In the 25 years since the breakup of the Soviet Union ended the Cold War, the future of the U.S. nuclear arsenal has faded from the headlines. Now, Brad Roberts and William J. Perry have written two important books pleading for our re-engagement with nuclear matters. Both are motivated to a significant degree by the actions of Russian President Vladimir Putin, who has embarked on a buildup of Russia’s nuclear capability, ending two decades of post-Cold War cooperative and negotiated nuclear reductions. Russian officials have asserted that their nuclear weapons are necessary to offset the conventional military strength of NATO and the United States, implying that this strength poses a direct threat and that, in a conflict, they are prepared to be the first to use nuclear weapons.
This comes just as the usable lifetime of the aging U.S. nuclear arsenal is reaching its limits. With the need for an ongoing deterrent to Russian nuclear forces re-emerging, a serious effort to refurbish and even upgrade the U.S. nuclear arsenal is underway. The Cold War nuclear arms race seems to be resuming only eight years after the hope and excitement generated by President Barack Obama’s stirring speech and declaration in Prague: “I state clearly and with conviction America’s commitment to seek the peace and security of a world without nuclear weapons.”

In one sense, wider re-engagement with nuclear issues is a welcome development; it brings an end to growing complacency. Too many have forgotten or, if young enough, have never learned that nuclear weapons remain the most immediate existential threat to civilization. Roughly 10,000 nuclear weapons remain in military inventories worldwide, and 5,000 more are in storage. Even though these numbers are down by 70 percent or more from Cold War peaks, they are still huge. Some studies have argued that as few as 100 nuclear detonations could trigger nuclear winter, and a few hundred could destroy all the world’s major cities.

The potential scenarios for nuclear catastrophe are uncountable. Perry describes one of the most frightening: If a terrorist organization were to gain control of just a single one of these 15,000 weapons, put it in an SUV or small van, and set it off halfway between the White House and the Capitol on a day when the president and Congress were present, the world would be changed forever. Even a “small” Hiroshima-sized weapon would destroy the White House and Capitol Hill, probably including the Supreme Court, along with the headquarters of most government departments. The federal government would be completely decapitated; its reconstitution would be drawn out and chaotic at best.

**Arguing for a Robust Force**

Roberts comes to the question of what to do about U.S. nuclear weapons after a long career of analyzing nuclear weapons programs, policy, posture, and plans. His book, *The Case for U.S. Nuclear Weapons in the 21st Century*, covers the nuts and bolts of the nuclear issue. It provides an important contribution to understanding how government policy and programs actually have been constructed.

Roberts largely telegraphs his conclusions in the introduction to his book. He asserts that the United States “is entering a period of renewed debate about nuclear deterrence,” with the debate led by two “camps,” each with “fixed positions.” One camp “recoils from the horror of nuclear war” and demands unilateral U.S. steps toward nuclear disarmament. The other camp “accepts nuclear weapons as necessary and useful” and advocates retention and modernization of the nuclear arsenal. Roberts asserts that these two camps are generally contemptuous of the views of each other, leading to gridlock in Congress and disagreement within the “analytic community” on how to proceed.

Using an approach long followed by analysts, Roberts asserts his preference for the middle option—a “balanced approach” set between these two extremes. The essence of his recommendation is to implement fully the Obama administration’s 2010 Nuclear Posture Review, in which he played an important role. He would set aside as unrealistic the goal of nuclear abolition in favor of “working to create the conditions that would allow the United States and other states with nuclear weapons to take additional steps in the future to reduce the role and number of such weapons.” In other words, Roberts supports arms control, but only in the future when “conditions allow.” He very much wants to drop dreams of nuclear disarmament, which in his view have led to dangerous complacency about the safety, effectiveness, and reliability of U.S. nuclear weapons. To end the complacency, he calls for the United States to modernize and strengthen its nuclear forces along the lines that the Obama administration has proposed to Congress.

Roberts’ book is a thorough and carefully argued case for maintaining a robust U.S. nuclear force indefinitely into the future. His rationale starts with a proposition not disputed by Obama or even those who have supported the goal of eventual nuclear disarmament: so long as other states retain nuclear weapons, the United States must maintain a robust nuclear deterrent to ensure that nuclear weapons are never used. But Roberts goes further: he supports missions for nuclear weapons that go beyond that of preventing the use of nuclear weapons by others.
Roberts defines three “zones of deterrence” through which nuclear-related challenges might pass: a “gray zone” of coercion and provocation, a “red zone” in which combat is underway but the adversary attempts to keep its actions beneath the U.S. nuclear response threshold, and a “black and white zone” involving nuclear attack against U.S. assets, allies, or forces. Deterrence should work in all three zones. He also hypothesizes a “theory of victory” held by each potential adversary. He believes that a major aspect of U.S. strategy should be to ensure that each theory of victory can be effectively countered, even when doing so would require standing ready to use nuclear weapons as war-fighting instruments.

