NATIONAL INSTITUTE FOR PUBLIC POLICY

Journal of POLICY & STRATEGY

Vol. 3, No. 4

Journal of Policy & Strategy

Editorial Office

National Institute for Public Policy, 9302 Lee Highway, Suite 750, Fairfax, VA 22031 USA,
Telephone: 703-293-9181, Fax: 703-293-9198, www.nipp.org

The National Institute Press would like to express their appreciation to the Sarah Scaife Foundation for the generous support that made the *Journal of Policy & Strategy* possible.

Design by Stephanie Koeshall

Journal of Policy & Strategy

Vol. 3, No. 4 2023

TABLE OF CONTENTS

EDITOR's NOTE

Welcome to Volume 3, Issue 4 of National Institute's online *Journal of Policy & Strategy*—a quarterly, peer-reviewed publication. In this issue, under the heading "Analysis," readers will find timely articles by Dr. Mark Schneider, Dr. Keith Payne, Dr. Michaela Dodge, and Matthew Costlow. These articles address issues of contemporary relevance, including the size and characteristics of Russia's strategic nuclear arsenal, the prospects for arms control, and factors that might keep any nuclear conflict limited. In a tribute to the work of Dr. John S. Foster, former Under Secretary of Defense for Research and Engineering and a former Director of the Lawrence Livermore Laboratory, the "Analysis" section also includes an assessment by Keith Payne and Matthew Costlow of how, in 1973, the "Foster Panel," established the basic contours of U.S. nuclear deterrence policy that have endured, on a bipartisan basis, and remain helpful in today's complex deterrence threat environment.

This issue also includes interviews with Gen. Glen D. VanHerck, Commander, North American Aerospace Defense Command (NORAD) and United States Northern Command (USNORTHCOM), and Michael Rühle, former Head of the Climate and Energy Security Section at NATO. Gen. VanHerck discusses U.S. homeland defense posture and technology developments that are likely to affect future U.S. missile defense capabilities. He also comments on the importance of developing globally-integrated strategies and plans, the need to improve the defense acquisition process, efforts to share information with allies and partners, and the role of space in deterrence and defense. Michael Rühle assesses the relevance and applicability of NATO's security strategy to the current international security environment. He also identifies the most serious security challenges facing the West and offers his perspective on allied views of nuclear deterrence, missile defense, and arms control.

This issue of the *Journal of Policy & Strategy* also provides proceedings from National Institute's monthly online symposia, "webinars" moderated by David Trachtenberg. These proceedings are drawn from three different symposia that collectively focused on: "Restraints at the Nuclear Brink: Factors in Keeping War Limited"; "Comparing Soviet, Russian, and Chinese Influence Operations"; and "Russia's New START Suspension: Does Arms Control Matter?". This issue's "Literature Review" feature includes three book reviews: David Trachtenberg's review of John Gentry's *Neutering the CIA: Why US Intelligence Versus Trump Has Long-Term Consequences*; Dr. Michaela Dodge's review of *Competitive Arms Control: Nixon, Kissinger, & SALT 1969-1972,* by John D. Maurer; and Matthew Costlow's review of *The Road to Pearl Harbor: Great Power War in Asia and the Pacific*, edited by John H. Maurer and Erik Goldstein.

The "Documentation" in this issue includes the Executive Summary from *America's Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States* (2023), and select excerpts from the Department of Defense's latest report on *Military and Security Developments Involving the People's Republic of China, 2023*.

Finally, this issue's "From the Archive" feature is the Executive Summary from the bipartisan 2009 Congressional Strategic Posture Commission report. The findings and recommendations from this 2009 Commission report, when compared and contrasted to the findings and recommendations of the 2023 Commission report, demonstrate how significantly the global international security environment has changed over the past decade and a half and how the United States should adapt to these changes.

As always, we strive to make each issue of the *Journal of Policy & Strategy* informative and useful to our readers. We hope you find our efforts successful and that you find value in the contents of this issue. Above all, we thank you for your interest in and support of the Institute's work.

ANALYSIS

ESTIMATING THE NUMBER AND CHARACTERISTICS OF RUSSIA'S STRATEGIC NUCLEAR WEAPONS

Mark B. Schneider

Russian strategic nuclear modernization programs are the most extensive in the world, despite the fact that China is increasingly a competitor for this distinction. The sheer number of Russian nuclear programs is almost at the Soviet level, although the annual procurement rate is much more limited due to resource limitation and Western sanctions—resulting in a much slower pace of modernization than in the Soviet period. In January 2017, Russian Defense Minister General of the Army Sergei Shoigu stated that the development of the strategic nuclear forces was Russia's top priority, and that Russia will "…continue a massive program of nuclear rearmament, deploying modern ICBMs on land and sea, [and] modernizing the strategic bomber force."[1] Pavel Felgenhauer elaborated, "By 2020, Russia may have more than ten types of land-based deployed ICBMs and up to five different sea-based ballistic missiles, while the US has only two deployed long-range ballistic missiles—the vintage land-based Minuteman and the sea-based Trident."[2] Indeed, Russia has multiple systems for every leg of its nuclear Triad and is moving forward with novel systems with long-range capabilities that fall outside the traditional definition of a strategic Triad.[3]

Russia has announced more than 20 new or modernized strategic delivery systems since the end of the Cold War, most of which are being developed from post-Cold War designs.[4] In

---

This article is adapted from, Mark B. Schneider, *How Many Nuclear Weapons Does Russia Have? The Size and Characteristics of the Russian Nuclear Stockpile*, *Occasional Paper*, Vol. 3, No. 8 (August 2023), available at https://nipp.org/papers/how-many-nuclear-weapons-does-russia-have-the-size-and-characteristics-of-the-russian-nuclear-stockpile/.

[1] Pavel Felgenhauer, "Kremlin Learning to Navigate Washington's New Unpredictability," *Eurasia Daily Monitor*, Vol. 14, No. 3 (January 19, 2017), available at https://jamestown.org /program/kremlin-learning-navigate-washingtons-new-unpredictability/.

[2] Loc. cit.

[3] Mary Beth D. Nikitin, *Russia's Nuclear Weapons: Doctrine, Forces, and Modernization* (Washington, D.C.: Congressional Research Service, April 21, 2022), p. 37, available at https://crsreports.congress.gov/product/pdf/R/R45861/16; and, Mark B. Schneider, "Russian Nuclear Weapons Policy," *Real Clear Defense*, April 28, 2017, available at https://www.realcleardefense.com/articles/2017/04/28/russian_nuclear_weapons_policy_111261.html.

[4] Ibid. See also, *Section II. Minimum Deterrence: Fragile Hope of a Constant and Benign Threat Environment* (Fairfax, VA: National Institute for Public Policy, September 2014), pp. 15-26, available at https://www.esd.whs.mil/Portals/54/Documents/FOID/Reading%20Room/Litigation_Release/Litigation%20Release%20-%20Section%20II%20Minimum%20Deterrence%20Fragile%20Hope.pdf; "Russia developing new 'Osina' Yars missile variant," *BBC Monitoring Former Soviet Union*, June 16, 2021, available at https://infoweb.newsbank.com/apps/news/document-view?p=WORLDNEWS&docref=news/183279F7D59204B8; Isabel Van Brugen, "Russia Creating Unstoppable Submarine Nuclear Missiles—Report," *Newsweek*, May 15, 2023, available at https://www.newsweek.com/russia-new-unstoppable-intercontinental-ballistic-missile-submarine-navy-1800313; Mark B. Schneider, "The Russian Nuclear Buildup and the Biden Administration Nuclear Posture Review," *Real Clear Defense*, September 21, 2021, available at https://www.realcleardefense.com/articles/2021/09/29/the_russian_nuclear_buildup_and

addition, Moscow is likely developing other strategic systems that have not been publicly announced. Indeed, the U.S. Department of Defense usually does not reveal anything about Russia's nuclear missiles that Moscow has not already made public. Russia's announced programs are in various stages of development, testing, or deployment.[5] However, Russia sometimes has more than one name for a missile system, which creates confusion. (Note that the current Yars-M ICBM is different from the RS-24 Rubezh ICBM, which was also called the Yars-M.)[6] The Russian government sometimes does not announce when a program is suspended. However, such information is usually disclosed in Russian media reports.

This analysis uses a broad range of open sources, governmental and nongovernmental, to estimate the size and characteristics of Russian strategic nuclear forces. Doing so can help inform an understanding of the nature of the Russian threat.

Regardless of whether President Putin remains in power, a large percentage of these programs is expected to go forward. Russia sees strategic forces as the core of its "great power" status; its modernization programs are extensive and reflect this perspective. Given Russian modernization cycles, it is anticipated that every system will be replaced by either an improved version or a new type. Despite Western sanctions, a weakened economy and its war against Ukraine, Russia has continued with the expansion and modernization of its nuclear arsenal.

Russian Strategic Nuclear Capabilities

According to the Russian government, its strategic nuclear forces on September 1, 2022 were composed of: 1) 540 deployed ICBMs, SLBMs and heavy bombers; 2) 1,549 nuclear warheads deployed on ICBMs, SLBMs and one counted for each heavy bomber; and, 3) 759 deployed and non-deployed ICBM launchers, SLBM launchers and heavy bombers.[7] At entry into force of the New START Treaty (February 2011), the declared Russian numbers were 527, 1,537 and 865, respectively. Thus, according to official Russian data, there has been a small increase in the number of its deployed warheads and delivery vehicles since the New START Treaty took effect.[8] However, the warhead number did not take into consideration the impact of Russian bomber modernization, which has enhanced the Russian bomber delivery

_the_biden_administration_nuclear_posture_review_796621.html; and, Mark B. Schneider, "Russian Strategic and Hypersonic Naval Nuclear Weapons," *Real Clear Defense*, November 21, 2020, available at https://www.realcleardefense.com/articles/2020/11/18/russian_strategic_and_hypersonic_naval_nuclear_weapons_650130.html.

[5] John A. Tirpak, "The Great Hypersonic Race," *Air Force Magazine*, June 27, 2018, available at https://www.airandspaceforces.com/article/the-great-hypersonic-race/.

[6] Pavel Podvig, "Too Many Missiles - Rubezh, Avangard, and Yars-M," *RussianForces.org*, July 6, 2013, available at https://russianforces.org/blog/2013/07/too_many_missiles_-_rubezh_ava.shtml.

[7] U.S. Department of State "New START Treaty Aggregate Numbers of Strategic Offensive Arms," *State.gov*, September 1, 2022, available at https://www.state.gov/new-start-treaty-aggregate-numbers-of-strategic-offensive-arms-4/.

[8] U.S. Department of State, *New START Treaty Aggregate Numbers of Strategic Offensive Arms* (Washington, D.C.: Department of State, October 25, 2011), p. 1, available at https://2009-2017.state.gov/documents/organization/176308.pdf.

New Russian Strategic Nuclear Delivery Vehicles

ICBMs:

- The new road-mobile and silo-based single warhead SS-27 Mod 1/Topol-M Variant 2 ICBM, which is operational and fully deployed;
- The new SS-27 Mod 2/RS-24/Yars MIRVed ICBM, which is operational and whose deployment is continuing;
- The improved Yars-S, which is operational and the deployment of which is continuing;
- The Yars-M, a novel missile design, which is under development;
- The Avangard hypersonic glider launched on the SS-19 ICBM, which is operational and the deployment of which is continuing;
- The Sarmat highly-MIRVed heavy ICBM, which is in testing with deployment announced for 2023;
- The new RS-26 Rubezh missile, called an "ICBM" by Russia, but in reality an intermediate-range missile, with deployment suspended pending a 2027 decision;
- The Barguzin rail-mobile ICBM, with deployment suspended pending a 2027 decision;
- The Osina-RV ICBM, perhaps a new road-mobile ICBM, which is under development; and,
- The Kedr ICBM, a reported replacement for the Yars, the development of which is probably about to start.

SLBMs and SSBNs:

- The new Borei and Borei A ballistic missile submarines;
- The new Bulava-30 missiles with new MIRV warheads which are operational, and deployment of which is continuing on new Borei submarines;
- An improved Bulava-30 SLBM, which is in development;
- A recently announced follow-on missile to replace the Bulava-30, the characteristics and status of which are unknown;
- The improved versions of the Soviet legacy SS-N-23 SLBM called the Sineva and the Layner/Liner, both of which are operational and the deployments which have been completed; and,
- The new Husky 5th generation ballistic missile submarine and a new liquid-fueled ballistic missile; the development of both probably is suspended.

Bombers:

- Repeated modernizations of the Blackjack (Tu-160) and the Bear (Tu-95) heavy bombers;
- A program to deploy at least 50 new Tu-160M2 bombers, the production of which is now underway;
- New nuclear cruise missiles including 1) the new Kh-102 stealthy long-range strategic cruise missile, which is operational; 2) the nuclear-capable Kh-101 long-range cruise missile, which is operational; and, 3) reported deployment of the Kinzhal hypersonic missile on the Tu-160; and,
- The development of a new stealthy heavy bomber, the Pak DA, which reportedly will carry cruise and hypersonic missiles.

Novel Systems:

- The Poseidon (previously called the Status-6) nuclear-powered, nuclear-armed drone carried by the large new Belgorod-class nuclear submarines, which is nearly operational; and,
- The Burevestnik nuclear-armed, nuclear-powered cruise missile, which is under development.

capability considerably. The reduction in Russian non-deployed delivery vehicles appears to be the result of scrapping systems that were no longer functional, such as the Typhoon ballistic missile submarines, which reportedly were no longer operational even in 2011. (The main problem with the Typhoons was the lack of missiles**,** as many were eliminated by 2012 under the Cooperative Threat Reduction program.)[9]

Alexei Arbatov, former Deputy Chairman of the Duma Defense Committee, turned out to be correct in 2010 when he said that New START was a Treaty that would only limit U.S. strategic forces, which were reduced in all three New START categories by hundreds of weapons and delivery systems.[10] Indeed, during the 2010 Russian New START ratification hearings, then Defense Minister Anatoly Serdyukov said, "The parameters laid down in the treaty will in no way reduce the potential of our strategic forces."[11] Furthermore, he said that Russia intended to *increase* its forces up to the New START Treaty limits of 700 deployed strategic delivery vehicles, 1,550 deployed warheads, and 800 total deployed and non-deployed delivery systems.[12]

The following chart was released by the Department of State in March 2022.[13] It does not include the increase in Russian force levels reported in the last Russian New START Treaty data notification provided to the United States on September 1, 2022.

[9] Pavel Podvig, "Elimination of R-39/SS-N-20 Missiles," *RussianForces.org*, September 18, 2012, available at https://russianforces.org/blog/2012/09/elimination_of_r-39ss-n-20_mis.shtml.

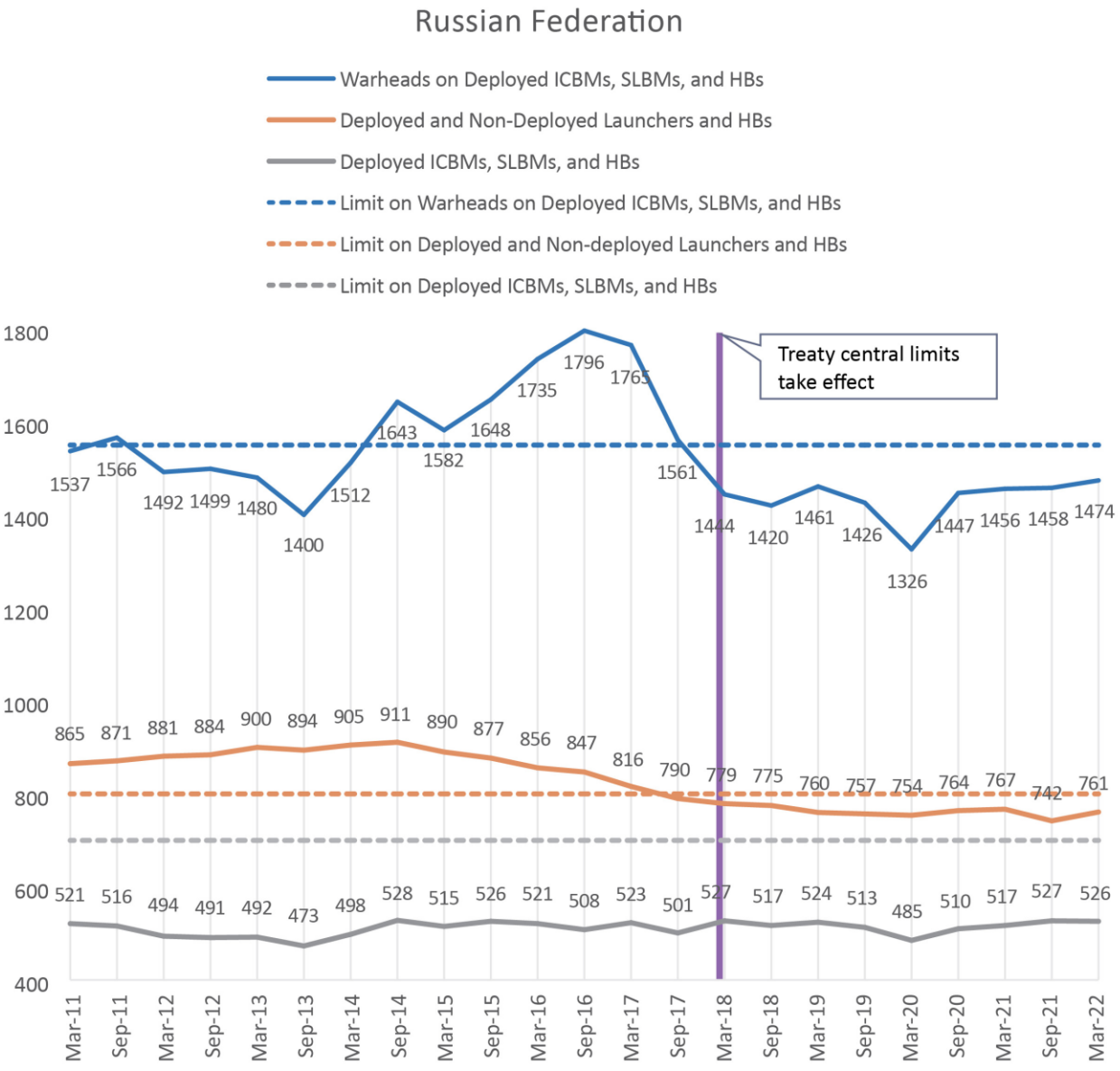
[10] Quoted in Mark B. Schneider, *New START: The Anatomy of a Failed Negotiation* (Fairfax, VA: National Institute Press, July 2012), p. iii, available at http://www.nipp.org/wp-content/uploads/2014/12/New-start.pdf; and, U.S. Department of State, "New START Treaty Aggregate Numbers of Strategic Offensive Arms," September 1, 2022, op. cit.

[11] Keith B. Payne, "Postscript on New START **-** The Senate was Misinformed about the Nuclear Treaty," *National Review*, January 18, 2011, available at http://www.nationalreview.com/articles/257329/postscript-new-start-keith-bpayne; "Defence Minister Outlines Benefits of New START Treaty to Russia," *BBC Monitoring Former Soviet Union*, December 24, 2010, available at https://infoweb.newsbank.com/apps/news/document-view?p=WORLDNEWS&docref=news/134578172F18FDD8; and, "Nuclear Treaty Goes Easy on Russia: Analysts," *Dawn.com,* December 27, 2010, available at https://www.dawn.com/news/593943/nuclear-treaty-goes-easy-on-russia-analysts.

[12] Ibid.

[13] U.S. Department of State, "New START Treaty Aggregate Numbers of Strategic Offensive Arms of the United States and the Russian Federation, February 2011 – March 2022," *State.gov*, March 1, 2022, available at https://www.state.gov/new-start-treaty-aggregate-numbers-of-strategic-offensive-arms-of-the-united-states-and-the-russian-federation-february-2011-march-2022/.

Russian Nuclear Weapons and Treaty Limits



Source: U.S. Department of State

The Number of Russian Strategic Nuclear Weapons

As noted previously, then Principal Deputy Under Secretary of Defense for Policy Dr. James Miller's 2011 numbers on Russia's nuclear inventory[14] suggested it had up to 2,500 strategic nuclear weapons. This number appears to be the then-declared Russian number of deployed strategic nuclear warheads under the New START Treaty plus the well-documented delivery capability of Russian strategic nuclear bombers, which is generally reported at about 800. Dr. Miller's numbers with regard to the total Russian nuclear weapons inventory (4,000-6,500)[15] have never been publicly updated by the Defense Department.

The official Russian position, repeatedly stated at the Nuclear Non-Proliferation Treaty (NPT) review conferences, is that Russia has reduced its strategic nuclear forces by 85 percent since the Cold War.[16] However, this appears to be misleading, as Russia is comparing the New START Treaty accountability number (which grossly undercounts Russian bomber weapons) to the original (1990) START Treaty accountability number (10,271),[17] which used different counting rules.

Despite this apples-to-oranges comparison, in December 2018, General Karakayev stated that, "…the nuclear potentials of the sides have [been] reduced more than 66 percent since the signing of START I."[18] The difference between an 85 percent reduction and a 66 percent reduction is almost 2,000 strategic nuclear warheads, which suggests Russia, at that time, had about 3,300 strategic nuclear weapons, well above the New START Treaty-allowed level of 1,550. It is not possible to get this high a number by just adding about 800 bomber-delivered weapons unaccountable under the New START Treaty.[19] Instead, it is likely that at least part of the difference is made up by additional cruise missiles, nuclear gravity bombs, and possibly short-range nuclear missiles.[20] Significant numbers of nuclear gravity bombs

---

[14] James Miller, as quoted in, U.S. House of Representatives, *The Current Status and Future Direction for U.S. Nuclear Weapons Policy and Posture* (Washington, D.C.: Armed Services Committee, Subcommittee on Strategic Forces, November 2, 2011), available at https://www.govinfo.gov/content/pkg/CHRG-112hhrg71527/html/CHRG-112hhrg71527.htm.

[15] Loc. cit.

[16] *Statement by Mr. Dmitry Polyanskiy, First Deputy Permanent Representative of the Russian Federation to the UN, during General Debate at the UN Disarmament Commission 2018*, Permanent Mission of the Russian Federation to the United Nations, April 2, 2018, available at http://russiaun.ru/en/news/desarm0204.

[17] *START Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms Signed in Moscow July 31, 1991*, op. cit., p. 122.

[18] "U.S. to seek ways of leveling capacities of Russian strategic nuclear forces - Gen. Karakayev," *Interfax*, December 17, 2018, available at https://interfax.com/; and, "US to look for new ways of neutralizing Russian strategic nuclear forces." *TASS*, December 16, 2018, available at https://tass.com/defense/1036341.

[19] U.S. Department of State, "New START Treaty Aggregate Numbers of Strategic Offensive Arms," *State.gov*, October 2, 2017, available at https://2017-2021.state.gov/new-start-treaty-aggregate-numbers-of-strategic-offensive-arms-5/index.html.

[20] "Winged Snipers: Best of the Best of Russia's Ballistic and Cruise Missiles," *Sputnik*, December 23, 2017, available at https://sputnikglobe.com/20171223/russian-air-launched-ballistic-cruise-missiles-1060272064.html; and, Hans M. Kristensen and Matt Korda, "Russian Nuclear Weapons, 2022," *Bulletin of the Atomic Scientists*, Vol. 78, No. 2 (2022), p. 99.

and short-range missiles could be included in the count of actual Russian bomber weapons. These could explain, in part, Karakayev's 3,300 overall number.

In addition, these systems could be augmented by undeclared SS-27 Mod 2/RS-24 Yars mobile ICBMs. If so, then the total number of deployed strategic nuclear weapons could easily reach 3,300. The Soviet Union established a precedent for covert deployment of mobile ICBMs; therefore, such a possibility today should not be summarily dismissed. Indeed, the Reagan Administration's first Soviet arms control non-compliance report in January 1984 concluded that the SS-16 ICBM was deployed at Plesetsk in "probable violation" of the SALT II Treaty prohibition on its deployment.[21] Many years later, when SALT II was apparently forgotten, Russian generals and the chief designer of the SS-16 acknowledged its deployment by the Soviet Union, which was a violation of the SALT II prohibition.[22]

If Russia had 3,300 deployed strategic nuclear weapons in 2018, the potential covert upload capability due to continued modernization, the end of on-site inspections in 2020**,** and Russia's New START Treaty "suspension" could have allowed Russia to add even more weapons to the 3,300 number. Indeed, well-known Russian expert Sergei Rogov reportedly stated that the "…overall number of [Russian] strategic nuclear weapons, including those in storage, could be as high as around 6,000."[23]

In a 2014 article, Colonel (ret.) Houston T. Hawkins of the Los Alamos National Laboratory, wrote that, "Today, estimates are that Russia has about 4,500 strategic weapons in its inventory. But how accurate are these new estimates?"[24] He noted that the primary driver for Cold War-era estimates of Soviet strategic nuclear weapons was the assessed amount of Soviet Highly Enriched Uranium (HEU), which the United States underestimated by at least 100 percent.[25] Today, it appears that the Russian stockpile of fissile material is vastly in excess of what Russia could possibly need for any of the currently estimated nuclear warhead numbers. The information in Hawkins's article was subjected to a security review and it is unlikely that a U.S. National Laboratory would have published an article on such an important subject that lacked credibility. A Russian strategic nuclear stockpile of 4,500 weapons in 2014 would have indicated a significant upload capability, allowing Russia to achieve a rapid breakout from the New START Treaty. In the current context of no on-site inspections for more than three years, such a hedge force could support large-scale cheating.

---

[21] Ronald Reagan, *Message to the Congress Transmitting a Report and a Fact Sheet on Soviet Noncompliance With Arms Control Agreements*, ReaganLibrary.gov, January 23, 1984, available at https://www.reaganlibrary.gov/archives/speech/message-congress-transmitting-report-and-fact-sheet-soviet-noncompliance-arms.

[22] Schneider, *New START: The Anatomy of a Failed Negotiation*, op. cit., pp. 36-37.

[23] Pavel Felgenhauer, "Kremlin Overrules Own Defense and Foreign Policy Establishment on Arms Control," *Eurasia Daily Monitor*, Vol. 17, Iss. 149 (October 22, 2020), available at https://jamestown.org/program/kremlin-overrules-own-defense-and-foreign-policy-establishment-on-arms-control/.

[24] Houston T. Hawkins, *Rethinking the Unthinkable* (Los Alamos, NM: Los Alamos National Laboratory, July 23, 2014), LA-UR-14-25647, p. 10, available at https://www.osti.gov/biblio/1148302.

[25] Ibid.

There is other evidence of Russian expansion of its nuclear force. In 2019, the Director of the Defense Intelligence Agency (DIA) Lt. General Robert P. Ashley, Jr., in a speech delivered at the Hudson Institute, stated that "…during the past decade, Russia has improved and expanded its [nuclear weapons] production complex, which has the capacity to process thousands of warheads annually."[26] Russia does not have money to waste even on its highest priority programs, strategic nuclear forces. Russia does not need a capability to produce and/or dismantle "thousands" of weapons a year to sustain a roughly 6,000-warhead stockpile as assessed by the Federal of American Scientists (FAS) in its February 2022 and May 2023 reports. This suggests that Russia desires to increase its nuclear weapons capability massively. The question is: Why?

