

The Trump Nuclear Posture Review: Three Issues, Nine Implications

President Donald J. Trump's *Nuclear Posture Review (NPR)* is especially important because of its timing and contents.¹ Together with the administration's *National Security Strategy* and other documents related to defense and security policy, the *NPR* offers both continuity and change with respect to the Obama administration's policy statements and guidelines. Russia and China are identified in national security documents as US peer competitors and as systemic disrupters that constitute the main threats to international stability and future American security. This recognition in the *NPR* and other documents of a return to great power rivalry as the fulcrum of military-strategic activity, including deterrence, explicitly embraces political realism as the preferred model for interpreting international politics.

Some of the Trump administration's proposed changes in nuclear policy and force structure planning affect US national security in three aspects: nuclear force modernization, nuclear arms control, and non-proliferation. Although theorists and military strategists may treat these three issues as distinctly compartmentalized, in practice they overlap and together contain important implications for nuclear deterrence. Summarized below are nine such implications.

First, the Trump administration plans to deploy new lower-yield warheads, including weapons for use on Trident II D-5 submarine-launched ballistic missiles. The implication is that this would provide additional targeting options for the most survivable arm of the strategic nuclear triad. New warheads for Trident missiles might be as low as 1 to 2 kilotons, as opposed to 100 kt or more, allowing for more discrimination in target selection and less collateral damage in case of actual use.

Second, a new nuclear-capable sea-launched cruise missile (SLCM) would be developed and deployed. The proposed deployment of nuclear-capable SLCMs is a good illustration of an issue that overlaps force modernization and arms control stability. Nuclear-armed SLCMs were previously deployed by the US until 2011 when the program was cancelled. The assumption is that the nuclear SLCM would provide additional non-strategic nuclear response capability that is rapidly deployable in theater conflicts in Europe or Asia. These capabilities would contribute to US nuclear reassurance of allies who might otherwise be more vulnerable

to nuclear blackmail. Sea-launched nuclear missiles could also support arms control: they would be neither first-strike vulnerable nor most suitable for preemptive attacks. The possible deployment of nuclear SLCMs could also be used as bargaining chips as against Russian departure from the Intermediate Nuclear Forces (INF) Treaty (like the original ground-launched cruise missiles in the 1980s, prior to the INF Treaty) and resulting deployment of additional nonstrategic nuclear weapons in European Russia.² However, expert analysts have warned that new sea-based nuclear weapons can have drawbacks with respect to deterrence and arms race stability. According to Lawrence J. Korb, “Because the United States already has a sub-launched conventional cruise missile, adding a nuclear cruise missile to the inventory means the Russians would have to assume any (submarine-launched) cruise missile is in fact a nuclear weapon. And finally, producing new small-yield nuclear weapons could provoke an arms race in that realm—even though the United States already possesses 1,000 low-yield nuclear weapons, including the B-61 bomb and an air-launched cruise missile that can deliver yields between 0.3 to 170 kilotons.”³

Third, the Trump administration foresees an increased probability for a nuclear response to a strategic nonnuclear attack, for example, cyberattacks that might cause large numbers of US or allied casualties; widespread destruction of critical infrastructure, including electric power grids, communications, and digital supervisory control and data acquisition systems; and, especially, cyberattacks against components of nuclear command, control, and communications (C3) and early warning systems. Of course, this assumes that the problem of attribution of the source for any such cyberattack could be solved with sufficient clarity—no small challenge.⁴

Fourth, nuclear planning guidance assumes that a wider spectrum of nuclear capabilities is necessary to improve deterrence of Russia and China. Administration planners are especially concerned about Russian and Chinese temptations to “escalate for de-escalation”: to engage in limited nuclear first use to prevent defeat in a conventional war, with the expectation that the other side would back down. This line of thinking follows the arguments of some expert analysts that effective deterrence now requires greater attention to threats posed by diverse adversaries and contexts, including the possible exploitation of limited nuclear threats and/or nuclear coercion by great powers and rogue states.⁵ On the one

hand, the *NPR* addresses the concern that a larger spectrum of nuclear weapons could make decision makers more prone to engage in nuclear first use. It states, “To be clear, this is not intended to, nor does it enable, ‘nuclear war-fighting.’ Expanding flexible US nuclear options now, to include low-yield options, is important for the preservation of credible deterrence against regional aggression. It will raise the nuclear threshold and help ensure that potential adversaries perceive no possible advantage in limited nuclear escalation, making nuclear employment less likely.”⁶

On the other hand, whether the availability of a wider range of nuclear yields will increase the likelihood of escalation is dependent not so much on military-technical factors as on political ones. It is unpredictable before the fact whether the “deterree” on the receiving end of an intentionally limited nuclear attack will interpret these strikes as deliberately controlled bargaining measures or as preludes to a more ambitious symphony of destruction.