Roberts then turns to the nuclear-related security problems that he sees challenging the United States. He first analyzes two “new problems”—the emergence of nuclear-armed regional challenges, principally North Korea, and Putin’s Russia. He also analyzes four long-standing security issues: the evolving relationship with China, extended deterrence in Europe and Asia, strategic stability, and nuclear assurance.

Roberts’ first new-problem discussion focuses on Iran and North Korea, although he also sees some role for nuclear deterrence in Iraq, Libya, and Syria. His writing dates to 2014, so one can assume that the situation in the latter three countries has now changed to the point that nuclear issues are no longer terribly relevant. Much the same is true with regard to his discussion of how to deal with a nuclear-armed Iran. That leaves North Korea as the new problem—something that has been high on the list of U.S. concerns since President Bill Clinton’s first term, so it is new only in the sense that it emerged after the Cold War. To deter North Korean threats in the gray zone or even the red zone, Roberts proposes a combination of robust conventional forces, ballistic missile defense, and flexible nuclear forces relevant to the region. There is little mention of diplomacy beyond maintaining alliances, and there is no mention of arms control.

Roberts implies that U.S. nuclear forces need to be the sum of what is required to separately deter or respond to each possible regional threat, plus what is needed to deter or respond to China and Russia. But long-standing U.S. government analysis has been that the force needed to deal with non-Russian threats is a “lesser included case” of what is needed to deal with Russia. In other words, the size of the U.S. nuclear force is determined entirely by the need to deter a potentially hostile Russia, not by the other problems Roberts cites. If the United States has enough for Russia, it does not need more for Roberts’ other problems, nor does it need more-flexible forces to fight nuclear wars.
With regard to Russia, Roberts asserts that 2014 was a “fundamental turning point” in U.S.-Russian relations. There is no question that Russia’s annexation of Crimea and de facto invasion of Ukraine’s Donbas region, blatantly disregarding its multiple commitments to respect existing borders, marked a significant turn for the worse. Yet, the relationship had been deteriorating steadily under Putin, except perhaps for his four years as prime minister when there was a partial thaw under the “tandem” leadership with President Dmitry Medvedev. During this period, Russia and the United States concluded the New Strategic Arms Reduction Treaty, which froze but did not significantly reduce strategic nuclear force numbers and left tactical and reserve weapons uncontrolled.

Roberts believes that Russia’s leadership feels genuinely threatened by NATO expansion, modest missile defenses oriented toward Iran, and the U.S. wars in Afghanistan and Iraq. But Steven Lee Myers in his definitive book, *The New Tsar: The Rise and Reign of Vladimir Putin*, details the ways in which Putin has been motivated largely by a desire for power and wealth. Putin has sought to control every aspect of Russian government, news outlets, and major business. To do so, he needed all the public support he could get. So he has used the age-old tactic of scaring his citizens about an external enemy, in this case NATO led by the United States, to consolidate his power. This became more feasible as oil revenues enriched his kleptocracy and bloated Russia’s defense budget. Complaints about the “threat” of NATO or the United States were largely concocted for his domestic political reasons. This does not fit Roberts’ zones of deterrence model.

**Back to the Cold War**

Roberts’ approach is similar in many aspects to the “flexible response” strategy initiated by President John Kennedy. This strategy was a reaction to President Dwight Eisenhower’s strategy of “massive retaliation,” which was no longer credible after the Soviet Union developed a strategic missile and bomber force comparable to that of the United States. Yet, Roberts seems to forget that the main purpose of “flexible response,” which envisioned the United States being the first to use tactical battlefield nuclear weapons, was to deter a Soviet tank army invasion of Western Europe. Soviet control of the Warsaw Pact and its massive armored force meant that the West would have had a difficult time building an adequate deterrent consisting only of conventional weapons.

The Cold War strategy of using nuclear weapons to offset a conventional disadvantage was high risk even then, adopted only because it was the best of many bad options. Fortunately, there no longer is a Soviet invasion force requiring nuclear threats to deter its use. High-tech U.S. and European conventional forces, based on precision-guided munitions and dominant surveillance and communications, could defeat any Russian invasion or, for that matter, a conventional military threat to the United States or its allies anywhere in the world. So the only remaining purpose of U.S. nuclear weapons is to prevent the use of nuclear weapons by others.

