: Yale University Press, 1966), p. 37.

91. See “Essentials of Post-Cold War Deterrence,” p. 7. During the Cold War, President Nixon attempted to employ his “madman theory” by raising the alert level of U.S. nuclear forces in October 1969 in an attempt to convince the Soviet Union and North Vietnam that he might take extreme measures to end the war in Vietnam. The effort was unsuccessful. In addition, the gambit was dangerous in another context, as China had alerted its nascent nuclear forces in preparation for what it thought was an imminent Soviet attack on its nuclear facilities because of its ongoing conflict with the Soviet Union on the Sino-Soviet border. Apparently both China and the Soviet Union picked up the alert. Thus there was a danger that either Beijing or Moscow, or both, could have misinterpreted the U.S. alert as a signal of President Nixon’s intent to involve the United States in their conflict. This was particularly true for China, given that Mao and others had often accused Moscow and Washington of collusion against China, and several months earlier, a group of respected Chinese advisers had told Mao that a Soviet decision to initiate a major war against China was critically dependent on how the United States would respond. See William Burr and Jeffrey Kimball, “Nixon’s Secret Nuclear Alert: Vietnam War Diplomacy and the Joint Chiefs of Staff Readiness Test, October 1969,” *Cold War History*, Vol. 3, No. 2 (January 2003), pp. 113–156; Scott D. Sagan and Jeremi Suri, “The Madman Nuclear Alert: Secrecy, Signaling, and Safety in October 1969,” *International Security*, Vol. 27, No. 4 (Spring 2003), pp. 150–183; and John Wilson Lewis and Xue Litai, *Imagined Enemies: China Prepares for Uncertain War* (Stanford, Calif.: Stanford University Press, 2006), pp. 70–71.

in terms of their impact on crisis stability. A crisis is “stable” when neither side has an overriding incentive to use nuclear weapons first, and both sides are aware of this situation. Conversely, a crisis is “unstable” when one or both states have an overriding incentive to strike first, either to achieve some strategic advantage or to prevent the other side from gaining some perceived advantage by getting in the first blow.⁹² From the perspective of crisis stability, those who argue that the United States should continue to hold out the option of first use—even if it is a bluff—because it might have some deterrent effect downplay or neglect the possibility that leaving open the option to use nuclear weapons first might increase the chance that nuclear weapons are used accidentally, inadvertently, or deliberately, especially in crises involving minor nuclear powers.⁹³

Although the concept of stability dominated much of the Cold War debate, leading to elaborate theories and models of crisis, first strike, and arms race stability, by the late 1960s and early 1970s, both the U.S. and Soviet nuclear arsenals had grown so large, diverse, and survivable that any concerns about instability arising from counterforce exchange ratios or technological breakthroughs were almost certainly unfounded.⁹⁴ The condition of mutually assured destruction (MAD) helped solve the strategic stability problem by ensuring that neither side could gain any meaningful advantage from striking

92. The classic works on stability are Schelling, *The Strategy of Conflict*, pp. 207–254; and Schelling, *Arms and Influence*, chap. 6. See also Glenn H. Snyder, *Deterrence and Defense: Toward a Theory of National Security* (Princeton, N.J.: Princeton University Press, 1961), pp. 97–110; Kurt Gottfried and Bruce G. Blair, eds., *Crisis Stability and Nuclear War* (New York: Oxford University Press, 1988); Robert Powell, “Crisis Stability in the Nuclear Age,” *American Political Science Review*, Vol. 83, No. 1 (March 1989), pp. 61–76; and R. Harrison Wagner, “Nuclear Deterrence, Counterforce Strategies, and the Incentive to Strike First,” *American Political Science Review*, Vol. 85, No. 3 (September 1991), pp. 727–749.

93. Few scholars have made the explicit connection between NFU and crisis stability. One exception is Rong Yu and Peng Guangqian, “Nuclear No-First-Use Revisited,” pp. 81–90.

94. Despite the stability of the strategic balance in retrospect, some military and defense intellectuals at the time continued to worry about instabilities based on counterforce exchange models that showed how the Soviets could create a favorable balance of forces after a nuclear strike. The most elaborate scenario came from Paul Nitze. The “Nitze Scenario,” as it was called, postulated that Soviet advancements in hard-target counterforce capabilities provided the capability for a disarming first strike against U.S. land-based nuclear forces. This would leave only the less-accurate SLBMs available for retaliation, and because these forces could be targeted only at Soviet cities—in which case the Soviets would retaliate against U.S. cities—Nitze worried that the United States might be deterred from retaliating. As a result, the Soviets might calculate that they could achieve strategic leverage by striking first. See Paul H. Nitze, “Assuring Strategic Stability in an Era of Détente,” *Foreign Affairs*, Vol. 54, No. 2 (January 1976), pp. 207–232; and Paul H. Nitze, “Deterring Our Deterrent,” *Foreign Policy*, No. 25 (Winter 1976–1977), pp. 195–210. For critiques, see Alan Tonelson, “Nitze’s World,” *Foreign Policy*, No. 35 (Summer 1979), pp. 74–90; Robert J. Art, “Between Assured Destruction and Nuclear Victory: The Case for the ‘Mad-Plus’ Posture,” *Ethics*, Vol. 95, No. 3 (April 1985), pp. 505–511; and Waltz, “Nuclear Myths and Political Realities,” pp. 735–736.