Fifth, there is little apparent emphasis on the importance of nuclear arms control, including extension of the New START strategic nuclear arms reduction treaty (signed in 2010 and expiring in 2021 unless extended to 2026 by mutual agreement). Trump’s position on New START extension is unclear. Also with respect to nuclear arms control, the US and Russia are possibly on a path of permanent departure from one of the most important arms limitation agreements of the previous century: the INF Treaty that has prevented for decades the development and deployment of US and Soviet or Russian ground-launched ballistic and cruise missiles within the ranges of 500–5,500 kilometers.

Some Russians now regard this treaty as obsolete and argue that INF has increased Russia’s vulnerability to neighboring states with growing inventories of ballistic missiles. As well, Russia views NATO enlargement and US missile defense deployments in Europe as provocative to its security, requiring a larger menu of usable nuclear weapons and launchers deployed in Europe. But the US and NATO regard Russia’s annexation of Crimea and destabilization of eastern Ukraine, together with Russia’s frequent reminders of its nuclear capabilities with respect to perceived threats from the US and NATO, as provocative and destabilizing of European security, therefore requiring enhanced NATO preparedness across the spectrum of deterrence.

Sixth, there is not much apparent interest in the topic of nonproliferation, with the exception of North Korea and Iran. Trump wants to scuttle

the Iran deal or revise it, which puts the United States at potential odds with the other members of the five permanent members of the UN Security Council (China, France, Russia, the United Kingdom, and the US) plus Germany who are cosignatories to the *Joint Comprehensive Program of Action*.⁷ Supporters of the Iran nuclear deal feel that abrogation of the agreement would actually increase the risk of Iran eventually becoming a nuclear weapons state. Critics of the Iran nuclear deal argue that it merely slows down Iran's march to the bomb and allows Iran to move closer to the status of a virtual nuclear weapons state, meanwhile expanding its inventory of long range missiles with reach across the Middle East and into Europe.

Seventh, the nuclear modernization plan to support the Trump policy review accepts the Obama modernization plan committing an estimated \$1.2 trillion over 30 years, plus new weapons proposed by Trump.⁸ The Trump *NPR* modernization will maintain all three legs of the current strategic nuclear triad of intercontinental land-based missiles (ICBM), submarine-launched ballistic missiles (SLBM), and bombers. The *NPR* notes that eliminating any leg of the triad would "greatly ease adversary attack planning" and "allow an adversary to concentrate resources and attention on defeating the remaining two legs."⁹ Ohio-class ballistic missile submarines (SSBN) will eventually be replaced by Columbia-class SSBNs, maintaining at least 12 SSBNs available throughout the transition. The US ICBM force of Minuteman III missiles will be replaced beginning in 2029 by the ground-based strategic deterrent, including the modernization of some 450 launch facilities supporting a deployed ICBM force of 400 missiles.¹⁰ The administration also plans to deploy a next-generation strategic bomber (the B-21 Raider) that will eventually replace elements of the conventional and nuclear-capable bomber force, beginning in the mid-2020s. Currently the bomber leg of the triad consists of 46 nuclear-capable B-52H and 20 nuclear-capable B-2A strategic bombers.¹¹ Critics have questioned whether a new strategic bomber and a replacement for the air-launched cruise missile called the long-range stand-off cruise missile are both necessary and whether a new land-based missile is needed to replace Minuteman III or if Minuteman should be refurbished at lower cost.¹²

Eighth—ignored or virtually so—is the accelerating risk of war due to accident or miscalculation, especially in Asia but also in Europe as between Russia and NATO.¹³ Too many US and Russian nuclear missiles remain

on alert, according to some expert analysts; others dismiss this as a serious problem. Cold War history shows that in times of peace or crisis leaders may misperceive warning information or misinterpret the behavior of their counterparts. Future warning and command and control systems may invite attack on themselves unless they are protected against prompt cyberattacks or lurking malware inserted prior to the eruption of a crisis.