In December 2017, American journalist Bill Gertz reported, "Russia is aggressively building up its nuclear forces and is expected to deploy a total force of 8,000 warheads by 2026 along with modernizing deep underground bunkers, according to Pentagon officials. The 8,000 warheads will include both large strategic warheads and thousands of new low-yield and very low-yield warheads to circumvent arms treaty limits and support Moscow's new doctrine of using nuclear arms early in any conflict."[27] In August 2019, then Deputy Assistant Secretary of Defense for Nuclear Matters Rear Admiral (ret.) Peter Fanta, speaking at the Crane Naval Submarine Warfare Center Symposium on Strategic Nuclear Weapons Modernization and Hypersonics, confirmed the Gertz report stating that, "The Russians are going to 8,000 plus warheads."[28]

An incisive 2015 study by James R. Howe concluded that Russia had the potential to deploy 2,664-5,890 nuclear warheads on its then-planned strategic ballistic missile force.[29] In another analysis, published in September 2019, he said Russia would have between "2,976 WHs [warheads], and a maximum of 6,670 WHs" (depending on warhead loading) plus over 800 bomber weapons.[30] He noted that "the 2022 [Russian] strategic nuclear force's (SNFs) warhead (WH) levels will likely significantly exceed New START levels based on planned WH loadings."[31] Indeed, as a result of the lack of on-site inspections for more than three years, some of this nuclear force growth may have already happened. Much of it depends on the scale of the Sarmat heavy ICBM deployment since it is a 20-warhead system (see below).

---

[26] Ashley, Jr., "Russian and Chinese Nuclear Modernization Trends," op. cit.

[27] Bill Gertz, "Russia Sharply Expanding Nuclear Arsenal, Upgrading Underground Facilities," *Washington Free Beacon*, December 13, 2017, available at http://freebeacon.com/national-security/russia-sharply-expanding-nuclear-arsenal-upgrading-underground-facilities/.

[28] Peter Fanta, Deputy Assistant Secretary of Defense for Nuclear Matters, speaking at the NWSC Crane Triad Symposium, August 23, 2019.

[29] James R. Howe, "Exploring the Dichotomy Between New START Treaty Obligations and Russian Actions and Rhetoric," *Vision Centric, Inc.*, October 2015, mimeo, slide 4.

[30] James R. Howe, "Future Russian Strategic Nuclear and Non-Nuclear Forces: 2022," in Stephen J. Blank ed., *The Russian Military in Contemporary Perspective* (Carlisle, PA.: U.S. Army War College, Strategic Studies Institute, September 2019), p. 358, available at https://press.armywarcollege.edu/monographs/907/.

[31] Ibid., p. 341.

The Potential for Covert Upload of Russian Strategic Ballistic Missiles

After nine years of the degraded New START Treaty verification regime (2011-2020), which included no on-site monitoring of Russian mobile ICBM production, followed by more than three years of no on-site inspections, it is highly unlikely that the United States can rely on the accuracy of Russian data declarations (the last one occurred in September 2022). Moreover, on March 15, 2023, the U.S. Department of State announced that, "Russia has stopped providing its [New START] treaty-mandated notifications."[32] As discussed above, more than three years without on-site inspections means the treaty is essentially unverifiable. This stands Ronald Reagan's maxim, "Trust, but verify," on its head. As a result, Russia can deploy any number of strategic nuclear weapons it desires, up to the theoretical capability of its delivery systems, with potentially little risk of detection and, given past history, little risk of a robust and serious U.S. response. Russia also can produce large numbers of ICBMs and SLBMs and put them in storage, and they are not accountable under the New START Treaty.

The November 2022 FAS New START Treaty advocacy article stated that, without New START, Russia could increase its deployed strategic nuclear weapons to 2,425, an increase of 837 nuclear warheads over what the FAS estimated the Russians had deployed at that time.[33] However, the authors appear to have significantly underestimated Russian missile upload potential. They included 400 bomber weapons in the 837 number.[34] The authors said they were counting nuclear weapons in bomber base weapons storage areas.[35] Yet, the number of nuclear weapons that are available at bomber bases is not limited in any way under the New START Treaty. Indeed, in December 2019, Rose Gottemoeller cautioned that the United States may lose nuclear parity because, if freed from the New START warhead limit, "…without deploying a single additional missile,"[36] Russia, "could readily add several hundred—by some accounts, one thousand—more warheads, to their ICBMs…"[37] Both of these estimates likely understate Russian upload potential by a considerable amount.

---

[32] U.S. Department of State, "Russian Noncompliance with and Invalid Suspension of the New START Treaty," *State.gov*, March 15, 2023, available at https://www.state.gov/russian-noncompliance-with-and-invalid-suspension-of-the-new-start-treaty.

[33] Jessica Rogers, Matt Korda, Hans M. Kristensen, "Nuclear Notebook: The Long View—Strategic Arms Control after the New START Treaty," *Bulletin of the Atomic Scientists*, November 9, 2022, available at https://thebulletin.org/premium/2022-11/nuclear-notebook-the-long-view-strategic-arms-control-after-the-new-start-treaty/.

[34] Ibid.

[35] Kristensen and Korda, "Russian Nuclear Weapons, 2022," op. cit., pp. 98, 100, 110.

[36] Rose Gottemoeller, as quoted in, U.S. Congress, House of Representatives, *The Importance of the New START Treaty* (Washington, D.C.: Committee on Foreign Affairs, December 4, 2019), p. 61, available at https://www.congress.gov/116/meeting/house/110302/documents/CHRG-116hhrg38543.pdf.

[37] Rose Gottemoeller, *The Importance of the New START Treaty* (Washington, D.C.: House of Representatives, Committee on Foreign Affairs, December 4, 2019), p. 2, available at https://www.congress.gov/116/meeting/house/110302/witnesses/HMTG-116-FA00-Wstate-GottemoellerR-20191204.pdf.

While the United States has a good understanding of the maximum Russian warhead upload potential for existing missile types (thanks largely to the original START Treaty that gave the United States a significant amount of data plus 15 years of unencrypted telemetry), open source information is inadequate to assess how much upload has actually taken place since the end of on-site inspections and, in particular, since Putin's 2022 expanded invasion of Ukraine. The assessed upload potential in the February 2022 and the May 2023 FAS reports and the November 2022 FAS arms control advocacy article appears to have been significantly understated. The FAS reports did not reveal the assumed warhead loadings that make up its estimate of 1,388 deployed ballistic missile warheads in the February 2022 report or its May 2023 estimate of 1,474.[38]

The 2018 *Nuclear Posture Review* report stated that, "Russia is developing and deploying new nuclear warheads…"[39]—which Russia has acknowledged since 2005.[40] Russia's ability to break out of the New START Treaty by uploading warheads on the new strategic missiles deployed mainly over the last decade depends on the size and weight of the warheads themselves. A number of Russian press reports indicate that Russia has developed a new warhead with a weight of 100-kg and a yield of 100-kt.[41] (This may be the same as the "small" power warhead that is sometimes reported as 150-kt.) In general, evaluating open source assessments of Russian upload warhead numbers is done by taking half the throw-weight of the missile and dividing it by the weight of the warhead to get a plausible maximum number of warheads for that missile type.

The biggest uncertainty the United States faces in assessing Russian upload potential is whether or not the Russians have developed and deployed the 10-warhead package of "super-lightweight" warheads on the SS-27 Mod 2/RS-24 Yars ICBMs and the Bulava-30 SLBM.[42] In a technical sense, it is possible for Russia to create a "super-lightweight" warhead. Indeed, in the *late 1960s*, the United States reportedly developed and deployed a similar warhead on the Poseidon missile. The warhead was so small and light that 14 of them could have been deployed on it.[43] However, it was apparently never actually deployed with that number of warheads and, under the START Treaty, the U.S. Poseidon SLBM was limited to 10 warheads.[44] This illustrates the fact that there is always a tradeoff between missile range and

---

[38] Kristensen and Korda, "Russian Nuclear Weapons, 2022," op. cit., p. 98; and, Kristensen, Korda and Reynolds, "Russian Nuclear Weapons, 2023," op. cit., p. 175.

[39] U.S. Department of Defense, *Nuclear Posture Review* (Washington, D.C.: U.S. Department of Defense, 2018), p. 9, available at https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF.

[40] Mark B. Schneider, "The Future of the U.S. Nuclear Deterrent," *Comparative Strategy*, Vol. 27, No. 4 (2008), p. 347.

[41] *Section II: Minimum Deterrence: Fragile Hope of a Constant and Benign Threat Environment*, op. cit., p. 21.

[42] Schneider, *New START: The Anatomy of a Failed Negotiation*, op. cit., p. 29.

[43] "Poseidon C-3 Missile," Smithsonian National Air and Space Museum, no date, available at https://airandspace.si.edu/collection-objects/missile-submarine-launched-poseidon-c-3/nasm_A19731668000; and, "United States of America Poseidon C-3," *Navweaps.com*, no date, available at http://www.navweaps.com/Weapons/WMUS_Poseidon.php.

[44] *START Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms Signed in Moscow July 31, 1991*, op. cit., p. 120.

warhead numbers and weight. Since Russia increased its accountable nuclear warheads to 1,796 under the New START Treaty in September 2016[45] (before the limit of 1,550 came into legal effect), it apparently saw a benefit in deploying a larger number of nuclear warheads than legally permitted under the New START limit.

This does not necessarily mean that the Russians will field the largest warhead load that is technically feasible on their missiles. Warhead numbers and technical characteristics relate to targeting objectives and Russia will clearly try to maximize its capabilities in this arena consistent with its overall strategic objectives. The yield of a "super-lightweight" warhead would have to be lower than the reported yields of the Russian "small," "medium" and "high" power warheads and Russian targeting objectives would be a consideration in determining the number they would deploy. It is likely they would deploy 10- and 12-warhead packages on their Bulava-30 and their Sineva and Layner/Liner SLBMs, respectively, because of the reported targets for these systems. In a September 13, 2007 interview in *Moskovskiy Komsomolets*, Colonel General (ret.) Viktor Yesin described Russian Navy strategic nuclear targeting, stating, "The sailors…largely hit targets that do not have any serious protection, such as cities and enterprises, and therefore they don't require a very high degree of accuracy."[46]

The recent FAS estimates placed Russian total upload capability at only about 500 warheads, which appears to be much too low. The number of additional warheads Russia could deploy by uploading depends upon: 1) the number of missiles deployed; 2) the number of warheads they now carry; and, 3) the maximum number of warheads they could carry. Available information on the maximum number of warheads Russian missiles are capable of carrying is summarized in the following chart as assembled by this author based on publicly available sources:[47]

[45] U.S. Department of State, "New START Treaty Aggregate Numbers of Strategic Offensive Arms," *State.gov*, January 1, 2017, available at https://2009-2017.state.gov/t/avc/rls/2016/266384.htm.

[46] Mark B. Schneider, "Russian Nuclear Targeting," *Real Clear Defense*, October 4, 2022, available at https://www.realcleardefense.com/articles/2022/10/04/russian_nuclear_targeting_857030.html.

[47] START Treaty accountability numbers did not necessarily represent the maximum possible warhead load. There were deployment limits and counting rules that allowed National Technical Means (NTM) to be used, in conjunction with on-site inspections, to verify Treaty limits. Information contained in the 1990 START Treaty Memorandum of Understanding, later updated in the case of the SS-27 Mod 1/Topol M Variant 2 and Bulava-30, is still useful in evaluating the credibility of Russian reports on the warhead capability and yield of the new Russian missiles. Available open source data on the characteristics of U.S. nuclear missile warheads, some dating back to the 1960s, provide a sanity check on the Russian press reporting. There is simply no doubt that Russia can duplicate the U.S. capabilities achieved 30-50 years ago.

Russian Nuclear Warhead Upload Potential

	Russian Missile Type	START Treaty Accountable[a]	FAS Estimates	Upload Potential[b]
ICBMs	SS-18	10	10	14
	Sarmat	N/A[c]	10	20
	SS-19	6	6[d]	6
	SS-25	1	1	1[e]
	SS-27 Mod 1/Topol M V2	1	1	4-7
	SS-27 Mod 2/RS-24 Yars	N/A[f]	4	6-10
	RS-24 Yars S	N/A[g]	N/A[h]	3-4
	Yars-M	N/A	N/A[i]	4 (?)
SLBMs	Bulava-30	6	6	6-10
	SS-N-23 Sineva/Layner[j]	4	4	8-12
	SS-N-18	3	3	7[k]

a START Treaty accountable warheads are not necessarily the largest number that can be deployed on the missile even without reducing the size and weight of the warheads.
b Based largely on Russian sources.
c The Sarmat did not exist during the START Treaty duration. It was originally planned to be a 100-ton missile but evolved into a 200-ton missile. Supposedly, it will become operational in 2023.
d The FAS includes an entry for the SS-19 ICBM on its forces chart; but oddly does not include SS-19 ICBMs in the count of Russian warheads.
e An upload for the SS-25 is theoretically possible but unlikely due to the age of the missile and its on-going phase out.
f The SS-27 Mod 2/RS-24 Yars was never declared under the START Treaty probably because of the compliance issue involving MIRVing a single warhead missile (the SS-27 Mod 1 ICBM).
g The RS-24 Yars S post-dates the end of the START Treaty in 2009.
h The RS-24 Yars is not mentioned in the FAS study. It reportedly carries medium yield warheads.
i The Yars-M is mentioned in the 2023 FAS report but not included in its main table of Russian nuclear forces.
j The Sineva and Layner/Liner SLBMs are upgraded versions of the SS-N-23 SLBM. Warhead upload was prohibited by the START Treaty.
k The FAS includes an entry for the SS-N-18 on its forces chart but does not include SS-N-18 missiles in the count of Russian warheads.

To highlight problems with the FAS analyses, their estimate of the maximum number of warheads that can be uploaded on Russian ICBMs and SLBMs will be compared with the upload potential of these missiles reported in a wide variety of Western and Russian sources.[48]

The FAS May 2023 article on Russian nuclear forces stated, without citing any sources, that, "It is estimated that the SS-18 heavy ICBMs now carry only five warheads each to meet the New START limit for deployed strategic warheads," and can be uploaded to 10.[49] (The

[48] James R. Howe, "Exploring the Dichotomy Between New START Treaty Obligations and Russian Actions and Rhetoric," *Vision Centric, Inc.*, October 2015, mimeo.

[49] Kristensen, Korda, and Reynolds, "Russian Nuclear Weapons, 2023," op. cit., p. 175.

SS-18 is inaccurately referred to as "M6" [Mod 6] when it is the Mod 5. The Mod 6 was reportedly a single warhead 20-megaton yield version of the missile.)[50] There is now open source proof that the SS-18 Mod 5 has a maximum upload capability of up to 14 high-yield warheads.[51] By contrast, the FAS February 2022 report said it was "possible" that the SS-18 was downloaded to five warheads.[52] However, there appears to be no open source data that supports this assessment.

The May 2023 FAS report, again without sourcing, reduced its estimate of the number of operational SS-18 launchers from 46 in 2021 and 40 in February 2022 to only 34 in May 2023.[53] It also said, "It is also possible that a fourth regiment at Dombarovsky is operational."[54] The June 2020 joint report by the Defense Intelligence Agency (DIA) and the National Air and Space Intelligence Center (NASIC) said the number of SS-18 Mod 5s was "about 50."[55] While this was before the Sarmat conversion began, there appears to be no press reports indicating that Russian Sarmat conversion is as fast and on such a large scale as the FAS now assesses. The FAS has nine silos being converted to Sarmat and 14 off line.[56] If the FAS is correct about the scope of current Russian conversion from SS-18 to Sarmat activities, the increase in the potential number of Russian strategic nuclear weapons could be rapid and substantial since the Sarmat is able to carry many more warheads than the SS-18.

Even setting aside the conversion to Sarmat ICBMs, with 34 operational SS-18 launchers, the upload potential would be 136 warheads more than the FAS assesses. If there are 40 operational SS-18 launchers as assessed in the February 2022 FAS report, the upload number would be 160 extra warheads.

The SS-27 Mod 2/RS-24 Yars mobile ICBM likely is the quickest and easiest Russian missile to upload *covertly* in the protracted no on-site inspection environment because upload would likely be done within covered buildings on bases. If the Russians have covertly uploaded this missile, it likely could be deployed with a six- or even a 10-warhead package. The first version of the Yars is the most likely to be uploaded. The upload capability of both

---

[50] Defense Intelligence Ballistic Missile and Analysis Committee (DIBMAC), *Ballistic and Cruise Missile Threat* (Wright-Patterson AFB, OH: NASIC, 2020), p. 29, available at https://media.defense.gov/2021/Jan/11/2002563190/-1/-1/1/2020%20%20BALLISTIC%20AND%20CRUISE%20MISSILE%20THREAT_FINAL_2OCT_REDUCEDFILE.PDF; U.S. Department of Defense, *Soviet Military Power: Prospects for Change 1989* (Washington, D.C.: U.S Department of Defense, 1989), p. 45, available at https://apps.dtic.mil/sti/pdfs/ADA212860.pdf; and, Steven J. Zaloga, *The Kremlin's Nuclear Sword: The Rise and Fall of Russia's Strategic Nuclear Forces: 1945-2000* (Washington, D.C.: Smithsonian Books, 2002), p. 237.

[51] Kristensen and Korda, "Russian Nuclear Weapons, 2022," op. cit., pp. 99-100; and, Joseph Trevithick, "Russia Releases Incredibly Detailed Views Of Its Massive 'Satan' Missile," *The War Zone*, November 21, 2022, available at https://www.thedrive.com/the-war-zone/russia-releases-incredibly-detailed-views-of-its-massive-satan-missile.

[52] Kristensen and Korda, "Russian Nuclear Weapons, 2022," op. cit., p. 100.

[53] Loc. cit.; Kristensen and Korda, "Russian Nuclear Weapons, 2022," op. cit., p. 100; and, Hans M. Kristensen and Matt Korda, "Russian Nuclear Weapons, 2021," *Bulletin of the Atomic Scientists*, Vol. 77, No. 2 (2021), p. 91.

[54] Kristensen, Korda, and Reynolds, "Russian Nuclear Weapons, 2023," op. cit., p. 175. This type of ICBM regiment typically includes six boosters.

[55] DIBMAC, *Ballistic and Cruise Missile Threat*, 2020, op. cit., p. 29.

[56] Kristensen, Korda, and Reynolds, "Russian Nuclear Weapons, 2023," op. cit., p. 175.

the SS-27 Mod 2/RS-24 Yars ICBM and the Bulava-30 SLBM appears to be at least six warheads and possibly 10.

The May 2023 FAS study credited the SS-27 Mod 2/RS-24 Yars with a maximum of four warheads but stated, "It is estimated that the SS-27 Mod 2s now carry only three warheads each to meet the New START limit on deployed strategic warheads."[57] Here again, the assumption of Russian New START compliance is increasingly dubious. Moreover, the February 2022 edition of the report said only that, "It is *possible* that the SS-27 Mod 2s now carry only three warheads each to meet the New START limit on deployed strategic warheads."[58] This continues the pattern of less nuanced assessments by the FAS, without apparent evidence to back them.

If the SS-27 Mod 2/RS-24 Yars is uploaded to six warheads, which is clearly possible as it has more throw-weight than the six-warhead Bulava-30, it could deliver up to 386 more warheads than the FAS May 2023 estimate. A problem in making a confident estimate of the number of Russian warheads is that the number of Yars-S missiles and the number of warheads that missile carries is unknown from open sources. If there is a 10-warhead option, the upload potential could be, in theory, 1,158 warheads above the FAS estimate. Again, the problem is that it is unknown how many of the deployed missiles are the Yars-S. It is unlikely that Moscow would deploy the maximum theoretical number of the 10-warhead packages, as a 10-warhead package would require individual warheads with lower yields and less capability to destroy hard targets in a counterforce strike. "Low-yield" likely is not five kilotons or fewer, but significantly lower than the reported 100-150-kt yield of the original SS-27 Mod 2/RS-24 Yars warheads. The Yars-S would likely be uploaded to four of the medium-yield warheads, as the "medium" yield warheads would give the Yars-S more capability against hard targets. It is unlikely Russia would sacrifice this military capability just to have more warheads. Since the Yars-S was not deployed until several years ago, most Yars are probably the first version with the more numerous smaller yield warheads and greater upload potential.

Russia reportedly has 78 SS-27 Mod 1/Topol M variant 2 ICBMs which are presumed to be single warhead ICBMs but, according to Howe, the missile "…has been tested with multiple RVs [reentry vehicles], and there are reports it may be upgraded to carry 4 to 7 RVs, and stay in service until 2027."[59] Even at four warheads (or RVs), this adds up to 234 more warheads than the FAS assessed. At seven warheads each it would add an additional 468.

The February 2022 and the May 2023 FAS reports assume no operational SS-19 ICBMs other than those converted for use with Avangard hypersonic boost glide vehicles, despite the fact that the authors acknowledge that "activities continue at some former regiments," and, it "is possible that one or two SS-19 regiments are active."[60] The assumption of no operational SS-19s appears inconsistent with available evidence. In April 2021, *TASS*

---

[57] Loc. cit.

[58] Kristensen and Korda, "Russian Nuclear Weapons, 2022," op. cit., p. 99. (Emphasis added.)

[59] Howe, "Future Russian Strategic Nuclear and Non-Nuclear Forces: 2022," op. cit., p. 359.

[60] Loc. cit.; and, Kristensen, Korda, and Reynolds, "Russian Nuclear Weapons, 2023," op. cit., p. 175.

reported that there were "currently 50" SS-19s deployed.[61] The June 2020 DIA/NASIC report said "about 50."[62] In April 2021, Alexander Leonov, identified as the "CEO and Chief Designer of the Research and Production Association of Machine-Building," the manufacturer of the SS-19, said that, "We will keep this missile [the SS-19] on combat duty as long as necessary. Now we are going to extend its service life by three years."[63] He also said the SS-19s "…are being replaced by advanced Yars ICBMs…"[64] According to Howe, some SS-19s can be deployed until the late 2020s, using the 22 SS-19s Russia received from Ukraine that were never fueled.[65] Also, in December 2020, General Karakayev listed the SS-19 "Stilet" (possibly also known as the "Stiletto") as being operational.[66] There is open source evidence that the SS-27 Mod 2/RS-24 Yars ICBMs are still being deployed in SS-19 silos. This includes two missiles deployed in December 2022,[67] and a missile deployed in November 2021.[68] The May 2023 FAS report said Russia had deployed 22 Yars in silos, which would certainly be former SS-19 silos.[69] The 2020 edition of the FAS Russia nuclear weapons report said Russia had 11 silo-based SS-27 Mod 2/RS-24 Yars.[70] If the 11 added SS-27 silos are subtracted from the 50 reported deployed SS-19s in 2020, this leaves 39 SS-19s. Both the 2020 and 2021 FAS reports counted the deployed number of SS-19s at zero, despite the fact that the 2020 DIA/NASIC report credited Russia with about 50 deployed SS-19s.[71]

Unfortunately, there is no information on how many SS-19s have been downloaded and, if so, to what extent. However, it seems probable that the SS-19's contribution to the apparent FAS underestimate of Russian upload potential is 234 nuclear warheads.

As discussed above, and according to a statement by its manufacturer, the Sineva and the Layner/Liner SLBMs are reportedly capable of carrying eight-to-12 of the smaller Russian warheads developed for the SS-27 Mod 2/RS-24 Yars and the Bulava-30. Moreover, modifying these missiles to carry the new warheads makes sense. Upload of the Sineva and Layner/Liner to eight-to-12 warheads does *not* require the "super-lightweight" warhead associated with the Bulava-30's 10-warhead reports but merely the relatively light warhead originally deployed on the Bulava-30. In both the February 2022 and May 2023 FAS reports,

---

[61] "Russia may Extend Service Life of SS-19 Stiletto ICBMs by Three Years," *TASS*, April 2, 2021, available at https://tass.com/defense/1273521.

[62] DIBMAC, *Ballistic and Cruise Missile Threat*, 2020, op. cit., p. 29.

[63] "Russia may Extend Service Life of SS-19 Stiletto ICBMs by Three Years," op .cit..

[64] Loc. cit.

[65] Howe, "Future Russian Strategic Nuclear and Non-Nuclear Forces: 2022," op. cit., p. 364.

[66] "Development of new Missiles for Russia's Strategic Forces to Begin Soon — Commander," *TASS*, December 15, 2020, available at https://tass.com/defense/1235501.

[67] "Next Yars ICBM Placed into Silo in Strategic Missile Formation in Central Russia," *TASS*, December 15, 2022, available at https://tass.com/defense/1550895.

[68] "Russia's Top Brass Uploads Video of Yars ICBM 'Being Loaded into Silo,'" *TASS*, November 29, 2021, available at https://tass.com/defense/1367663.

[69] Kristensen, Korda, and Reynolds, "Russian Nuclear Weapons, 2023," op. cit., p. 175.

[70] Hans M. Kristensen and Matt Korda, "Russian Nuclear Weapons, 2020," *Bulletin of the Atomic Scientists*, Vol. 76, No. 2 (2020), p. 103.

[71] Loc. cit.; Hans M. Kristensen and Matt Korda, "Russian Nuclear Weapons, 2021," op. cit., p. 91; and, DIBMAC, *Ballistic and Cruise Missile Threat*, 2020, op. cit., p. 29.

the Bulava-30 was credited with a maximum potential of six warheads accountable under the original START Treaty. If the maximum Bulava-30 warhead upload is six warheads, the FAS assessment of its upload potential would be correct. If the Bulava-30 can carry 10 warheads, however, the current Russian SLBM force could carry 224 more warheads than assessed by the FAS.

Russian Strategic Low-Yield Nuclear Warheads

The "small," "medium," and "high power" warheads reported for the *new* Russian missiles apparently correspond to a series of yield numbers that appear routinely in the Russian and non-Russian press: these are the maximum yields of 100-150-kt, 300-350-kt and 800-kt.[72] A December 2022 *Sputnik News* report listed a 500-kiloton warhead option for the Sineva and Layner/Liner SLBMs.[73] Reports from Pavel Felgenhauer indicated that these new Russian warheads are variable yield and have very low, minimum yields – *tens to hundreds of tons*.[74] General John Hyten stated that Russia had "thousands of low-yield nuclear and tactical nuclear weapons" and suggested that the new Russian ballistic missile weapons have variable yields.[75] Ten to 15 years ago, there were reports in Russian state and non-state media of Russian *deployment* of ultra-low-yield (50-200 tons yield) strategic nuclear warheads on its SLBMs.[76] In 2006, then Defense Minister Sergei Ivanov stated, "…the country's land and sea ballistic missiles will carry the same type of new warhead."[77] Thus, if

---

[72] "New Nuclear Triad: A Look Into the Future of Russia's Strategic Defenses," *Sputnik*, July 27, 2018, available at https://sputnikglobe.com/20180727/russian-strategic-arsenal-upgrades-analysis-1066749013.html; Nikolai Litovkin, "What Major Weapons will Russia's Military get in 2018," *Russia Beyond the Headlines*, January 19, 2018, available at https://www.rbth.com/science-and-tech/327300-what-major-weapons-russian-military-get-in-2018; "Sarmat ICBM: 8 Megatons at Hypersonic Speeds, Arriving 2 Years Ahead of Schedule," *Sputnik*, January 19, 2018, available at https://sputnikglobe.com/20160907/sarmat-ahead-of-schedule-analysis-1045062797.html; Schneider, "The Future of the U.S. Nuclear Deterrent," op. cit., p. 347; "Doomsday Weapon: Russia's New Missile Shocks and Dazzles US, China," *Sputnik*, March 9, 2016, available at https://sputnikglobe.com/20160309/russia-missile-shocker-1036002714.html; "RS-24 Yars Intercontinental ballistic missile," *MilitaryToday.com*, no date, available at http://www.military-today.com/missiles/yars.htm; and, "Russia test-launches Topol-M ballistic missile," *Xinhua News Agency*, October 1, 2019, available at http://www.xinhuanet.com/english/2019-10/01/c_138437734.htm.

[73] Ilya Tsukanov, "How Many Nuclear Submarines Does Russia Have?," *Sputnik*, December 19, 2022, available at https://sputnikglobe.com/20221205/how-many-nuclear-submarines-does-russia-have-1105034535.html.

[74] Pavel Felgenhauer, "Bomber Makers Trade Union," *The Moscow Times*, March 14, 2002, available at http://www.themoscowtimes.com/opinion/article/bomb-makers-trade-union/247805html.