first.⁹⁵ In the modern nuclear environment, however, strategic stability—especially crisis stability—is far from assured. Given U.S. quantitative and qualitative advantages in nuclear forces,⁹⁶ and given that current and potential nuclear-armed adversaries are likely to have nuclear arsenals with varying degrees of size and survivability, in a future crisis an adversary may fear that the United States could attempt a disarming nuclear first strike. Even if the United States has no intention of striking first, the mere possibility of a U.S. disarming first strike left open by a policy of not ruling one out could cause suboptimal decisionmaking in the heat of an intense crisis and increase the chances that nuclear weapons are used.

There are three causal pathways through which the continued U.S. option to use nuclear weapons first could generate crisis instability. First, in a severe crisis (perhaps in the context of an ongoing conventional war⁹⁷), intense apprehensions about a U.S. first strike could prompt an opponent to take dangerous measures to increase the survivability of its forces and help ensure nuclear retaliation, such as adopting a launch-on-warning posture, rapidly dispersing forces, raising alert levels and mating warheads to missiles, or pre-delegating launch authority to field commanders.⁹⁸ In the 1990–91 Gulf War, for example, Saddam Hussein dispersed his ballistic missiles to decrease their vulnerability to attack and apparently pre-delegated launch authority to a select group of commanders for the use of CW in certain circumstances.⁹⁹ Loosening centralized control, adopting a hair-trigger posture, or simply acting in haste to generate forces and increase survivability increases the possibilities of an accidental launch or other miscalculations that lead to unauthorized use.

Second, in the midst of an intense crisis, an adversary's trepidations about a U.S. first strike could create incentives for signaling and brinkmanship that

95. See, for example, Robert Jervis, "Why Nuclear Superiority Doesn't Matter," *Political Science Quarterly*, Vol. 94, No. 4 (Winter 1979–1980), pp. 617–633; and Charles L. Glaser, *Analyzing Strategic Nuclear Policy* (Princeton, N.J.: Princeton University Press, 1990), p. 53.

96. See, for example, Lieber and Press, "The End of MAD?"

97. For an earlier analysis of the dangers of nuclear escalation in the context of a conventional war, see Barry R. Posen, *Inadvertent Escalation: Conventional War and Nuclear Risks* (Ithaca, N.Y.: Cornell University Press, 1991).

98. See, for example, Lieber and Press, "The End of Mad?" pp. 31–32; Glaser and Fetter, "Counterforce Revisited," p. 121; Bruce G. Blair and Chen Yali, "The Fallacy of Nuclear Primacy," *China Security*, No. 4 (Autumn 2006), p. 60; Peter D. Feaver, "Command and Control in Emerging Nuclear Nations," *International Security*, Vol. 17, No. 3 (Winter 1992/93), pp. 160–187; Byman and Waxman, *The Dynamics of Coercion*, pp. 208, 220; and Forrest E. Morgan, Karl P. Mueller, Evan S. Medeiros, Kevin L. Pollpeter, and Roger Cliff, *Dangerous Thresholds: Managing Escalation in the 21st Century* (Santa Monica, Calif.: RAND, 2008), p. 86.

99. Sagan, "The Commitment Trap," pp. 108–109; Smith, *Deterring America*, p. 51; and Joseph Cirincione, Jon B. Wolfstahl, and Miriam Rajkumar, *Deadly Arsenals: Nuclear, Biological, and Chemical Threats* (Washington, D.C.: Carnegie Endowment for International Peace, 2005), p. 343.

increase the chances of miscommunication and nuclear escalation. For example, in a crisis an adversary's concerns about a U.S. disarming nuclear strike could prompt it to take measures to decrease the vulnerability of its forces, such as mating warheads to delivery vehicles, fueling missiles, dispersing forces, raising alert levels, or erecting mobile ballistic missile launchers. While the opponent might intend these measures to signal resolve and to deter a U.S. counterforce first strike by increasing the survivability of its forces, U.S. political and military leaders might misperceive these actions as a sign of the opponent's impending nuclear attack and decide to preempt.¹⁰⁰ In this situation, an opponent's fear of a U.S. first strike encourages actions that, through miscommunication and miscalculation, might inadvertently trigger a U.S. preemptive attack. If the opponent has any remaining weapons after a U.S. strike, at least some of them might be used in retaliation against the United States or its allies. This dynamic may be especially pernicious in a future crisis if U.S. leaders believe that the opponent is willing to take substantial risks, because then decisionmakers may be more inclined to interpret the adversary's actions as preparations for a nuclear attack rather than as defensive signals intended for deterrence.