Roberts’ book does not deal with a critical capability now missing from the U.S. nuclear force—the capability to assure that there will be no “prompt launch.” Present systems and war plans envision the possibility of the president having to make a decision to launch nuclear weapons under attack in a very short time frame. There have been many calls to de-alert U.S. nuclear weapons systems, which would automatically remove the capability for prompt launch. In many cases, however, keeping systems on alert is important to ensure their survivability. What the United States needs instead is a national command system that will better protect the safety of the president and his successors to be sure any decision to use nuclear weapons can be made deliberately.

**A Very Different Perspective**

Perry’s book, *My Journey at the Nuclear Brink*, is also an analysis of the nuclear challenge but from a very different perspective—that of a lifetime of insider involvement culminating at the very highest level as secretary of defense. Perry does not retrace the intricacies of nuclear strategy and doctrine. Rather, his book is devoted to explaining his urgent concern that although nuclear weapons remain the primary existential threat to humankind, the public’s focus, particularly that of young leaders, has moved elsewhere. He calls the book a “selective memoir” because its focus is the “nuclear brink” on which he believes the world remains perched, not his career as a whole.
Perry’s book has five important chapters on other aspects of his fascinating and rich career: the Bosnian war and his role in bringing it to an end, Haiti and other efforts to build a new mutual defense relationship with Latin America, the challenges of creating an efficient weapons development and procurement system, improving the life of military families, and his experience as a successful entrepreneur in Silicon Valley at the outset of the digital age. But the remaining 20 chapters focus on nuclear subjects.

Perry begins with a fascinating personal description of the defining moment of the early Cold War and of his career’s focus on nuclear war: the Cuban missile crisis. He had been exposed to the horrors of modern warfare as a young soldier posted to Okinawa just after allied bombs had destroyed the main cities there. But he had to confront the reality of possible nuclear war only many years later when he was serving as a young assistant to the chief intelligence officer in the Cuban missile crisis of 1962.

Perry and one or two other young experts prepared the daily briefings on the status of the Soviet missiles in Cuba for Kennedy and his top advisers. The crisis management team was meeting nearly around the clock trying to figure out how to remove the nuclear threat from Cuba without triggering a catastrophic nuclear war. Each day, Perry thought war was imminent and that it might be his last day on earth. The knee-jerk reaction of the senior military officer present, General Curtis LeMay, was to start bombing the missiles in Cuba immediately, which probably would have triggered their launch against U.S. cities and an all-out nuclear exchange killing hundreds of millions. But LeMay was overruled by Kennedy, leaving room for the brilliant diplomacy, backed up by a naval blockade, that ended the crisis peacefully. A nuclear catastrophe was narrowly averted, and Perry learned that the only way to avoid nuclear war was to use a combination of military strength and smart diplomacy.

Soon afterward, Perry was to play a major role in developing the intelligence systems that allowed the United States to understand the growth of the Soviet Union’s nuclear arsenal. In the Carter administration, he became the Department of Defense’s chief technology officer, leading the development of stealth and other systems that increased the credibility of the U.S. nuclear deterrent force. He eloquently describes these efforts and how they helped to keep the peace. Finally, in the Clinton administration, Perry assumed what is perhaps the world’s most important position of responsibility for nuclear matters, U.S. defense secretary.

In that role, Perry accumulated even more intense experience with the challenge of avoiding nuclear war as second to the president in command of U.S. nuclear weapons. Any order to launch nuclear
weapons, including the massive attacks that made up the Single Integrated Operational Plan (SIOP), would have to pass through him. He thus became intimately aware of how fragile the edifice of “mutual assured destruction” was and how catastrophic a failure of deterrence would be.

As a result, Perry immediately took advantage of the new relationship with Russia emerging after the breakup of the Soviet Union. One of his first steps, ably assisted by the current defense secretary, Ash Carter, was to take personal responsibility for the Nunn-Lugar Cooperative Threat Reduction (CTR) program with Russia. Perry adds new details to the history of this path-breaking effort. The CTR program led to the dismantlement of nuclear systems in the former Soviet republics of Belarus, Kazakhstan, and Ukraine and provided significant other assistance to Russia in dismantling the Cold War nuclear infrastructure it no longer needed. Cooperative disarmament such as this has not existed before or since.

Perry also documents the unprecedented military cooperation between Russia and NATO that peaked in the Bosnia peacekeeping mission. This cooperation was so deep that a Russian battalion participated in the Bosnia peacekeeping force under the overall command of a U.S. general. During Perry’s years as secretary, Russian President Boris Yeltsin signed a formal cooperation agreement with NATO that remains in effect (although little used). Again, Perry took home the lesson that military programs had to be complemented by capable diplomacy to manage the nuclear threat.