[75] "General Notes Value, Limitations of New START Treaty," *Defense.gov*, February 26, 2021, available at https://www.defense.gov/News/News-Stories/Article/Article/2517670/general-notes-value-limitations-of-new-start-treaty/.

[76] Ilya Kramnik, "Nevsky and Novomoskovsk: Two Submarines for Putin," *Sputnik*, December 12, 2010, available at https://sputnikglobe.com/20101215/161784522.html; and, *Section II: Minimum Deterrence: Fragile Hope of a Constant and Benign Threat Environment*, op. cit., p. 22.

[77] "Russia to use Same Warheads on Land, Sea," *UPI*, April 24, 2006, available at https://infoweb.newsbank.com/apps/news/document-view?p=WORLDNEWS&docref=news/11D655C0E0E31CF8; see also, "Russia: Ivanov Says New Warhead Test To Ensure Security To 2030," *ITAR-TASS*, April 26, 2006, available at https://wnc-eastview-com.mutex.gmu.edu/wnc/article?id=31129705.

the Bulava-30 has a low-yield option, it is likely the Yars does as well. The costs involved in developing a new type of nuclear warhead suggest that the "small" yield warhead for the Sarmat is probably the same warhead as that of the Bulava-30 and the SS-27 Mod 2/RS-24 Yars.

Russian ICBM Modernization

According to Professor Dmitry Adamsky, "A popular Russian rock singer, close to the Kremlin and sanctioned by Ukraine, produced a hymn to Sarmat—the country's newest class of intercontinental ballistic missiles." It included a background of music provided by "the military orchestra of the Strategic Nuclear Missile Forces" and declared that "God and Sarmat are with us."[78] The new Sarmat heavy ICBM is the most important of Russia's strategic nuclear modernization programs because of its potential to increase vastly the number and capabilities of Russian strategic nuclear weapons. The Sarmat reportedly is the first Russian ICBM with satellite-aided guidance.[79] This will increase Russian capabilities to target U.S. ICBM silos with greater precision and the flexibility to launch very low-yield (e.g., tens to hundreds of tons) nuclear strikes against the United States and its allies. According to the Russian Ministry of Defense, the "…Sarmat will be able to carry up to 20 warheads of small, medium, high power classes."[80] In light of the apparent potential for the Soviet SS-18 Mod 4 and Mod 5 to carry 14 powerful warheads and the references to a 100-ton version of the Sarmat that could carry 10-15 warheads,[81] the possibility that the 200-ton Sarmat missile that was actually built might carry 20 warheads appears credible.

The announced throw-weight of the Sarmat is 10,000-kilograms.[82] The 10-warhead Soviet SS-24 ICBM/RT-23 (*not* the RS-24/Yars) was declared under the START Treaty as a

---

[78] Dmitry Adamsky, "Russia's New Nuclear Normal How the Country Has Grown Dangerously Comfortable Brandishing Its Arsenal," *Foreign Affairs*, May 19, 2023, available at https://www.foreignaffairs.com/russian-federation/russias-new-nuclear-normal.

[79] "RS-28 Sarmat Satan 2 SS-X-30 ICBM," *ArmyRecognition.com*, December 8, 2022, available at https://www.armyrecognition.com/russia_russian_missile_system_vehicle_uk/rs-28_sarmat_satan_ii_ss-x-30_icbm_silo-based_intercontinental_ballistic_missile_data.html; and, Ilya Tsukanov, "Russia's Sarmat ICBM Can Correct Trajectory Even If Hit by Enemy Missile Defense, Designer Says," *Sputnik,* September 22, 2022, available at https://sputnikglobe.com/20220922/russias-sarmat-icbm-can-correct-trajectory-even-if-hit-by-enemy-missile-defense-designer-says-1101087476.html.

[80] "Guaranteed Defeat of Enemy Infrastructure: how the Sarmat Ballistic Missile will Enhance the Combat Potential of the Strategic Missile Forces," *RT*, December 16, 2019, available at https://russian.rt.com/russia/article/698699-sarmat-raketa-rvsn-perevooruzhenie.

[81] Viktor Litovkin, "New Russian 'Sarmat' ICBM will be like 'Son of Satan,'" *Russia Beyond the Headlines*, September 21, 2016, available at https://www.rbth.com/economics/defence/2016/09/21/new-russian-sarmat-icbm-will-be-like-son-of-satan_631869.

[82] "Formidable Sarmat: Satan's Successor that can Pierce any Defense," *TASS*, October 25, 2016, available at https://tass.com/defense/908575; "Guaranteed Defeat of Enemy Infrastructure," op. cit.; and, "Russia Completes pop-up Tests of most Advanced Sarmat ICBM," *TASS*, July 19, 2018, available at https://tass.com/defense/1014008.

10-warhead missile with a throw-weight of 4,050-kg,[83] or about 40 percent of the Sarmat. According to the FAS, its warheads ranged from 300- to 550-kt,[84] or roughly what the Russians are now apparently calling "medium" yield warheads. The SS-18 Mod 4 reportedly had a throw-weight of 7,300 kilograms and could carry 14 "high" yield warheads.[85] The increase in throw-weight from the SS-18 Mod 4 to the Sarmat seems consistent with the latter being able to carry up to 20 "high" yield warheads.

According to Colonel General (ret.) Viktor Yesin, Sarmat silos will be given:

> …a fundamentally new level of fortification protecting new ICBM silos, their technological and other renovation, operational, engineering and other means of camouflage, wide use of electronic jamming with the creation of a continuous field of impenetrable noise, measures to organize, alongside the passive defense of the silos their active defense, as well [as] through the deployment of long-range S-400 ABM systems and high-altitude S-500 systems capable of destroying on a par with space and air weapons the warheads of ICBMs and the enemy's precision weapons, including missiles and aircraft bombs and cruise missiles.[86]

In December 2019, Russia revealed that it intended to complete the modernization of its strategic nuclear forces by 2024 and President Putin was briefed on a plan involving the deployment of 20 regiments of the Sarmat by 2027.[87] This would result in the ability to carry at least 2,400 warheads. Twenty regiments of Sarmat ICBMs, with a minimum of six missiles per regiment, is an impractical allocation of resources, however, if Moscow has any intent to comply with the force ceilings of New START.

This report on the number of Sarmat regiments was surprising. Previously, the Russian press reported only 46 deployed Sarmat missiles and, in 2022, then Russian Space Agency Director Dmitry Rogozin also mentioned procuring 46 missiles.[88] It may be that Russia plans

---

[83] *START Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms Signed in Moscow July 31, 1991* (Washington, D.C.: U.S. Department of State, October 1991), Supplement No. 5, p. 121.

[84] "RT-23 / SS-24 SCALPEL," *Federation of American Scientists*, July 29, 2000, available at https://nuke.fas.org/guide/russia/icbm/rt-23.htm.

[85] Schneider, *New START: The Anatomy of a Failed Negotiation*, op. cit., p. 65; and, "Most Powerful Strategic RS-20 to Remain In Inventory - Kommersant Moscow," *Kommersant.com*, July 29, 2008, available at http://www.kommersant.com/p-12927/r_527/RS-20_inventory/. An anonymous FAS report credits it with 7,200-kg of throw-weight and notes, "According to some Western estimates, evidence suggested that the Mod 4 may be capable of carrying as many as 14 RVs…" See "R-36M / SS-18 SATAN Overview," *Federation of American Scientists*, no date, available at https://programs.fas.org/ssp/nukes/nuclearweapons/russia_nukescurrent/ss18.html .

[86] "Russia to have new Heavy ICBM 2018 – Missile Force Commander Adviser," *ITAR-TASS*, April 12, 2011 (No longer available on the internet). See also, "Yesin: Russia Will Have RS-20 Missile Replacement in 2018," *ITAR-TASS*, April 12, 2011, available at https://wnc-eastview-com.mutex.gmu.edu/wnc/article?id=31220894.

[87] "Testing of Sarmat Intercontinental Missile to be over in 2021 - Russian Defense Management Center," *ITAR-TASS Daily*, December 24, 2019, available at https://on-demand-eastview-com.mutex.gmu.edu/browse/doc/56709629. State-run *Ria Novosti* also reported 20 planned regiments of the Sarmat. "Highlights of Russia's Arms Procurement Programme for 2018-2027," *BBC Monitoring Former Soviet Union*, December 30, 2019, available at https://infoweb.newsbank.com/apps/news/document-view?p=WORLDNEWS&docref=news/17828B4D147ABCA0.

[88] Pavel Podvig, "Sarmat deployment plans," *RussianForces.org*, December 27, 2014, available at https://russianforces.org/blog/2014/12/sarmat_deployment_plans.shtml; and, "Russia Planning to Test Sarmat ICBMs

an open-ended procurement of the Sarmat at perhaps a regiment or two per year. Russia likely will be hard-pressed to deploy 46 Sarmats by 2027, much less another 20 regiments.

Russia says the Sarmat can attack the United States over the South Pole,[89] apparently to exploit limitations in U.S. early warning radar coverage. Russia has also indicated that the Sarmat is an orbital bombardment system; General Cotton, Commander of U.S. Strategic Command, has confirmed this, even hinting it might go beyond a "partial" orbital capability.[90] As part of the first Sarmat launch announcement, Colonel General Karakayev stated that the Sarmat can carry several Avangard hypersonic glide vehicles.[91] The heavy Avangard glider likely reduces the number of weapons that can be carried on each missile (the original SS-19 was a six-warhead missile) but dramatically increases the threat potential of the system against highly time-urgent targets such as the U.S. National Command Authority.[92]

The Avangard nuclear-armed hypersonic boost-glide vehicle became operational in December 2019. Formerly called Project 4202, it reportedly now uses the Soviet legacy SS-19/UR-100NUTTH ICBM, a large ballistic missile, to boost the large hypersonic glider.[93] The reported speed of the Avangard is 24,000-km per hour.[94] It is extremely large with a reported weight of 2,000-kg.[95] *TASS* stated that the Avangard carries a two-megaton nuclear warhead.[96] *Sputnik News* said it is between "0.8 and 2 megatons."[97] This apparently will be the equivalent of a "silver bullet" force because the Russians reportedly plan to deploy only

---

Throughout 2022: Rogozin," *Asian News International / Sputnik*, May 21, 2022, available at https://infoweb.newsbank.com/apps/news/document-view?p=WORLDNEWS&docref=news/18A23494827A4700. See also, "Russia's Sarmat ICBM Can Change Trajectory, Will Make Interception Hardly Possible in Coming Decades," *Sputnik*, May 22, 2022, available at https://sputnikglobe.com/20220522/russias-sarmat-icbm-can-change-trajectory-interception-hardly-possible-in-coming-decades-1095694819.html.

[89] "Russia's Sarmat ICBM Can Change Trajectory," op. cit.

[90] Anthony J. Cotton, *Statement of Anthony J. Cotton, Commander, United States Strategic Command* (Washington, D.C.: House Armed Services Committee, Subcommittee on Strategic Forces, March 8, 2023), p. 8, available at https://www.stratcom.mil/portals/8/Documents/2023%20USSTRATCOM%20Congressional%20Posture%20Statement.pdf?ver=bFFdbYI2D5Tju5nPNsebbw%3D%3D.

[91] "Russian Officer: Missile to Carry Several Hypersonic Weapons," *Associated Press*, April 24, 2022, available at https://apnews.com/article/russia-ukraine-putin-business-europe-moscow-e577969b24c19398cc7fd025ba3327a6.

[92] Mark B. Schneider, "Russia's Hypersonic Missile Threat to the U.S. National Command Authority," *Real Clear Defense*, September 11, 2019, available at https://www.realcleardefense.com/articles/2019/09/11/russias_hypersonic_missile_threat_to_the_us_national_command_authority_114736.html.

[93] Pavel Podvig, "UR-100NUTTH Launch from Dombarovskiy, most likely with Project 4202 payload," *RussianForces.org*, October 25, 2016, available at https://russianforces.org/blog/2016/10/ur-100nutth_launch_from_dombar.shtml.

[94] Nikolai Litovkin, "3 Russian Weapons Systems that have no Equivalents Anywhere in the World," *Russia Beyond the Headlines*, January 15, 2019, available at https://www.rbth.com/science-and-tech/329848-3-russian-weapons-systems-that-no-one-has.

[95] "Avangard," *CSIS Missile Threat*, July 31, 2021, available at https://missilethreat.csis.org/missile/avangard/; and, "Explained: Why Russia Avangard missile will have US worried," *IndianExpress*.com, December 30, 2019, available at https://indianexpress.com/article/explained/explained-why-russia-avangard-missile-will-have-us-worried-6189727/.

[96] "Russia to use SS-19 ICBMs as Carriers for Avangard Hypersonic Glide Vehicles — source," *TASS*, March 20, 2017, available at http://tass.com/defense/995167.

[97] "From Avangard to Zircon: How Far Do Russian Missiles Fly?," *Sputnik*, May 13, 2023, available at https://sputnikglobe.com/20230512/from-avangard-to-zircon-how-far-do-russian-missiles-fly-1110296500.html.

12 of them,[98] at least until the glider is deployed on some of the new Sarmat heavy ICBMs. Its main purpose appears to be to conduct a surprise nuclear attack on critical U.S. time-urgent strategic targets.

Russian ICBM force modernization will not end with the Yars variants, the Avangard and the Sarmat. In December 2020, *TASS* reported that Colonel General Karakayev said that, "The development of new missile systems for Russia's Strategic Missile Forces (RVSN) will begin in the short- and mid-term perspective."[99] Russia has announced the new Kedr ICBM program but has provided no information about it. In June 2021, *TASS* reported the Kedr's first test launch, and said it would be mobile, silo-based, and manufactured by the Moscow Institute of Thermal Technology.[100] This means it is a solid-fuel missile. Reporting on the Kedr is highly contradictory with most sources saying that work on the program will not begin until 2023-2024.[101] Something new tested in 2021 is more likely to be an improved SS-27 Mod 2/RS-24 Yars than a completely new missile like the Kedr, which apparently is intended to replace the Yars in the 2030s.[102] The February 2022 FAS report mentioned a new ICBM called the "…Osina-RV ICBM, a follow-on system reportedly derived from the Yars ICBM…"[103] This was repeated in the May 2023 report.[104] The Osina-RV ICBM, or the 15P182, reported to have been tested in 2022, apparently is a modification of the Yars-M,[105] and has a scheduled initial operational capability (IOC) of 2025.[106] *Voenno-Boltovoi* (*Military Chat*)

---

[98] Pavel Podvig, "Avangard system is tested, said to be fully ready for deployment," *RussianForces.org*, December 24, 2018, available at http://russianforces.org/blog/2018/12/avangard_system_is_tested_said.shtml.

[99] "Development of new Missiles for Russia's Strategic Forces to Begin Soon — Commander," *TASS*, December 15, 2020, available at https://tass.com/defense/1235501; "Testing of Sarmat Intercontinental Missile to be over in 2021," op. cit.; "Highlights of Russia's Arms Procurement Programme for 2018-2027," *BBC Monitoring Former Soviet Union*, December 30, 2019, available at https://infoweb.newsbank.com/apps/news/document-view?p=WORLDNEWS&docref=news/17828B4D147ABCA0; and, "Испытания комплекса "Сармат" планируется завершить в 2021 году - Национальный центр управления обороной РФ, *Interfax*, December 24, 2019, available at https://www.militarynews.ru/story.asp?rid=1&nid =524255&lang=R.

[100] "Russia Successfully test-launches Latest ICBM — Source," *TASS*, June 28, 2021, available at https://tass.com/defense/1307845.

[101] Ivan Timofeev, "KEDR ICBM Production Starts in 2023-2024," *Dfnc.ru*, no date, available at https://dfnc.ru/en/russia-news/kedr-icbm-production-starts-in-2023-2024/; and, "Development of Russia's new-generation ICBM to begin in 2023-2024," *Eurasia Diary*, April 3, 2021, available at https://infoweb.newsbank.com/apps/news/document-view?p=WORLDNEWS&docref=news/181A597C28E7B9B8.

[102] Leonid Nersisyan, "Russian ICBM tests shed light on Programme Progress," *ShephardMedia.com*, July 15, 2021, available at https://www.shephardmedia.com/news/defence-notes/russian-icbm-tests-shed-light-programme-progress/.

[103] Kristensen and Korda, "Russian Nuclear Weapons, 2022," op. cit., p. 106.

[104] Kristensen, Korda, and Reynolds, "Russian Nuclear Weapons, 2023," op. cit., p. 183.

[105] It is unclear what the Yars-M is other than obviously a major modification of the Yars ICBM. Kristensen suggested that it was the IRBM version of the Yars which was later called the RS-26. See Hans Kristensen, "Russian Missile Test Creates Confusion and Opposition in Washington," *Federation of American Scientists*, July 3, 2013, available at https://fas.org/blogs/security/2013/07/yars-m/.

[106] "Osina-RV," *Deagel.com*, no date, available at https://www.deagel.com/Offensive%20Weapons/Osina-RV/a00 4141.

said that the project began in 2019, that there are both mobile and silo-based versions of the missile, and that it will carry "various warhead payloads."[107]

Development of the Russian RS-26 Rubezh, an IRBM described as an ICBM—probably to avoid the INF Treaty ban—is reportedly on hold until 2027.[108] If it is revived after 2027, Russia will likely give it a new name and number. *Sputnik News* reported that the RS-26 can carry four 300-kiloton nuclear warheads.[109] It is also possible that instead of reviving it, Russia would develop an IRBM version of one of its new ICBMs.

According to *TASS*, the Russian program for a rail-mobile ICBM, the Barguzin, has been put on hold pending a 2027 decision.[110] Rail-mobile ICBMs would allow Russia to circumvent New START Treaty limitations as the treaty does not limit such systems. It also probably would require less manpower than road-mobile ICBMs. Fewer technicians and troops would probably be necessary to operate and guard a single train compared to what would be required to operate and guard individual ground-mobile launchers. Because the New START Treaty does not limit rail-mobile ICBMs, the development of a system like the Barguzin is a logical decision for Russia to take if it can afford to do so.

Russian Ballistic Missile Submarines

The official Russian program for ballistic missile submarines reportedly involves 10 fourth generation Borei and Borei-A submarines carrying 16 Bulava-30 missiles each.[111] The hull of the 955A Borei-A submarine apparently was modified for increased quietness.[112] In 2018, *TASS* reported that Russia planned 14 Borei submarines.[113] In April 2023, *TASS* stated that, "…the Navy will have 14 new strategic submarines: 11 Borey-A class subs and three Borey class ones."[114] In May 2023, Russia announced the development of a new SLBM to replace the Bulava-30.[115] In addition to ballistic missiles, Russian strategic missile submarines also

---

[107] "Russia developing new 'Osina' Yars missile variant," *BBC Monitoring Former Soviet Union*, June 16, 2021, available at https://infoweb.newsbank.com/apps/news/document-view?p=WORLDNEWS&docref=news/183279F7D59204B8.

[108] "Avangard Hypersonic Missiles Replace Rubezh ICBMs in Russia's Armament Plan Through 2027," *TASS*, March 22, 2018, available at https://tass.com/defense/995628.

[109] "Doomsday Weapon: Russia's New Missile Shocks and Dazzles US, China," op. cit.

[110] "Russia's Strategic Missile Forces as its Decisive Defense," *TASS*, December 19, 2017, available at https://tass.com/defense/981811.

[111] Thomas Nilsen, "Russia Launches New Borei-A class Ballistic Missile Sub," *The Barents Observer*, December 25, 2021, available at https://thebarentsobserver.com/en/security/2021/12/russia-launches-new-borey-class-ballistic-missile-sub.

[112] "Russian Submarine Hulls Modified for Better Stealth," *BBC Monitoring Former Soviet Union*, May 17, 2019, available at https://infoweb.newsbank.com/apps/news/document-view?p=WORLDNEWS&docref=news/1737B6A90CBD3EE8.

[113] "Russia: Russia to Build 6 more Borei-A Strategic Nuclear-powered Submarines – Source," *TASS*, May 21, 2018, available at https://tass.com/defense/1005356.

[114] "The Pyotr Veliky Cruiser to Donate its name to Nuclear Submarine — Source," *TASS*, April 20, 2023, available at https://tass.com/defense/1606933.

[115] Van Brugen, "Russia Creating Unstoppable Submarine Nuclear Missiles—Report," op. cit.

reportedly carry nuclear-capable Kalibr long-range cruise missiles.[116] When deployed on a strategic nuclear ballistic missile submarine, the Kalibrs would likely have a nuclear mission.

In 2019, *TASS* reported that Russia might develop and deploy two Borei-K long-range cruise missile submarines after 2027.[117] With nuclear warheads, this would be a way of circumventing the New START Treaty. The new Kalibr-M is reported to have a range of 4,500-km, making it a strategic system in all but name**,** as a ship-based cruise missile with a range over 600 km is considered "strategic" under START Treaty definitions.[118]

At this point, Russia will apparently not go ahead with the reported Borei-B class submarines.[119] Russia has announced a program for a "5th generation" strategic missile submarine called the Husky which would carry both ballistic and cruise missiles.[120] For the time being, however, it appears to be on the back burner, as apparently there have been no official statements about it since 2020.

Russian Strategic Nuclear Bomber Capability

Russia has been modernizing its strategic nuclear bomber strike capability for two decades. Initially, this involved repairing and upgrading the Soviet legacy Tu-95 and Tu-160 bombers with more advanced nuclear and dual-capable missiles. [121] Not surprisingly, strategic nuclear upgrades were given first priority.[122] Nine new Tu-160s were produced after the demise of the Soviet Union through 2018.[123] In 2015, Russia announced a program to develop and deploy at least 50 improved Tu-160M2s (recently Russia has begun to call them Tu-160M bombers) with new engines with 10 percent better performance, a 1,000-km range increase, new avionics, new electronic warfare equipment, new weapons, an active phased array radar and a modestly reduced radar cross section.[124] Fabrication of the Tu-160M2 bombers

---

[116] "All Russian Subs can be Fitted with Kalibr Missiles — Russian Navy Commander," *TASS*, March 16, 2023, available at https://tass.com/defense/1589983; and, "Meeting with Defence Minister Sergei Shoigu," *Kremlin.ru*, December 8, 2015, available at http://en.kremlin.ru/events/president/news/50892.

[117] "Russia may Build Borei-K Nuclear Subs with Cruise Missiles – Source," *TASS*, April 20, 2019, available at http://tass.com/defense/1054714; "Russia Launches R&D Work on Fifth-Generation Submarine," *TASS*, April 17, 2019, available at http://tass.com/defense/1054096.

[118] "Ukraine website details arms used in war by Russia," *BBC Monitoring Former Soviet Union*, April 1, 2022, available at https://infoweb.newsbank.com/apps/news/document-view?p=WORLDNEWS&docref=news/1891B49AD032F900.

[119] "Russia to Build 6 more Borei-A Strategic Nuclear-powered Submarines — Source," op. cit.

[120] "Research into Russia's Fifth Generation Subs well in Progress — Navy's Commander," *TASS*, March 18, 2020, available at https://tass.com/defense/1131767.

[121] Mark B. Schneider, "Russian Violations of Its Arms Control Obligations," *Comparative Strategy*, Vol. 31, No. 4 (September 2012), p. 341.

[122] Dave Johnson, *Russia's Conventional Precision Strike Capabilities, Regional Crises, and Nuclear Thresholds* (Livermore, CA.: Lawrence Livermore National Laboratory, Center for Global Security Research, February 2018), p. 38, available at https://cgsr.llnl.gov/content/assets/docs/Precision-Strike-Capabilities-report-v3-7.pdf.

[123] "Tupolev Tu-160," *Air Forces Monthly*, January 2022, p. 87.

[124] "Russia to Renew Production of Tu-160 'Blackjack' Strategic Bomber," *Sputnik*, April 29, 2015, available at https://sputnikglobe.com/20150429/1021514706.html; "Russia Wants To Build Its Very Own 'B-2 Stealth Bomber.' Here

reportedly began in 2018.[125] Two are now being tested.[126] Deputy Defense Minister Yuri Borisov has said that the combat effectiveness of the Tu-160M2 will be 2.5 times greater than that of its predecessor.[127] Reportedly, two to three Tu-160M2s will be produced each year.[128] *TASS* said that the Tu-160s will carry Kinzhal nuclear-capable hypersonic missiles.[129]

Russia apparently is also developing the Pak DA, a subsonic, stealthy, flying wing type, cruise missile-carrying bomber.[130] It is reportedly capable of carrying 30 tons of weapons including "high speed" missiles.[131] Nuclear-capable hypersonic missiles are an obvious possibility. Russia has not announced any plans for a deployment number.

"Novel" Russian Nuclear Systems Not Covered by Arms Control

Russia is also reportedly developing a nuclear-powered, nuclear-armed drone submarine designed to deliver nuclear attacks against large port cities.[132] The nuclear warhead section of the drone submarine is enormous by the standards of late Cold War nuclear weapons. Based on the line drawing of the Status-6 (now called Poseidon) on a leaked Kremlin briefing

---

Come the Problems," *National Interest*, February 22, 2020, available at https://nationalinterest.org/blog/buzz/russia-wants-build-its-very-own-b-2-stealth-bomber-here-come-problems-126421; "Russia's Tu-160M2 Bomber More Advanced Than Anything Pentagon Has In Its Arsenal," *Sputnik*, June 22, 2017, available at https://sputnikglobe.com/20170622/tu160m2-prospects-analysis-1054888100.html; "Decision to Prolong Life of Tupolev Tu-160 only Correct Decision - Russian Deputy PM Borisov," *Interfax*, February 7, 2020, available at https://interfax.com/newsroom/top-stories/17608/; and, "Russia's modernized Tu-160M nuclear-capable bomber takes to the skies for the 1st time (VIDEO)," *RT*, February 6, 2020, available at https://www.rt.com/russia/480238-russian-modernized-tu160m-flight/.

[125] "Russia Launches Production of Upgraded Tu-160 Strategic Bombers," *TASS*, December 20, 2018, available at http://tass.com/defense/1037133.

[126] "Russia: Russia to ramp up Tu-160M Strategic Bomber Production in Coming Years – Rostec," *TASS*, December 30, 2022, available at https://tass.com/defense/1557695.

[127] "Russia Launches Production of Upgraded Tu-160 Strategic Bombers," op. cit.

[128] "Russia: Russia's Fifth-generation Fighter Jets to Start Arriving for Troops in 2019," *TASS*, May 24, 2017, available at https://tass.com/defense/947333.

[129] "Russia to arm Tu-160 Strategic Bombers with Hypersonic Missiles — Source," *TASS*, February 10, 2020, available at https://tass.com/defense/1118255; and, "Presidential Address to the Federal Assembly," *Kremlin.ru*, March 1, 2018, available at http://en.kremlin.ru/events/president/news/56957.

[130] Grigoriy Sysoev, "Russia Speeds Up Development of New Strategic Bomber," *Sputnik*, November 28, 2013, available at https://sputnikglobe.com/20131128/Russia-Speeds-Up-Development-of-New-Strategic-Bomber-185110769.html.

[131] Harrison Kass, "The PAK-DA Is Russia's Big Plan to Build Its Very Own B-2 Stealth Bomber," *19FortyFive.com*, July 21, 2022, available at https://www.19fortyfive.com/2022/07/the-pak-da-is-russias-big-plan-to-build-its-very-own-b-2-stealth-bomber/; "Russia's Defense Ministry to Receive First Newly-built Tu-160M Strategic Bomber," *TASS*, February 4, 2022, available at https://tass.com/defense/1398283; and, Piotr Butowski, "Russia Pushes Ahead with New Strategic Bomber," *Aviation Week*, July 29, 2022, available at https://aviationweek.com/defense-space/aircraft-propulsion/russia-pushes-ahead-new-strategic-bomber.

