

# RUSSO-AMERICAN STRATEGIC NUCLEAR ARMS CONTROL

## New START or a New Start?

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This article considers whether the temporarily iced New Strategic Arms Reduction Treaty (START) can continue to serve as a fulcrum for the renewal of Russo-American strategic nuclear arms control. Going forward, the political and military-technical challenges to rebooting the New START and/or leapfrogging over it are formidable but not insurmountable. The article first considers the existing status of New START and both Russian and American strategic nuclear forces. Second, it discusses the fivefold context of challenges that face decisionmakers and negotiators in Washington and Moscow, and, although unlikely, Beijing. Third, the article analyzes the adequacy of New START-compatible forces to provide for surety in deterrence, crisis, and arms race stability, allowing for various levels of performance under exigent conditions.

In February 2023 Russian President Vladimir Putin announced Russia was suspending participation in the New Strategic Arms Reduction Treaty (START) signed by the United States and Russia in 2010. Considering that the treaty had no measure for such an action, the act effectively equated to withdrawal.<sup>1</sup> Almost a year later, both nations are looking ahead at future deterrence and arms control. A new or renewed New START could tame the growth of strategic nuclear arsenals and provide a measure of deterrence and arms race stability, but this is insufficient for the longer term. Effective treaty negotiations must grapple with challenges, including Russia's war in Ukraine; China's nuclear expansion; the space and cyber domains; new offensive and defensive technologies; and the various concepts of escalation and de-escalation held by the three powers in question.

## Background

New START entered into force in 2011 and was extended by mutual agreement between Russia and the United States in 2021, until 2026. The treaty limits each state to a

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1. Office of the Spokesperson, Department of State (DoS), "Russian Noncompliance with and Invalid Suspension of the New START Treaty," press release, DoS, June 1, 2023, <https://www.state.gov/>.

maximum of 800 deployed and nondeployed strategic launchers: intercontinental ballistic missiles (ICBM), submarine launched ballistic missiles (SLBM), and heavy bombers. Additionally, each country can deploy a maximum of 700 ICBM and/or SLBM launchers and heavy bombers, and an upper limit of 1,550 warheads. The treaty also provided for measures to ensure monitoring and verification of each country's deployments, including data updates and exchanges, notifications, and on-site inspections.<sup>2</sup>

Despite Putin's 2023 announcement of Russia's suspended participation in New START, both states indicated their willingness to continue to observe its numerical limits on deployed and nondeployed launchers and deployed warheads.<sup>3</sup> This announcement came at a time when Russia was already in breach of mandatory inspections.<sup>4</sup>

The ability of the United States' "national technical means" to effectively monitor Russian compliance with New START is imperfect at best.<sup>5</sup> Monitoring the numbers of warheads deployed on strategic launchers is the most challenging aspect now because the on-site inspections called for in the treaty will no longer take place—unless Russia returns to full participation and compliance.

In response to Russia's suspension of participation in the treaty, the US State Department announced in June 2023 that the United States would no longer provide notifications about the status or location of items accountable under the treaty, would no longer facilitate inspections on American territory, and would cease providing Russia with telemetry information from American ICBM and SLBM launches.<sup>6</sup>

The absence of regular data exchanges and complete monitoring and verification of one another's forces do not pose an immediate danger to the United States or Russia. In the longer term, if soured relations lead to a deadlocked or nonexistent arms control dialogue, both the United States and Russia could lose confidence in the arms control process and resume force building on the basis of their worst fears about what the other side is doing or might do in the future. American officials have indicated a willingness to keep an open door to further discussions on these issues, but these efforts are taking place at a time when the Department of Defense's recently released annual report, *Military and Security Developments Involving the People's Republic of China* (PRC), suggests China may have tripled the size of its nuclear arsenal since

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2. Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, U.S.-Russian Federation (New START), Apr. 8, 2010, Treaty Document 111-5.

3. Guy Falconbridge, "Russia's Putin Issues New Nuclear Warnings to West over Ukraine," Reuters, February 21, 2023, <https://www.reuters.com/>.

4. Humeys Pamuk, "US Says Russia Violating New START Nuclear Arms Control Treaty," Reuters, January 31, 2023, <https://www.reuters.com/>.

5. Michael P. Gleason and Luc Reisbeck, *Noninterference with National Technical Means: The Status Quo Will Not Survive* (Washington, DC: Aerospace Corporation, 2020), 1–4.

6. Steven Pifer, "The US and Russia Must Re-Assess Their Strategic Relations in a World without New START," *Bulletin of the Atomic Scientists*, June 13, 2023, <https://thebulletin.org/>.

2020 as it builds to a peer arsenal.<sup>7</sup> China's actions are certain to change the shape of future arms control.