Ninth and more abstract, a case can be made for the arrival of cognitive deterrence as an umbrella term to refer to present and future challenges to nuclear stability and security. To some extent deterrence has always been about psychology and mind games, as the works of noted theorists such as Robert Jervis and Thomas Schelling have explained.¹⁴ However, at the level of applied science and military-strategic planning, many past issues of deterrence were argued about in terms of hardware: numbers and kinds of launchers, warheads, re-entry vehicles, and the physics or engineering of their performance parameters. Future deterrence discussions must also take into account the priority of software and network security. The scope of such discussions will include the potential for flawed or degraded networks and nuclear C3 systems to fail the required crisis management, intrawar deterrence, or conflict termination “stress tests.”¹⁵ “Deterrence” old style is a difficult term to apply in cyberspace, and cyberspace itself is not holding still.¹⁶ Formerly cyberspace was conceived as just another domain for which military leaders had to plan deterrence and defense. But cyberspace has the potential to evolve into the master narrative of military-strategic behavior by default: the history of military-technical revolutions in the United States is rich with illustrations of techno-fixation triumphing over strategy. The nexus among policy, strategy, and military operations (ends, ways, and means) is vulnerable to disruption at both ends of the “strategy bridge” as Colin Gray has described it.¹⁷

Conclusion

The Trump administration *NPR* offers proposals and perspectives that require careful consideration by the US national security community. It is more evolutionary than revolutionary in recognizing the need to recapitalize the nuclear force and to rethink the need for flexible nuclear responses in a changing security environment. However, the implications for nuclear arms control are mixed. While the overall size of the

US nuclear force may not change very much, the quality of the force and its supporting command and control systems must pass newer stress tests between now and 2046 when modernization plans are fulfilled. The role of nuclear employment policies in deterring escalation in limited war remains problematic and begs the question: Are we headed for a lower threshold between conventional war fighting and nuclear first use in Europe or Asia? If so, plans for nuclear deterrence and arms control must fit within a policy-strategy-operations continuum that recognizes the uniqueness of nuclear dangers and the need for strategic discipline in deterrence and arms control. **SSQ**

Stephen J. Cimbala*

Pennsylvania State University—Brandywine

Notes

*Grateful acknowledgment is made to Paul Bracken and Paul Davis for comments on an earlier draft. They are not responsible for any arguments or opinions in this study.

1. Office of the Secretary of Defense (OSD), *Nuclear Posture Review (NPR)* (Washington, DC: Department of Defense, February 2018), <https://www.defense.gov/News/SpecialReports/2018NuclearPostureReview.aspx>. For analysis and commentary, see Lawrence J. Korb, “Why Congress Should Refuse to Fund the NPR’s New Nuclear Weapons,” *Bulletin of the Atomic Scientists*, 7 February 2018, <https://thebulletin.org/commentary/why-congress-should-refuse-fund-npr%E2%80%99s-new-nuclear-weapons11493>; David E. Sanger and William J. Broad, “To Counter Russia, U.S. Signals Nuclear Arms Are Back in a Big Way,” *New York Times*, 5 February 2018, <https://www.nytimes.com/2018/02/04/us/politics/trump-nuclear-russia.html>; Hans M. Kristensen, “The Nuclear Posture Review and the U.S. Nuclear Arsenal,” *Bulletin of the Atomic Scientists*, 2 February 2018, <https://thebulletin.org/commentary/nuclear-posture-review-and-us-nuclear-arsenal11484>; Hans Rühle, “The New US Nuclear Posture Review: Return to Realism,” *National Institute for Public Policy*, no. 427, 7 February 2018, <http://www.nipp.org/2018/02/07/ruhle-hans-the-new-us-nuclear-posture-review-return-to-realism/>; Sanger and Broad, “Pentagon Suggests Countering Devastating Cyberattacks with Nuclear Arms,” *New York Times*, 16 January 2018, <https://www.nytimes.com/2018/01/16/us/politics/pentagon-nuclear-review-cyberattack-trump.html>; Michael R. Gordon, “U.S. Plans New Nuclear Weapons: Pentagon Weighs ‘Low-Yield’ Warhead and Sea-Based Cruise Missile, Igniting Debate over Strategy,” *Wall Street Journal*, 16 January 2018, <https://www.wsj.com/articles/u-s-plans-new-nuclear-weapons-1516063059>; and Richard Burt and John Wolfsthal, “America and Russia May Find Themselves in a Nuclear Arms Race Once Again: Despite the Trump Administration’s Decision to Treat It as an Afterthought, Arms Control

Is Not Dead,” *National Interest*, 17 January 2018, <http://nationalinterest.org/feature/america-russia-may-find-themselves-nuclear-arms-race-once-24100>.

2. Low-yield SLBM warheads and a modern nuclear-armed SLCM are discussed in the *Executive Summary* of OSD’s *Nuclear Posture Review*, 8, <https://media.defense.gov/2018/Feb/02/2001872877/-1/-1/1/EXECUTIVE-SUMMARY.PDF>. On the possibility of using nuclear SLCMs as a bargaining chip, see RadioFreeEurope/RadioLiberty, “M Mattis: Proposed U.S. Cruise Missile a Bargaining Chip with Russia,” 6 February 2018, <https://www.rferl.org/a/russia-mattis-cruise-missile-bargaining-chip/29023940.html>.