[132] Mark B. Schneider, "The Barbarians in the Bay: Russia's Nuclear Armed Drone Submarine," *Real Clear Defense*, July 25, 2020, available at https://www.realcleardefense.com/articles/2020/07/25/the_barbarians_in_the_bay_russias_nuclear_armed_drone_submarine_115493.html; and, Bill Gertz, "'Kanyon' Unmanned Sub to Target Harbors, Cities," *Washington Free Beacon*, September 8, 2015, available at https://freebeacon.com/national-security/russia-building-nuclear-armed-drone-submarine/.

slide, the nuclear warhead has been measured at 1.6 meters in diameter and 6.5 meters in length.[133] If this is accurate, or even close to being accurate, the nuclear yield would likely be immense. According to Russian press reports, the Poseidon carries a 100-megaton warhead, possibly salted with cobalt to intensify radioactive fallout.[134] The Russian reports on Poseidon yield have been questioned. However, unless there is a very large measurement error on the size of the warhead compartment, a 50- to 100-megaton yield is possible. Russia has considerable experience with very high-yield single warheads for its large ICBMs.[135] In the 1963 Nuclear Test Ban Treaty hearings, then Secretary of Defense Robert McNamara stated that it would be possible to develop a new warhead for the Titan II ICBM (its warhead was much smaller than the Poseidon warhead section)[136] with a 35-megaton yield without further nuclear testing.[137] Russia would certainly be able to do today what the United States was able to do 60 years ago.

A high-yield warhead of the kind that Russia suggests is on the Poseidon would clearly be a terror weapon; it appears deliberately designed to maximize civilian casualties through massive blast and fallout[138] and, hence, its use would likely violate international law.

Russia has recently tested this system.[139] *TASS* reported that the first batch of nuclear warheads for these drones has been produced.[140] In July 2022, the Belgorod, the first

---

[133] Steven Pifer, "Russia's Perhaps-not-real Super Torpedo," *Brookings Institution*, November 18, 2015, available at https://www.brookings.edu/articles/russias-perhaps-not-real-super-torpedo/.

[134]Lynn Berry and Vladimir Isachenkov, "Kremlin-controlled TV airs 'Secret' Plans for Nuclear Weapon," *Associated Press*, November 12, 2015, available at https://apnews.com/article/aaa75e4bb6e84d52948b9e6d8275c71d; Pavel Felgenhauer, "Russia Leaks Data About Doomsday Underwater Nuclear Drone," *Eurasia Daily Monitor*, Vol. 12, Iss. 206 (November 12, 2015), available at https://jamestown.org/program/russia-leaks-data-about-doomsday-underwater-nuclear-drone/; and, Pavel Felgenhauer, "The Hypersonic Hype and Russia's Diminished Nuclear Threshold," *Eurasia Daily Monitor*, Vol. 17, Iss. 116 (August 6, 2020), available at https://jamestown.org/program/the-hypersonic-hype-and-russias-diminished-nuclear-threshold/.

[135] Charles Tyroler, II, ed., *Alerting America: The Papers of the Committee on The Present Danger* (Washington, D.C.: The Pergamon Brasey's, 1984), p. 46; "R-36M / SS-18 SATAN," *Federation of American Scientists*, July 29, 2013, available at http://fas.org/nuke/guide/russia/icbm/r-36m.htm; and, "Big Ivan, The Tsar Bomba (King of Bombs)," *NuclearWeaponsArchive.org*, September 3, 2007, available at https://nuclearweaponarchive.org/Russia/TsarBomba.html.

[136] The B53 warhead for the Titan II was 1.26 meters in diameter and 3.81 meters long. See "The B-53 (Mk-53) Bomb," *NuclearWeaponsArchive.org*, April 3, 2007, available at https://nuclearweaponarchive.org/Usa/Weapons/B53.html.

[137] James Herbert McBride, *The Test Ban Treaty, Military, Technological and Political Implications* (Chicago: Henry Regnery Company, 1967), p. 33.

[138] Schneider, "The Barbarians in the Bay: Russia's Nuclear Armed Drone Submarine," op. cit.; and, Sam LaGrone, "Analyst: Doomsday Nuclear Torpedo Leak Gives Insight to Russian Strategic Mindset, Ballistic Missile Defense Anxiety," *USNI News*, November 12, 2015, available at https://news.usni.org/2015/11/12/analyst-doomsday-nuclear-torpedo-leak-gives-insight-to-russian-strategic-mindset-ballistic-missile-defense-anxiety.

[139] Felix Allen, "Putin's World Record 604 ft 'City Killer' Nuclear Submarine now Primed for War Armed with Poseidon Nuke Torpedoes," *The Sun*, January 26, 2022, available at https://www.the-sun.com/news/4542914/belgorod-submarine-putin-city-killer-nuclear-drones/; and, Vijainder K Thakur, "Russia's Poseidon 'Nuke Drone' Test: Is US-Led NATO Making Mushroom Clouds Out Of A Molehill?" *Eurasian Times*, October 5, 2022, available at https://eurasiantimes.com/russias-nuclear-drone-test-rattled-us-led-nato-is-mushroom/.

[140] "First Batch of Nuclear-armed Drones Poseidon Manufactured for Special-purpose Sub Belgorod," *TASS*, January 15, 2023, available at https://tass.com/emergencies/1562553.

Poseidon-armed submarine, was turned over to the Russian Navy.[141] Russia reportedly will have 30 deployed Poseidons by 2027.[142] While this is only 30 nuclear warheads, the blast effect of these weapons would be five-to-10 times greater than ordinary Russian high-yield nuclear warheads and the fallout generated could be equivalent to up to a hundred times that of Russia's ordinary high-yield nuclear warheads.

General Cotton has stated that in addition to the Avangard, "Russia now fields nuclear-capable hypersonic systems such as…the Tsirkon land-attack cruise missile, and the Kinzhal air-launched ballistic missile, the last of which Russia has employed in Ukraine with conventional warheads."[143] Russia apparently plans to use them for both strategic and non-strategic missions. General Hyten, when Commander of U.S. Strategic Command, warned about the threat posed by Russian hypersonic weapons. He noted that a hypersonic missile "disappears, and we don't see it until the effect is delivered."[144] Existing Russian launchers for Kalibr and Oniks cruise missiles can reportedly launch the Tsirkon.[145] Widespread deployment is quite possible. Russian state-run television broadcast a "list of American targets" associated with the U.S. National Command Authority, that "…the Kremlin could strike with hypersonic nuclear missiles within five minutes if war breaks out."[146]

The Impact of the Ukraine War on Russian Strategic Nuclear Capability

Except for the reported use of a few Kh-55 nuclear cruise missiles with inert warheads against Ukraine,[147] Russia's aggression has had no apparent impact on its strategic nuclear capabilities. Similarly, it did not impact the FAS estimate of Russian nuclear warhead numbers. The FAS report, until the May 2023 edition,[148] ignored official Russian statements about the nuclear capability of the Kh-101 and the state-media reports of a nuclear capability for the Kh-555 cruise missile. As noted above, President Putin has decreed that Russia "will carry out all of our plans" regarding nuclear modernization.[149]

---

[141] "Belgorod: Nuclear Submarine Armed With Poseidon Torpedoes," *Sputnik*, April 10, 2023, available at https://sputnikglobe.com/20230410/belgorod-nuclear-submarine-armed-with-poseidon-torpedoes-1109325885.html.

[142] "'Doomsday Weapon': Advanced Russian Drones to Be Test-Launched From Nuclear Sub, Report Says," *Sputnik*, February 2, 2021, available at https://sputnikglobe.com/20210212/doomsday-weapon-advanced-russian-drones-to-be-test-launched-from-nuclear-sub-report-says-1082055313.html.

[143] Cotton, *Statement of Commander Anthony J. Cotton*, op. cit., p. 8.

[144] Thomas Newdick, "Victory Day 'Bears'," *Combat Aircraft*, August 2019, p. 85.

[145] "'Deadliest Ever': Russia Launches New 4th-gen Nuclear-powered Submarine (VIDEO)," *RT*, December 25, 2019, available at https://www.rt.com/russia/476812-russia-nuclear-submarine-launched/.

[146] "Putin's US Nuclear hit list Revealed: Russian State TV Names Camp David as the Top Location the Kremlin would Target with 'Unstoppable' Hypersonic Nukes which can Strike in just Five Minutes," *Reuters*, February 25, 2019, available at https://www.dailymail.co.uk/news/article-6742481/After-Putins-warning-Russian-TV-lists-nuclear-targets-US.html.

[147] Tanmay Kadam, "Russia Fired Nuke-Capable Kh-55 Missile Into Kyiv After Simply Unscrewing 'Nuclear Warheads' — Ukraine StratCom," *The Eurasian Times*, November 19, 2022, available at https://eurasiantimes.com/ukraine-russias-nuclear-capable-kh-55-missile/.

[148] Kristensen, Korda, and Reynolds, "Russian Nuclear Weapons, 2023," op. cit., p. 174.

[149] "Meeting of Defence Ministry Board," *Kremlin.ru*, December 21, 2022, available at http://en.kremlin.ru/events/president/news/70159.

Russia has launched thousands of missiles against Ukraine, depleting its inventory.[150] Russian cruise missiles with conventional warheads have displayed reliability and accuracy problems in the war against Ukraine. While the reliability problems will likely impact the performance of Kh-101 and Kh-555 cruise missiles used with nuclear warheads, the accuracy problem will have little impact on targeting effectiveness even with low sub-kiloton yield nuclear warheads.[151] The Kh-101 is reported to have a "…circular error probable (CEP) of between 33 and 66 feet."[152] (CEP is a measure of accuracy based on a circle in which half of the attacking warheads will fall.) Any dual-capable missile will likely have more than enough accuracy for the nuclear mission. Dr. Phil Karber has stated that one in three Russian missiles used in Ukraine has destroyed its target, but if they had a 20-ton yield nuclear warhead, another third would have been destroyed.[153] In this context, targets are assumed to be fairly small and not super-hardened and/or deeply buried.

Russia is continuing to produce Kh-101 missiles,[154] but its inventory has been substantially depleted. In January 2023, Ukraine stated that Russia's stockpile of Kh-101, Kh-555 and Kalibr missiles was running low and that Moscow had only enough missiles left for two or three 80-missile strikes.[155] It is not clear from the Ukrainian statement whether they were counting the entire Russian missile inventory or excluding those that are reserved for the nuclear mission. In light of the priority given to nuclear capability in Russian strategy, it is unlikely Russia would exhaust its supply of nuclear missiles. The Kh-101 is the best Russian missile for implementing a strategy of very low-yield nuclear escalation strikes against the United States. Indeed, the repeated warnings from the Biden Administration that Russia has increased its reliance on nuclear weapons[156] suggest that Moscow would not reduce its inventory of nuclear Kh-101s by using them in conventional strikes.

---

[150] Benjamin Brimelow, "Russia is Using its Newest and Oldest Missiles Indiscriminately against Ukraine," *Yahoo*, available at https://www.yahoo.com/news/russia-using-newest-oldest-missiles-222900918.html.

[151] Mark B. Schneider, "Lessons from Russian Missile Performance in Ukraine," *Proceedings*, Vol. 148/10/1,436, October 2022, available at https://www.usni.org/magazines/proceedings/2022/october/lessons-russian-missile-performance-ukraine.

[152] Alexander Mlandenov, "Russia's Heavy Hitters," *AirForces Monthly*, May 2023, p. 79.

[153] "DEFAERO Strategy Series [Oct 20, '22] w/ Dr. Philip Karber," *Defense & Aerospace Report*, October 22, 2022, available at https://soundcloud.com/defaeroreport/defaero-strategy-series-oct-20-22-w-dr-philip-karber.

[154] "Top Official Explains why Russia hasn't run out of Precision Missiles in Ukraine," *RT*, April 19, 2022, available at https://www.rt.com/russia/554134-borisov-interview-defense-industry/.

[155] Isabel van Brugen, "Russia Has This Many Strikes Left as Kh-555 Cruise Missiles Run Out—Kyiv," *Newsweek*, January 4, 2023, available at https://www.newsweek.com/russia-missiles-running-out-kh-555-ukraine-1771174.

[156] Cotton, *Statement of Commander Anthony J. Cotton*, op. cit., p. 8; Office of the Director of National Intelligence, *Annual Threat Assessment of the U.S. Intelligence Community* (Washington, D.C.: Office of the Director of National Intelligence, February 6, 2023), p. 14, available at https://www.dni.gov/index.php/newsroom/reports-publications/reports-publications-2023; and, The White House, *National Security Strategy* (Washington, D.C.: The White House, October 2022), pp. 21, 26, available at https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf.

The April 2023 Russian test of an ICBM into the Sary Shagan test range[157] was indicative of further warhead development. Sary Shagan is where Russia conducts research and development tests on new warheads and missile defense tests. According to Pavel Podvig, "The situation with the Kapustin Yar to Sary Shagan launches is a bit different. These are tests of ICBM/SLBM re-entry vehicles. Yes, maybe what is tested is their capability to penetrate missile defense. But more likely these tests contribute to the overall improvement of RVs [reentry vehicles]."[158] This could be associated with the new ICBMs about which Russian officials talk.

It is clear that Russia has a very large and expanding strategic nuclear capability. Russia has the potential to upload thousands of nuclear warheads on its strategic nuclear forces and this capability will grow dramatically with the deployment of the Sarmat heavy ICBM, supposedly later in 2023. Warhead uploads may have already been covertly implemented since the end of the New START Treaty's on-site inspections more than three years ago. Russia will continue to modernize its strategic nuclear forces and is unlikely to stop when it reaches its 100 percent objective since there are announced follow-on ICBM and SLBM programs. Other than the Sarmat, there is little public information about the other new and improved Russian ICBMs that are under development. However, the pattern of Russian force expansion is likely to continue. The Biden Administration's stated objective is to reduce U.S. reliance on nuclear weapons. This is likely to be very difficult when an adversary is dramatically increasing its emphasizes on nuclear capabilities for coercive and prospective war-fighting purposes.[159]

Dr. Mark B. Schneider is a Senior Analyst with the National Institute for Public Policy. Before his retirement from the Department of Defense Senior Executive Service, Dr. Schneider served as Principal Director for Forces Policy, Principal Director for Strategic Defense, Space and Verification Policy, Director for Strategic Arms Control Policy and Representative of the Secretary of Defense to the Nuclear Arms Control Implementation Commission. He also served in the senior Foreign Service as a Member of the State Department Policy Planning Staff.

[157] Liam Coleman, "Putin Launches Huge New Ballistic Rocket and Takes Down Target in Kazakhstan," *Metro.com*, April 12, 2023, available at https://metro.co.uk/2023/04/12/putin-launches-huge-new-ballistic-rocket-and-takes-down-target-in-kazakhstan-18596094/.

[158] Pavel Podvig, April 12, 2023, available at https://twitter.com/russianforces/status/1646266841109610497.

[159] See, for example, Keith B. Payne and David J. Trachtenberg, *Deterrence in the Emerging Threat Environment: What is Different and Why it Matters*, *Occasional Paper*, Vol. 2, No. 8 (August 2022), available at https://nipp.org/papers/deterrence-in-the-emerging-threat-environment-what-is-different-and-why-it-matters/.

ANALYSIS

BACK TO THE FUTURE: U.S. NUCLEAR DETERRENCE TODAY AND THE FOSTER PANEL STUDY*

Keith B. Payne and Matthew R. Costlow

Introduction

At the request of President Richard Nixon in February 1973, Dr. John S. Foster, then Under Secretary of Defense for Research and Engineering and a former Director of the Lawrence Livermore Laboratory, chaired an *ad hoc* working group to review U.S. nuclear policy. This working group "included [Ronald] Spiers, [Seymour] Weiss, [Gardiner] Tucker, David S. Brandwein of the CIA, and Lieutenant General Louis T. Seith, Director of the Strategic Plans and Policy Directorate, Joint Staff, JCS."[1] The "Foster Panel," as it came to be known, produced its summary findings in a lengthy report with multiple annexes, the National Security Study Memorandum 169 (NSSM-169) *Summary Report*.[2] Dr. Foster forwarded NSSM-169 and its attachment to Secretary of Defense James Schlesinger under a covering memorandum of June 15. Secretary Schlesinger forwarded the report to National Security Advisor Henry Kissinger writing, "In my judgment this report represents an excellent basis for further consideration by the National Security Council."[3] The report—well-received by both Secretary Schlesinger and Kissinger—formed the basis for the 1974 National Security Decision Memorandum 242 (NSDM-242),[4] and associated Nuclear Weapon Employment Policy (NUWEP-74).[5]

NSSM-169 and NSDM-242, while now seemingly familiar only to the *cognoscente*, inarguably set in motion the direction of U.S. nuclear policy accepted by all subsequent Republican and Democratic administrations. The Carter Administration's Presidential

*This article is in honor of Dr. John S. Foster Jr., 101 years young and is adapted from Keith B. Payne and Matthew R. Costlow, "Back to the Future: U.S. Nuclear Deterrence Today and the Foster Panel Study," *Information Series* No. 565 (Fairfax, VA: National Institute Press, October 2023).

[1] See, "Summary Report of the Inter-Agency Working Group on NSSM 169, June 8, 1973" at, *Foreign Relations of the United States: 1969-1976*, Vol. XXXV, *National Security Policy 1973-1976*, Department of State (Washington, D.C.: USGPO, 2014), p. 47, available at https://static.history.state.gov/frus/frus1969-76v35/pdf/frus1969-76v35.pdf.

[2] See, Ibid., pp. 19-20, 49-82.

[3] Ibid., p. 47.

[4] See, Richard Nixon, *National Security Decision Memorandum 242: Policy for Planning the Employment of Nuclear Weapons* (Washington, D.C.: The White House, January 17, 1974), available at https://www.nixonlibrary.gov/sites/default/files/virtuallibrary/documents/nsdm/nsdm_242.pdf.

[5] Office of the Secretary of Defense, *Policy Guidance for the Employment of Nuclear Weapons* (Washington, D.C.: Office of the Secretary of Defense, April 3, 1974), available at https://nsarchive.gwu.edu/document/20307-national-security-archive-doc-22-office.

Directive-59 (PD-59),[6] and the Reagan Administration's National Security Decision Directive 13 (NSDD-13),[7] accepted, extended and added to that direction. But NSSM-169 and its associated policy and planning documents established the basic framework for U.S. nuclear deterrence policy that has endured to the present, including intentionally aligning the U.S. deterrence threat to Moscow's goals, and providing limited and tailored nuclear threat options for credible extended deterrence—the arguments for which are even more relevant today.

Sweeping changes in the threat environment 50 years ago prompted American officials to re-examine U.S. nuclear policy and strategy and the study that produced NSSM-169. Dr. Foster and his working group successfully confronted the policy and strategy challenges at the time, upsetting long-held assumptions in the process. The 50th anniversary of the Foster Panel report is a suitable occasion to recognize its historical significance in the development of U.S. deterrence policy and the continuing pertinence of the Foster Panel's work for U.S. nuclear deterrence requirements in the emerging post-Cold War threat context.

The need for a fundamental policy review in 1973 is analogous to the contemporary need to consider U.S. nuclear deterrence policy and requirements in a dramatically new context in which: 1) Russia emphasizes the war-fighting role of nuclear weapons, including nuclear first use; 2) China is emerging as a hostile, peer-nuclear power with the goal, in league with Russia, of reordering the international system; 3) Moscow and Beijing issue numerous explicit and implicit nuclear threats against the United States and its allies in their respective efforts to reorder the global system; and, 4) North Korea is both hostile and expanding its nuclear arsenal. Perhaps surprisingly, the pertinence of the Foster Panel's work endures even in the contemporary dynamic threat context; its analysis and conclusions can help inform current U.S. officials as they consider how to adapt U.S. deterrence policy and requirements in a new and dangerous era.

This *Information Series* proceeds in three parts: First, it explains why, 50 years ago, U.S. officials requested a re-examination of U.S. nuclear policy and strategy; second, it summarizes the changes to U.S. nuclear policy introduced by the Foster Panel and NSSM-169; and, third, it concludes by examining the ways in which the Foster Panel's work remains relevant for today's threat environment.

The Rapid Growth of the Soviet Nuclear Threat

The Foster Panel's task was to address the challenge to U.S. nuclear deterrence policy and nuclear strategy posed by the rapid, and largely surprising, growth of the Soviet nuclear threat. In the years leading up to the creation of the Foster Panel, Soviet hostility to the West was unabated as Moscow expanded its conventional and nuclear capabilities. National

[6] Jimmy Carter, *Presidential Directive/NSC-59* (Washington, D.C.: The White House, July 25, 1980), available at https://nsarchive2.gwu.edu/nukevault/ebb390/docs/7-25-80%20PD%2059.pdf.

[7] Ronald Reagan, *National Security Decision Directive 13* (Washington, D.C.: The White House, October 19, 1981), available at https://irp.fas.org/offdocs/nsdd/nsdd-13.pdf.

Intelligence Estimates (NIEs) repeatedly revised estimates of the emerging Soviet nuclear threat. In 1963, for example, the annual NIE stated that the evidence available, "… does not indicate that the Soviets are attempting to match the US in numbers of weapons for intercontinental attack…"[8] This projection significantly missed Soviet nuclear force goals. Only five years later in 1968, the NIE on Soviet strategic attack forces stated "having attained parity" with the United States in this area, the Soviets would emphasize other areas of defense.[9] Having missed Moscow's actual views on the need for nuclear parity (at least) with the United States, the NIE in 1971 stated the Soviets would seek advantages over the United States, but the intelligence community could not say in which area specifically.[10] The subsequent Soviet decade-long drive included the unprecedented expansion of Moscow's ICBM capabilities, particularly including the quantitative and qualitative deployments needed to threaten U.S. strategic retaliatory forces.

Given this rapidly and severely deteriorating nuclear threat environment, U.S. political officials increasingly were dissatisfied with a deterrence policy, inherited from Secretary of Defense Robert McNamara, that focused on a declared massive threat to Soviet population and industry—McNamara's "assured destruction" measure of deterrence.[11] Most concerns in this regard revolved around the lack of flexible U.S. threat options, especially if called upon to respond to a limited Soviet nuclear attack against the United States or allies. For example, in 1970, Nixon rhetorically asked, "Should a President, in the event of a nuclear attack, be left with the single option of ordering the mass destruction of enemy civilians in the face of the certainty that it would be followed by the mass slaughter of Americans?"[12] Brig. Gen. William Odom, then military advisor to National Security Advisor Zbigniew Brzezinski, characterized U.S. nuclear war plans in the 1960s and early 1970s, stating, "The SIOP [Single Integrated Operational Plan] and its executive plan... was a war plan that did not allow for choosing specific war aims at the time and in the context of the outbreak of hostilities. It was just a

---

[8] Central Intelligence Agency, "National Intelligence Estimate, NIE 11-4-63," March 22, 1963, reprinted in, Evan Gerakas, David W. Mabon, David S. Patterson, William F. Sanford, Jr. and Carolyn B. Yee, eds., *Foreign Relations of the United States, 1961-1963, Volumes VII, VIII, and IX: Arms Control; National Security Policy; Foreign Economic Policy, Microfiche Supplement* (Washington, D.C.: Department of State, 1997), p. 1162.

[9] Central Intelligence Agency, "National Intelligence Estimate, NIE 11-8-68, Soviet Strategic Attack Forces," October 3, 1968, reprinted in, David S. Patterson, ed., *Foreign Relations of the United States, 1964-1968, Volume X, National Security Policy* (Washington, D.C.: Department of State, 2001), available at https://history.state.gov/historicaldocuments/frus1964-68v10/d217.

[10] Central Intelligence Agency, *National Intelligence Estimate, NIE 11-8-71, Soviet Forces for Intercontinental Attack* (Langley, VA: CIA, October 21, 1971), p. 7, available at https://www.cia.gov/readingroom/docs/DOC_0000283820.pdf.

[11] See, Alain C. Enthoven and K. Wayne Smith, *How Much Is Enough?* (New York: Harper & Row Publishers, 1971), p. 175; and, Robert McNamara, *Draft Memorandum for the President, Secretary of Defense to the President [Lyndon B. Johnson],* Subj: Recommended FY 1966-FY 1970 Programs for Strategic Offensive Forces*, Continental Air and Missile Defense Forces, and Civil Defense*, December 3, 1964, p. 4 (Sanitized and declassified on January 5, 1983).

[12] See, United States Senate, Subcommittee on Arms Control, International Law and Organization of the Committee on Foreign Relations, Hearing, *Briefing* [by Secretary of Defense Schlesinger] *on Counterforce Attacks*, 93rd Congress, 2nd Session, September 11, 1974, pp. 5-6.

huge mechanical war plan aimed at creating maximum damage without regard to political context."[13]

As President Nixon suggested, the problem posed by a "mechanical" threat aimed at inflicting "maximum damage" on Soviet society is that the deterrence credibility of such a threat is likely very limited when the enemy has attained the capability to respond with "the mass slaughter of Americans." The credibility of such a U.S. threat was particularly suspect as a basis for providing extended nuclear deterrence for America's far-flung allies. The inevitable question in response to such a U.S. deterrent was whether the United States would risk the destruction of American society on behalf of distant allies. Indeed, some allies and Soviet officials had voiced skepticism regarding the credibility of the U.S. extended nuclear deterrent early in the Cold War.[14] Correspondingly, U.S. officials had for years voiced recognition of the need for much greater flexibility in U.S. deterrence threat options.[15] It is true that various U.S. threat options had been available for "quite some time" prior to the Foster Panel.[16] However, all of these options were "at the upper end of the spectrum" only and entailed massive Russian civilian fatalities.[17] Concern about the questionable effectiveness and credibility of such a U.S. deterrence policy in light of the dramatic Soviet nuclear buildup led to the Foster Panel and its taskings. Allied concern and opponent skepticism regarding the credibility of the U.S. "nuclear umbrella" clearly is emerging once again in the contemporary threat environment.

NSSM-169, the Foster Panel Report, and NSDM-242

The Foster Panel made three significant, lasting contributions to U.S. deterrence policy and nuclear strategy. First, it concluded that, for deterrence purposes, U.S. threats should hold at risk that which Moscow's leadership valued, rather than presuming that Soviet values and calculations would mimic those of Washington, i.e., "mirror-imaging." Holding at risk that which the opponent's leadership values is now well-recognized, on a bipartisan basis, as a foundational principle of U.S. deterrence policy.[18]

---

[13] William Odom, as quoted in, Edward C. Keefer, *Harold Brown: Offsetting the Soviet Military Challenge* (Washington, D.C.: Office of the Secretary of Defense, Historical Office, 2017), p. 138.

[14] Dean Rusk, *As I Saw It* (London: W.W. Norton & Company, 1990), p. 228. See also, Arnold Beichman, "How Foolish Khrushchev Nearly Started World War III," *The Washington Times*, October 3, 2004, p. B 8.

[15] See the discussion in, Keith B. Payne, "The Schlesinger Shift: Return to Rationality," in, Keith B. Payne, C. Johnston Conover, and Bruce Bennett, *Nuclear Strategy: Flexibility and Stability* (Santa Monica, CA: RAND, California Seminar on Arms Control, March 1979), p. 7.

[16] See James Schlesinger, *Annual Defense Department Report, FY 1975* (Washington, D.C.: Government Printing Office, March 4, 1974), p. 33.

[17] *Briefing* [by Secretary of Defense Schlesinger] *on Counterforce Attacks*, op. cit., p. 37.

[18] U.S. Department of Defense, *2022 Nuclear Posture Review* (Washington, D.C.: Department of Defense, 2022), p. 11, available at https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF.

Secretary of Defense McNamara had earlier described threatening the Soviet Union with massive societal destruction as the "very essence of the whole deterrence concept."[19] In contrast, the Foster Panel recommended taking into account Moscow's unique goals and values; this meant denying the Soviet leadership any expectation of securing its post-war goals by threatening Soviet military capabilities, internal political control, and post-war recovery capability.[20] This was, in effect, a significant redefinition of McNamara's "assured destruction" deterrence threat—moving it away from a declared massive threat to destroy Russian society to a deterrence threat to destroy the Soviet leadership's valued military and political power and its prospects for post-war recovery. This threat, which was intended to align with the denial of Soviet military and political goals, was the direct progenitor of what today is called "tailoring" deterrence and is accepted on a bipartisan basis as a requirement for U.S. deterrence policy.

