

## **Should the United States Maintain the Nuclear Triad?**

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In the first week of Pres. Barack Obama's new administration, the White House released his agenda, stating the policies the president will pursue regarding the nuclear arsenal. The agenda includes three foci: securing loose nuclear material from terrorists, strengthening the Nuclear Non-Proliferation Treaty, and moving toward a nuclear-free world.<sup>1</sup> Pushing the president in the direction of a "world without nuclear weapons" are such paragons of past political power as former senator Sam Nunn and former secretaries of state George Shultz and Henry Kissinger.<sup>2</sup> Adding a host of Washington's think-tank analysts to this list produces a crescendo of voices calling for "global zero." They challenge not only the current size of the arsenal but also the very need for a nuclear triad. Much of the recent scholarship shows a clear preference for moving to a monad composed solely of submarines armed with submarine-launched ballistic missiles (SLBM) until the United States ultimately disarms.<sup>3</sup>

Some past and present members of the military leadership hold a view that supports the nuclear arsenal. Senior leaders have given a number of public speeches and interviews outlining what it will take to

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maintain and modernize the most advanced and secure nuclear arsenal in the world.<sup>4</sup> A key aspect of the general position held by supporters of the nuclear arsenal includes retaining the triad and replacing aging platforms.

In the ongoing debate over the appropriate size and purpose of the nuclear arsenal, abolitionists—clearly in the ascendency—make six basic arguments that would ultimately lead to creation of a nuclear monad before reaching total disarmament:<sup>5</sup>

1. Post–Cold War presidents have failed to alter nuclear policy for the current security environment.
2. Terrorism, not Russia, is the primary threat facing the United States. Nuclear weapons do not deter terrorists.
3. America’s advanced conventional capabilities can accomplish the same objectives as nuclear weapons.
4. As a signer of the Nuclear Non-Proliferation Treaty, the United States must move toward nuclear abolition.
5. Only nuclear disarmament can overcome the threats of accidental detonation, miscalculation leading to nuclear war, and proliferation of nuclear weapons and material.
6. The safest and most secure leg of the nuclear triad is the sea-based one. Thus, it should become the sole delivery platform for the nuclear arsenal.<sup>6</sup>

Admittedly, each of these arguments has some element of truth; they do not, however, represent a complete understanding of the strategic role played by nuclear weapons in ensuring the sovereignty of the United States or the specific contribution of each leg of the triad. Although each of the abolitionists' arguments deserves a detailed refutation, a focus on the relevance of the triad must suffice.

### **Development of the Triad**

In 1947, the year the United States Air Force became an independent service, the American military was attempting to develop sound tactical, operational, and strategic doctrine for the use of nuclear weapons. Just two years earlier, a new and devastating weapon had changed the face of warfare, but the full implications of the atom bomb were yet to be realized. In a flurry of activity, the academic, military, and policy communities undertook much writing and studying as the nation sought to understand nuclear weapons while also confronting the Soviet Union. As technology developed over the following decades, the nation moved from depending on a fleet of long-range bombers as the sole method of delivering nuclear weapons (1945–59) to a nuclear triad composed of bombers, intercontinental ballistic missiles (ICBM), and SLBMs.<sup>7</sup>

During the 1950s, Pres. Dwight Eisenhower believed that an American effort to maintain conventional parity with the Soviet Union would destroy the US economy and bankrupt the federal treasury.<sup>8</sup> Thus, his administration turned to the nuclear arsenal as a substitute for conventional parity. In the president's view, the United States could effectively deter Soviet aggression by placing greater emphasis on nuclear weapons in American national security policy. Commonly called the "New Look," the president's emphasis on the growth of advanced nuclear weapons and delivery platforms led to development of a large fleet of nuclear bombers and, by the end of the Eisenhower administration, the nuclear triad.<sup>9</sup> Composed of three legs, the triad provides the United States with three distinct delivery platforms for nuclear weapons.