On June 2, 2023, US national security adviser Jake Sullivan, in a speech to the Arms Control Association, said that the United States was ready to engage with Russia on bilateral arms control talks without preconditions in order to “manage nuclear risks and develop a post-2026 arms control framework.”<sup>8</sup> Russian reactions to this offer were equivocal. They also depend, to some extent, on Putin's willingness to reengage on nuclear arms control despite continued American and NATO's opposition to Russia's war in Ukraine.<sup>9</sup>

Although the United States and Russia both say they are in compliance with the requirements of New START, there is no guarantee this situation will continue indefinitely. Uncertainty about the durability of New START is based on several factors. First, the war in Ukraine already shows signs of being a protracted struggle that will dampen enthusiasm for further collaboration on security and foreign policy issues. Second, there is significant support among arms control and foreign policy experts for including the PRC in any future strategic nuclear arms control agreement. As mentioned above, the PRC is engaged in building a nuclear force peer to the United States.<sup>10</sup> This would increase American extended deterrence requirements in Asia in addition to those already existing in Europe.

Third, the challenge of deterring nuclear attack involves more than maintaining strategic parity in force-building. The rising significance of the cyber and space domains as related to nuclear deterrence requires further consideration among defense leaders and policy planners. Fourth, technological innovations in offensive strike weapons and antimissile defenses may complicate American and Russian estimates of “how much is enough” for deterrence and crisis stability. A fifth issue is whether American and Russian notions of the role of nuclear weapons in military strategy, especially with regard to escalation, are correctly understood or compatible in the event that deterrence fails.

## **Five Challenges for Future Arms Control**

### ***Russia's War in Ukraine***

The first challenge to the issue of future arms control is the protracted nature of Russia's war in Ukraine. With the conclusion of the war difficult to foresee, any of the

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7. Office of the Secretary of Defense (OSD), *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China* (Washington, DC: DoD, 2023), VIII.

8. OSD.

9. See Michaela Dodge, “On Arms Control and Why New START's Suspension Does Not Really Matter,” National Institute for Public Policy (NIPP), June 19, 2023, <https://nipp.org/>.

10. See Brad Roberts et al., *China's Emergence as a Second Nuclear Peer: Implications for U.S. Nuclear Deterrence Strategy* (Livermore, CA: US Department of Energy, Lawrence Livermore National Laboratory, 2023), <https://cgsr.llnl.gov/>.

possible outcomes can complicate future Russo-American political relations. The options, broadly speaking, are a decisive victory for Russia, a decisive victory for Ukraine, or a split decision that leaves both sides with some significant payoffs but perhaps less than their maximum objectives.

Any negotiated settlement will involve side payments, trade-offs, and some disgruntlement on the part of governing elites, interest groups, media pundits, and others in Kyiv, Moscow, Washington, and Brussels. For example, Russia might have to settle for the loss of some previously occupied territory in eastern and southern Ukraine. Ukraine might have to accept Russia's foothold on a land bridge to Crimea. International mediation would almost certainly be required, perhaps on the part of the United Nations, the Organization for Security and Co-operation in Europe, and/or other key state actors such as China.

A possible sticking point to a mutually acceptable cease-fire, or to a more durable peace agreement, would be the admission of Ukraine to NATO. Member states in NATO and others are promoting this idea in public discourse, but it is a nonstarter for Putin.<sup>11</sup> The admission of Ukraine into NATO could lead to the fall of the Putin regime and to a worse option.<sup>12</sup> Additionally, if Ukrainian armed forces appear on the cusp of retaking Crimea, this is a red line for Russia, and it may see a total deterioration of relations between Moscow and Washington. NATO leaders should not assume that turbulence within the Russian regime works to NATO's advantage.<sup>13</sup> Peace agreements have to be implemented by stable governments, not by those who are distracted and looking over their shoulders at their possible replacement.

## ***China***

A second issue is the participation of Beijing in strategic arms control agreements. China's rising political influence and economic power are now being mated to a growing nuclear arsenal and make its participation necessary. Moreover, Chinese military improvements are not only in the realm of growing force size. China's capabilities for high-end conventional warfare and for nuclear deterrence are also qualitatively improved compared to those of the pre-Xi Jinping era.

The Defense Department's 2023 annual report details expansion in numbers and system capabilities that are shocking when compared to past reports and the expected growth in China's capability.<sup>14</sup> The PRC also plans to challenge the United States in foundational technologies such as artificial intelligence (AI), space offense and defense, cyberwar, and hypersonic weapons. China's growing arsenal of nuclear

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11. Robert Pszczel, "The Consequences of Russia's Invasion of Ukraine for International Security—NATO and Beyond," *NATO Review*, July 7, 2022, <https://www.nato.int/>.

12. Jim Heinz, "Putin Is Expected to Seek Reelection in Russia, but Who Would Run If He Doesn't?," *AP [Associated Press]*, November 1, 2023, <https://apnews.com/>.

13. Alexander Motyl, "It's High Time to Prepare for Russia's Collapse," *Foreign Policy*, January 7, 2023, <https://foreignpolicy.com/>.

14. OSD, *Annual Report*.

weapons includes launchers of intercontinental reach as well as those designed for a regional conflict.