Recognition that deterrence works in the mind of an adversary predated the Foster Panel, as did U.S. planning to strike Soviet military capabilities.[21] But, prior to the Foster Panel, U.S. declarations regarding its deterrence policy and the related definition of U.S. deterrence force adequacy appeared to presume that the fear of large-scale societal destruction—a threat surely feared by Washington—was the universal basis for effective strategic deterrence in virtually all circumstances.

This definition of deterrence adequacy clearly shaped U.S. considerations of which forces it should (and should not) develop and deploy, i.e., U.S. acquisition policy. The Foster Panel successfully challenged the fundamental definition of the declared U.S. deterrence threat, the "assured destruction" measure of adequacy, and thus the guidelines for U.S. acquisition policy for deterrence. This innovation in thinking was a milestone in the development of U.S. nuclear policy. Indeed, Henry Kissinger ordered an additional, subsequent study, *National Security Study Memorandum 191: Policy for Acquisition of U.S. Nuclear Forces*, to "draw heavily" from the Foster Panel's earlier work.[22]

Second, as mentioned above, the credibility of large-scale U.S. nuclear threats against a Soviet Union that had become capable of a comparable nuclear response was questioned by allies and Moscow alike. The Foster Panel described the need for change, stating, "… times have changed. The Soviets now have a highly capable deterrent to strategic attack and this has been codified by the SALT I agreements. As a consequence, the credibility of large-scale [U.S.] retaliation as a deterrent to anything but a massive attack on the United States may have become seriously eroded."[23] It noted that the smallest option that existed in nuclear

---

[19] Robert S. McNamara, *The Essence of Security: Reflections in Office* (New York: Harper and Row, 1968), pp. 52-53.

[20] See, "Summary Report of the Inter-Agency Working Group on NSSM 169, June 8, 1973," op. cit., p. 49. See also the discussion in, William R. Van Cleave and Rodger Barnett, "Strategic Adaptability," *Orbis*, Vol. 28, No. 3 (Fall 1974), p. 666.

[21] See, Franklin Miller, "Tailoring U.S. Strategic Deterrent Effects on Russia," in Barry Schneider and Patrick Ellis, eds., *Tailored Deterrence* (Maxwell Air Force Base, AL: USAF Counterproliferation Center, 2011), pp. 41-56.

[22] Henry A. Kissinger, *National Security Study Memorandum 191: Policy for Acquisition of U.S. Nuclear Forces* (Washington, D.C.: National Security Council, January 17, 1974), available at https://www.nixonlibrary.gov/sites/default/files/virtuallibrary/documents/nssm/nssm_191.pdf.

[23] NSSM 169 Working Group, *NSSM 169 Summary Report* (Washington, D.C.: Department of Defense, June 8, 1973), p. 6, available at https://nsarchive2.gwu.edu/NSAEBB/NSAEBB173/SIOP-21.pdf.

target planning at that point employed 2,500 nuclear warheads,[24] and emphasized that the lack of limited, graduated nuclear threat options challenged the credibility of the U.S. "nuclear umbrella," i.e., extended deterrence for allies. In 1970, during a then-classified discussion of U.S. extended nuclear deterrence, General Andrew Goodpaster sought to assure President Nixon of the great lethality of the U.S. deterrent threat: "our capability for assured destruction against the Soviets is very high." Nixon's response was telling: "But what about the risks we would take if we do that?"[25] U.S. nuclear planning had not adapted to the new risk realities nor been responsive to repeated presidential calls for graduated, flexible employment options "to respond at levels appropriate to the provocation."[26]

Consequently, for credible deterrence, and particularly extended deterrence for allies, the Foster Panel's recommendations led to a range of limited nuclear options, to include planning for the employment of just a small number of weapons.[27] The Foster Panel anticipated three main benefits of these limited nuclear options: U.S. deterrence threats would be more credible than the existing massive retaliation threats in scenarios short of large-scale intercontinental nuclear conflict; limited options backstopped by a reserve of withheld U.S. nuclear force could encourage adversary restraint during war, i.e., intra-war deterrence;[28] and, the change in policy guidance could lead to U.S. acquisition of forces better suited to credible deterrence and presidential orders.[29]

The Foster Panel also made a third lasting contribution to U.S. nuclear strategy by recommending the primary goal during a nuclear war should be escalation control for intra-war deterrence and conflict termination. At the time, official U.S. strategy was to "prevail" during a nuclear war with a massive retaliation against Soviet leadership, military forces, and urban and industrial targets.[30] In contrast, the Foster Panel recommended new employment policy, stating: "If deterrence fails, the objectives are to control escalation and terminate the war with minimum damage, while protecting vital US interests and preserving the capability to escalate further if necessary. To the extent that escalation cannot be controlled, the objective is to destroy those political, economic, and military targets critical to the enemy's post-war power and recovery."[31] To implement these recommendations, the

---

[24] Ibid., p. 5.

[25] Quoted in, *Memorandum of Conversation, NATO Meeting: NATO & MBFR*, The Cabinet Room, White House, November 19, 1970, in *National Security Archive Electronic Briefing Book*, No. 192, p. 1 (Declassified July 17, 2003), available at http://www.gwu.edu/~nsarchiv.

[26] NSSM 169 Working Group, *NSSM 169 Summary Report*, op. cit., p. 7.

[27] See, Secretary James Schlesinger's testimony in, U.S. Senate, Committee on Foreign Relations, *U.S./U.S.S.R. Strategic Policies*, 93rd Congress, 2nd Session, March 4, 1974 (Washington, D.C.: Government Printing Office, 1974), p. 9. See also, Desmond Ball, *Déjà vu: The Return of Counterforce in the Nixon Administration* (Santa Monica, CA: RAND, California Seminar on Arms Control, December 1974), p. 46.

[28] For a comprehensive discussion of intra-war deterrence see, Matthew R. Costlow, *Restraints at the Brink: Factors in Keeping War Limited*, *Occasional Papers*, Vol. 3, No. 7 (July 2023).

[29] On these three benefits respectively, see, NSSM 169 Working Group, *NSSM 169 Summary Report*, op. cit., pp. 6-7, 14, 24-30.

[30] Ibid., pp. 5-7.

[31] Ibid., p. 8.

Foster Panel proposed nuclear employment options that included withholding attacks against the Soviet leadership and its command and control capabilities—both to allow for the Soviet leadership to exercise restraint over its forces and to continue holding the Soviet leadership at risk to encourage intra-war deterrence and conflict termination.[32]

These three innovations in U.S. deterrence policy advanced by the Foster Panel helped to move the United States away from a nuclear acquisition policy, intentionally promoted during the McNamara era, that sought to limit U.S. nuclear forces to McNamara's "assured destruction" measure of deterrence.[33]

Back to the Future: The Continuing Value of the Foster Panel Report

The fundamental principles of international deterrence remain constant, but the application of deterrence—and thus deterrence policy—must adjust to changes in the threat environment. The Foster Panel's analysis and recommendations, of course, took place in the largely bipolar Cold War context. Nevertheless, that work has enduring value, including for the emerging "tripolar" nuclear deterrence dynamic.

First, there are contemporary calls to return to the declared counter-city targeting policy of the McNamara era.[34] Yet, as has been emphasized in a recent response to those calls,[35] they commit the past error of mirror-imaging, i.e., presuming that China's and Russia's leaderships' deterrence calculations mimic those of U.S. leaders. That convenient presumption—as the Foster Panel suggested 50 years ago—must be set aside in favor of a U.S. deterrence policy that takes into account the unique values and goals of specific leaderships. So understanding opponents is a challenge, but essential for an approach to deterrence based on more than uninformed guesswork and mirror-imaging; deterrence threats absent a serious assessment of what opponents value most risk being ineffective in an arena where deterrence failure could lead to catastrophic consequences. Following the Foster Panel's earlier innovation in thinking, U.S. deterrence threats must now align with the unique values of the Russian and Chinese (and North Korean) leaderships—which are highly unlikely to mirror Washington's. It should be noted in this regard that serious studies undertaken during the Carter Administration concurred with the Foster Panel that threatening Soviet military capabilities and tools of power was a key to effective, credible

---

[32] Ibid., pp. 8, 12-13.

[33] See, Alain C. Enthoven and K. Wayne Smith, *How Much Is Enough?* (New York: Harper & Row Publishers, 1971), pp. 172-191, 194-196, 207-210.

[34] See, Keir Lieber and Daryl G. Press, "US Strategy and Force Posture for an Era of Nuclear Tripolarity," *Atlantic Council*, May 1, 2023, available at https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/us-strategy-and-force-posture-for-an-era-of-nuclear-tripolarity/; and, Charles L. Glaser, James M. Acton, and Steve Fetter, "The U.S. Nuclear Arsenal Can Deter Both China and Russia," *Foreign Affairs*, October 5, 2023, available at https://www.foreignaffairs.com/united-states/us-nuclear-arsenal-can-deter-both-china-and-russia.

[35] See, Keith B. Payne, John R. Harvey, Franklin C. Miller, and Robert Soofer, *The Rejection of Intentional Population Targeting for 'Tripolar' Deterrence* (Fairfax, VA: National Institute for Public Policy, September 26, 2023), *Information Series* No. 563, available at https://nipp.org/wp-content/uploads/2023/09/IS-563.pdf.

deterrence.[36] Indeed, U.S. policy subsequently fully rejected the intentional targeting of cities. Marking a reversal of Washington's earlier declared policy, Secretary of Defense Caspar Weinberger stated that the United States would not "attack deliberately the Soviet population."[37] This transition of U.S. targeting policy away from McNamara's simplistic "assured destruction" measure of deterrence remains sound and must not be overturned.

Second, as noted, the Foster Panel recommended flexible and limited U.S. nuclear options to help deter limited Soviet nuclear threats to the United States and Moscow's combined arms threats to U.S. allies. The Foster Panel highlighted the value of flexible and limited U.S. capabilities to help deter the very types of threats now posed by Russia and China (and potentially North Korea) to the United States and U.S. allies; that value is only magnified in the current threat context. In the absence of flexible, limited U.S. nuclear threat options, Washington would run the great risk of posing deterrence threats entirely disproportional to opponents' apparent strategies for regional victories over U.S. allies and partners—U.S. deterrence threats that are likely incredible because their execution would simply ensure the subsequent destruction of the United States. In addition, as the Foster Panel emphasized, in the absence of flexible and limited U.S. nuclear options, the United States could do little to demonstrate both U.S. resolve and restraint, and thereby encourage intra-war deterrence; it would, instead, virtually ensure catastrophic escalation. The Foster Panel recognized how imprudent this approach was and thus recommended flexible and limited U.S. options that would correspond to Presidential intent to minimize the level of unnecessary damage and the danger of escalation.[38]

Third, and related to the above two points of enduring value for contemporary U.S. deterrence goals, the Foster Panel was concerned about the disconnect between U.S. nuclear targeting policy and weapon acquisition. In short, Washington pursued some targeting policy requirements (such as a "well-hedged" force) but rejected others, such as procuring specifically-designed counter-military capabilities.[39] This disconnect resulted in the United States having an over-abundance of warheads suitable for a counter-industry targeting, but insufficient capabilities for counter-military targeting. This was an intolerable disconnect given the Panel's conclusion that U.S. deterrence policy required flexible counter-military threats and withheld capabilities as a way to control escalation and facilitate intra-war deterrence.

As Washington now considers deterrence policy in the emerging "tripolar" threat environment, it must recognize, as did the Foster Panel five decades ago, the need to synchronize U.S. nuclear deterrence policy and the acquisition of forces. Acquisition policy must correspond to targeting requirements and other related demands, including allied

---

[36] See, the testimony by Secretary Harold Brown and the "Administration's Responses to Questions Submitted Before the Hearing," in, U.S. Senate, Committee on Foreign Relations, *Nuclear War Strategy*, Hearings, 96th Congress, 2nd Session (Washington, D.C.: USGPO, 1981), pp. 10, 16, 25, 29-30.

[37] Caspar Weinberger, "U.S. Defense Strategy," *Foreign Affairs*, Vol. 64, No. 4 (Spring 1986), pp. 680-681.

[38] See, especially, NSSM 169 Working Group, *NSSM 169 Summary Report*, op. cit., pp. 43-46.

[39] Ibid., pp. 25-27.

assurance and hedging against unforeseen developments.[40] U.S. nuclear modernization programs are still in their early stages and changes to the program of record are likely necessary in the near-term.

The wisdom of the Foster Panel's work is without question; it established parameters for U.S. deterrence policy that responded to the mounting Soviet threat of the day. Those parameters are critical for U.S. deterrence considerations in the emerging "Tripolar" deterrence context. Recognition and appreciation of the Foster Panel's policy innovations are critical today.

Conclusion

When viewed in the context of the two decades of U.S. nuclear policy preceding NSSM-169, the Foster Panel's analysis and recommendations were audacious in scope and thoroughness. Nevertheless, the Foster Panel set the direction of U.S. nuclear policy for all subsequent Republican and Democratic administrations. The results were embraced at the time by Henry Kissinger and James Schlesinger, and effectively translated into policy by NSDM-242 and its associated NUWEP. President Carter's PD-59 and President Reagan's NSDD-13 were billed by their drafters as extensions of NSDM-242 and, ultimately, the Foster Panel.[41]

The Foster Panel succeeded in part because it correctly diagnosed the strategic problems then confronting the United States and allies; its recommendations flowed logically and garnered consensus. Lessons from the Foster Panel's work that are critical for contemporary deterrence considerations include: 1) U.S. deterrence strategies must be based on a clear-eyed understanding of opponents, vice mirror-imaging; 2) flexible and limited nuclear options that are proportional to opponents' threats, and do not essentially ensure the consequent destruction of the United States, are essential for credible deterrence; and, 3) U.S. acquisition policy must be aligned with these requirements for deterrence. Finally, the Foster Panel's experience demonstrates the value of independent analysis as entrenched bureaucratic processes may be too slow or biased to react in the necessary ways to adapt in a dynamic security environment.

---

[40] For the increasing need to hedge in the contemporary nuclear threat environment see, See Keith B. Payne and David J. Trachtenberg, *Deterrence in the Emerging Threat Environment: What is Different and Why it Matters, Occasional Paper* (Fairfax, VA: National Institute Press, August 2022). It should be noted in this regard that the Biden Administration's 2022 *Nuclear Posture Review* explicitly *rejects* "hedging against an uncertain future" as a parameter for U.S. nuclear deterrence capabilities. See, U.S. Department of Defense, *2022 Nuclear Posture Review* (Washington, D.C.: Department of Defense, 2022), p. 7, available at https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022- NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF.

[41] On PD-59, see, Edward C. Keefer, *Harold Brown: Offsetting the Soviet Military Challenge, 1977-1981* (Washington, D.C.: OSD Historical Office, 2017), pp. 131-133, 137-145; for NSDD-13, see, Caspar Weinberger, *Memorandum for the President: Nuclear Weapons Employment Policy* (Washington, D.C.: Office of the Secretary of Defense, September 8, 1981), pp. 1-2, available at https://www.esd.whs.mil/Portals/54/Documents/FOID/Reading%20Room/MDR_Releases/FY19/FY19_Q4/Weapons_Employment_Policy_8Sep1981.pdf.

Today's U.S. nuclear deterrence policy stands on the shoulders of the Foster Panel; U.S. officials who are largely unfamiliar with this policy history would do well to understand the Foster Panel's analysis and recommendations for their application to the deterrence challenges of the present.

Dr. Keith B. Payne is a co-founder of the National Institute for Public Policy, professor emeritus at the Graduate School of Defense and Strategic Studies, Missouri State University, a former Deputy Assistant Secretary of Defense and former Senior Advisor to the Office of the Secretary of Defense.

Matthew R. Costlow is a Senior Analyst at the National Institute for Public Policy and former Special Assistant in the Office of Nuclear and Missile Defense Policy, Department of Defense.

ANALYSIS

WHAT DO RUSSIA'S NUCLEAR THREATS TELL US ABOUT ARMS CONTROL PROSPECTS?

Michaela Dodge

Arms control with the Russian Federation has hit a rough patch due to Russia's essential shut down of the New Strategic Arms Reduction Treaty (New START), aggressive and expansionist foreign policy, and arms control violations.[1] Russia has been remarkably consistent in issuing nuclear threats against the West and has elevated the role of nuclear weapons in its nuclear strategy. Moscow's unwillingness to limit its nuclear weapons in any meaningful way is apparent, yet the U.S. arms control community appears to discount the importance of Russia's nuclear threats as an obstacle to arms control.[2] Russian nuclear rhetoric illustrates core Russian beliefs; beliefs that are fundamentally at odds with world order, Western survival and the West's arms control approach.

This analysis contains a vast list of threats made by Russian government officials in the past twenty years. It also contains examples of more contemporary threats from Russian propagandists who are not a part of the government; however, these propagandists maintain their close ties to the Kremlin and their activities are often sanctioned by the regime.[3] These statements reflect Russia's strategic culture; the United States and allies ought to tailor their policies vis-à-vis the Russian Federation accordingly. The United States ought to stop assuming that both countries' share goals and desire cooperative results, including in arms control.

Russia's Nuclear Threats: General Themes

Russia's nuclear threats against the West have been a fairly common occurrence in its public discourse, particularly since Russia's full-scale invasion of Ukraine in February 2022.[4] The

[1] This analysis draws on previously published work: Michaela Dodge, "On Arms Control and Why New START's Suspension Does Not Really Matter," *Information Series* No. 557 (National Institute Press, Fairfax, VA: June 19, 2023), available at https://nipp.org/wp-content/uploads/2023/06/IS-557.pdf; Michaela Dodge, "What Do Russia's Nuclear Threats Tell Us About Arms Control Prospects?" *Information Series* No. 564 (National Institute Press, Fairfax, VA: October 2, 2023), available at https://nipp.org/wp-content/uploads/2023/10/IS-564.pdf. The author is grateful to the National Institute for Public Policy for the permission to republish the work.

[2] For a most recent example of endorsing the call to engage in bilateral negotiations with the Russian Federation "without preconditions", see Thomas Countryman, "US-Russia Nuclear Arms Control Talks `Without Preconditions': Somebody Has to Make the First Move," *Just Security*, September 12, 2023, available at https://www.justsecurity.org/88159/us-russia-nuclear-arms-control-talks-without-preconditions-somebody-has-to-make-the-first-move/?emci=1b075c76-3c56-ee11-9937-00224832e811&emdi=0b5b9be6-5156-ee11-9937-00224832e811&ceid=9312369.

[3] The list can be found in the Appendix.

[4] For an excellent and comprehensive treatment of Russia's nuclear forces and policy, see Mark Schneider, "How Many Nuclear Weapons Does Russia Have? The Size and Characteristics of the Russian Nuclear Stockpile," *Occasional Paper* Vol. 3, No. 8 (Fairfax, VA: National Institute Press, August 2023), available at https://nipp.org/wp-content/uploads/2023/09/Vol.-3-No.-8.pdf.

threats have been direct and indirect. Different actors within Russia issue them, from presidents and former presidents, to other members of the government, to Kremlin spokespeople, to Russian propagandists. The pattern of nuclear threats is apparent: whenever the United States or NATO pursue a policy that the Russian Federation deems against its interest, the frequency of nuclear threats increases.

The target audiences for public messages differ. Russia issues some threats knowing they will reach foreign audiences, particularly in the West. Such threats are likely aimed at shaping the decision-making environment in Russia's favor. Russia has been somewhat successful in this regard. For example, Russia's nuclear threats appear to have slowed down and restricted the North Atlantic Treaty Organization's (NATO's) military support for Ukraine with respect to providing certain weapon systems, particularly early in conflict, leading to Ukraine losing a number of its most experienced and dedicated fighters. Their lives perhaps could have been spared had the needed weapons been provided and delivered sooner.

Moscow's nuclear threats also appear to have contributed to achieving Russia's political goal—preventing NATO from accepting Ukraine as one of its members for the foreseeable future. As Alexander Vershbow, former Deputy Secretary General of NATO and U.S. ambassador to Russia and South Korea, pointed out in a recent article, "Putin wouldn't be wrong in concluding that nuclear coercion works."[5] That is also why it is unlikely that Russia's threats will abate anytime soon.

Other nuclear threats appear to be issued to impress, and perhaps to assure, the Russian public. Nuclear weapons are a reminder of Russia's grandeur and an affirmation of its superpower status. The most powerful weapons ever invented demand respect. In a country where many villages "lack reliable electricity, navigable streets, or even indoor toilets" and food is scarce, there is "only ambiguous pride of belonging to such a great—and strong—nation," as chiefs of the Baltic states' counterintelligence agencies point out.[6] In the context of Russia's conventional forces' unexpectedly dismal performance in Ukraine and a strong international reaction and sanctions against the country, nuclear weapons and nuclear threats are one of the visible reminders to its population of Russia's superpower status and a manifestation of its strength.

Nuclear threats could also be intended to normalize the idea of nuclear weapons employment within the Russian public and prepare the information environment for such an option; however, at present the Russian people do not appear supportive of nuclear weapons use in Ukraine, although whether their opinion matters is questionable.[7] According to Russian political scientist Mikhail Troitsky, "It's doubtful that major segments of Russian

---

[5] Alexander Vershbow, "How the United States and NATO can deal with Russian nuclear coercion in Ukraine," *The Bulletin of Atomic Scientists*, June 23, 3023, available at https://thebulletin.org/2023/06/how-the-united-states-and-nato-can-deal-with-russian-nuclear-coercion-in-ukraine/.

[6] Eero Epner, "Human Life Has No Value There: Baltic Counterintelligence Officers Speak Candidly About Russian Cruelty," *Eesti Ekspress*, October 18, 2022, available at https://vsquare.org/baltic-counterintelligence-officers-russia-cruelty-war-history/.

[7] Press Release, "On the Possibility of Using Nuclear Weapons in the Ukrainian Conflict," *Levada Center*, June 21, 2023, available at https://www.levada.ru/en/2023/06/21/on-the-possibility-of-using-nuclear-weapons-in-the-ukrainian-conflict/.

society would put the 'survival of the state' (as understood by Moscow) above their own physical survival."[8] Recently, some members of the Council on Foreign and Defense Policy, a Russian think-tank, came out in opposition to normalizing the idea of nuclear weapons employment promoted by the Council's chair and Putin's advisor Sergei Karaganov.[9]

Nevertheless, about a third of those Russians surveyed in a poll last year stated it is "highly probable" or "quite probable" that Putin could order the Russian military to launch nuclear weapons first in a war with the West.[10] This is not to say that propaganda could not over time create an environment in which the Russian people *do* equate the survival of the state with their own survival and well-being, which may increase their support for nuclear weapons use. After all, over 50 percent of surveyed Russians demonstrated fear "of the possibility of war between Russia and Ukraine" in early February 2022, but 81 percent supported the action once Russia invaded. Their support has remained consistently high throughout the war, even as evidence of Russia's atrocities and war crimes permeated the information space.[11]

The earliest nuclear threat documented in the Appendix listing examples of Russia's significant nuclear threats in the past two decades, is then-President Boris Yeltsin's angry comment to then-President Bill Clinton following Clinton's criticism of Russia's war in Chechnya. In response, Yeltsin commented that "Clinton allowed himself to pressurise Russia yesterday. He must have forgotten for a moment what Russia is. We have a full arsenal of nuclear weapons."[12]

Another surge of nuclear threats from Russian officials came during U.S.-Czech/Polish negotiations in the 2007-2009 timeframe about placing U.S. missile defense components on these countries' territories.[13] For example, then-Chief of the General Staff of the Russian Armed Forces General Nikolai Makarov threatened a pre-emptive nuclear strike in connection with U.S. missile defense deployments.[14] The Obama Administration cancelled the Bush Administration's plans and announced its own missile defense plans to deploy a

---

[8] Mikhail Troitsky, "The death of nuclear fear In the wake of Prigozhin's mutiny, war hawks are once again brandishing Russia's nuclear potential. Why aren't their threats working?," *Meduza*, July 3, 2023, available at https://meduza.io/en/feature/2023/07/03/the-death-of-nuclear-fear.

[9] "О ПРИЗЫВАХ К РАЗВЯЗЫВАНИЮ ЯДЕРНОЙ ВОЙНЫ (On Calls for Nuclear War)," *Council on Foreign and Defense Policy*, July 13, 2023, available at https://svop.ru/main/48156/.

[10] Simon Saradzhyan, "Levada: Nearly 1/3 of Russians Are 'Not Very Afraid' Their Country Will Use Nukes," *Russia Matters*, June 10, 2022, available at https://www.russiamatters.org/blog/levada-nearly-13-russians-are-not-very-afraid-their-country-will-use-nukes.

[11] Maxim Starchak, "Russians Will Accept Nuclear Doomsday," *Europe's Edge*, August 16, 2023, available at https://cepa.org/article/russians-will-accept-nuclear-doomsday/.

[12] John Gittings, "Yeltsin gives US nuclear warning," *The Guardian,* December 9, 1999, available at https://www.theguardian.com/world/1999/dec/10/russia.chechnya.

[13] Michaela Dodge, *U.S.-Czech Missile Defense Cooperation: Alliance Politics in Action* (Fairfax, VA: National Institute Press, 2020); and Ian Traynor, Luke Harding, and Helen Womack, "Moscow warns it could strike Poland over US missile shield," *The Guardian*, August 15, 2008, available at https://www.theguardian.com/world/2008/aug/15/russia.poland.nuclear.missiles.threat.

[14] Andrew Kramer, "Russian General Makes Threat on Missile-Defense Sites," *The New York Times*, May 3, 2012, available at https://www.nytimes.com/2012/05/04/world/europe/russian-general-threatens-pre-emptive-attacks-on-missile-defense-sites.html.

different type of a missile defense system to Poland and Romania. These plans, too, met with Russia's disapproval and nuclear threats.[15] U.S. withdrawal from the Intermediate-Range Nuclear Forces Treaty that Russia had been violating for years was another significant event during which Russia increased the number of its nuclear threats.

With Russia's 2022 invasion of Ukraine, Russia's threats have reached an unprecedented frequency. Perhaps this is because while Putin thought the Russian army would be able to capture Kyiv in two days (and that the Ukrainians would welcome the Russians as liberators),[16] the war continues more than 500 days later thanks to Ukraine's heroic resistance and Western support, resulting in large losses of equipment and manpower. For example, Russia's tank losses reportedly surpassed 2,000 at the end of May 2023.[17]

Threats Issued by Russian Government Officials

While nuclear weapons have always been an important feature of Russia's presidential politics, Putin has been more vocal about Russia's nuclear might and what it might mean for NATO and the West since Russia's 2022 full-scale invasion of Ukraine. For example, he announced that Russia's nuclear forces would be on "special alert" immediately before the February 2022 invasion.[18] (The United States did not observe any changes in Russia's nuclear posture following the announcement.[19]) He also stated that "No matter who tries to stand in our way or all the more so create threats for our country and our people, they must know that Russia will respond immediately, and the consequences will be such as you have never seen in your entire history. No matter how the events unfold, we are ready. All the necessary decisions in this regard have been taken."[20]

A year later, with Russia's Army still bogged down by Ukraine's valiant defense and unable to deliver the quick and decisive victory its leaders expected, Putin stated that the "elites of the West do not hide their purpose. But they also cannot fail to realise that it is impossible to defeat Russia on the battlefield."[21] Putin also stated that the threat of nuclear war "is

---

[15] Robin Emmott, "U.S. activates Romanian missile defense site, angering Russia," *Reuters*, May 12, 2016, available at https://www.reuters.com/article/us-nato-shield/u-s-activates-romanian-missile-defense-site-angering-russia-idUSKCN0Y30JX.

[16] Jake Epstein and Charles R. Davis, "Putin thought Russia's military could capture Kyiv in 2 days, but it still hasn't in 20," *Business Insider*, March 15, 2022, available at https://www.businessinsider.com/vladimir-putin-russian-forces-could-take-kyiv-ukraine-two-days-2022-3.