Whereas in the logic of crisis instability outlined above the use of nuclear weapons occurs through accident or miscommunication, extreme concerns about a U.S. nuclear first strike might also prompt a state to deliberately use nuclear weapons first. There are two rationales for intentional nuclear first use by a state that fears a U.S. disarming first strike. First, in the context of an intense crisis in which the adversary believes that the United States might attempt a disarming first strike, a state could be enticed to preempt out of fear that if it does not launch first it will not have a second chance. A "use-it-or-lose-it" mentality might give an opponent a strong incentive to preempt.¹⁰¹ In this case, the adversary's motivation to use nuclear weapons first comes not from the possibility of gaining some advantage, but rather from the belief that waiting and receiving what it believes to be a likely U.S. first strike would only lead to an even worse outcome. Desperation, rather than advantage, could

100. For similar arguments, see, for example, Keir A. Lieber and Daryl G. Press, "Superiority Complex: Why America's Growing Nuclear Supremacy May Make War with China More Likely," *Atlantic Monthly*, July/August 2007, p. 91; Lieber and Press, "The End of MAD?" p. 32; and Glaser and Fetter, "Counterforce Revisited," pp. 121–123.

101. See, for example, Feaver, "Command and Control in Emerging Nuclear Nations," p. 165; Morgan et al., *Dangerous Thresholds*, pp. 43, 86; Byman and Waxman, *The Dynamics of Coercion*, p. 220; Christopher F. Chyba and Karthika Sasikumar, "A World of Risk: The Current Environment for U.S. Nuclear Weapons Policy," in George Bunn and Chyba, eds., *U.S. Nuclear Weapons Policy: Confronting Today's Threats* (Washington, D.C.: Brookings Institution Press, 2006), p. 4; and Lyle J. Goldstein, *Preventive Attack and Weapons of Mass Destruction: A Comparative Historical Analysis* (Stanford, Calif.: Stanford University Press, 2006), pp. 152–153.

compel an opponent to preempt.¹⁰² Second, an adversary might rationally choose to use nuclear weapons first if it believes that nuclear escalation could be an effective means to de-escalate a losing conventional conflict. Similar to NATO's strategy in the Cold War, a state might initiate a limited nuclear attack to raise the risk of further escalation and thereby influence the United States' resolve to continue the war.¹⁰³ Consequently, if an adversary believes that nuclear escalation is a "trump card" that could be used to force a negotiated settlement, and if there is significant concern about a U.S. disarming first strike (perhaps as a pretext for regime change) during an ongoing conventional engagement, then the opponent might choose to use nuclear weapons at an early point in the conflict.¹⁰⁴

The Benefits of No First Use

For the United States and its allies, NFU has several military and political benefits. First, and most important, NFU would enhance crisis stability. A credible NFU policy will help decrease an opponent's trepidations about a U.S. first strike, thereby decreasing the possibility that nuclear weapons are used accidentally, inadvertently, or deliberately in a severe crisis.

Second, by removing the option to use nuclear weapons first, the United States would have a consistent and inherently credible nuclear policy. Although some states might question U.S. political resolve to use nuclear weapons first—in which case the NPR's decision to retain the option in many circumstances does not contribute to deterrence—current and potential adversaries cannot dismiss the possibility of a nuclear response after U.S. interests have been attacked with nuclear weapons.¹⁰⁵ The threat to use nuclear weapons in response to a nuclear attack is highly credible, and it is a threat that U.S.

102. See Paul K. Davis, *Studying First-Strike Stability with Knowledge-Based Models of Human Decisionmaking* (Santa Monica, Calif.: RAND, 1989), pp. xiii, 18–19. See also Walter B. Slocombe, "Strategic Stability in a Restructured World," *Survival*, Vol. 32, No. 4 (July/August 1990), p. 306; and Thomas C. Schelling, "The Role of Deterrence in Total Disarmament," *Foreign Affairs*, Vol. 40, No. 3 (April 1962), p. 394.