The first and oldest leg includes the nation's long-range bombers and their payload of gravity bombs and air launched cruise missiles. At its apex in the early to mid-1960s, Strategic Air Command included more than 1,300 nuclear-capable bombers, including 700 of the then-new B-52s.<sup>10</sup> By 1990 the nation's long-range bomber fleet had declined to 347 total aircraft.<sup>11</sup> Today, nuclear-capable bombers account for about half of the Air Force's bomber fleet of 162 aircraft.<sup>12</sup>

A second leg became part of the nation's nuclear arsenal in 1959 with deployment of the first six Atlas D ICBMs. Just three years later, the first Minuteman I deployed. Not until 1970 did America's ICBM force

reach its peak with a mix of 1,054 Titan II and Minuteman I, II, and III missiles—most of which carried three to 12 warheads. These numbers remained constant until 1982.<sup>13</sup> Since then, the number of operationally deployed ICBMs steadily declined to its current size of 450.<sup>14</sup>

The addition of the Polaris SLBM in 1960 completed the triad. Like the other two legs, SLBMs waxed at the height of the Cold War and waned as it ended. By 1967 the United States had deployed 656 SLBMs aboard 41 ballistic missile submarines (SSBN). When the Soviet Union collapsed in December 1991, the sea leg of the triad remained largely intact with 33 SSBNs carrying 608 SLBMs.<sup>15</sup> Today, however, only 14 *Ohio*-class submarines remain, each carrying 24 Trident II nuclear missiles.

Throughout the Cold War, the United States maintained a substantial inferiority in conventional military forces but enjoyed the protection of a sizable nuclear umbrella. As the Cold War progressed and American thinking about nuclear conflict developed, “assured destruction” took precedence as the approach of choice. Developed by Thomas Schelling and others while he worked for the RAND Corporation in the 1960s, the concept of assured destruction purposefully left the United States vulnerable to a first strike, yet the nation maintained a credible second-strike capability.<sup>16</sup> Although nuclear policy evolved throughout the Cold War, its essential nature remained much the same.

Because of the exorbitant fiscal cost of building a large underground industrial infrastructure, for example, the nation chose to accept the risk of an unprotected public—but only as long as it was defended by bombers standing at alert, ICBMs protected in their reinforced silos, and submarines quietly prowling the world's oceans. In the end, deterrence seems to have worked.

A second aspect of American nuclear policy—often overlooked in the current debate—dates back to the earliest days of the North Atlantic Treaty organization (NATO) when the United States and its European allies made a conscious decision to forgo creation of a NATO military equal in strength to that of the Warsaw Pact. Instead, the European members of NATO chose to rely on America's strategic nuclear weapons—based in the United States and at sea—as well as tactical nuclear weapons, based in Europe, as a guarantor that Eastern Bloc troops would not roll through the Fulda Gap on their way to Paris.<sup>17</sup> Extended deterrence, as it came to be known, enabled Western Europe to focus on economic development instead of heavy investment in national security. Although this type of deterrence often proved unpopular with European publics, governments throughout Western Europe depended upon the security provided by basing nuclear weapons throughout the West.

## **Entering the Post–Cold War Era**

In the immediate aftermath of the Cold War, assured destruction and related nuclear strategies that had served the nation well for more than two generations were almost forgotten as the euphoria that engrossed America took hold.<sup>18</sup> With it, the triad fell into decline. As the former Soviet Union sought to stabilize its deteriorating economy by lowering its military expenditures, the United States joined Russia in making dramatic reductions to the overall size of the nuclear arsenal. The “peace dividend” promised to the American people by presidents George H. W. Bush and Bill Clinton led to a refocusing of US foreign policy. With the Russian Bear focused on internal struggles, the United States was free to take on the role of global hegemon and concentrate its efforts on serving as the world’s policeman. The 1990s saw the US military intervene in a number of failing or failed states such as Somalia, Haiti, Bosnia, and Serbia, while also focusing on democratization of the former Soviet Union and globalization of the international economy.<sup>19</sup>

As Francis Fukuyama suggested in his article “The End of History?” “What we may be witnessing is not just the end of the Cold War, or the passing of a particular period of postwar history, but the end of history as such: that is, the end point of mankind’s ideological evolution and the universalization of Western liberal democracy as the final form of human government.”<sup>20</sup> Democracy had apparently won;



socialism had apparently lost. Continuing to focus on the nuclear triad and nuclear conflict seemed passé.

Between 1991 and 2009, the nuclear arsenal shrank by more than 75 percent. Few members of Congress or the military objected since it appeared that the single greatest purpose for nuclear weapons was gone. Even in the wake of the terrorist attacks of 11 September 2001, Pres. George W. Bush signed the Strategic Offensive Reduction Treaty, which obligates the United States and Russia to reduce their operationally deployed strategic weapons to between 1,700–2,200 each by 2012. President Obama is promising to follow suit and continue reductions in the nuclear arsenal as the United States eventually moves to zero.<sup>21</sup>

Although President Obama's speech of 5 April 2009 may give the impression that he has adopted the stance of nuclear abolitionists, one should not forget that Pres. Ronald Reagan once said that he "dream[ed]" of a "world free of nuclear weapons."<sup>22</sup> Just as Reagan shepherded the United States to victory in the Cold War, so, hopefully, will President Obama act responsibly and not put the national security of the United States at risk by reducing the nuclear arsenal to a point that nuclear deterrence loses the credibility that enables its success.