[17] "Russia's Tank Losses in Ukraine Surpass 2,000 – OSINT Report," *Moscow Times*, May 31, 2023, available at https://www.themoscowtimes.com/2023/05/31/russias-tank-losses-in-ukraine-surpass-2000-osint-report-a81346.

[18] "Ukraine invasion: Putin puts Russia's nuclear forces on 'special alert'," *BBC*, February 28, 2022, available at https://www.bbc.com/news/world-europe-60547473.

[19] Phil Stewart and Idrees Ali, "No Russian 'muscle movements' after Putin's nuclear readiness alert, U.S. says," *Reuters*, February 28, 2022, available at https://www.reuters.com/world/europe/no-russian-muscle-movements-after-putins-nuclear-readiness-alert-us-says-2022-02-28/.

[20] Presidential Executive Office, "Address by the President of the Russian Federation," February 24, 2022, available at http://en.kremlin.ru/events/president/news/67843.

[21] Guy Faulconbridge, "Russia's Putin issues new nuclear warnings to West over Ukraine," *Reuters*, February 21, 2023, available at https://www.reuters.com/world/putin-update-russias-elite-ukraine-war-major-speech-2023-02-21/.

increasing."[22] In March 2023, Russia announced it would deploy nuclear weapons to Belarus, in the first deployment beyond the Russian Federation's borders since the end of the Cold War.[23] The work is to be completed by "the end of the summer, by the end of this year," according to Putin.[24] "This is an element of deterrence," he said, "so that everyone who thinks of inflicting a strategic defeat on us should keep this circumstance in mind."[25] Russian nuclear deployments to Belarus introduce new uncertainties in the deterrence calculus, though the geographic equation is not affected much since Russia can already reach all the targets on NATO's territory.

But Putin was no stranger to nuclear threats even prior to Russia's invasion of Ukraine. For example, during his 2018 address to the Federal Assembly, Putin unveiled a suite of new "exotic" nuclear weapon systems such as underwater nuclear drones and said "In spite of all difficulties over the years, economic and financial problems with our defense industry and Armed Forces, Russia reached nuclear power, but nobody wanted to take us seriously. Nobody listened to us. So listen to us now."[26] The remarkable slide show accompanying his speech ended with what appeared to be a depiction of Russian nuclear warheads headed toward Florida.[27]

Perhaps no Russian government official has issued more nuclear threats during Russia's invasion of Ukraine than Dmitry Medvedev, former stand-in President for Putin, once the West's hope for Russia's democratization, and currently the Deputy Head of Russia's Security Council.[28] He threatened a "nuclear apocalypse"[29] in the context of Western weapon supplies for Ukraine on several occasions.[30] He boasted, "And I can tell you something, simply as someone who knows something about this. Let's be clear: if you have a weapon in your hands, and I know what this is like as a former president, then you should be prepared to use it without qualms in a certain situation, no matter how monstrous and brutal that might sound."[31] He said "Britain was, is and will be our eternal enemy. […] In any case, soon enough

---

[22] Katharina Krebs, "Putin says threat of nuclear war is increasing," *CNN*, December 8, 2022, available at https://edition.cnn.com/europe/live-news/russia-ukraine-war-news-12-07-22/h_9e32121e0e11c3aa4b0a708befaf3f30.

[23] "Why is Belarus admitting Wagner leader and backing Russia against Ukraine?," *BBC News*, June 26, 2023, available at https://www.bbc.com/news/world-65964623.

[24] Vladimir Putin, Remarks at the Plenary session of the St Petersburg International Economic Forum," June 16, 2023, available at http://en.kremlin.ru/events/president/news/71445 (accessed June 20, 2023).

[25] Ibid.

[26] Vladimir Putin, "State of the Nation Address 2018," *C-Span*, March 1, 2018, available at https://www.c-span.org/video/?441907-1/russian-president-vladimir-putin-state-nation-address.

[27] "Russia's Putin unveils 'invincible' nuclear weapons," *BBC News*, March 1, 2018, available at https://www.bbc.com/news/world-europe-43239331.

[28] A more complete list of Medvedev's nuclear threats can be found in the Appendix.

[29] Guy Faulconbridge and Kevin Liffey, "Western arms for Ukraine make 'nuclear apocalypse' more likely – Russia's Medvedev," *Reuters*, May 23, 2023, available at https://www.reuters.com/world/europe/russias-medvedev-western-arms-ukraine-make-nuclear-apocalypse-more-likely-2023-05-23/.

[30] David Ljunggren, "Russia's Medvedev says arms supplies to Kyiv threaten global nuclear catastrophe," *Reuters*, February 27, 2023, available at https://www.reuters.com/world/europe/russias-medvedev-says-arms-supplies-kyiv-threaten-global-nuclear-catastrophe-2023-02-27/.

[31] "Russia may use nuclear weapons in face of threat to its existence," *Interfax*, April 25, 2023.

their impudent and disgustingly damp island will be sent into the abyss of the sea by waves created by the latest Russian weapons system."[32] His speeches and articles are often aggressive and insulting toward U.S. and allied government officials.

Russia also appears to consider nuclear weapons use justified in the case of a defeat in a conventional war. For example, Medvedev noted that "The defeat of a nuclear power in a conventional war may trigger a nuclear war. Nuclear powers have never lost major conflicts on which their fate depends. And this should be obvious to anyone. Even a Western politician with any trace of intelligence."[33] He reiterated that Russia may consider employing nuclear weapons should Ukraine attack Donetsk and Luhansk, illegally annexed territories Russia now considers its own.[34] There are indications that Putin sees war with Ukraine as an existential struggle for Russia.[35]

Russian ambassadors also occasionally engage in public nuclear threats, which begs the question of why Western countries should let them continue to be ambassadors after engaging in nuclear brinkmanship on Russia's behalf.[36] For example, Oleg Stepanov, Russia's Ambassador to Canada, recently stated "Once again, just to be clear: when you are not in the nuclear bloc [referring to the North Atlantic Treaty Organization], you are safe. When you join it, you become yet another target. We cannot believe that the alliance, including our Finnish neighbors, does not understand this truism. It's as plain as day."[37] Nuclear threats across of levels of the Russian government have become a frequent occurrence in Russia's conduct of foreign and defense policy.

In addition to more public nuclear threats, it appears that Russia is threatening other states with nuclear strikes through unofficial channels. For example, following Russia's first invasion of Ukraine in 2014, then-Ukrainian Minister of Defense Valeriy Heletey stated that the "Russian side has threatened on several occasions across unofficial channels that, in the case of continued resistance they are ready to use a tactical nuclear weapon against us."[38]

---

[32] Maighna Nanu, "Ukraine-Russia war: Russia 'will send disgustingly damp Britain into the abyss'," *The Telegraph*, April 21, 2023, available at https://www.telegraph.co.uk/world-news/2023/04/21/ukraine-russia-war-latest-news-putin-bakhmut-kyiv-nato/.

[33] Tom Watling, Tim McNulty, Sean Meleady, "Putin ally threatens West with nuclear war if Russia defeated in Ukraine," *Express*, January 20, 2023, available at https://www.express.co.uk/news/world/1723253/Russia-war-Ukraine-tanks-T-14-Ramstein-putin-Volodymyr-Zelensky.

[34] Caleb Davis, "Russia's Medvedev: new regions can be defended with strategic nuclear weapons," *Reuters*, September 22, 2022, available at https://www.reuters.com/world/europe/russias-medvedev-strategic-nuclear-weapons-can-be-used-defend-new-regions-2022-09-22/.

[35] Lauren Sforza, "Putin says Ukraine war poses existential threat to 'Russian people'," *The Hill*, February 26, 2023, available at https://thehill.com/policy/international/3874880-putin-says-ukraine-war-poses-existential-threat-to-russian-people/.

[36] Adam Withnall, "Russia threatens Denmark with nuclear weapons if it tries to join Nato defence shield," *The Independent*, March 22, 2015, available at https://www.independent.co.uk/news/world/europe/russia-threatens-denmark-with-nuclear-weapons-if-it-tries-to-join-nato-defence-shield-10125529.html.

[37] "Countries Joining NATO Face Security Risks Including Nuclear - Russian Envoy to Canada," *Sputnik News*, April 20, 2023, available at https://sputnikglobe.com/20230420/countries-joining-nato-face-security-risks-including-nuclear---russian-envoy-to-canada-1109713089.html.

[38] Damien Sharkov, "Russia Has Threatened Nuclear Attack, Says Ukraine Defence Minister," September 1, 2014, available at https://www.newsweek.com/russia-has-threatened-nuclear-attack-says-ukraine-defence-minister-

The Ugly Twin Sisters: Russia's Threats and Arms Control Noncompliance

Despite a history of Russia's nuclear threats against the United States and its allies, and a brutal onslaught against Ukraine, U.S. Secretary of State Antony Blinken stated that the United States remains "ready to talk about strategic arms limitations at any time with Russia irrespective of anything else going on in the world or in our relationship."[39] Perhaps that is why arms control continues to over-promise and under-deliver in U.S. national security; it should be self-evident that Washington must consider "anything else going on in the world or in our relationship" before going down a path toward an agreement, if an agreement is to benefit U.S. national security.

For example, Russia's aggression, nuclear buildup, doctrine, and threats ought to be considered, in addition to Moscow's dismal arms control compliance record. Amazingly, Moscow's blatant treaty violations and evidence of adversarial strategic culture appear rarely to be considered significant by U.S. arms control proponents.[40] They ought to be. Russia's malign intentions are so far removed from the West's cooperative approach to arms control that pursuing it cannot but result in a significant disadvantage for the United States—and continuing frustration with Moscow's arms control behavior.

Moscow's compliance record is abysmal. The Soviet Union signed agreements while preparing to violate them, as was the case with the nuclear testing moratorium. Most recently, Russia decided to "suspend" New START's implementation, halting required on-site inspections and making it impossible for the State Department to certify that Russia is in compliance with the terms of the treaty.[41] Yet, despite the U.S. inability to certify Russia's compliance, two leading New START negotiators argued that they "do not see that Russian suspension constitutes an extraordinary event that jeopardizes US supreme interests"[42]—as if nothing short of threatening "US supreme interests" is meaningful for Washington's continued pursuit of arms control with a treaty partner that appears to have no qualms violating agreements.

For Moscow, treaty violations, noncompliance, and "suspensions," appear to be a matter of course in the conduct of its foreign and defense policy. As long as a treaty serves Russia's

---

267842#:~:text=Kiev%20has%20received%20threats%20of%20nuclear%20retaliation%20from,Heletey%2C%20announced%20on%20his%20Facebook%20page%20on%20Monday.

[39] U.S. Department of State, "Secretary Antony J. Blinken Remarks to the Press," February 21, 2023, available at https://www.state.gov/secretary-antony-j-blinken-remarks-to-the-press-7/.

[40] For an example, see U.S. Department of State, "Secretary Antony J. Blinken Remarks to the Press," February 21, 2023, available at https://www.state.gov/secretary-antony-j-blinken-remarks-to-the-press-7/; or Dana Struckman, "Russia's Suspension of New START Is No Reason for America to Do the Same," *The National Interest*, April 14, 2023, available at https://nationalinterest.org/blog/russia%E2%80%99s-suspension-new-start-no-reason-america-do-same-206401.

[41] U.S. Department of State, *Report to Congress on Implementation of the New START Treaty*, 2023, p. 5, https://www.state.gov/wp-content/uploads/2023/01/2022-New-START-Implementation-Report.pdf.

[42] Rose Gottemoeller and Marshall L. Brown, Jr., "Legal aspects of Russia's New START suspension provide opportunities for US policy makers," *Bulletin of Atomic Scientists*, March 2, 2023, available at https://thebulletin.org/2023/03/legal-aspects-of-russias-new-start-suspension-provide-opportunities-for-us-policy-makers//.

interest, Russia will observe its terms. When it does not, Russia will stop complying and will even violate it, but may not formally withdraw from it. Why would it, when it can do what it wants while keeping the United States restrained and fully exploiting the asymmetry between the two approaches? When the United States finally withdraws after years of efforts to bring Russia into compliance, Russia gains a valuable talking point about the United States being the one destroying the arms control regime.[43]

Russia's history of Intermediate-Range Nuclear Forces (INF) Treaty violations is instructive. The United States started raising concerns about Russia's compliance in 2013, to no avail.[44] Exhausting other options, the United States found Russia in violation of its obligations under the INF Treaty in its 2014 *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments Report*.[45] The 2015 edition of the report stated that "the cruise missile developed by the Russian Federation meets the INF Treaty definition of a ground-launched cruise missile with a range capability of 500 km to 5,500 km, and as such, all missiles of that type, and all launchers of the type used to launch such a missile, are prohibited under the provisions of the INF Treaty."[46]

Russia remained in violation of its INF Treaty obligations according to the 2016, 2017, and 2018 editions of the report.[47] It took the Obama Administration three years after raising the initial compliance concern to convene a Special Verification Commission meeting with Belarus, Kazakhstan, Russia, and Ukraine to discuss Russia's violation within the multilateral format provided by the treaty.[48] At the end of 2018, the United States assessed "that Russia has fielded multiple battalions of SSC-8/9M729 missiles" in violation of the INF Treaty.[49] The report noted that the covert development of the missile may have started as early as the mid-

---

[43] For an example, see Vladimir Isachenkov, "Russian foreign minister lambasts US over arms control," *Associated Press*, November 8, 2019, available at https://apnews.com/general-news-82ecbfa679cd4ebb82ef24b9c12b6b39.

[44] U.S. Department of State, *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments Report*, July 31, 2014, available at https://2009-2017.state.gov/t/avc/rls/rpt/2014/230047.htm#inf2.

[45] Ibid.

[46] U.S. Department of State, *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments Report*, June 5, 2015, available at https://2009-2017.state.gov/t/avc/rls/rpt/2015/243224.htm#INF2.

[47] U.S. Department of State, *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments Report*, April 11, 2016, available at https://2009-2017.state.gov/t/avc/rls/rpt/2016/255651.htm#INF%20TREATY; and U.S. Department of State, *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament*, 2017, available at https://2017-2021.state.gov/2017-report-on-adherence-to-and-compliance-with-arms-control-nonproliferation-and-disarmament-agreements-and-commitments/; and U.S. Department of State, *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament*, 2018, available at https://2017-2021.state.gov/2018-report-on-adherence-to-and-compliance-with-arms-control-nonproliferation-and-disarmament-agreements-and-commitments/.

[48] U.S. Department of State, *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament*, 2017, op. cit.

[49] U.S. Department of State, *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament*, August 2019, p. 13, available at https://2017-2021.state.gov/wp-content/uploads/2019/08/Compliance-Report-2019-August-19-Unclassified-Final.pdf.

2000s.[50] After extensive efforts to bring Russia back into compliance failed, the United States withdrew from the treaty in 2019.[51]

Over the years, Russia continued to deny any wrongdoing, playing for time while the United States would not violate the INF Treaty with its own version of a ground-launched intermediate-range system. In fact, because intermediate-range systems were banned by the Treaty, the United States was reluctant to spend resources on seriously examining whether it would benefit from these systems, let alone starting any major research effort, until years after it first recognized Russia's violations.

The problem of restoring treaty compliance by parties intent on cheating is not new. More than 60 years ago, Fred Iklé, who would later become Director of the Arms Control and Disarmament Agency, pointed out in his seminal article on challenges related to treaty compliance and enforcement, that "detecting violations is not enough. What counts are the political and military consequences of a violation once it has been detected, since these alone will determine whether or not the violator stands to gain in the end."[52] The United States was unable to impose enough political and military costs following Russia's INF Treaty violations to change Moscow's non-compliance, partly because Washington was constrained by the very treaty Russia was violating, and partly because Russia had too much to gain by violating the treaty. In fact, there are very few examples of the United States being successful in bringing a determined violator back into compliance with an existing arms control agreement absent a significant change in political conditions that improved bilateral relations (e.g., when President Gorbachev confirmed Russia was in violation of the Anti-Ballistic Missile (ABM) Treaty after years of Russia's denials). Such a change in Russia today seems unlikely, but it would be imprudent to base U.S. arms control policy on the assumption of such a transition.

The asymmetry between the U.S. and Russian approaches to arms control is striking. While the United States shies away from activities that could be even remotely perceived as contrary to the object and purpose of a treaty, Russia often ignores treaty obligations and plows ahead with programs that violate them, incurring limited costs for its actions. In doing so, Russia relies on disinformation and the intricacies of arms control to claim that the United States is to blame for the demise of arms control architectures. When Washington eventually withdraws, Russia blames it, not years of its own noncompliance and violations, for the demise of arms control. It is much easier for Russia to say "The United States killed a treaty," than for the United States to explain Russia's violations and what the United States has done to try to bring it back into compliance, and so the United States is perpetually put on defensive—a position it does not handle adroitly.

For example, Russian Foreign Minister Sergey Lavrov recently stated that "It is a medical fact that they [the United States] have destroyed the entire international legal system of

---

[50] Ibid.

[51] C. Todd Lopez, "U.S. Withdraws From Intermediate-Range Nuclear Forces Treaty," *U.S. Department of Defense*, August 2, 2019, available at https://www.defense.gov/News/News-Stories/Article/Article/1924779/us-withdraws-from-intermediate-range-nuclear-forces-treaty/.

[52] Fred Iklé, "After Detection: What?" *Foreign Affairs*, Vol. 39, No. 2 (January 1961), p. 208.

deterrence and strategic stability."[53] He menacingly continued that "It's a good thing they do not want a nuclear war, no one wants it. And the system of agreements, which has been destroyed by the United States, exists specifically to reduce its risk and to make this risk negligible at all."[54] There are many risks to the international system, but they originate with revisionist powers and their armaments, especially Russia and China, rather than with the United States which has built and maintained a relatively stable international order at great cost in blood and treasure for decades—and been scrupulous in its treaty compliance.

Yet, some U.S. negotiators would prefer to keep the political context separate from arms control negotiations. For example, Rose Gottemoeller, former Under Secretary for Arms Control and International Security, recently wrote that "America does not link nuclear arms limits to other issues: they are an existential necessity in their own right, and if Putin cannot recognise that, then it is to his own country's detriment. His nuclear forces lose an important means to predict US behaviour just as America is embarking on a two-decade modernisation of its nuclear triad."[55] The notion that "nuclear arms limits" are "an existential necessity in their own right" is absurd; their value can be judged only in relation to the security environment in which they exist. Arms control should never be separated from the political context in which it is pursued. Under the current conditions, it may not be in the U.S. interest to continue to live under agreements that originated many years ago in a much more benign threat environment—particularly if the United States is the only party adhering to their terms.

Far from failing to see "his own country's detriment," Putin apparently sees benefits in Russia's arms control violations and nuclear weapons superiority. "Just talking about this (the potential use of nuclear weapons) lowers the nuclear threshold. We have more than NATO countries and they want to reduce our numbers. Screw them," he said.[56] Putin's point of view is grounded in the long-term failure of the United States to impose sufficient costs on Russia following its arms control violations to restore the integrity of the agreement.[57] Putin is undoubtedly familiar with effective Soviet-era arms control efforts to restrain the United States in areas of U.S. technological advantage and enable the Soviet Union to take advantage of its areas of strength.[58] These efforts were often successful, particularly as they pertained to missile defense.

---

[53] "No one wants nuclear war, but US destroyed entire deterrence system – Lavrov," *TASS*, June 28, 2023, available at https://tass.com/politics/1639971.

[54] Ibid.

[55] Rose Gottemoeller, "The west must act now to break Russia's nuclear fever," *The Financial Times*, June 15, 2023, available at https://www.ft.com/content/91c51eb9-65df-44f0-977d-db922c3e97e9.

[56] Andrew Osborn, "Putin says Russia put nuclear bombs in Belarus as warning to West," *Reuters*, June 17, 2023, available at https://www.reuters.com/world/europe/putin-says-russia-positions-nuclear-bombs-belarus-warning-west-2023-06-16/.

[57] Michaela Dodge, "On Arms Control and Why New START's Suspension Does Not Really Matter, *Information Series* No. 557 (Fairfax, VA: National Institute Press), June 19, 2023, available at https://nipp.org/information_series/michaela-dodge-on-arms-control-and-why-new-starts-suspension-does-not-really-matter-no-557-june-19-2023/.

[58] David Trachtenberg, Michaela Dodge and Keith Payne, "The 'Action-Reaction' Arms Race Narrative vs. Historical Realities" (Fairfax, VA: National Institute Press, June 2021), pp. 63-68, available at https://nipp.org/wp-content/uploads/2021/04/Action-Reaction-pub.pdf.

Through the arms control process, the Soviets managed to impose restrictions on missile defense programs in which the United States was a technological leader. These restraints long outlived even the end of the Cold War, despite the Soviet Union's own violations. When the national security environment and missile proliferation (to which the Russians contributed) necessitated a U.S. withdrawal from the ABM Treaty in 2002, the Russians gained a useful propaganda narrative that the U.S. withdrawal fueled an arms race, a narrative still repeated within the arms control community two decades later.[59] In reality, the United States and Russia went on to sign the Strategic Offensive Reductions Treaty (SORT or Moscow Treaty) fewer than six months after the U.S. announcement of the ABM Treaty withdrawal—a Treaty that included unprecedented reductions in the aggregate number of accountable strategic nuclear warheads (down to 1700-2200).[60]

For Russia, the Quantity and Quality of Nuclear Weapons Appear to Matter

Washington must account for how adversaries view nuclear weapons and their attributes when developing its own nuclear weapons policy, including arms control policy, even if U.S. officials would like to consider such factors unimportant. As nuclear policy expert Greg Weaver pointed out during recent testimony, "In a deterrence relationship, the adversary doesn't just have "a" vote, they have *the only vote*."[61] While some U.S. pundits argue that the United States keeps too many nuclear weapons[62] or that nuclear weapons do not matter,[63] official Russian statements indicate that Moscow values numerical superiority, as well as the increased diversity of its nuclear weapon arsenal. For example, Putin noted "that we have more such nuclear weapons than NATO countries. They know about it and never stop trying to persuade us to start nuclear reduction talks. Like hell we will, right? A popular phrase. Because, putting it in the dry language of economic essays, it is our competitive advantage."[64] In 2013, then-Deputy Prime Minister Sergei Ivanov stated: "When I hear our American partners say: 'let's reduce something else,' I would like to say to them: 'excuse me, but what

---

[59] James Acton, "The U.S. Exit From the Anti-Ballistic Missile Treaty Has Fueled a New Arms Race," *Carnegie Endowment for International Peace*, December 13, 2021, available at https://carnegieendowment.org/2021/12/13/u.s.-exit-from-anti-ballistic-missile-treaty-has-fueled-new-arms-race-pub-85977.

[60] U.S. Department of State, "Treaty Between the United States of America and the Russian Federation On Strategic Offensive Reductions," May 24, 2002, available at https://2009-2017.state.gov/t/isn/18016.htm/.

[61] Testimony by Greg Weaver, Senior Associate (Non-Resident), Project on Nuclear Issues, CSIS, before the Senate Armed Services Committee on Regional Nuclear Deterrence, Subcommittee on Strategic Forces, March 28, 2023, p. 3, available at https://www.armed-services.senate.gov/imo/media/doc/Mr.%20Gregory%20Weaver%20Written%20Statement%20-%20Regional%20Nuclear%20Deterrence%20-%2003.28%20SASC%20FINAL.pdf. (Emphasis in original).

[62] John Isaacs, "Old Think' Is Driving U.S. Nuclear Weapons Policy," *The National Interest*, December 17, 2022, available at https://nationalinterest.org/feature/%E2%80%98old-think%E2%80%99-driving-us-nuclear-weapons-policy-206024.

[63] John Mueller, "Nuclear Weapons Don't Matter," *Foreign Affairs*, October 15, 2018, available at https://www.foreignaffairs.com/world/nuclear-weapons-dont-matter.

[64] Vladimir Putin, Remarks at the Plenary session of the St Petersburg International Economic Forum," June 16, 2023, available at http://en.kremlin.ru/events/president/news/71445 (accessed June 20, 2023).

we have is relatively new.' They [the U.S.] have not conducted any upgrades for a long time. They still use Trident [missiles]."[65] In addition to its nuclear-charged rhetoric, Russia also conducts large-scale military exercises that include simulated nuclear weapons attacks.[66]

Putin appears to value more than just a numerical advantage. Unlike the United States that has not designed and deployed a new nuclear warhead since the end of the Cold War, Russia rejuvenated its nuclear weapons complex after the 1990s' slump and maintained personnel proficient in nuclear weapons building. Consequently, some of Russia's nuclear weapons "are more modern than the weapons NATO countries have," as Putin pointed out.[67] Given the fact that U.S. nuclear weapons in Europe were deployed in the 1960s, the feat is much less impressive than it appears at first. Then-Defense Intelligence Agency Director Robert Ashley stated that the "United States believes that Russia probably is not adhering to the nuclear testing moratorium in a manner consistent with the zero-yield standard."[68] More importantly, he added that "Our understanding of nuclear weapon development leads us to believe Russia's testing activities would help it improve its nuclear weapon capabilities."[69] Russia's quantitative superiority on the tactical nuclear weapons level and belief in the qualitative superiority of its nuclear warheads at the strategic level may be yet again contributing to its foreign policy adventurism, as it did during the Cold War.[70]

What Does Moscow's Propaganda Tell the Russians about Nuclear Weapons?

The Russian government maintains a loyal network of propagandists and "journalists." Freedom of speech is extremely limited in the country and divergence from the official line is punishable by high fines and years in prison. The already bad situation got even worse after February 2022. Russia effectively shut down the BBC, the Voice of America, Radio Free Europe/Radio Liberty, Deutsche Welle, and the independent Russian outlet Meduza as retaliation for Western governments cracking down on some of Russia's influence operators

---

[65] "Russia today is not interested in U.S.-proposed arms reduction—Sergei Ivanov," Interfax, March 5, 2013; quoted in *Russian Strategy: Expansion, Crisis, and Conflict* (Fairfax, VA: National institute Press, 2016), p. 85, available at https://nipp.org/wp-content/uploads/2021/03/FINAL-FOR-WEB-1.12.16.pdf.

[66] *Russian Strategy: Expansion, Crisis, and Conflict*, op. cit., pp. 69-71.

[67] Vladimir Putin, Address by the President of the Russian Federation," September 21, 2022, available at http://en.kremlin.ru/events/president/transcripts/69390#sel=8:18:Wvp,8:33:41G.

[68] Lt. Gen. Robert P. Ashley, Jr., "The Arms Control Landscape," *Remarks at the Hudson Institute*, p. 4, available at https://s3.amazonaws.com/media.hudson.org/Hudson%20Transcript%20-%20The%20Arms%20Control%20Landscape.pdf.

[69] Ibid.

[70] Svetlana Savranskaya and David A. Welch, eds., *Global Competition and the Deterioration of U.S.-Soviet Relations*, 1977-1980, transcript from *The Carter-Brezhnev Project* (Washington, D.C.: National Security Archive, 1995), p. 38, available at https://nsarchive2.gwu.edu/carterbrezhnev/docs_global_competition/part7.PDF.

in their countries.[71] Russia also banned Twitter and Facebook and passed laws that made any criticism of the "special military operation," as the Kremlin euphemistically calls the war in Ukraine, punishable by years in prison.