Notwithstanding the urgency of bringing the PRC into nuclear arms control discussions with the United States and Russia, there are obstacles to three-way agreements. First, China may resist entering into any negotiations of this type until it has built up its strategic nuclear forces to higher levels.<sup>15</sup> China does not necessarily need to duplicate the nuclear forces of the United States or Russia. It appears the PRC is seeking to field a nuclear arsenal that matches or exceeds the United States with respect to a survivable second-strike capability, a plurality of delivery systems, and the necessary supporting elements for a credible strategic nuclear deterrent, including nuclear warning and command, control, and communications (C3) systems, space-based assets, and cyber capabilities.<sup>16</sup>

China will also want to deploy nuclear retaliatory forces that can circumvent any antimissile defenses that the United States might deploy, fearing that otherwise, the credibility of its nuclear deterrent will be compromised.<sup>17</sup>

A second concern about PRC participation in nuclear arms control talks is its negative attitude toward transparency in disclosing information about its currently deployed forces and modernization plans.<sup>18</sup> Chinese leadership and military advisers may find the transparency to which the United States and Russia have become accustomed, as a result of participation in Cold War and post-Cold War arms control, antithetical to their concepts of international negotiation and national security. Attaining agreements to detailed on-site inspections, data exchanges, test notifications, and the like, may require the United States and Russia to engage their Chinese military and political counterparts on the PRC's understandings about military strategy and arms competition in a broader sense.

### ***Space and Cyber Domains***

A third complication in the way of forward progress in nuclear arms control negotiations between the United States and Russia lies in the growing significance of the space and cyber domains for military strategy and deterrence. The space and cyber domains are no longer the provinces of a few technology enthusiasts or dedicated futurists. Space and cyber assets are critical for the United States, Russia, China, and other states aspiring to major-power status. Space-based reconnaissance and surveillance, early warning, C3, and geolocation are necessary elements for any advancing major military power, with or without nuclear weapons.

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15. David C. Logan, "Trilateral Arms Control: A Realistic Assessment of Chinese Participation," Stimson Center, August 9, 2021, <https://www.stimson.org/>.

16. See OSD, *Annual Report*.

17. Timothy Wright, "Is China Gliding toward a FOBS Capability?," IISS [International Institute for Strategic Studies], October 22, 2021, <https://www.iiss.org/>.

18. Walter Lohman and Justin Rhee, eds., *2021 China Transparency Report* (Washington, DC: Heritage Foundation, 2021), 51–59, <https://www.heritage.org/>.

Future military space forces will be challenged to perform the functions of sanctuary, survivability, control, and dominance of the high ground, including decisive space-to-space and space-to-earth force application.<sup>19</sup> At the same time, technology is providing new capabilities for attacks on satellites at various orbits and for defense against the same. The United States, Russia, and China are developing and testing satellites for rendezvous and proximity operations, enabling satellites to approach close enough to other satellites to track, repair, and/or destroy them if necessary.<sup>20</sup>

Counterspace capabilities are not new, but there are now increasing incentives for the development and use of offensive counterspace capabilities. Multiple countries are developing counterspace capabilities across one or more of the following categories: direct ascent, co-orbital, electronic warfare, directed energy, and space situational awareness.<sup>21</sup>

The United States has tested technologies for close approach and rendezvous in both low Earth orbit and geosynchronous orbit in addition to tracking, targeting, and intercept technologies that could lead to a co-orbital intercept capability.<sup>22</sup> The United States does not have an acknowledged, operational direct-ascent antisatellite capability, but American midcourse ballistic missile defense interceptors were demonstrated in an antisatellite role against a satellite in low Earth orbit. The United States also has an operational electronic warfare offensive counterspace system, the Counter Communications System, which is globally deployed to provide uplink jamming against geostationary communications satellites.<sup>23</sup>

The United States has also conducted research and development on the use of ground-based high-energy lasers for counterspace and other missions. Currently, it has the most advanced space situational awareness system in the world, including for military applications. Such capabilities include a geographically dispersed network of ground-based radars and telescopes and space-based assets.<sup>24</sup> Institutionally, then-President Donald Trump established the US Space Force and reestablished US Space Command in 2019 as part of a more intensive focus on space as a warfighting domain.<sup>25</sup>

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19. Peter Hays, "The Space Force in Context" (presentation, Nonproliferation Policy Education Center, Arlington, VA, May 12, 2023).

20. See Brian Weeden, *US Military and Intelligence Rendezvous and Proximity Operations* (Washington, DC: Secure World Foundation, 2023).

21. Tyler Way, "Counterspace Weapons 101," Aerospace Security, Center for Strategic and International Security (CSIS), June 14, 2022, <https://aerospace.csis.org/>.

22. Brian Weeden and Victoria Samson, eds., *Global Counterspace Capabilities: An Open-Source Assessment* (Washington, DC: Secure World Foundation, April 2023), vii, <https://swfound.org/>.