103. There is some evidence indicating that this line of reasoning has appeared in Russia and China. On Russia's thinking, see Yury Fedorov, "Russia: 'New' Inconsistent Nuclear Thinking and Policy," in Muthiah Alagappa, ed., *The Long Shadow: Nuclear Weapons and Security in 21st Century Asia* (Stanford, Calif.: Stanford University Press, 2008), pp. 148–150; and Nikolai Sokov, "The Origins of and Prospects for Russian Nuclear Doctrine," *Nonproliferation Review*, Vol. 14, No. 2 (July 2007), pp. 207–226. On China, see Evan S. Medeiros, "Evolving Nuclear Doctrine," in Paul J. Bolt and Albert S. Willner, eds., *China's Nuclear Future* (Boulder, Colo.: Lynne Rienner, 2006), pp. 62–65.

104. For similar arguments, see Glaser and Fetter, "Counterforce Revisited," pp. 121–122; Lieber and Press, "The End of MAD?" p. 32; and Goldstein, *Preventive Attack and Weapons of Mass Destruction*, p. 160.

105. For a similar argument, see Glaser and Fetter, "Counterforce Revisited," pp. 101–102, 104.

political leaders should want to execute if deterrence fails. In fact, NFU could further strengthen the credibility of nuclear deterrence by signaling that the United States retains nuclear forces only for retaliation to a nuclear attack, which, in the mind of the adversary, could increase the likelihood that nuclear retaliation would indeed come if it crosses the nuclear threshold.¹⁰⁶ An NFU declaration would be a kind of commitment tactic that would increase the credibility of nuclear deterrence by seemingly binding U.S. decisionmakers to use nuclear weapons for the one mission they have been assigned in the event of a nuclear attack.¹⁰⁷

Third, NFU places primary emphasis on U.S. conventional forces. By relegating nuclear weapons to the sole mission of retaliation for nuclear attacks, the United States would make conventional forces the sole instrument of war fighting absent an opponent's nuclear escalation. Given U.S. advantages in conventional power, this is precisely the level where it should want to fight. NFU would place a necessary and important burden on the Defense Department to maintain superior conventional forces and power-projection capabilities against any conceivable threat. This responsibility would ensure that political and military leaders would not again be tempted, as they were in the early period of the Cold War, to rely on the threat of nuclear escalation as a cost-efficient alternative to expending the effort and resources to maintain conventional superiority.

Fourth, NFU could help assuage some of the recent criticisms of U.S. missile defense and nuclear stockpile maintenance initiatives. NFU could help assure states that might be threatened by U.S. missile defense efforts that they are for purely defensive purposes. NFU could help alleviate concerns that missile defenses might be used to complement offensive operations, such as providing a "safety net" for any remaining weapons launched in retaliation after a U.S. counterforce first strike against a state's nuclear capabilities. An NFU policy might also score political points with domestic opposition to efforts by the United States to update its aging nuclear stockpile, which has been criticized because of the potential negative impact on U.S. nonproliferation efforts. A nuclear doctrine that de-emphasized nuclear weapons by relegating them only to

106. By communicating that the only legitimate purpose of nuclear weapons is to retaliate against a nuclear attack, the United States can help strengthen an "illegitimacy norm" against the first use of nuclear weapons. This norm would increase the likelihood that the United States and the international community would be willing to sanction the use of nuclear weapons in response to what they believed was an illegitimate act. See Dean Wilkening and Kenneth Watman, *Nuclear Deterrence in a Regional Context* (Santa Monica, Calif.: RAND, 1995), p. 19.

107. A nuclear attack that went unrequited would set a dangerous precedent that states could use nuclear weapons against U.S. interests. Regardless of the costs that a massive conventional response could inflict, I argue that a nuclear attack must necessitate a nuclear response.

deterrence of a nuclear attack could help ease domestic and international concerns that efforts to update and enhance the safety and security features of the U.S. nuclear arsenal might inadvertently signal that the United States views nuclear weapons as militarily useful.

Fifth, an NFU declaration might also provide an incentive to other nuclear powers to revise their nuclear policies. Although changes in U.S. declaratory policy might not affect North Korean and Iranian nuclear decisions, there is some evidence suggesting that changes in U.S. nuclear policy can influence other nuclear states. India, for example, revised its nuclear policy in January 2003 to include the option to use nuclear weapons in response to CW or BW attacks, apparently in an effort to more closely align its policies with the United States and other nuclear powers.¹⁰⁸ Following the U.S. disclosure in May 2010 of the exact size of its nuclear stockpile, the United Kingdom followed suit, explaining, “[T]he time is now right to be more open about the weapons we hold.” In addition, the U.K. government stated, “[W]e have decided that the time is right to look again at our [nuclear] policy, as the U.S. has done in their recent Nuclear Posture Review, to ensure that it is fully appropriate for the political and security context in 2010 and beyond.”¹⁰⁹

Finally, because NFU would be an important departure from the past six decades of U.S. nuclear policy, it would provide the United States with important political benefits in its efforts to lead the nonproliferation regime and encourage greater international support for nonproliferation initiatives. Retaining the option to use nuclear weapons first undermines the NPT regime by signaling that even the world’s most affluent and powerful nation continues to believe that nuclear weapons are important instruments of national power. This perception contributes to international claims of American nuclear hypocrisy, as the United States seeks to both retain its nuclear weapons and lead the NPT regime to prevent others from acquiring them.¹¹⁰ Although it is unlikely that other nations would make such politically and economically important decisions about whether to build or otherwise acquire nuclear weapons based on what the United States says or does with its nuclear arsenal—if anything, U.S.