The state's tight control of the media environment makes it incredibly difficult to reach the Russian audience with any content that is not approved by the authorities. This also means that nuclear threats discussed on Russia's popular talk shows have the authorities' approval if not endorsement. As many as 82 million Russians consume media content every day and are exposed to statements that normalize explicit nuclear threats within the public discourse.[72]

For example, Margarita Simonyan, editor-in-chief of *RT* and the media group *Rossiya Segodnya*, stated following the International Criminal Court's (ICC's) issue of an arrest warrant on Putin for unlawful deportation of minors from Ukraine,[73] "I'd like to see the country that arrests Putin according to The Hague's ruling. Eight minutes later. Or whatever the flight time to its capital is."[74] On another occasion she stated that "Either we lose in Ukraine, or the Third World War starts. I think World War Three is more realistic, knowing us, knowing our leader. The most incredible outcome, that all this will end with a nuclear strike, seems more probable to me than the other course of events."[75]

Russian propagandists appear to be even more explicit and aggressive than officials in their nuclear threats. For example, Vladimir Solovyov, a prominent radio and television presenter for the state-owned *All-Russia State Television* and *Radio Broadcasting Company* (VGTRK), stated he would like to see Russia withdraw "from the treaty on moratorium on the testing of nuclear weapons in all environments."[76] He explained that "We need to test nuclear weapons so the West can see that they exist and see how powerful they are. And give an ultimatum to the NATO countries by targeting our nuclear strategic forces on the government

---

[71] James Ellingworth, "Russia cracks down on dissenting media, blocks Facebook," *Associated Press*, March 4, 2022, available at https://apnews.com/article/russia-ukraine-vladimir-putin-business-europe-germany-d15ca4ed450d9ca67f43d3b1ac27294d.

[72] Anastasia Edel, "A Day Inside Putin's Surreal Television Empire," *Foreign Policy*, May 28, 2023, available at https://foreignpolicy.com/2023/05/28/russia-ukraine-war-putin-propaganda-news-media-television/.

[73] The ICC also issued warrant on Maria Alekseyevna Lvova-Belova, Commissioner for Children's Rights in the Office of the President of the Russian Federation. International Criminal Court *Press Release*, "Situation in Ukraine: ICC judges issue arrest warrants against Vladimir Vladimirovich Putin and Maria Alekseyevna Lvova-Belova," March 17, 2023, available at https://www.icc-cpi.int/news/situation-ukraine-icc-judges-issue-arrest-warrants-against-vladimir-vladimirovich-putin-and.

[74] "Russian propagandists' responses to potential Putin arrest: from nuclear threats to mockery," *Ukrainska Pravda*, March 17, 2023, available at https://news.yahoo.com/russian-propagandists-responses-potential-putin-210443675.html.

[75] Kate Buck, "Putin would prefer nuclear strike to defeat in Ukraine, says Russian state TV chief," *Yahoo News*, April 28, 2022, available at https://news.yahoo.com/putin-rather-press-nuclear-button-lose-ukraine-war-rt-broadcaster-151707840.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAACEIoJGTGQUQdDa0jgNLbOtZgMdvzXXnU0yhwR5d5H0jvzsqd-n_MhnMavQPkDiIUgoKzn5Oj3tw4VJZ14bgkHo6iT7gft1OSBDcQcPXbjbb4rJvPRaZLQmHKru0CmcQM5wedp89OhDZAWJuSjCUZyUCnGg-uBIlzCOo9rTd5E7p.

[76] Anton Gerashchenko [@gerashchenko], "I firmly believe that nuclear war is inevitable," says Russian propagandist Solovyev, suggesting that Russia start it. He wants to aim Russian nuclear weapons at London, Paris, Berlin and Washington. [Tweet], *Twitter*, 8:25 AM, May 10, 2023, available at https://twitter.com/Gerashchenko_en/status/1656274238456709121?s=20.

quarters and on launch sites of those countries that have nuclear capabilities, on the quarters of those countries that support the Nazi regime. And put an ultimatum. If they don't want to hear it, that means there will be no more London, no more Berlin, no more Paris, no more Washington, D.C."[77]

On another occasion, he pondered an attack on the United Kingdom in retaliation for providing Ukraine with long-range missiles:

> And why are there still undersea cables leading to Britain? Why are all the pipelines still there? Why aren't we responding in the most brutal way, asymmetrically, to Britain? We are now out of the treaty, which is what we should have done a long time ago. I think we need to abandon a ban on nuclear weapons testing. We should conduct tests, show the nuclear weapons we have, blow something up somewhere, and target our Strategic Missile Forces, first of all targeting Britain. And all those countries that are providing support. And give them an ultimatum: You supply the missiles, we'll bomb.[78]

He also said, "One Sarmat [a new, very large Russian intercontinental-range ballistic missile] means minus one Great Britain."[79]

Russian propagandists also appear more explicitly apocalyptic than government officials. "I hope they understand that if we lose, we are taking the whole world with us," Solovyov pointed out on one of his shows.[80] And Dmitry Kiselyov, a Kremlin-backed journalist and RT's general director, pondered "Why do we need a world if Russia is not in it?"[81] and showed potential nuclear targets in the United States on his TV show in 2019.[82] These kinds of statements are well within acceptable norms in Russia, however extreme those in the West may consider them.

Conclusion

The consistency of Russia's nuclear threats should cause the arms control proponents and national security experts to seriously take into account the Russian strategic culture. Russian

---

[77] Ibid.

[78] Anton Gerashchenko [@gerashchenko], Attention, Great Britain! Russian propagandist Solovyev threatens the UK with a nuclear strike and cutting their underwater cables. [Tweet], *Twitter*, 12:29 PM, May 11, 2023, available at https://twitter.com/Gerashchenko_en/status/1656697983977545728?s=20.

[79] Evan Simko-Bednarski, "Russian state TV threatens to wipe out 'boorish' UK with ballistic missile," *New York Post*, April 27, 2022, available at https://nypost.com/2022/04/27/russian-state-tv-threatens-to-wipe-out-uk-with-ballistic-missile/.

[80] Brendan Cole, "Russian State TV Issues Stark Warning Over Threat of Defeat," *Newsweek*, May 17, 2023, available at https://www.msn.com/en-us/news/world/russian-state-tv-issues-stark-warning-over-threat-of-defeat/ar-AA1biFQt?rc=1&ocid=winp1taskbar&cvid=f27a8f8c98fb4753bd5324d84d12565d&ei=17.

[81] "'Why Do We Need a World if Russia Is Not In It?': State TV Presenter Opens Show With Ominous Address," *Moscow Times*, February 28, 2022, available at https://www.themoscowtimes.com/2022/02/28/russians-race-for-cash-as-ruble-plummets-a76655.

[82] Andrew Osborn, "After Putin's warning, Russian TV lists nuclear targets in U.S.," *Reuters*, February 25, 2019, available at https://www.reuters.com/article/us-usa-nuclear-russia-idUSKCN1QE1DM.

government officials, including Putin himself, appear convinced that nuclear superiority serves its expansionist purposes; they continue to brandish nuclear weapon threats, and have been consistent and explicit, particularly since Russia launched its most recent invasion of Ukraine in February 2022. They also appear to believe that the actual employment of nuclear weapons is "thinkable." Moscow's perceived qualitative and quantitative superiority appears be influencing its foreign policy to be more belligerent toward Western interests, as it did during the Cold War.

U.S. consideration of arms control appears to ignore or discount Moscow's views of nuclear weapons and increasingly explicit nuclear threats. Continuing to do so is unwise. Rather, the United States must approach arms control not as an arena of mutual interest and cooperation, but as another form of competition—which clearly is Moscow's mode of operation. It appears that Russia's aggressive, revisionist policies and goal of reordering the global order, in league with China, will portend conflict and crises. At this point in history, the United States would be better off preparing to compete rather than accommodate.

APPENDIX: RUSSIA'S NUCLEAR THREATS[83]

Russia's Government Officials

Vladimir Putin (President of the Russian Federation)

"Just talking about this (the potential use of nuclear weapons) lowers the nuclear threshold. We have more than NATO countries and they want to reduce our numbers. Screw them."[84]

"The second point is that we have more such nuclear weapons than NATO countries. They know about it and never stop trying to persuade us to start nuclear reduction talks. Like hell we will, right? A popular phrase. *(Laughter.)* Because, putting it in the dry language of economic essays, it is our competitive advantage. As you know, we have been in talks with our partner in the Union State—with President Lukashenko—about deploying some of these tactical nuclear weapons to Belarusian territory. This has happened. The first nuclear warheads have been delivered to Belarus, but only the first batch. There will be more. By the end of the summer, by the end of this year, we will complete this work. This is an element of deterrence, so that everyone who thinks of inflicting a strategic defeat on us should keep this circumstance in mind."[85]

"The elites of the West do not hide their purpose. But they also cannot fail to realise that it is impossible to defeat Russia on the battlefield."[86]

"In terms of the threat of nuclear war, you are right, such threat is increasing."[87]

"I would like to remind those who make such statements regarding Russia that our country has different types of weapons as well, and some of them are more modern than the weapons NATO countries have. In the event of a threat to the territorial

---

[83] This Appendix covers the time period between 1999 through summer 2023 and includes nuclear threats compiled by Dr. Mark Schneider, which can be found in Keith Payne, Testimony before the Senate Appropriations Subcommittee on Energy and Water Development, U.S. Senate, June 25, 2012, pp. A-1 to A-5, available at https://nipp.org/wp-content/uploads/2021/05/July-25-testimony-for-web.pdf.

[84] Andrew Osborn, "Putin says Russia put nuclear bombs in Belarus as warning to West," *Reuters*, June 17, 2023, available at https://www.reuters.com/world/europe/putin-says-russia-positions-nuclear-bombs-belarus-warning-west-2023-06-16/.

[85] Vladimir Putin, Remarks at the Plenary session of the St Petersburg International Economic Forum," June 16, 2023, available at http://en.kremlin.ru/events/president/news/71445 (accessed June 20, 2023).

[86] Guy Faulconbridge, "Russia's Putin issues new nuclear warnings to West over Ukraine," *Reuters*, February 21, 2023, available at https://www.reuters.com/world/putin-update-russias-elite-ukraine-war-major-speech-2023-02-21/.

[87] Katharina Krebs, "Putin says threat of nuclear war is increasing," *CNN*, December 8, 2022, available at https://edition.cnn.com/europe/live-news/russia-ukraine-war-news-12-07-22/h_9e32121e0e11c3aa4b0a708befaf3f30.

integrity of our country and to defend Russia and our people, we will certainly make use of all weapon systems available to us. This is not a bluff."[88]

"Western countries aren't only taking unfriendly economic actions against our country, but leaders of major NATO countries are making aggressive statements about our country. So, I order to move Russia's deterrence forces to a special regime of combat duty."[89]

Putin announced that Russia's nuclear forces would be on "special alert" following Russia's invasion of Ukraine in February 2022.[90]

"No matter who tries to stand in our way or all the more so create threats for our country and our people, they must know that Russia will respond immediately, and the consequences will be such as you have never seen in your entire history. No matter how the events unfold, we are ready. All the necessary decisions in this regard have been taken."[91]

"They [the tensions] are not a reason to ratchet up confrontation to the levels of the Cuban Missile Crisis in the 1960s. In any case that's not what we want," said Putin. "If someone wants that, well OK they are welcome. I have set out today what that would mean. Let them count [the missile flight times]."[92]

"If the United States does withdraw from the INF treaty, the main question is what they will do with these [intermediate-range] missiles that will once again appear. If they will deliver them to Europe, naturally our response will have to mirror this, and European countries that agree to host them, if things go that far, must understand that they are putting their own territory at risk of a possible counter-strike."[93]

"But then any aggressor should know that retaliation is inevitable and they will be annihilated. And we as the victims of an aggression, we as martyrs would go to

---

[88] Vladimir Putin, Address by the President of the Russian Federation," September 21, 2022, available at http://en.kremlin.ru/events/president/transcripts/69390#sel=8:18:Wvp,8:33:41G.

[89] Shannon Bugos, "Putin Orders Russian Nuclear Weapons on Higher Alert," *Arms Control Association*, March 2022, available at https://www.armscontrol.org/act/2022-03/news/putin-orders-russian-nuclear-weapons-higher-alert.

[90] "Ukraine invasion: Putin puts Russia's nuclear forces on 'special alert'," *BBC*, February 28, 2022, available at https://www.bbc.com/news/world-europe-60547473.

[91] Presidential Executive Office, "Address by the President of the Russian Federation," February 24, 2022, available at http://en.kremlin.ru/events/president/news/67843.

[92] Andrew Osborn, "Putin to U.S.: I'm ready for another Cuban Missile-style crisis if you want one," *Reuters*, February 21, 2019, available at https://www.reuters.com/article/us-russia-putin-idUSKCN1QA1A3.

[93] Olesya Astakhova, Andrew Osborn, "Russia will target European countries if they host U.S. nuclear missiles: Putin," *Reuters*, October 24, 2018, available at https://www.reuters.com/article/us-usa-nuclear-putin-idUSKCN1MY2FO.

paradise while they will simply perish because they won't even have time to repent their sins."[94]

"Certainly, it would be a global disaster for humanity; a disaster for the entire world. As a citizen of Russia and the head of the Russian state I must ask myself: Why would we want a world without Russia?"[95]

"In spite of all difficulties over the years, economic and financial problems with our defense industry and Armed Forces, Russia reached nuclear power, but nobody wanted to take us seriously. Nobody listened to us. So listen to us now."[96]

"Thank God, I think no one is thinking of unleashing a large-scale conflict with Russia. I want to remind you that Russia is one of the leading nuclear powers."[97]

"Let me remind you that Russia is one of the world's biggest nuclear powers. These are not just words—this is the reality. What's more, we are strengthening our nuclear deterrent capability and developing our armed forces."[98]

"It's horrible to say and even horrible to think that, in response to the deployment of such facilities in Ukrainian territory, which cannot theoretically be ruled out, Russia could target its missile systems at Ukraine. Imagine this for a second. That is what worries us."[99]

"This system of missile defence on one side and the absence of this system on the other... increases the possibility of unleashing a nuclear conflict."[100]

---

[94] President of Russia, *Meeting of the Valdai International Discussion Club*, Transcript, October 18, 2018, available at http://en.kremlin.ru/events/president/news/58848.

[95] "'Why would we want a world without Russia?' Putin on Moscow's nuclear doctrine," *RT*, March 7, 2018, available at https://www.rt.com/news/420715-putin-world-russia-nuclear/.

[96] Vladimir Putin, "State of the Nation Address 2018," *C-Span*, March 1, 2018, available https://www.c-span.org/video/?441907-1/russian-president-vladimir-putin-state-nation-address.

[97] Damien Sharkov, "Russia Has Threatened Nuclear Attack, Says Ukraine Defence Minister," September 1, 2014, available at https://www.newsweek.com/russia-has-threatened-nuclear-attack-says-ukraine-defence-minister-267842#:~:text=Kiev%20has%20received%20threats%20of%20nuclear%20retaliation%20from,Heletey%2C%20announced%20on%20his%20Facebook%20page%20on%20Monday.

[98] Vladimir Putin, Excerpts from Transcript of Meeting with Seliger 2014 Forum Participants, August 29, 2014, available at http://en.kremlin.ru/events/president/news/46507.

[99] Luke Harding, "Putin issues nuclear threat to Ukraine over plan to host US shield," *The Guardian*, February 13, 2008, available at https://www.theguardian.com/world/2008/feb/13/russia.putin.

[100] Adrian Blomfield, "Putin in nuclear threat against Europe," *The Telegraph*, June 4, 2007, available at https://www.telegraph.co.uk/news/worldnews/1553593/Putin-in-nuclear-threat-against-Europe.html.

Dmitry Medvedev (Deputy Chairman of the Security Council of the Russian Federation, Former President of the Russian Federation)

> "Just imagine that the offensive… in tandem with NATO, succeeded and ended up with part of our land being taken away. Then we would have to use nuclear weapons by virtue of the stipulations of the Russian Presidential Decree. There simply wouldn't be any other solution. Our enemies should pray to our fighters that they do not allow the world to go up in nuclear flames."[101]

> "The completely crazy West could not come up with anything else... In fact, it's a dead end. World War Three is getting closer."[102]

> "In general, any war, even a world war, can be ended very quickly. Either if a peace treaty is signed or if you do what the Americans did in 1945 when they used their nuclear weapons and bombed two Japanese cities."[103]

> "One way to resolve it is the third world war. But it is obviously bad, because the victors are not at all guaranteed further prosperity, as was the case after previous world wars. Most likely, there will simply be no winners. After all, it is impossible to consider as a victory the world in which nuclear winter has come, million-plus cities lie in ruins, there is no electricity due to the transcendent electromagnetic impulse, and a huge number of people died from the shock wave, light radiation, penetrating radiation and radioactive contamination…such an Apocalypse is not only possible, but also quite probable… The world is in a confrontation much worse than during the Cuban missile crisis, because our opponents have decided to really defeat the largest nuclear power - Russia."[104]

---

[101] Josh Pennington, Alex Stambaugh and Brad Lendon, "Medvedev says Russia could use nuclear weapon if Ukraine's fightback succeeds in latest threat," *CNN*, July 31, 2023, available at https://www.cnn.com/2023/07/31/europe/medvedev-russia-nuclear-weapons-intl-hnk/index.html.

[102] Lidia Kelly, "Russia's Medvedev: NATO's military aid to Ukraine brings World War Three closer," *Reuters*, July 11, 2023, available at https://www.reuters.com/world/europe/russias-medvedev-natos-military-aid-ukraine-brings-world-war-three-closer-2023-07-11/.

[103] "Medvedev names options to stop war: Either negotiations or nuclear strike," *Ukrainska Pravda*, July 5, 2023, available at https://finance.yahoo.com/news/medvedev-names-options-stop-war-122615769.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAJs07l1oJK8Jm6uqXJ8TdCsHuzra91Z2SfxOP549lL41Y19vVLhDMWoDvCEOXBQcBfSSE0dHAiTIO_wh5zzp3FbQb7lrtFdWUpOWzK_iuHOjGDhvIMHbLeprm_ALQwCr5td4X2eBQNwz7jvGMG3NN3X7sqq7eLcfZrxoH7q9h9OW.

[104] Dmitry Medvedev, "Эпоха противостояния (The Era of Confrontation)," *Russian Gazette*, July 2, 2023, available at https://rg.ru/2023/07/02/epoha-protivostoianiia.html.

"There are some irreversible rules of war. If it comes to [deliveries of] nuclear weapons [to Ukraine], a preemptive strike will have to be carried out. […] It will [happen], under certain circumstances."[105]

"The more weapons are supplied, the more dangerous the world will be. And the more destructive these weapons are, the more likely the scenario becomes of what is commonly called a nuclear apocalypse."[106]

"Britain was, is and will be our eternal enemy. […] In any case, soon enough their impudent and disgustingly damp island will be sent into the abyss of the sea by waves created by the latest Russian weapons system."[107]

"No, it hasn't decreased, it has grown. Every day when they provide Ukraine with foreign weapons brings the nuclear apocalypse closer."[108]

"Our enemies are doing just that [supplying weapons to Ukraine], not wanting to understand that their goals will certainly lead to a total fiasco. Loss for everyone. A collapse. Apocalypse. Where you forget for centuries about your former life, until the rubble ceases to emit radiation."[109]

"We don't set ourselves any limits and, depending on the nature of the threats, we're ready to use all types of weapons. In accordance with our doctrinal documents, including the Fundamentals of Nuclear Deterrence."[110]

"The defeat of a nuclear power in a conventional war may trigger a nuclear war. Nuclear powers have never lost major conflicts on which their fate depends. And this

---

[105] "West fails to grasp possibility of preemptive nuclear strike — Medvedev," *TASS*, May 26, 2023, available at https://tass.com/politics/1623285.

[106] Guy Faulconbridge and Kevin Liffey, "Western arms for Ukraine make 'nuclear apocalypse' more likely – Russia's Medvedev," *Reuters*, May 23, 2023, available at https://www.reuters.com/world/europe/russias-medvedev-western-arms-ukraine-make-nuclear-apocalypse-more-likely-2023-05-23/.

[107] Maighna Nanu, "Ukraine-Russia war: Russia 'will send disgustingly damp Britain into the abyss'," *The Telegraph*, April 21, 2023, available at https://www.telegraph.co.uk/world-news/2023/04/21/ukraine-russia-war-latest-news-putin-bakhmut-kyiv-nato/.

[108] Vladimir Isachenkov, "Russia's security chief blasts West, dangles nuclear threats," *Associated Press*, March 23, 2023, available at https://apnews.com/article/medvedev-nuclear-putin-arrest-warrant-germany-ukraine-6dcde92e06f41a7c5cb7386f7939df33.

[109] David Ljunggren, "Russia's Medvedev says arms supplies to Kyiv threaten global nuclear catastrophe," *Reuters*, February 27, 2023, available at https://www.reuters.com/world/europe/russias-medvedev-says-arms-supplies-kyiv-threaten-global-nuclear-catastrophe-2023-02-27/.

[110] Kevin Liffey, "Russia's Medvedev says more U.S. weapons supplies mean 'all of Ukraine will burn'," *Reuters*, February 4, 2023, available at https://www.reuters.com/world/europe/russias-medvedev-says-more-us-weapons-supplies-mean-all-ukraine-will-burn-2023-02-04/.

should be obvious to anyone. Even a Western politician with any trace of intelligence."[111]

"The only thing that stops our enemies today is the understanding that Russia will be guided by the fundamentals of state policy ... on nuclear deterrence. And in the event that a real threat arises, it will act on them."[112]

"Let's imagine that Russia is forced to use the most fearsome weapon against the Ukrainian regime which had committed a large-scale act of aggression that is dangerous for the very existence of our state."[113]

"The Donbas [Donetsk and Luhansk] republics and other territories will be accepted into Russia. […] Russia has announced that not only mobilisation capabilities, but also any Russian weapons, including strategic nuclear weapons and weapons based on new principles, could be used for such protection."[114]

"Let's not forget that the European Union also has nuclear power plants. And accidents can happen there, too."[115]

"Judgment Day will come very fast and hard. It will be very difficult to hide."[116] [Referring to an attack on Crimea—editorial comment]

---

[111] Tom Watling, Tim McNulty, Sean Meleady, "Putin ally threatens West with nuclear war if Russia defeated in Ukraine," *Express*, January 20, 2023, available at https://www.express.co.uk/news/world/1723253/Russia-war-Ukraine-tanks-T-14-Ramstein-putin-Volodymyr-Zelensky.

[112] "Nuclear deterrence only factor preventing West from waging full-fledged war on Russia: Medvedev," *PressTV*, December 25, 2022, available at https://www.presstv.ir/Detail/2022/12/25/695139/Russia-West-nuclear-war-Medvedev-Ukraine.

[113] Guy Falconbridge and Caleb Davis, "Medvedev raises spectre of Russian nuclear strike on Ukraine," *Reuters*, September 27, 2022, available at https://www.reuters.com/world/europe/russias-medvedev-warns-west-that-nuclear-threat-is-not-bluff-2022-09-27/#:~:text=LONDON%2C%20Sept%2027%20%28Reuters%29%20-%20An%20ally%20of,apocalypse%27%20to%20directly%20enter%20the%20conflict%20in%20reponse.

[114] Caleb Davis, "Russia's Medvedev: new regions can be defended with strategic nuclear weapons," *Reuters*, September 22, 2022, available at https://www.reuters.com/world/europe/russias-medvedev-strategic-nuclear-weapons-can-be-used-defend-new-regions-2022-09-22/.

[115] "'Accidents can happen at European nuclear plants too,' Russian ex-president says," *Reuters*, August 12, 2022, available at https://www.reuters.com/world/europe/accidents-can-happen-european-nuclear-plants-too-russian-ex-president-says-2022-08-12/.

[116] Guy Faulconbridge, "Russia's Medvedev: Attack on Crimea will ignite 'Judgement Day' response," *Reuters*, July 17, 2022, available at https://www.reuters.com/world/europe/medvedev-wests-refusal-recognise-crimea-russian-is-threat-2022-07-17/.

> "The idea of punishing a country that has one of the largest nuclear potentials is absurd. And potentially poses a threat to the existence of humanity."[117]
>
> "There can be no more talk of any nuclear–free status for the Baltic [referring to Russia's enclave in Kaliningrad—editorial comment] - the balance must be restored."[118]

Boris Yeltsin (then-President of the Russian Federation)

> "Clinton allowed himself to pressurise Russia yesterday. He must have forgotten for a moment what Russia is. We have a full arsenal of nuclear weapons."[119]

Nikolai Patrushev (Secretary of Russia's Security Council)

> "American politicians trapped by their own propaganda remain confident that, in the event of a direct conflict with Russia, the United States is capable of launching a preventive missile strike, after which Russia will no longer be able to respond. This is short-sighted stupidity, and very dangerous."[120]
>
> "Russia is patient and does not intimidate anyone with its military advantage. But it has modern unique weapons capable of destroying any adversary, including the United States, in the event of a threat to its existence."[121]
>
> "We have corrected the conditions for use of nuclear weapons to resist aggression with conventional forces not only in large-scale wars, but also in regional or even a local one…. There is also a multiple-options provision for use of nuclear weapons depending on the situation and intentions of the potential enemy. In a situation critical for national security, we don't exclude a preventive nuclear strike at the aggressor."[122]

---

[117] Guy Faulconbridge, "Russia's Medvedev warns United States: messing with a nuclear power is folly," *Reuters*, July 6, 2022, available at https://www.reuters.com/world/russias-medvedev-warns-united-states-messing-with-nuclear-power-is-folly-2022-07-06/.

[118] Guy Faulconbridge, "Russia warns of nuclear, hypersonic deployment if Sweden and Finland join NATO," *Reuters*, April 14, 2022, available at https://www.reuters.com/world/europe/russia-warns-baltic-nuclear-deployment-if-nato-admits-sweden-finland-2022-04-14/.

[119] John Gittings, "Yeltsin gives US nuclear warning," *The Guardian,* December 9, 1999, available at https://www.theguardian.com/world/1999/dec/10/russia.chechnya.

[120] "Putin ally says Russia has weapons to destroy US if its existence is threatened," *Reuters*, March 27, 2023, available at https://www.reuters.com/world/europe/putin-ally-says-russia-has-weapons-destroy-us-if-its-existence-is-threatened-2023-03-27/.

[121] Ibid.

[122] "Russia to broaden nuclear strike options," *Russia Today*, October 14, 2009, available at https://www.rt.com/news/russia-broaden-nuclear-strike/.

Alexander Venediktov (Deputy Secretary of Russia's Security Council)

> "Kyiv is well aware that such a step [meaning Ukraine's accession to NATO] would mean a guaranteed escalation to World War Three."[123]

Sergei Ivanov (then-Defense Minister)

"As regard to [the] use of nuclear weapons in case of aggression, of course [it will use them in this case]. What else were they built for?"[124]

Sergey Lavrov (Foreign Minister of the Russian Federation)

> "In the context of deterrence, the possession of nuclear weapons is today the only possible response to some significant external threats to the security of our country."[125]

> "It is a medical fact that they have destroyed the entire international legal system of deterrence and strategic stability. It's a good thing they do not want a nuclear war, no one wants it. And the system of agreements, which has been destroyed by the United States, exists specifically to reduce its risk and to make this risk negligible at all."[126]

> "As during the Cold War, we have reached the dangerous, possibly even more dangerous, threshold."[127]

> "We are really in a hot phase of a war because Ukrainian Nazis are fighting mostly with US weapons."[128]

---

[123] Guy Faulconbridge and Lidia Kelly, "Russian official warns of World War Three if Ukraine joins NATO," *Reuters*, October 13, 2022, https://www.reuters.com/world/europe/admission-ukraine-nato-can-lead-third-world-war-russian-official-2022-10-13/.

[124] "Russia Reserves Right to Preemptive Strikes," Moscow *Agentstvo Voyennykh Nosostey*, February 7, 2007.

Transcribed in Open Source Center, Doc. ID: CEP200707950213; quoted in Keith Payne, Testimony before the Senate Appropriations Subcommittee on Energy and Water Development, U.S. Senate, June 25, 2012, p. A-1, available at https://nipp.org/wp-content/uploads/2021/05/July-25-testimony-for-web.pdf.

[125] "Russia sees nuclear weapons as only possible response to some threats — Lavrov," *TASS*, August 18, 2023, available at https://tass.com/russia/1662459.