23. Kyle Mizokami, "US Space Force's First Offensive Weapon Is a Satellite Jammer," *Popular Mechanics*, March 17, 2020, <https://www.popularmechanics.com/>.

24. Hays, "Space Force."

25. Theresa Hitchens, "NORTHCOM's Head Sets Record Straight on Missile Defense Boundaries with SPACECOM," *Breaking Defense*, June 16, 2023, <https://breakingdefense.com/>.

War in space is a possibility, but cyberwar among state and nonstate actors already poses a significant danger to international security.<sup>26</sup> Cyberattacks occur as solo excursions or as supplements to kinetic uses of force. Both the public and private sectors are vulnerable to cyberwar, and the possibility of a crippling attack against American infrastructure, including military forces and command-and-control systems, requires constant vigilance and upgrading of information systems.

In the event of a nuclear first strike on the United States, the attack will likely be preceded by cyberattacks against American early warning and nuclear C3 systems (NC3) in order to introduce confusion or paralysis—delaying or forestalling an effective response. Cyberattacks directed at government or private sector targets in the United States and other countries include ransomware, network infiltration, insertion of malware to corrupt digital control systems, and extraction of confidential files for espionage.<sup>27</sup>

With regard to nuclear infrastructure, cyberattacks against Iran's nuclear program caused the destruction of many centrifuges, and "left of launch" techniques have allegedly been used by the United States in attempts to disable or divert adversary nuclear missile launches. In addition, breaches of internal security like the Edward Snowden affair made available to foreign powers some of the most sensitive cyber weapons used by the National Security Agency. In 2016, the so-called Shadow Brokers posted online tools used by the agency's highly classified Tailored Access Operations unit to break into computer networks in Russia, China, Iran, and elsewhere.<sup>28</sup>

American capabilities for offensive cyberwar are second to none, but defenses against enemy cyberattack are a larger challenge since American civilian infrastructure contains so many potentially vulnerable targets.<sup>29</sup> One example is the electric grid. Another issue with respect to cyberwar is the potential for AI to raise the bar in providing tools for military and strategic deception, including in cyberspace.

Deepfakes can simulate politicians, generals, and others announcing decisions or conducting war games that seem very convincing to large audiences on social media. AI systems already produce encyclopedias, plays, novels, and other creative works that were previously the purview of individual artists and scholars. Future declarations of war by heads of state or announcements of victory by commanding generals are open to simulation and temporarily may convince large audiences of their validity. In the

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26. Andrew 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], 2016); and Erik Gartzke and Jon R. Lindsay, "Thermonuclear Cyberwar," *Journal of Cybersecurity* 3, no. 1 (2017), <https://academic.oup.com/>.

27. Chad Heitzenrater, "Cyber Attacks Reveal Uncomfortable Truths about U.S. Defenses," *Rand Blog*, September 21, 2023, <https://www.rand.org/>; and see also CSIS, "Significant Cyber Incidents since 2006" (Washington, DC: CSIS, 2023), <https://csis-website-prod.s3.amazonaws.com/>.

28. David E. Sanger, *The Perfect Weapon: War, Sabotage and Fear in the Cyber Age* (New York: Crown Publishers, 2018), 227, 268–79.

29. For a detailed look at cyber operations see Chase Cunningham, *Cyber Warfare—Truth, Tactics, and Strategies* (Birmingham, UK: Packt, 2020).

case of nuclear crisis management, misperceptions of an adversary's intentions, along with deceptions by adversary intelligence services, can lead to miscalculated escalation and an outbreak of nuclear war.<sup>30</sup>

### *Innovations in Offensive and Defensive Weapons*

A fourth set of complications with respect to the viability of New START or other nuclear arms control agreements is continuing innovation in offensive and defensive weapons. For example, the development of hypersonic weapons, including delivery systems for nuclear warheads, raises serious issues for deterrence and defense planners.<sup>31</sup> In the case of nuclear deterrence, a reliable second-strike capability is a necessary condition for the success of deterrence by credible threat of retaliatory punishment. Hypersonics compress the time available for warning and selection of an appropriate response to an attack.<sup>32</sup>

It is conceivable that national leaders might have only a few minutes from the initial launch detection of an enemy first strike to the arrival of warheads at their assigned targets. Under these conditions, leaders fearful of losing their deterrent might be more willing to authorize preemptive attacks instead of waiting for indisputable confirmation that a nuclear war is underway.<sup>33</sup> An arms race in deploying hypersonic weapons could also affect conventional deterrence, since intermediate- and medium-range missiles with hypersonic speeds and maneuverability could inflict massive damage over a wide area within minutes instead of hours or days.