108. Sagan, “The Case for No First Use,” p. 176.

109. Both quotes are from “U.K. Offers Nuke Numbers,” *Global Security Newswire*, May, 26, 2010.

110. In a recent interview, Turkish Prime Minister Recep Tayyip Erdogan defended Iran’s nuclear program by saying, “There is a style of approach which is not very fair because those [who accuse Iran of pursuing nuclear weapons] have very strong nuclear infrastructures and they don’t deny that. The permanent members of the UN Security Council all have nuclear arsenals and then there are countries which are not members of the International Atomic Energy Agency which also have nuclear weapons. So although Iran doesn’t have a weapon, those who say Iran shouldn’t have them are those countries which do.” Quoted in Robert Tait, “Turkish PM Exposes Nuclear Rift in NATO,” *Guardian*, October 26, 2009.

conventional superiority is more likely to affect states' strategic calculations—recalcitrant countries have nevertheless blamed or at least referred to U.S. nuclear precedents to defend and justify their nuclear decisions.¹¹¹ North Korea, for example, claimed that the first-use option in the 2010 NPR “proves that the present U.S. policy toward the DPRK is nothing different from the hostile policy pursued by the Bush administration. . . . As long as the U.S. nuclear threat persists, the DPRK will increase and update various type[s] of nuclear weapons as its deterrent in such a manner as it deems necessary in the days ahead.”¹¹²

For nonnuclear NPT member states, especially members of the Nonaligned Movement, NFU would satisfy a long-standing desire for the United States to show a tangible commitment to Article 6 of the NPT, which commits the five declared nuclear weapons states under the treaty to “pursue negotiations in good faith on effective measures relating to the cessation of the nuclear arms race at an early date and to nuclear disarmament.” Several nonnuclear NPT states have said that a reduction in the role of nuclear weapons in U.S. security policy such as NFU, rather than simple reductions in the number of weapons in the U.S. arsenal, would be a clear and convincing demonstration of the U.S. commitment to eventual disarmament.¹¹³ These states have often based their lack of support for U.S.-led multilateral nonproliferation initiatives, including support for sanctions against proliferant regimes at the UN Security Council, on the grounds that the United States has not done enough to fulfill its Article 6 obligations. Thus, NFU, by symbolizing an important step toward realizing Article 6, would remove a significant roadblock to greater support for and participation in the NPT regime among nonnuclear NPT member states. NFU would therefore have an important, albeit indirect, effect on nonproliferation

111. For example, Iranian President Mahmoud Ahmadinejad has said, “But the other side is that there are a number of countries that possess both nuclear energy and nuclear weapons. They use their atomic weapons to threaten other peoples. And it is these powers who say that they are worried about Iran deviating from the path of peaceful use of atomic energy. We say that these powers are free to monitor us if they are worried. But what these powers say is that the Iranians must not complete the nuclear fuel cycle because deviation from peaceful use might then be possible. What we say is that these countries themselves have long deviated from peaceful usage. These powers have no right to talk to us in this manner. This order is unjust and unsustainable.” Mahmoud Ahmadinejad, “We Are Determined,” interview, *Der Spiegel*, May 30, 2006, <http://www.spiegel.de/international/spiegel/0,1518,418660-2,00.html>. Similarly, Libyan leader Col. Muammar Qadhafi said, “If the Israelis have the nuclear weapons and the nuclear capabilities, then it is the right of the Egyptians, the Syrians, the Saudis to have the same—even the Palestinians should have the same because their counterparts, or their opponents, have nuclear capabilities.” Quoted in “Qadhafi Says Palestinians, Arab Nations Have Right to Nuclear Arms,” *Global Security Newswire*, October 26, 2009.

112. “North Korea Said to Agree to Chinese Nuclear Negotiations Proposal,” *Global Security Newswire*, April 12, 2010.

113. Deepti Choubey, “Are New Nuclear Bargains Attainable?” (Washington, D.C.: Carnegie Endowment for International Peace, 2008), p. 7.

by encouraging greater multilateral alignment with U.S.-led nonproliferation efforts. At the very least, an NFU policy would help expose states that use the U.S. commitment to Article 6 as an excuse not to vigorously support nonproliferation.