## **The Current Debate**

In an era dominated by nonstate actors (terrorists, international criminal gangs, and insurgents), rogue regimes, and rising powers, some members of the Air Force are asking whether the triad is still relevant or whether nuclear abolitionists are correct in suggesting that the United States adopt a monad as the nation moves toward zero. The answers to these questions deserve considerable attention. In short, however, the triad is as relevant today as it was at the height of the Cold War. Nevertheless, before offering a justification for maintaining the triad, one should explain the position of nuclear abolitionists.

### ***The Abolitionists' Position***

According to the most recent reports and studies published by advocates of nuclear abolition, the United States should initiate complete disarmament by taking the following actions.<sup>23</sup> First, abolitionists desire to remove the 76 remaining B-52H and 19 B-2 bombers from nuclear-capable service.<sup>24</sup> By maintaining an arsenal of 500–1,000 warheads, as abolitionists suggest, the United States no longer needs the bomber leg of the triad. Additionally, the nation's long-range bombers are slow to reach their targets, cannot penetrate advanced antiair defenses (with the exception of the B-2), and are expensive to procure and maintain.

Second, abolitionists seek to dismantle the nation's 450 ICBMs, which need expensive upgrades or replacement and present the nation's adversaries a target on American soil.

Third, abolitionists are willing to accept, for the near term, a nuclear deterrence strategy that relies solely on a dozen *Ohio*-class SSBNs, each armed with 24 Trident II SLBMs.<sup>25</sup> According to their strategy, the United States will maintain half of its SSBNs at sea at any given time while the other half is in port at one of two designated submarine bases.

Abolitionists are willing to accept a submarine-based monad because they consider submarines the most secure leg of the triad. These vessels also obviate the need for operationally deployed nuclear weapons on US soil. Supposedly, the absence of these weapons would reduce the likelihood of a counterforce strike against the homeland.

Because these arguments seem reasonable and each contains an element of truth, they have wide appeal. But if the United States were to adopt a monad, the nation's ability to deter current and future adversaries would decline precipitously for four key reasons.

### ***The Counterview***

First, deterrence, the capstone of American foreign policy since the end of World War II, relies on effectively making an adversary believe that the

risks involved in changing the status quo outweigh any potential rewards. To achieve effective deterrence, the United States must have the capability and, most importantly, credibility to create the desired psychological effect. Moving to a nuclear deterrence strategy that effectively depends on a half dozen deployed submarines undermines both capability and credibility. Contrary to the admonitions of abolitionists, adopting a monad sends a clear signal to America's adversaries that the nation does not value nuclear weapons to the degree it once did and will be more reluctant to use a diminished arsenal in the future. This emboldens adversaries and decreases the confidence that US allies have in the nation's extended deterrence.

Successful deterrence depends *completely* upon simply and effectively communicating desire and intent to allies and adversaries. Dramatically reducing the size of the arsenal and killing two legs of the triad, while claiming that the United States remains serious about nuclear deterrence, would send a mixed signal. The historical record does not offer analogous examples of arms reductions leading to the maintenance of credibility. On the contrary, the Washington Naval Treaty (1922), which limited the tonnage of major world navies, may have played a key role in leading the Japanese to attack Pearl Harbor.<sup>26</sup> Admittedly, such counterfactual claims are difficult to prove.

Second, since signaling intent is a vital aspect of successful deterrence, eliminating the bomber leg of the triad would be a mistake. Designed to remain hidden from the view of an adversary, ICBMs and SSBNs offer no effective way of conveying American resolve or an escalation/de-escalation in posture, should an adversary move toward conflict. The bomber fleet, however, effectively demonstrates resolve. For example, if an adversary were to openly challenge the status quo, the president could order the nation's B-52s and B-2s on alert, put them in the air, and/or deploy them to forward bases. All of these actions are visible signals of American intent, designed to lead to a de-escalation of tensions. Without question, bombers are the most effective tool for overtly demonstrating resolve.

A related point arises. Nuclear-capable bombers are one of the best tools for assuring allies that the United States remains committed to providing a credible extended deterrent. Neither ICBMs nor submarines can provide a *visible* show of resolve in the face of danger. Deploying nuclear bombers to an ally's air base not only assures America's friends but also deters the nation's foes.