3. Korb, “Why Congress Should Refuse.”

4. Expert commentary on this aspect of the *NPR* includes Ruhle, “The New U.S. Nuclear Posture Review: Return to Realism,” 2. Challenges to US defense and other vital networks and IT capabilities are examined in the final report of the Defense Science Board Task Force on Resilient Military Systems, *Resilient Military Systems and the Advanced Cyber Threat* (Washington, DC: Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, January 2013), <http://www.dtic.mil/dtic/tr/fulltext/u2/a569975.pdf>.

5. See Keith B. Payne, “Nuclear Deterrence in a New Age,” National Institute for Public Policy, Information Series no. 426, 13 December 2017, <http://www.nipp.org/2017/12/13/payne-keith-b-nuclear-deterrence-in-a-new-age/>. Other experts warn that nuclear weapons have been used with greater success in support of deterrence, compared to lesser effectiveness in support of coercion or coercive diplomacy. See Todd S. Sechser and Matthew Fuhrmann, *Nuclear Weapons and Coercive Diplomacy* (Cambridge, UK: Cambridge University Press, 2017).

6. OSD, *NPR Executive Summary*, 8.

7. For the text, see European Union External Action Service (EEAS), *Joint Comprehensive Plan of Action* (Vienna, Austria: EEAS Strategic Communications Division, 14 July 2015), https://eeas.europa.eu/headquarters/headquarters-homepage/8710/joint-comprehensive-plan-action_en. See also Lawrence Korb and Katherine Blakeley, “This Deal Puts the Nuclear Genie Back in the Bottle,” *Bulletin of the Atomic Scientists*, Expert Commentary, 15 July 2015, <http://thebulletin.org/experts-assess-iran-agreement-20158507>.

8. Jon B. Wolfsthal, Jeffrey Lewis, and Marc Quint, *The Trillion Dollar Nuclear Triad: US Strategic Nuclear Modernization over the Next Thirty Years* (Monterey, CA: James Martin Center for Nonproliferation Studies, January 2014), http://cns.mii.edu/opapers/pdfs/140107_trillion_dollar_nuclear_triad.pdf.

9. OSD, *NPR Executive Summary*, 6.

10. OSD, 6.

11. OSD, 6.

12. For example, see Darius E. Watson, “Rethinking the US Nuclear Triad,” *Strategic Studies Quarterly* 11, no. 4 (Winter 2017): 134–50, http://www.airuniversity.af.mil/Portals/10/SSQ/documents/Volume-11_Issue-4/Watson.pdf. Cost projections for alternative US nuclear force structures are discussed in US Congressional Budget Office, *Approaches for Managing the Costs of U.S. Nuclear Forces, 2017–2046* (Washington, DC: Congressional Budget Office, October 2017), 15–20.

13. On this issue, see Jeffrey Edmonds, “How America Could Accidentally Push Russia into a Nuclear War,” *National Interest*, 6 February 2018, <http://nationalinterest.org/feature/how-america-could-accidentally-push-russia-nuclear-war-24378>; and Ernest J. Moniz, “Global Nuclear Risks,” 11 January 2018, transcript, Center for Strategic and International Studies, Washington, DC, <https://www.belfercenter.org/publication/ernest-j-moniz-addresses-global-nuclear-risks>.

14. See, for example, Robert Jervis, *The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon* (Ithaca, NY: Cornell University Press, 1989); Jervis, *The Illogic of American Nuclear Strategy* (Ithaca, NY: Cornell University Press, 1984); and Thomas C. Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 2008).

15. See Andrew Futter, “The Double-Edged Sword: US Nuclear Command and Control Modernization,” *Bulletin of the Atomic Scientists* (29 June 2016), <http://thebulletin.org/double-edged-sword-us-nuclear-command-and-control-modernization.html>; and Futter, *Cyber Threats and Nuclear Weapons: New Questions for Command and Control, Security and Strategy* (London: Royal United Service Institute for Defence and Security Studies, RUSI Occasional Paper, July 2016).

16. Pertinent discussion appears in P. W. Singer and Allan Friedman, *Cybersecurity and Cyberwar: What Everyone Needs to Know* (New York: Oxford University Press, 2014), and in Martin C. Libicki, *Crisis and Escalation in Cyberspace* (Santa Monica, CA: RAND Corporation, 2012).

17. Colin S. Gray, *The Strategy Bridge: Theory for Practice* (New York: Oxford University Press, 2010), 24–43

Disclaimer

The views and opinions expressed or implied in SSQ are those of the authors and are not officially sanctioned by any agency or department of the US government. We encourage you to send comments to: strategicstudiesquarterly@us.af.mil