Obstacles to No First Use

There are two issues that could potentially pose serious obstacles to U.S. adoption of an NFU policy. First, some critics argue that NFU would reduce the credibility of both formal and informal extended deterrence guarantees. States such as Japan and South Korea, as well as many NATO allies, have foresworn indigenous nuclear arsenals in part because of credible U.S. extended deterrence commitments. Consequently, some contend that NFU would weaken deterrence (especially against chemical and biological threats) and signal a diminished U.S. commitment to the security of U.S. treaty allies, which might therefore encourage some allies to develop their own nuclear capabilities.

Although some allies are likely to initially oppose NFU, there are several arguments that can be used to assuage allies' concerns and convince them that they are ultimately more secure with NFU. Most important, NFU would not degrade or eliminate the nuclear deterrence umbrella. An NFU policy would still protect allies from nuclear coercion or attacks because the United States would still threaten a nuclear response to the use of nuclear weapons.¹¹⁴ NFU means only that the United States would not be the first to use nuclear weapons; it does not mean that the United States would not retaliate, perhaps massively, once the nuclear threshold has been crossed.

In addition, it is important to note that since the 1960s the United States has never relied exclusively on nuclear weapons for extended deterrence. Conventional forces have always been the first line of defense against nonnuclear threats, and nuclear use would be considered only if conventional capabilities were unable to contend with the challenge. Given that first use has always been the option of last resort, and that the United States currently possesses conventional superiority, the threat of first use is essentially irrelevant for extended deterrence because there are no credible scenarios in which it would need to be used. In fact, an overreliance on implicit or explicit nuclear first-use threats is more likely to weaken extended deterrence, given that current or potential adversaries can readily question whether the United States would actually be willing to break the long record of nuclear nonuse and potentially risk retaliation in kind for anything except as a response to a nuclear attack. To

114. For a similar argument about the compatibility between NFU and extended deterrence, see Sagan, "The Case for No First Use," pp. 167–169.

the extent that U.S. extended deterrence commitments are perceived as credible by both allies and adversaries, the combination of superior conventional capabilities and a nuclear second-strike capability is a powerful and credible extended deterrent.

Convincing skeptical U.S. allies of the benefits of NFU would not be easy, and the United States should not adopt it without significant and sustained consultations with allies to explain the logic of NFU. There is some precedent, however, to suggest that the United States can successfully convince its allies of the benefits of a fundamental shift in nuclear strategy. NATO's adoption of flexible response in 1967 provides an important example. Throughout the 1950s, NATO doctrine was predicated on the belief that a conventional defense of Europe was not possible at an acceptable cost, and therefore U.S. nuclear weapons would be the principal deterrent to major Warsaw Pact aggression. According to NATO's 1954 military strategy document, MC 48, in the event of a massive conventional offensive in Europe by Warsaw Pact forces, NATO "would be unable to prevent the rapid overrunning of Europe unless NATO immediately employed [atomic] weapons both strategically and tactically." Nuclear weapons must be used "from the outset," as "[a]ny delay in their use—even measured in hours—could be fatal."¹¹⁵ A similar view is echoed in MC 14/2, issued in 1957, which declared, "In case of general war . . . NATO defense depends upon an immediate exploitation of our nuclear capability, whether or not the Soviets employ nuclear weapons."¹¹⁶ Yet, by 1967, after a sustained campaign by Defense Secretary Robert McNamara and other U.S. officials, NATO had essentially reversed course and incorporated an important role for conventional forces in its military doctrine.¹¹⁷ Despite strong

115. North Atlantic Military Committee, "Decision on M.C. 48: The Most Effective Pattern of NATO Military Strength for the Next Few Years," November 22, 1954, in Pedlow, *NATO Strategy Documents, 1949–1969*, pp. 233, 242, <http://www.nato.int/docu/stratdoc/eng/a541122a.pdf>.

116. North Atlantic Military Committee, "Final Decision on MC 14/2 (Revised): Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area," May 23, 1957, in Pedlow, *NATO Strategy Documents, 1949–1969*, p. 289, <http://www.nato.int/docu/stratdoc/eng/a570523a.pdf>. Importantly, MC 14/2 acknowledged that nuclear weapons would not be appropriate to respond to small-scale aggression, such as infiltrations, incursions, or other localized actions. The document said that "NATO must also be prepared to deal immediately with such situations without necessarily having recourse to nuclear weapons. NATO must be prepared to respond quickly with nuclear weapons should the situation require it." *Ibid.*, p. 291.