On the other hand, future arms control will have to take into account the improving capability of antimissile and air defenses.<sup>34</sup> With respect to ballistic missiles, the Cold War era was marked by a one-sided dominance of offensive systems over defenses. The United States and other countries have already demonstrated improved missile defense technologies against missiles of short, medium, and intermediate ranges. Future missile defense technologies or platforms, including space-based systems, might provide additional leverage against ballistic missile attacks.<sup>35</sup> Herein looms the possibility of a race between states in their ability to field hypersonic offensive weapons, or other

30. See Stephen J. Cimbala and Lawrence J. Korb, "Artificial Intelligence: Challenges and Controversies for US National Security," *Bulletin of the Atomic Scientists*, June 9, 2023, <https://thebulletin.org/>.

31. See Stephen J. Cimbala and Adam B. Lowther, "Hypersonic Weapons and Nuclear Deterrence," *Comparative Strategy* 41, no. 3 (April 2022), <https://doi.org/>; and Stephen Reny, "Nuclear-Armed Hypersonic Weapons and Nuclear Deterrence," *Strategic Studies Quarterly* 14, no. 4 (Winter 2020), <https://www.airuniversity.af.edu>.

32. Adam Lowther and Curtis McGiffin, "America Needs a Dead Hand," *War on the Rocks*, August 16, 2019, <https://warontherocks.com/>.

33. R. Harrison Wagner, "Nuclear Deterrence, Counterforce Strategies, and the Incentive to Strike First," *American Political Science Review* 85, no. 3 (1991).

34. Jeremiah Rozman, *Integrated Air and Missile Defense in Multi-Domain Operations* (Washington, DC: Association of the United States Army, 2020), 3–9.

35. See Michaela Dodge, *Missile Defense Reckoning Is Coming: Will the United States Choose to Be Vulnerable to All Long-Range Missiles?* (Fairfax, VA: NIPP, 2020).



weapons designed to confuse or evade defenses, compared to their ability to improve missile defenses.

With respect to nuclear deterrence, missile defenses are always challenged by the fact that even small numbers of nuclear weapons can do historically unprecedented damage to society. Therefore, against the possibility of large-scale nuclear attacks on the homeland, deterrence by denial remains less dependable than deterrence by credible threat of retaliatory punishment.<sup>36</sup> On the other hand, defenses that are good enough to make the calculations of prospective first strikers more complicated might appeal to some national leaders and defense planners. Previously discussed left-of-launch techniques for cyber disruption of missile launches might justifiably be considered a form of antimissile defense, although critics might refer to it as a variant of preemption.

### ***American and Russian Nuclear Strategy***

A fifth aspect of the uncertain context for future strategic nuclear arms control is the challenge of managing policy-prescriptive doctrine and nuclear force planning for escalation control if deterrence fails.<sup>37</sup> This is a thorny subject because it involves two kinds of prospective nuclear use: so-called tactical or nonstrategic nuclear weapons made available for battlefield use, and limited strikes with strategic nuclear weapons that purposely aim at high-value military and/or command-and-control targets but spare cities and other value targets for coercive bargaining and war termination.

Critics scoff at the idea of limited nuclear wars as a type of war that both Russia and China see as possible without expanding to strategic nuclear conflict.<sup>38</sup> But, beginning with the administration of John F. Kennedy, every American president since has sought to escape the civilization-ending Single Integrated Operational Plan for something that offers a variety of limited nuclear options for theater or strategic nuclear war.<sup>39</sup> During the Cold War years, NATO fielded a variety of nonstrategic nuclear weapons deployed in Western Europe on the assumption that NATO conventional forces were collectively inferior to those of the Soviet Union and its Warsaw Pact allies.

The situation now is the reverse. NATO holds the commanding heights of advanced technology conventional warfare, so Russia maintains many more deployed nonstrategic nuclear weapons than NATO. Estimates of Russian theater nuclear weapons range from 2,000 to 6,000, on more than a dozen delivery platforms, against 100 to

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36. Carl Rehberg, "Integrated Air and Missile Defense: Early Lessons from the Russia-Ukraine War," 1945 (website), June 10, 2022, <https://www.19fortyfive.com/>.

37. See Madison Estes, *Prevailing under the Nuclear Shadow: A New Framework for US Escalation Management* (Washington, DC: CNA [Center for Naval Analyses], 2020).

38. Stephen J. Cimbala and Lawrence J. Korb, "Karaganov's Case for Russian Nuclear Preemption: Responsible Strategizing or Dangerous Delusion?," *Bulletin of the Atomic Scientists*, August 21, 2023, <https://thebulletin.org/>.

39. See Fred Kaplan, *The Bomb: Presidents, Generals, and the Secret History of Nuclear War* (New York: Simon and Schuster, 2020).

200 B-61 gravity bombs with a low operational readiness rate.<sup>40</sup> The question remains whether the first use of a nonstrategic or tactical nuclear weapon would automatically expand into a much wider and more destructive conflict or remain contained below the threshold of general nuclear war. Such a scenario suggests a second question: Once one adversary launches an attack using strategic nuclear weapons against selective military targets, sparing cities, is reciprocal counterforce restraint possible?