To document that nongovernmental efforts can play an important diplomatic role, Perry offers a fascinating account of how he continued his “journey at the nuclear brink” even after he left office. He resumed a position at Stanford University and passed up a comfortable retirement to travel the world, with several trips to Russia, to mentor next-generation leaders and to advocate for continued reductions in nuclear forces worldwide.

These efforts reached something of a peak when he joined three other distinguished statesmen to write the op-ed “A World Free of Nuclear Weapons” in the January 4, 2007, Wall Street Journal. This article took the arms control and nuclear policy community by storm. The four men—Perry, former Secretaries of State Henry Kissinger and George Shultz, and former Senator Sam Nunn (D-Ga.)—argued that a serious effort should be made to eliminate all nuclear weapons from the earth. Nuclear deterrence would have to be maintained during the process, but the risk to mankind of these weapons was too great to keep them indefinitely.

The four authors became known as the “Gang of Four.” They had come to their conclusion after years of responsibility for U.S. nuclear forces and policy at the highest level. In their initial op-ed and in subsequent articles and speeches, they argued that any use of nuclear weapons would trigger massive, unacceptable changes in the world, even if the first detonation did not lead to escalation. The states that emerged from the catastrophe would very likely band together to disarm any state or terrorist group that might still retain nuclear weapons or the capability to make them, no matter what the price in collateral damage. The cost of the dragnet would be huge, probably involving more war, an end to individual liberties, and perhaps even an end to the system of sovereign states that forms the basis of world governance. Reconstruction could take decades or perhaps never be possible because of residual radiation.
Perry emphasizes the importance of maintaining close working relations with Russia because significant reductions in the vast number of active nuclear weapons still remaining in the world are not possible without this cooperation. He attributes the current breakdown in relations with Russia in no small measure to mistakes made by successive U.S. presidents. While he was defense secretary, he argued for a slower and smaller expansion of NATO. He also disagreed with President George W. Bush’s decision to abandon the Anti-Ballistic Missile (ABM) Treaty in order to deploy ABMs in central Europe directed at Iran, which then led Russia to renounce START II with its extensive verification procedures and ban on multiple independently targetable re-entry vehicles. Perry saw these actions as unnecessary provocations and not worth stifling the growing U.S.-Russian cooperation that had led to dramatic reductions in nuclear arsenals.

Perry argues that it would be a terrible mistake to give up on nuclear diplomacy with Russia, but he does not directly address the challenge of making progress with Putin in power and his nuclear buildup underway. Perry’s implicit solution is to remain patient and not respond with a nuclear buildup in the United States, realizing that the aging but very powerful U.S. force will remain an adequate deterrent. Over time, Russia will accept that NATO, limited missile defenses, and U.S. military actions against terrorists are not a threat and will return to cooperation. This probably will require a change in Russian leadership; Putin seems pleased at the success he has had using foreign threats to stoke nationalistic political support for his authoritarian regime.

**Prospects for Reductions**

Since the early days of the Cold War, calculations have shown that 400 nuclear weapons detonated on Russian targets could destroy Russia’s military and its economy. Accounting for alert rates and other failures, perhaps 1,000 weapons might be needed to guarantee that 400 hit their targets. Today’s deployed U.S. force is more than twice this size, implying that it should be reduced, rather than modernized and expanded in capability, as Roberts prefers. Yet, it always has been politically difficult to move away from nuclear parity with Russia, even if there is no military or strategic need for a nuclear force of the same numerical size as Russia’s.

Thus, further U.S.-Russian bilateral arms control reductions are likely to be the only path away from the nuclear brink. Notwithstanding Putin’s bellicosity, this is not as hopeless as one might think. An economically challenged Russia, with its energy revenues severely reduced, its businesses sanctioned, and its industry falling further behind the rest of the world, might just find it in its interest to resume nuclear cooperation with the United States. This would not usher in “the peace and security of a world without nuclear weapons,” but it would be a start in that direction.

*Jan Lodal* is a distinguished fellow and former president of the Atlantic Council. He has served in senior positions at the Department of Defense and the National Security Council, where he had major responsibilities for arms control and other defense-related matters. He is the author of more than 50 articles and *The Price of Dominance: The New Weapons of Mass Destruction and Their Challenge to American Leadership* (2001).

**Source URL:** https://www.armscontrol.org/act/2016-03/book-reviews/book-review-future-nuclear-weapons