117. On the transition to flexible response, see, for example, Schwartz, *NATO's Nuclear Dilemmas*; Jane E. Stromseth, *The Origins of Flexible Response: NATO's Debate over Strategy in the 1960s* (New York: St. Martin's, 1988); Ivo H. Daalder, *The Nature and Practice of Flexible Response: NATO Strategy and Theater Nuclear Forces since 1967* (New York: Columbia University Press, 1991); and Helga Haftendorn, *NATO and the Nuclear Revolution: A Crisis of Credibility, 1966–1967* (Oxford: Oxford University Press, 1996). It is important to note that the version of flexible response adopted by NATO represented a compromise between U.S. and allied positions, as MC 14/3 differed from McNamara's original formulation. Contrary to earlier U.S. proposals for a full-scale conventional force capable of resisting a conventional attack without resort to nuclear weapons, MC 14/3 was explicit in including the option of deliberate nuclear escalation. Nevertheless, NATO's eventual

initial opposition to a shift in NATO doctrine—some allies argued that removing the threat to immediately use nuclear weapons would weaken extended deterrence and encourage Soviet military adventurism¹¹⁸—the United States was ultimately able to convince NATO to rethink and revise a fundamental element of its earlier policy. This achievement suggests that it is possible to persuade U.S. allies to embrace an important change in nuclear policy such as NFU.

The second argument against NFU is that it would not be believed, and therefore NFU would do nothing to improve the strategic equation.¹¹⁹ Despite China's consistent commitment to NFU, for instance, there is considerable debate among scholars and policymakers about its validity, and Beijing has been somewhat ambiguous about the specific conditions under which NFU applies, especially regarding Taiwan.¹²⁰ For some, the possibility that an NFU pledge would merely be dismissed as "cheap talk" that could be reversed if necessary effectively negates any strategic gain the United States might accrue from such a policy.

Skeptics of the believability of NFU underestimate the international and domestic audience costs incurred by a clear NFU commitment.¹²¹ By making an NFU policy public, perhaps in the form of a presidential press conference accompanied by a formal document, the United States would increase the credibility of NFU by tying its reputation to the sustainment of and adherence to the commitment. The objective would be to bolster the credibility of an NFU policy by ensuring that noncompliance would have unacceptably high political costs.

A violation of NFU would likely have substantial domestic, and especially

decision to move away from what was basically a nuclear-only strategy was an important departure from past practice. Although there was a compromise, NATO moved closer to the U.S. position than the other way around.

118. See Christoph Bluth, "Reconciling the Irreconcilable: Alliance Politics and the Paradox of Extended Deterrence in the 1960s," *Cold War History*, Vol. 1, No. 2 (January 2001), pp. 73–102.

119. See, for example, Tertrais, "The Trouble with No First Use," p. 23.

120. For recent debates about China's NFU policy, see Medeiros, "Evolving Nuclear Doctrine," pp. 59–62; Evan S. Medeiros, "'Minding the Gap': Assessing the Trajectory of the PLA's Second Artillery," in Roy Kamphausen and Andrew Scobell, eds., *Right-Sizing the People's Liberation Army: Exploring the Contours of China's Military* (Carlisle, Pa.: Strategic Studies Institute, U.S. Army War College, 2007), pp. 156–158; Ting Wai, "The Potential Flashpoint: Taiwan," in Bolt and Willner, *China's Nuclear Future*, pp. 147–153; Larry M. Wortzel, *China's Nuclear Forces: Operations, Training, Doctrine, Command, Control, and Campaign Planning* (Carlisle, Pa.: Strategic Studies Institute, U.S. Army War College, 2007), pp. 14–15; and Jeffrey Lewis, *The Minimum Means of Reprisal: China's Search for Security in the Nuclear Age* (Cambridge, Mass.: MIT Press, 2007), pp. 41–44.

121. On audience costs, see James D. Fearon, "Domestic Political Audiences and the Escalation of International Disputes," *American Political Science Review*, Vol. 88, No. 3 (September 1994), pp. 577–592; James D. Fearon, "Signaling Foreign Policy Interests: Tying Hands versus Sinking Costs," *Journal of Conflict Resolution*, Vol. 41, No. 1 (February 1997), pp. 68–90; and Michael Tomz, "Domestic Audience Costs in International Relations: An Experimental Approach," *International Organization*, Vol. 61, No. 4 (October 2007), pp. 821–840.

international, political ramifications. Domestically, a president's purposeful violation of an NFU pledge could incentivize the political opposition to rally strongly against the violation, providing an opportunity for vocal political opponents to generate attention and potentially bring independent voters and moderate members of the opposite political party into their camp. Internationally, breaking an NFU commitment risks damaging the United States' reputation for honoring its commitments.¹²² If the United States were unwilling to adhere to its public policies regarding something as important as nuclear weapons, states might calculate that they could not trust the United States at its word. Such beliefs could weaken confidence in U.S. commitments to other unilateral, bilateral, and multilateral declarations and agreements; give states pause in considerations about entering into new agreements with the United States; and create strong doubts about the sincerity of future U.S. declaratory policies. In addition, the breach of NFU could undermine U.S. long-term security. Nuclear first use would signal that the United States believes that nuclear weapons have military utility and is willing to employ them regardless of the political costs, thereby potentially encouraging further proliferation in an attempt to deter future U.S. nuclear attacks.