Answering either question requires some conjecture about American and Russian approaches to escalation control and management.<sup>41</sup> With respect to lower-yield tactical nuclear weapons, there are clear differences between them and longer-range and more destructive strategic nuclear forces. Therefore, a “firebreak” between the two kinds of weapons is imaginable, but in the exigent circumstances of confusion and alarm surrounding nuclear war, mutual agreement on thresholds for limiting escalation may be difficult to arrange. Even more challenging is the establishment of thresholds and firebreaks with respect to strategic nuclear exchanges.

The rationale for limited strategic options is that they have two aspects: the immediate destruction that they cause and the message that they send about the ability and willingness to up the ante of destruction unless the other side agrees to terms. From the American standpoint, the objective is to influence the opponent through Thomas Schelling’s “manipulation of risk” and the “threat that leaves something to chance.”<sup>42</sup>

Whether this approach to messaging with (limited) mass destruction is understandable to Russian leaders, for example, is arguable, but probably circumstantial and scenario dependent. Since the beginning of Russia’s war against Ukraine in 2022, Putin has repeatedly made explicit references to the possibility of nuclear first use in the case of unacceptable losses by Russia.<sup>43</sup> What remains to be determined is when, or if, that threshold of political or military unacceptability is reached. Yet nuclear weapons can be employed without being detonated. They are not only instruments of war but are also useful for political intimidation and coercion. Russian military thinking recognizes the potential utility of nuclear weapons in this regard. Russia’s nuclear threats during its war against Ukraine are part of a larger matrix that one strategy expert has termed cross-domain coercion:

The current Russian cross-domain coercion campaign is an integrated whole of non-nuclear, informational, and nuclear types of deterrence and compellence. Finally, the campaign contains a holistic informational (cyber) operation,

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40. Mark B. Schneider, *How Many Nuclear Weapons Does Russia Have?* (Fairfax, VA: NIPP, 2023), 169–210; and “Nuclear Disarmament NATO,” NTI [Nuclear Threat Initiative], February 6, 2023, <https://www.nti.org/>.

41. See Olga Oliker, *Russia’s Nuclear Doctrine: What We Know, What We Don’t, and What That Means* (Washington, DC: CSIS, 2016); and Arushi Singh, “Russia’s Nuclear Strategy: Change or Continuities,” *Journal of Advanced Military Studies* 14, no. 2 (2023).

42. Thomas C. Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1967).

43. David Sanger and James McKinley, “Biden Warned of a Nuclear Armageddon: How Likely Is a Nuclear Conflict with Russia?,” *New York Times*, October 13, 2022, <https://www.nytimes.com/>.

waged simultaneously on the digital-technological and on the cognitive-psychological fronts, which skillfully merges military and non-military capabilities across nuclear, conventional, and sub-conventional domains.<sup>44</sup>

It follows that cross-domain coercion applies to political and military activities prior to war, in the initial period of war, and during escalation management and/or escalation dominance. With respect to strategic deterrence, this perspective was articulated in Russia's 2015 national security strategy, which states that interrelated "political, military, military-technical, diplomatic, economic, informational, and other measures" are being developed and implemented "in order to ensure strategic deterrence and the prevention of armed conflicts."<sup>45</sup>

If deterrence fails, Russia has not ruled out the possibility of a limited first use of nuclear weapons in order to deter expansion of the war by the opponent. There is considerable discussion in the United States of the prospect that Russia might "escalate to de-escalate" a conventional war by means of nuclear first use, but this prospect must be put into a broader context:

But while nuclear use in a first-strike mode to retrieve a losing conventional war and force NATO to de-escalate may be part of the strategy (escalate to de-escalate), that arguably is merely a part of a much broader nuclear strategy that relies heavily on the psychological and intimidating or informational components of nuclear weapons. In other words, we see a broader nuclear strategy that aims to use these weapons to control the entire process of escalation throughout the crisis from start to finish. If the crisis becomes kinetic, escalating to de-escalate may well become an operative possibility.<sup>46</sup>

Between Russia's war on Ukraine and war more generally, the political objectives for which states fight are related to their willingness to escalate or de-escalate the intensity of fighting and the attendant costs therein. For Russia, its war on Ukraine may be perceived as existential instead of merely opportunistic.<sup>47</sup> Putin has repeatedly claimed that the war in Ukraine is about the survival of a uniquely Russian civilization and culture that must either extend its influence abroad or wither on the vine. From this perspective, a Russia without de facto or de jure control over Ukraine is no longer an empire, and a Russia that is not an empire is not the destined great power that its history has mandated.

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44. Dmitri Adamsky, *Cross-Domain Coercion: The Current Russian Art of Strategy* (Paris: Institut Français des Relations Internationales, 2015), cited in Stephen Blank, "Nuclear Weapons in Russia's War against Ukraine," *Naval War College Review* 75, no. 4 (Autumn 2022): 58.

45. Timothy L. Thomas, *Russia: Military Strategy – Impacting 21st Century Reform and Geopolitics* (Fort Leavenworth, KS: Foreign Military Studies Office, 2015), 112.