Third, ICBMs offer two distinct benefits that a submarine force cannot replicate. On the one hand, they raise the cost of entry into the nuclear club as a peer of the United States. ICBMs require expensive and advanced missile technology, which may prove too costly for many

potential proliferators. On the other hand, they increase risks for an adversary by driving him to a strategy (counterforce) requiring the elimination of American ICBMs in an effort to prevent a US counterstrike. The value of forcing an adversary to strike the United States in order to eliminate its nuclear arsenal serves as a strong deterrent when the enemy considers a nuclear attack. Moreover, these missiles are the only leg of the triad that can hit any spot on the earth within half an hour.

Fourth, should the United States adopt the plan advocated by abolitionists, the nation's adversaries would know full well that half the nuclear arsenal would be in port at any given time, vulnerable to destruction by a single nuclear missile targeting each of the two designated nuclear submarine bases. Contrary to what Americans are led to believe, Russia and China maintain advanced submarine-detection capabilities that may enable either nation to detect, track, and sink the half of the nuclear arsenal (six submarines) at sea.<sup>27</sup> Moving to a submarine-based monad will also encourage adversaries of the United States to focus technological development on advanced sonar and torpedo technology. Doing so will simplify the calculation for an adversary seeking to neutralize the American arsenal.

The United States may soon face a real scenario in which two nuclear missiles and a half dozen torpedoes can destroy the entire

operationally deployed strategic nuclear arsenal—something no American should desire. Redundancy, which the triad provides, offers a level of protection that a submarine-based nuclear arsenal would greatly diminish.

Increasing American vulnerability and decreasing American capability do not represent a strategy for successful deterrence. As history demonstrates, deterrence works when the United States effectively convinces its adversaries that an attack on America will fail to carry out the desired objectives and will invoke massive retaliation. Any other approach to deterrence is doomed to failure.

Relying on what abolitionists refer to as “minimum deterrence” is a recipe for placing the American people at greater risk, not less.<sup>28</sup> Even though the United States will likely suffer a terrorist attack, it is certainly not the most dangerous threat the nation faces. With the nuclear club expanding and likely to gain new members hostile to the United States, weakening the nuclear triad is unwise. Doing so not only will undermine American credibility but also will cause allies to doubt America’s commitment to extended deterrence. This could lead allies to pursue their own nuclear arsenals as a hedge against American weakness and perceived threats yet to materialize.

Even though we Americans are generous, well-intentioned people, others do not necessarily wish us well. We would be wise to remember

that fact. As the great Roman strategist Vegetius once wrote, “Si vis pacem para bellum” (if you desire peace, prepare for war).

*Maxwell AFB, Alabama*

## **Notes**

1. Barack Obama, “Remarks by President Barack Obama,” Office of the Press Secretary, The White House, 5 April 2009, [http://www.whitehouse.gov/the\\_press\\_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered](http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered).

2. Ibid.; and George P. Shultz et al., “Toward a Nuclear-Free World,” *Wall Street Journal*, 15 January 2008, [http://online.wsj.com/public/article\\_print/SB120036422673589947.html](http://online.wsj.com/public/article_print/SB120036422673589947.html).

3. Ivo Daalder and Jan Lodol, “The Logic of Zero,” *Foreign Affairs* 87, no. 6 (November 2008): 80–95.

4. Gen Kevin P. Chilton (remarks to the Strategic Weapons in the 21st Century Conference, Ronald Reagan International Trade Center, Washington, DC, 31 January 2008); and Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, *Report of the Defense Science Board Task Force on Nuclear Deterrence Skills* (Washington, DC:



Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, September 2008).

5. Within the group broadly defined as nuclear abolitionists are a number of varying opinions. Some—such as Richard Branson and Queen Noor of Jordan, who ascribe to global zero—support a unilateral move by all nuclear powers to abolish nuclear weapons. Others, such as Henry Kissinger and George Shultz, believe that slow and steady reductions are the proper approach. All parties within the abolitionist camp believe in nuclear abolition as a relevant and obtainable goal. See the Global Zero Web site, <http://www.globalzero.org>; and Barack Obama, “Remarks by the President at the United Nations Security Council Summit on Nuclear Non-Proliferation and Nuclear Disarmament,” Office of the Press Secretary, The White House, 24 September 2009, [http://www.whitehouse.gov/the\\_press\\_office/Remarks-By-The-President-At-the-UN-Security-Council-Summit-On-Nuclear-Non-Proliferation-And-Nuclear-Disarmament](http://www.whitehouse.gov/the_press_office/Remarks-By-The-President-At-the-UN-Security-Council-Summit-On-Nuclear-Non-Proliferation-And-Nuclear-Disarmament).