To be sure, in the midst of an intense crisis U.S. decisionmakers, especially the president, would need to repeat and reinforce the commitment to NFU, lest an opponent fear that the United States could suddenly change its nuclear policy. During a severe crisis or a limited conventional conflict with a nuclear-armed adversary, U.S. leaders would need to make frequent public statements that U.S. nuclear weapons are solely for deterrence of nuclear attacks, and nuclear retaliation would be swift and severe if the opponent chooses to use nuclear weapons. Even more important, in a crisis the United States would have to carefully coordinate its declaratory policy and actions, especially with regard to alerting nuclear forces. If in a crisis an opponent perceives the alert status of U.S. nuclear (and conventional) forces as too high, the leadership might be inclined to believe that NFU is a bluff and the United States is preparing for a possible first strike. Consequently, to enhance the credibility of NFU in a crisis, U.S. decisionmakers would need to pay careful attention to the alert status of both U.S. nuclear forces and those of the opponent and ensure that, at a maximum, the alert status of U.S. forces were raised on a tit-for-tat basis with the opponent. In such cases, the president could announce a decision to raise

122. There is a vast literature on the role that reputation plays in compliance with international laws and agreements. Recent works that examine the role of reputation in deterrence and nuclear issues include T.V. Paul, *The Tradition of Non-Use of Nuclear Weapons* (Stanford, Calif.: Stanford University Press, 2009), pp. 25–36; and Anne E. Sartori, *Deterrence by Diplomacy* (Princeton, N.J.: Princeton University Press, 2005).

the alert level of U.S. forces as a reciprocal response to the adversary's actions, while reinforcing the U.S. commitment to NFU.

Conclusion

Arguments for a U.S. policy of no first use have traditionally been met with fierce resistance from some elements of the defense and foreign policy communities. Policymakers and defense planners are always reluctant to deprive the commander in chief of any potential military options. Yet a fundamental tenet of deterrence theory, first articulated and popularized by Thomas Schelling, is that limiting one's options can be beneficial for deterrence and strategic stability.¹²³ By foreclosing the U.S. option to use nuclear weapons first, NFU would enhance crisis stability, bolster conventional deterrence, and provide the United States with renewed political legitimacy and leverage as the leader of the global nonproliferation regime. For the United States, the continued threat to use nuclear weapons first is either militarily useless or potentially destabilizing, and the actual use of nuclear weapons first is politically untenable and militarily dangerous.

The appeal of NFU appears to be catching on. Japan has traditionally been a strong opponent of NFU, but statements by high-ranking Japanese officials suggest that this sentiment might be changing. According to Katsuya Okada, Japan's foreign minister, "We cannot deny the fact that we are moving in the direction of no first use of nuclear weapons. We would like to discuss the issue with Washington."¹²⁴ India, too, recently called for an international NFU policy as part of its support for global nuclear disarmament.¹²⁵ In addition, the International Commission on Nuclear Nonproliferation and Disarmament, a multination initiative sponsored by Australia and Japan, advocated in its recent report that the nuclear powers adopt NFU by 2025.¹²⁶ If the United States is committed to reducing nuclear dangers, NFU should be at the top of the list of necessary changes in U.S. nuclear policy.

123. See Schelling, *The Strategy of Conflict*, pp. 22–28; and Schelling, *Arms and Influence*, pp. 35–55.

124. Quoted in "Japan to Pressure U.S. over No Pre-emptive Use of Nuclear Weapons," *Mainichi Daily News*, October 19, 2009. See also Shingo Fukuyama and Hiromichi Umehayashi, "Japan Ready for 'No Nukes,'" *Japan Times*, August 25, 2009.

125. "India Calls for Global 'No First Use' Nuke Policy," *Global Security Newswire*, February 24, 2010.

126. International Commission on Nuclear Nonproliferation and Disarmament (ICNND), *Eliminating Nuclear Threats: A Practical Agenda for Global Policymakers* (Canberra/Tokyo: ICNND, 2009), p. 186, http://www.icnnd.org/reference/reports/ent/pdf/ICNND_Report-EliminatingNuclearThreats.pdf. The commission recognized that universal adherence to NFU would take time, which is why it set the 2025 time frame. In the interim, the commission advocated that nuclear states declare that "the sole purpose of the possession of nuclear weapons is to deter the use of such weapons against one's own state and that of one's allies." *Ibid.*, p. 173.