46. Blank, "Nuclear Weapons," 61.

47. Yulia Talmazan, "From Buildup to Battle: Why Putin Stoked a Ukraine Crisis—Then Launched an Invasion," NBC News, February 25, 2022, <https://www.nbcnews.com/>; and Isabel Van Brugen, "Putin's True Motive for Ukraine Invasion Revealed in Report," *Newsweek*, April 26, 2023, <https://www.newsweek.com/>.

Along with this, in 2022 the term *Anglosaksy* (Anglo-Saxons) appeared frequently in Kremlin usage as a derogatory reference to duplicitous Americans and their European allies.<sup>48</sup> It predates the Putin regime, reverting to the latter 1940s and early 1950s as a reference to the Soviet Union's most important enemies who are assumed to be plotting the destruction of the regime in Moscow.<sup>49</sup>

If ambitious political objectives in Moscow are combined with a military-strategic net assessment that a prolonged war of attrition in Ukraine favors Russia against its opponents, the likelihood going forward is a tit-for-tat expansion of conventional war fighting with a background of nuclear coercion du jour. Despite some assessments that the Russian armed forces have underperformed in Ukraine relative to expectations, from a historical perspective Russian military thinking has evolved quite substantially.<sup>50</sup>

In a controversial essay published in June 2023, one Russian academician addressed the issue of escalation in the war in Ukraine, arguing that Russian nuclear preemption is a necessary means for reawakening NATO fears of nuclear deterrence in order to prevent an otherwise inevitable escalation to global thermonuclear war:

We will have to make nuclear deterrence a convincing argument again by lowering the threshold for the use of nuclear weapons set unacceptably high, and by rapidly but prudently moving up the deterrence-escalation ladder. . . . The enemy must know that we are ready to deliver a preemptive strike in retaliation for all of its current and past acts of aggression in order to prevent a slide into global thermonuclear war.<sup>51</sup>

Numerous rejoinders to this appeared promptly, including by Russian nuclear policy experts.<sup>52</sup> Two aspects of this back-and-forth on nuclear preemption by Russians are especially interesting. First, the essay explicitly and implicitly draws upon Western notions of escalation ladders and escalation control that were controversial during the Cold War and were regarded by then Soviet political leaders and military commentators as misguided military dilettantism. Second, it is possible the author is engaged in disinformation prompted by Russian government sources that would prefer this messaging to come from a purportedly objective academic source instead of the Kremlin. If so, it corroborates the arguments, cited above, which argue nuclear weapons

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48. Stefano Caprio, "Showdown with the 'Anglosaksy,'" PIME Asia News, May 21, 2022, <https://www.asianews.it/>.

49. Andrei Kolesnikov, "The Plot against Russia: How Putin Revived Stalinist Anti-Americanism to Justify a Botched War," *Foreign Affairs*, May 25, 2023, <https://www.foreignaffairs.com/>.

50. See Randy Noorman, "The Russian Way of War in Ukraine: A Military Approach Nine Decades in the Making," Modern War Institute at West Point, June 15, 2023, <https://mwi.usma.edu/>.

51. Sergei A. Karaganov, "A Difficult but Necessary Decision," *Russia in Global Affairs*, June 13, 2023, <https://eng.globalaffairs.ru/>.

52. See Dmitri Trenin, "The Ukrainian Conflict and Nuclear Weapons," *Russia in Global Affairs*, June 20, 2023, <https://eng.globalaffairs.ru/>; and Ivan N. Timofeev, "A Preemptive Nuclear Strike? No!," *Russia in Global Affairs*, June 20, 2023, <https://eng.globalaffairs.ru/>.

are among the instruments in Russia's tool kit of cross-domain coercion and are best used in that role—compared to the operational uncertainties involved in nuclear first use.

## **New START Viability**

The previous section discussed some of the obstacles to successful Russo-American strategic nuclear arms control in its future context. An immediate issue is whether New START provides a platform for interim strategic stability in the near term and/or a launching pad for more ambitious agreements in the longer term, should political relations between Washington and Moscow improve.

To help answer these questions, this article examines the current and prospective near-term strategic nuclear balance between the United States and Russia and projects alternative force structures for each state. This examination takes place in two phases. In the first phase, the model develops alternative force structures for each state and assigns appropriate numbers of weapons to each state's deployed strategic launchers. In each case, New START limitations on the numbers of accountable weapons and launchers are observed.

It is assumed that the benchmark force structure for both the United States and for Russia will deploy a mix of ICBMs, SLBMs, and heavy bombers. Yet for the sake of comparison and analysis, alternative forces for each state are also projected. For the United States, in addition to the traditional triad of strategic nuclear forces, the following alternative force structures are included: a dyad of ballistic missile submarines (SSBNs) and heavy bombers without ICBMs, a dyad of ICBMs and SLBMs without bombers, and a force composed entirely of ballistic missile submarines and SLBMs. For Russia, in addition to the traditional triad, the included alternative force structures are a dyad of ICBMs and SLBMs without heavy bombers, a dyad of ICBMs and heavy bombers without SLBMs, and a force composed entirely of ICBMs.