6. For a detailed discussion of the arguments made by nuclear abolitionists, see Adam Lowther, *Challenging Nuclear Abolition*, Research Paper 2009-4 (Maxwell AFB, AL: Air Force Research Institute, August 2009), [http://www.afa.org/EdOp/2010/Logic\\_of\\_Nuclear\\_Arsenal.pdf](http://www.afa.org/EdOp/2010/Logic_of_Nuclear_Arsenal.pdf).

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9. Saki Dockrill, *Eisenhower's New-Look National Security Policy, 1953–61* (New York: St. Martin's Press, 1996), 48–62.
10. Rebecca Grant, *Return of the Bomber: The Future of Long-Range Strike*, Air Force Association Special Report (Arlington, VA: Air Force Association, February 2007).
11. Natural Resources Defense Council, "Table of US Strategic Bomber Forces" (Washington, DC: Natural Resources Defense Council, 2002), <http://www.nrdc.org/nuclear/nudb/datab7.asp#ninety>.
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14. "LGM-30G Minuteman III," factsheet, US Air Force, December 2009, <http://www.af.mil/information/factsheets/factsheet.asp?id=113>.
15. Natural Resources Defense Council, "Table of US Ballistic Missile Submarine Forces" (Washington, DC: Natural Resources Defense Council, 2002), <http://www.nrdc.org/nuclear/nudb/datab5.asp>.

16. See Thomas C. Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1966). In this seminal work on coercion, Schelling lays out the concepts that served as the rationale for Cold War deterrence strategy.

17. David S. Painter, *The Cold War: An International History* (New York: Routledge, 1999); and Stephen J. Cimbala, *The Past and Future of Nuclear Deterrence* (Westport, CT: Praeger Publishing, 1998), 11–12, 23–25.

18. Charles Krauthammer, “Don’t Cash the Peace Dividend,” *Time Magazine*, 26 March 1990, <http://www.time.com/time/magazine/article/0,9171,969672,00.html>; and 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), chap. 3.

19. See Joseph E. Stiglitz, *Globalization and its Discontents* (New York: W. W. Norton, 2002), chap. 5.

20. Francis Fukuyama, “The End of History?” *National Interest*, no. 16 (Summer 1989): 4.

21. Obama, “Remarks by President Barack Obama.”

22. Paul Lettow, *Ronald Reagan and His Quest to Abolish Nuclear Weapons* (New York: Random House, 2005), 6.

23. Hans M. Kristensen, Robert S. Norris, and Ivan Oelrich, *From Counterforce to Minimal Deterrence: A New Nuclear Policy on the Path toward Eliminating Nuclear Weapons*, Occasional Paper no. 7 (Washington, DC: Federation of American Scientists and the Natural Resources Defense Council, April 2009), [http://www.fas.org/pubs/\\_docs/OccasionalPaper7.pdf](http://www.fas.org/pubs/_docs/OccasionalPaper7.pdf); and Joint Working Group of the American Association for the Advancement of Science; American Physical Society; and Center for Strategic and International Studies, *Nuclear Weapons in 21st Century U.S. National Security* (Washington, DC: AAAS, APS, and Center for Strategic and International Studies, December 2008), <http://www.aps.org/policy/reports/popa-reports/upload/nuclear-weapons.PDF>.

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25. This is an acknowledgement by the more pragmatic members of the abolitionist camp that unilateral disarmament is not possible. See George P. Shultz et al., "How to Protect Our Nuclear Deterrent," *Wall Street Journal*, 19 January 2010, <http://online.wsj.com/article/SB10001424052748704152804574628344282735008.html>.

26. Had the Pacific fleet been as large as advocated by the Department of the Navy in the years prior to 7 December 1941 and not constrained by an arms-limitation treaty, there is reason to believe that the Japanese would not have come to the conclusion that a “knockout blow” was possible.

27. Marcel van Leeuwen, “Russia Starts Ka-28 ASW Deliveries to China,” *Aviation News*, 11 October 2009, <http://www.aviationnews.eu/2009/10/11/russia-starts-ka-28-asw-deliveries-to-china/>; and “Russian Sonar Technology,” *Warfare* <http://warfare.ru/?linkid=2085&catid=332> (accessed 29 January 2010).

28. Kristensen, Norris, and Oelrich, *From Counterforce to Minimal Deterrence*, 1–2.