In the second phase, the analytical model estimates the numbers of surviving and retaliating warheads for each state's forces under each of the following conditions of alertness and launch protocols: (1) generated alert, launch on warning (maximum retaliation); (2) generated alert, riding out the attack, and then retaliating (intermediate retaliation); (3) day-to-day alert, launch on warning (intermediate retaliation); and (4) day-to-day alert, riding out the attack, and retaliating (assured or minimum retaliation).<sup>53</sup> The analysis makes no assumptions about the combinations of alert status and launch protocols that may exist in any particular situation; that is obviously scenario dependent. Nor is it assumed that American or Russian leaders will necessarily have accurate information or perceptions about the status of forces on the other side.

The results of these simulations point to several preliminary conclusions. First, New START-level numbers of operationally deployed strategic nuclear warheads and

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53. Grateful acknowledgment is made to Dr. James Scouras for use of his Arriving Weapons Sensitivity Model, as adapted for this project.

launchers should provide adequate numbers of second-strike surviving and retaliating warheads under any conditions of alertness and launch protocols. Admittedly there are variations across these retaliatory options that might be important to military planners and policymakers, depending upon their assumptions about nuclear employment policy. The more ambitious the list of enemy targets assigned for prompt or delayed destruction by each side, the more demanding the requirements for surviving and retaliating weapons. It may turn out that, for example, the number of weapons available under the scenario of day-to-day alert and riding out the attack before retaliating are insufficient to provide for flexible targeting or for escalation control.

It is worth noting that the analysis presented here is premised on Russia maintaining a strategic nuclear arsenal within the New START limits. Russia's suspension of New START, which equates to withdrawal from the treaty, may mean Russia has already begun the process of uploading additional warheads on existing delivery vehicles or fielding new systems.<sup>54</sup> Russia certainly has the capacity to rapidly increase the size of their arsenal.

More problematical is the survivability and endurance of the respective NC3 systems for each state following a nuclear attack.<sup>55</sup> This system of systems has two parts: technology and people. The technology is expected to perform pre-attack and continue performing, albeit in a degraded form, postattack. The people are expected to persevere regardless of destruction already experienced by their country. These are optimistic assumptions.

Additionally, there are societal consequences of nuclear war. The detonation of even tens of weapons on American, European, or Russian soil will create widespread societal distress. What remains of the national command authority in the United States or Russia may find itself under siege for having committed the worst blunder possible. Fortunately, there is a complete lack of experience with such an event, making any predictions highly speculative.

The point is that various postattack scenarios are imaginable. Once deterrence fails, it is conceivable, but not inevitable, that control over forces is maintained sufficient to limit escalation and move toward conflict termination.<sup>56</sup> For that to happen, leaders in the United States and Russia need secure and reliable postattack communications and a shared desire to spare their societies further misery. Cooler heads must prevail over desire for revenge. It can happen, but history is not reassuring. The nature of warfare, according to Clausewitz, is to escalate and expand, not to de-escalate.<sup>57</sup>

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54. Adam Lowther and Derek Williams, "Why America Has a Launch on Attack Option," *War on the Rocks*, July 10, 2023, <https://warontherocks.com/>.

55. Bruce G. Blair, "Loose Cannons: The President and US Nuclear Posture," *Bulletin of the Atomic Scientists* 76, no. 1 (2020), <https://doi.org/>.

56. See Matthew R. Costlow, *Restraints at the Nuclear Brink: Factors in Keeping War Limited* (Fairfax, VA: NIPP, 2023).

57. See Stephen J. Cimbala, *Clausewitz and Escalation: Classical Perspective on Nuclear Strategy* (New York: Routledge, 1989).

## **Conclusion**

Russo-American nuclear arms control is on life support and fading fast. If reports coming out of the November 2023 arms control meetings between Chinese and American envoys is accurate, any arms control agreement that includes China is dead on arrival.<sup>58</sup> Optimistically, New START redux provides a starting point for renewed efforts to limit the growth of strategic nuclear arsenals and to provide for deterrence and arms race stability between the United States and Russia. It does little, however, for the problem of incorporating China into the arms control framework.

Future negotiations should use New START as a starting baseline but not necessarily as a most preferred destination. A post-New START arms control regime will have to navigate the challenges posed by an ongoing war in Ukraine; the need to bring China into talks; the rising significance of the space and cyber domains for warfare and deterrence; new and prospective technologies in offensive and defensive weapons; and comparative concepts of escalation and de-escalation held by the United States, Russia, and China. These are large challenges and a demanding context within which to plan for American nuclear modernization and future deterrence stability. **Æ**

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58. Jonathan Landay and Arshad Mohammed, "US Says China Reveals Little in Arms Control Talks," *US News & World Report*, November 7, 2023, <https://www.usnews.com/>.

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