[126] "No one wants nuclear war, but US destroyed entire deterrence system – Lavrov," *TASS*, June 28, 2023, available at https://tass.com/politics/1639971.

[127] Michelle Nichols, "At UN, Russia's Lavrov Warns World at 'Dangerous Threshold'," *Reuters*, April 23, 2023, available at https://www.usnews.com/news/world/articles/2023-04-24/un-chief-criticizes-russia-at-un-meeting-chaired-by-lavrov.

[128] "Lavrov says Russia and US are in 'hot phase of war'," *The National News*, April 6, 2023, available at https://www.thenationalnews.com/world/europe/2023/04/06/lavrov-says-russia-and-us-are-in-hot-phase-of-war/.

"The danger [of nuclear war—editorial comment] is serious, real. It can't be underestimated."[129]

"If it comes to aggression against Russian territory, which Crimea and Sevastopol are parts of, I would not advise anyone to do this. We have the doctrine of national security, and it very clearly regulates the actions, which will be taken in this case."[130]

Maria Zakharova (Spokesperson of the Russian Foreign Ministry)

"The greatest danger is that with the aggressive policies of inflicting a strategic defeat on Russia in the Ukrainian conflict they have provoked themselves the United States and NATO continue to raise the stakes and become drawn ever deeper into military confrontation. It is obvious that such a policy, which we qualify as reckless, is capable of leading to a direct armed clash between nuclear powers."[131]

Sergei Ryabkov (Deputy Foreign Minister of the Russian Federation)

"Our, as the Russian President put it, 'competitive advantage' in this domain is a countermeasure aimed at counterbalancing NATO's superiority in some other aspects of their aggregate military potential."[132]

"We are working to prevent relations with the U.S. from plunging into the abyss of an open armed conflict. We are already standing on the edge, on the edge of this precipice."[133]

"I wouldn't want to dive into a discussion about whether the likelihood of a nuclear conflict is high today, but it is higher than anything we have had for the past few decades, let's put it that way."[134]

---

[129] "Russia Warns of Nuclear War Risk as Ukraine Talks Go On," *Bloomberg News*, April 26, 2022, available at https://www.bloomberg.com/news/articles/2022-04-26/russia-warns-of-real-nuclear-war-risk-as-ukraine-talks-go-on?leadSource=uverify%20wall.

[130] Zachary Keck, "Russia Threatens Nuclear Strikes Over Crimea," *The Diplomat*, July 11, 2014, available at https://thediplomat.com/2014/07/russia-threatens-nuclear-strikes-over-crimea/.

[131] Vladimir Smirnov, "US, NATO's aggressive policies may result in clash between nuclear powers — Russian MFA," *TASS*, June 21, 2023, available at https://tass.com/defense/1636187.

[132] "NATO attempting to put pressure on Russia, China in quest for nuclear dominance – diplomat," *TASS*, July 1, 2023, available at https://tass.com/politics/1641407.

[133] Helen Regan and Yulia Kesaieva, "US rejects Russia's 'ludicrous claim' it was behind alleged Kremlin attack; Moscow warns of conflict," *CNN*, May 5, 2023, available at https://www.cnn.com/2023/05/04/europe/russia-accuses-us-drone-attack-conflict-ukraine-intl-hnk/index.html.

[134] Caleb Davis, "Russia says risk of nuclear conflict at highest level in decades," *Reuters*, March 22, 2023, available at https://www.reuters.com/world/europe/russia-says-risk-nuclear-conflict-highest-level-decades-2023-03-22/.

Vladimir Yermakov (Director General of the Department for Non-proliferation and Arms Control of Foreign Ministry of the Russian Federation)

> "If the United States continues to follow its current course of confrontation with Russia, with the stakes constantly escalating on the verge of sliding into direct armed conflict, then the fate of START (nuclear arms treaty) may be a foregone conclusion."[135]

Nikolai Makarov (then-Chief of the General Staff)

> "Taking into account a missile-defense system's destabilizing nature, that is, the creation of an illusion that a disarming strike can be launched with impunity, a decision on pre-emptive use of the attack weapons available will be made when the situation worsens."[136]

> "The possibility of local armed conflicts virtually along the entire perimeter of the border has grown dramatically. I cannot rule out that, in certain circumstances, local and regional armed conflicts could grow into a large-scale war, possibly even with nuclear weapons."[137]

Yury Baluyevskiy (then-Chief of the General Staff)

> "If we see that these facilities pose a threat to Russia, these targets will be included in the lists of our planners—strategic, nuclear or others. The latter is a technicality."[138]

> "We do not intend to attack anyone. But all our partners must realize that for the protection of Russia and its allies, if necessary, the Armed Forces will be used, including preventively and with the use of nuclear weapons."[139]

---

[135] Lidia Kelly, "Russia warns again that risks of nuclear confrontation with US growing – TASS," *Reuters*, April 24, 2023, available at https://www.reuters.com/world/europe/russia-warns-again-that-risks-nuclear-confrontation-with-us-growing-tass-2023-04-25/#:~:text=April%2025%20%28Reuters%29%20-%20Risks%20of%20a%20direct,a%20senior%20Russian%20diplomat%20as%20saying%20on%20Tuesday.

[136] Andrew Kramer, "Russian General Makes Threat on Missile-Defense Sites," *The New York Times*, May 3, 2012, available at https://www.nytimes.com/2012/05/04/world/europe/russian-general-threatens-pre-emptive-attacks-on-missile-defense-sites.html.

[137] Zachary Keck, "Russia Threatens Nuclear Strikes Over Crimea," *The Diplomat*, July 11, 2014, available at https://thediplomat.com/2014/07/russia-threatens-nuclear-strikes-over-crimea/.

[138] Baluyevskiy Says US European Missile Defense Poses Threat to Russia," *InternetWebDigest*, RU, May 3, 2007. Translated in Open Source Center, Doc. ID: CEP20070504358001CEP2007054358001; quoted in quoted in Keith Payne, Testimony before the Senate Appropriations Subcommittee on Energy and Water Development, U.S. Senate, June 25, 2012, p. A-1, available at https://nipp.org/wp-content/uploads/2021/05/July-25-testimony-for-web.pdf.

[139] "Russia will use nuclear weapons if necessary - chief of staff," Moscow ITAR-TASS, January 19, 2008, transcribed in Open Source Center, Doc. ID: CEP20080119950015, quoted in quoted in Keith B. Payne, Testimony before the Senate

Anatoly Nogovitsyn (then-Defense Ministry Spokesman)

> "Poland is making itself a target. This is 100 percent [certain]. It becomes a target for attack. Such targets are destroyed as a first priority."[140]

Nikolay Solovtsov (then-Commander of the Strategic Missile Troops)

> "[Correspondent] Russia has reacted sharply to the statement by the prime ministers of Poland and the Czech Republic. The commander of Strategic Missile Troops [SMT], Nikolay Solovtsov, said that if need be, our missiles would be targeted on the new ABM facilities, if they are built."[141]
>
> "We have to take measures that will prevent the devaluation of the Russian nuclear deterrence potential. I do not rule out that our political and military administration may target some of our intercontinental ballistic missiles at the aforesaid missile defense facilities in Poland and the Czech Republic."[142]
>
> "I cannot exclude that, in the event that the country's highest military-political leadership will make the appropriate decision, the indicated missile defense facilities in Poland and the Czech Republic and also other similar facilities in the future could be selected as targets for our intercontinental ballistic missiles", the general stated. "The RVSN is compelled to take steps, which will not permit the devaluation of the Russian nuclear deterrence potential under any conditions".[143]

Appropriations Subcommittee on Energy and Water Development, U.S. Senate, June 25, 2012, p. A-1, available at https://nipp.org/wp-content/uploads/2021/05/July-25-testimony-for-web.pdf.

[140] Damien McElroy, "Russian general says Poland a nuclear 'target'," *Telegraph*, August 15, 2008, available at Russia threatens nuclear attack on Poland over US missile shield deal (telegraph.co.uk).

[141] "General says Russia may target missile defence sites in Eastern Europe," Moscow *Channel One Television*, February 19, 2007. Translated in Open Source Center, Doc. ID: CEP20070219950390; quoted in Keith Payne, Testimony before the Senate Appropriations Subcommittee on Energy and Water Development, U.S. Senate, June 25, 2012, p. A-1, available at https://nipp.org/wp-content/uploads/2021/05/July-25-testimony-for-web.pdf.

[142] "Solovtsov: Russian Missiles May Be Targeted At US ABM Sites in Europe," Moscow, *Agentstvo Voyennykh Novostey*, December 17, 2007. Transcribed by Open Source Center Doc. ID: CEP20071217950364; quoted in Keith Payne, Testimony before the Senate Appropriations Subcommittee on Energy and Water Development, U.S. Senate, June 25, 2012, p. A-1, available at https://nipp.org/wp-content/uploads/2021/05/July-25-testimony-for-web.pdf.

[143] Yuriy Gavrilov, "The Nuclear Reaction: Strategic Missile Complexes Could Be Retargeted at Poland and the Czech Republic," Moscow *Rossiyskaya Gazeta*, September 11, 2008. Translated by Open Source Center Doc. ID: CEP20080911358018; quoted in quoted in Keith Payne, Testimony before the Senate Appropriations Subcommittee on Energy and Water Development, U.S. Senate, June 25, 2012, p. A-1, available at https://nipp.org/wp-content/uploads/2021/05/July-25-testimony-for-web.pdf.

Andrey Shvaychenko (then Commander of the Strategic Missile Troops)

> "In peacetime, they are intended to ensure deterrence of large-scale non-nuclear or nuclear aggression against Russia and its allies. In a conventional war, they ensure that the opponent is forced to cease hostilities, on advantageous conditions for Russia, by means of single or multiple preventive strikes against the aggressors' most important facilities. In a nuclear war, they ensure the destruction of facilities of the opponent's military and economic potential by means of an initial massive nuclear missile strike and subsequent multiple and single nuclear missile strikes."[144]

Anatoly Antonov (Russia's Ambassador to the United States)

> "It is time to realize that in the event of a direct armed conflict between Russia and NATO countries, the United States will not be able to hide behind the ocean."[145]

Oleg Stepanov (Russia's Ambassador to Canada)

> "Once again, just to be clear: when you are not in the nuclear bloc [referring to the North Atlantic Treaty Organization], you are safe. When you join it, you become yet another target. We cannot believe that the alliance, including our Finnish neighbors, does not understand this truism. It's as plain as day."[146]

Mikhail Vanin (then-Ambassador of the Russian Federation to Denmark)

> "I do not think that the Danes fully understand the consequences if Denmark joins the US-led missile defence shield. If that happens, Danish warships become targets for Russian nuclear missiles."[147]

---

[144] "Russia may face large-scale military attack, says Strategic Missile Troops chief," Moscow *ITAR-TASS*, December 11, 2009. Translated by Open Source Center Doc. ID: CEP20091216950151; quoted in Keith Payne, Testimony before the Senate Appropriations Subcommittee on Energy and Water Development, U.S. Senate, June 25, 2012, p. A-1, available at https://nipp.org/wp-content/uploads/2021/05/July-25-testimony-for-web.pdf.

[145] Tom O'Connor, "Russia Ambassador Warns U.S. Resolution Pushes for Nuclear War Over Ukraine," *Newsweek*, June 22, 2023, available at https://www.newsweek.com/russia-ambassador-warns-us-resolution-pushes-nuclear-war-over-ukraine-1808577.

[146] "Countries Joining NATO Face Security Risks Including Nuclear - Russian Envoy to Canada," *Sputnik News*, April 20, 2023, available at https://sputnikglobe.com/20230420/countries-joining-nato-face-security-risks-including-nuclear---russian-envoy-to-canada-1109713089.html.

[147] Adam Withnall, "Russia threatens Denmark with nuclear weapons if it tries to join Nato defence shield," *The Independent*, March 22, 2015, available at https://www.independent.co.uk/news/world/europe/russia-threatens-denmark-with-nuclear-weapons-if-it-tries-to-join-nato-defence-shield-10125529.html.

Konstantin Gavrilov (Head of the Russian Delegation in Vienna on Arms Control)

> "After all, in the event of an escalation of the conflict—and this is what Washington's reckless actions are leading to—they will be the first to deal with possible catastrophic consequences."[148]

Gen. Andrey Gurulyov (ret.), Deputy of 8th State Duma

> "We shouldn't be afraid of this! I say, this is the time for drastic decisions! We should strike all of these groupings that the Ukrainians have, 4 shots out of a 152 mm weapon near Robotyne and this issue will be solved for good! Wait a bit until the wind blows it over, come in, take all the equipment that is left and keep going. And that's it! Use normal tactical nuclear munitions! Without a second thought! Because this is our heritage!"[149]

> "When we say that certain things aren't permitted, today is the moment when everything is permitted. For the 15th or the 25th time we say that only the strikes with tactical nuclear weapons against critically important objects, command centers, airfields, etc. will completely paralyze Ukraine. We shouldn't be afraid of this. With that, everything will suddenly end. First, there will be screaming and then a totally different conversation will start because the European countries will be next. I doubt they want their heads bashed with a nuclear bat. … Here is a key issue: we need a threat directly to the territory of the US. Alaska is the closet US territory to Russia. We can target Alaska with everything imaginable having increased our tactical nuclear potential, without involving strategic nuclear forces from the areas that can reach every part of Alaska. There will be nothing left of Alaska."[150]

Oleg Nilov (Member of the State Duma)

> "I do not rule out that this Ukroreich could turn Ukraine into a Ukropolis, God forbid, of course, but the situation is not stopping, it is developing, and unfortunately, there

---

[148] Konstantin Gavrilov, "НАТО будет провоцировать нас и проверять на прочность (NATO will provoke us and test our strength)," *Ria Novosti*, July 11, 2023, available at https://ria.ru/20230711/gavrilov-1883438436.html.

[149] Julia Davis [@juliadavisnews], Meanwhile in Russia: Vladimir Solovyov raged against Russian oligarchs who denounced Putin's invasion and endorsed the proposal by State Duma deputy Andrey Gurulyov to strike Robotyne with tactical nuclear weapons. [Tweet], 12:33 AM, August 30, 2023, available at https://twitter.com/JuliaDavisNews/status/1696742824899711291.

[150] Julia Davis [@juliadavisnews], Vladimir Solovyov and his fellow propagandists bemoaned the situation in Belgorod, Russia's lack of potential recruits and allies. They proposed nuking Alaska and sending imprisoned women to the frontlines. Weatherman advocated the use of climate weapons. [Tweet], :54 PM, May 23, 2023, available at https://twitter.com/JuliaDavisNews/status/1661188817078874112.

might be an answer, including with all available means of the Russian Armed Forces. Tactical nuclear weapon will not be sheathed for a long time."[151]

Ramzan Kadyrov (Head of Russia's region of Chechnya)

"In my personal opinion, more drastic measures should be taken, right up to the declaration of martial law in the border areas and the use of low-yield nuclear weapons."[152]

Dmitry Rogozin (Former Deputy Prime Minister of the Russian Federation, Former Director General of Roscosmos)

"Well on the whole it needs to be said that in accordance with our doctrine we are fully entitled to use tactical nuclear weapons because that's exactly why they exist. They're a great leveller for the moment when there is a clear disparity in conventional forces and hardware in the enemy's favour. So the best methods for destroying their [meaning Ukrainian—author comment] offensive is to use tactical nuclear weapons, with clear consequences of course. But at the present time I don't think there's any other option."[153]

Media Personalities and Think-Tank Experts

Sergei Karaganov (Chair of the Council on Foreign and Defence Policy, Adviser to Vladimir Putin)

"What is being decided on the battlefields in Ukraine is not only, and not so much, what Russia and the future world order will look like, but mainly whether there will be any world at all or the planet will turn into radioactive ruins poisoning the remains of humanity."[154]

"I have said and written many times that if we correctly build a strategy of intimidation and deterrence and even use of nuclear weapons, the risk of a

[151] Dmitry [@wartranslated], A deputy of the State Duma Nylov is reading from a paper the new threats of using nuclear weapons that would turn the "fuhrers of the Ukroreich" into "Ukropolis". Language worth a Russian politician. [Tweet], *Twitter*, 6:16 AM, Mat 30, 2023, available at https://twitter.com/wartranslated/status/1663489437249032194?s=20.

[152] Felix Light, "Kadyrov says Russia should use low-yield nuclear weapon," *Reuters*, October 1, 2022, available at https://www.reuters.com/world/europe/russia-says-its-troops-left-lyman-avoid-encirclement-2022-10-01/.

[153] Francis Scarr [@francis_scarr], Former deputy prime minister and Roscosmos state space agency director Dmitry Rogozin says Russia should use tactical nukes to "destroy" Ukraine's counter-offensive because "at the present moment there is no other option" [Tweet], *Twitter*, 7:45 AM, May 4, 2023, available at https://twitter.com/francis_scarr/status/1654089966836695043?s=20.

[154] Sergey Karaganov, "A Difficult but Necessary Decision," *Russia in Global Affairs*, June 13, 2023, available at https://eng.globalaffairs.ru/articles/a-difficult-but-necessary-decision/.

> "retaliatory" nuclear or any other strike on our territory can be reduced to an absolute minimum. Only a madman, who, above all, hates America, will have the guts to strike back in "defense" of Europeans, thus putting his own country at risk and sacrificing conditional Boston for conditional Poznan. Both the U.S. and Europe know this very well, but they just prefer not to think about it."[155]

> "But what if they do not back down? What if they have lost the instinct of self-preservation completely? In this case we will have to hit a bunch of targets in a number of countries in order to bring those who have lost their mind to reason."[156]

Margarita Simonyan (Editor-In-Chief, RT and Rossiya Segodnya)

> "I'd like to see the country that arrests Putin according to The Hague's ruling. Eight minutes later. Or whatever the flight time to its capital is."[157]

> "The Western media is writing about that too, one strike of Sarmat is enough to destroy the coast let's just watch it. This missile can destroy half the coast of some large continent, which we may not like due to its aggressive politics."[158]

> "Either we lose in Ukraine, or the Third World War starts. I think World War Three is more realistic, knowing us, knowing our leader. The most incredible outcome, that all this will end with a nuclear strike, seems more probable to me than the other course of events."[159]

Vladimir Solovyov (Russia's Chief Propagandist)

> "Why are we still dancing around? I think we should strike. As soon as they officially deliver [F-16s], we conduct a strike with tactical nuclear weapons. They're convinced we won't do it. This is why it should be done."[160]

---

[155] Ibid.

[156] Ibid.

[157] "Russian propagandists' responses to potential Putin arrest: from nuclear threats to mockery," *Ukrainska Pravda*, March 17, 2023, available at https://news.yahoo.com/russian-propagandists-responses-potential-putin-210443675.html.

[158] Ebun Hargrave, "Russian pundit reveal why Putin holding back on nuclear weapons 'We pity all of them'," *Express*, May 25, 2022, available at https://www.express.co.uk/news/world/1615134/Putin-Nuclear-Weapons-War-Ukraine-RT-Margarita-Simonyan-Kharkiv-Military-Army-VN.

[159] Kate Buck, "Putin would prefer nuclear strike to defeat in Ukraine, says Russian state TV chief," *Yahoo News*, April 28, 2022, available at https://news.yahoo.com/putin-rather-press-nuclear-button-lose-ukraine-war-rt-broadcaster-151707840.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAACEIoJGTGQUQdDa0jgNLbOtZgMdvzXXnU0yhwR5d5H0jvzsqd-n_MhnMavQPkDiIUgoKzn5Oj3tw4VJZ14bgkHo6iT7gft1OSBDcQcPXbjbb4rJvPRaZLQmHKru0CmcQM5wedp89OhDZAWJuSjCUZyUCnGg-uBIlzCOo9rTd5E7p.

[160] Isabel van Brugen, "Putin's Cheerleaders Argue Over Nuclear Strikes on Ukraine," *Newsweek*, August 22, 2023, available at https://www.newsweek.com/putin-state-tv-host-russia-ukraine-nuclear-weapons-1821567.

"The Americans say they won't supply long-range missiles, the British say "We will! We will!" And why are there still undersea cables leading to Britain? Why are all the pipelines still there? Why aren't we responding in the most brutal way, asymmetrically, to Britain? We are now out of the treaty, which is what we should have done a long time ago. I think we need to abandon a ban on nuclear weapons testing. We should conduct tests, show the nuclear weapons we have, blow something up somewhere, and target our Strategic Missile Forces, first of all targeting Britain. And all those countries that are providing support. And give them an ultimatum: You supply the missiles, we'll bomb."[161]

"I hope they understand that if we lose, we are taking the whole world with us."[162]

"I believe that we should withdraw from the treaty on moratorium on the testing of nuclear weapons in all environments. We need to test nuclear weapons so the West can see that they exist and see how powerful they are. And give an ultimatum to the NATO countries by targeting our nuclear strategic forces on the government quarters and on launch sites of those countries that have nuclear capabilities, on the quarters of those countries that support the Nazi regime. And put an ultimatum. If they don't want to hear it, that means there will be no more London, no more Berlin, no more Paris, no more Washington, D.C."[163]

"One Sarmat means minus one Great Britain."[164]

Dmitry Kiselyov (General Director, RT, Kremlin-backed journalist)

"Why do we need a world if Russia is not in it?"[165]

---

[161] Anton Gerashchenko [@gerashchenko], Attention, Great Britain! Russian propagandist Solovyev threatens the UK with a nuclear strike and cutting their underwater cables. [Tweet], *Twitter*, 12:29 PM, May 11, 2023, available at https://twitter.com/Gerashchenko_en/status/1656697983977545728?s=20.

[162] Brendan Cole, "Russian State TV Issues Stark Warning Over Threat of Defeat," *Newsweek*, May 17, 2023, available at https://www.msn.com/en-us/news/world/russian-state-tv-issues-stark-warning-over-threat-of-defeat/ar-AA1biFQt?rc=1&ocid=winp1taskbar&cvid=f27a8f8c98fb4753bd5324d84d12565d&ei=17.

[163] Anton Gerashchenko [@gerashchenko], "I firmly believe that nuclear war is inevitable," says Russian propagandist Solovyev, suggesting that Russia start it. He wants to aim Russian nuclear weapons at London, Paris, Berlin and Washington. [Tweet], *Twitter*, 8:25 AM, May 10, 2023, available at https://twitter.com/Gerashchenko_en/status/1656274238456709121?s=20.

[164] Evan Simko-Bednarski, "Russian state TV threatens to wipe out 'boorish' UK with ballistic missile," *New York Post*, April 27, 2022, available at https://nypost.com/2022/04/27/russian-state-tv-threatens-to-wipe-out-uk-with-ballistic-missile/.

[165] "'Why Do We Need a World if Russia Is Not In It?': State TV Presenter Opens Show With Ominous Address," *Moscow Times*, February 28, 2022, available at https://www.themoscowtimes.com/2022/02/28/russians-race-for-cash-as-ruble-plummets-a76655.

In 2019, Dmitry Kiselyov showed potential nuclear targets in the United States on his TV show.[166]

"Russia is the only country in the world that is realistically capable of turning the United States into radioactive ash."[167]

Igor Korotchenko (Editor of the National Defense Newspaper)

"In response to your attacks on Russian military or civilian facilities, the first strike will be a preventative limited strike against targets on the territory of the United States of America."[168]

Yevgeny Satanovsky (Political Commentator)

"The question is, will it all reach the nuclear phase or not? Because if it keeps going like this, it will definitely happen. And it won't be tactical [but strategic] nuclear weapons that we'll be striking at Ukraine, believe me, the United States of America, and all the targets that need to be in the crosshairs. They have been there since Soviet times and those in the U.S., and those in Europe, and those in other places where American nuclear weapons are concentrated, where there are American military bases. S o I wish that on the way to the nuclear phase we could finish off the enemy without crossing the Rubicon. But if we have to, what can we do?"[169]

Dr. Michaela Dodge is a Research Scholar at the National Institute for Public Policy and an adjunct professor at the Graduate School of Defense and Strategic Studies, Missouri State University.

[166] Andrew Osborn, "After Putin's warning, Russian TV lists nuclear targets in U.S.," *Reuters*, February 25, 2019, available at https://www.reuters.com/article/us-usa-nuclear-russia-idUSKCN1QE1DM.

[167] Lidia Kelly, "Russia can turn US to radioactive ash - Kremlin-backed journalist," *Reuters*, March 16, 2014, available at https://www.reuters.com/article/ukraine-crisis-russia-kiselyov-idUSL6N0MD0P920140316.

[168] Brendan Cole, "Russian State TV Threatens Nuclear Strike on US," *Newsweek*, September 4, 2023, available at https://www.newsweek.com/kremlin-nuclear-strike-us-popov-korotchenko-1824285?amp=1.

[169] Gerard Kaonga, "Russia State TV Warns U.S. a Nuclear Strike Will Happen—'In the Crosshairs'," *Newsweek*, June 13, 2023, available at https://www.newsweek.com/russia-state-tv-us-nuclear-strike-happen-ukraine-war-1806315.

ANALYSIS

CAN NUCLEAR WAR STAY LIMITED?

Matthew R. Costlow

> *On the one hand, we want the Soviets to think that the situation might get out of hand, while on the other hand we want to persuade them to not let it get out of hand. The Soviets might stop without a major nuclear exchange. I don't believe they have an unlimited urge to escalate. I think they will be looking for excuses* not *to escalate.*[1]
>
> ~ Henry A. Kissinger

Introduction

One of the major unanswered questions, mercifully, of the nuclear age is whether a nuclear war between two nuclear-armed powers can be limited.[2] Assuming political leaders have the operational means (e.g., survivable command and control, plans that accurately reflect political intent, etc.), can the "dynamics of mutual alarm," as Thomas Schelling described them, be contained by the decisions of state leaders?[3] Some have answered this theoretical question by saying that limited nuclear war is nearly impossible since there will be immense pressure on leaders to conduct a first strike against the adversary before the adversary does the same. Others say that limited nuclear war will likely escalate eventually to general nuclear war as state leaders are drawn into an ever-shrinking set of available options. Still others say that we do not, and cannot with any certainty, know whether nuclear war can remain limited—but not making the attempt to prepare for limitation only ensures that the conflict ends in one of two ways: surrender or suicide.

The question remains, however, why examine the potential limits of a phenomenon that has not been observed? Why ask whether nuclear war can remain limited when one can just examine the factors that might promote restraint with the caveat that "none of this may be possible" stated at the end? It is important for two main reasons. First, there is a tendency among many Western analysts, and perhaps humans generally, to categorize unlikely and horrible possibilities as simply "impossible"—a type of coping mechanism. As Herman Kahn stated, "I suspect that many in the West are guilty of the worst kind of wishful thinking when,

---

[1] Emphasis in original. Henry Kissinger, as quoted in, *Memorandum for Mr. Kissinger: Minutes of the Verification Panel Meeting Held August 9, 1973, Subject: Nuclear Policy (NSSM 169)* (Washington, D.C.: National Security Council, August 9, 1973), available at https://history.state.gov/historicaldocuments/frus1969-76v35/d22.

[2] This article draws from Chapter 3 in Matthew R. Costlow, *Restraints at the Nuclear Brink: Factors in Keeping War Limited* (Fairfax, VA: National Institute Press, July 2023), *Occasional Paper*, Vol. 3, No. 7, available at https://nipp.org/wp-content/uploads/2023/07/OP-Vol.-3-No.-7.pdf.

[3] Thomas C. Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 2008 edition, first published 1966), Chapter 6.; See also, Robert Jervis, *The Meaning of the Nuclear Revolution* (Ithaca, NY: Cornell University Press, 1989), pp. 87-98.

in discussing deterrence, they identify the unpleasant with the impossible."[4] Yet, allowing this mindset to dominate would leave the United States in the worst possible position should the worst possible day arrive—when cool-headed planning and analysis of how to keep nuclear war limited is most needed, it will be in the shortest supply.

The second reason for undertaking this important task is that there is a great risk if the belief takes hold in leaders and analysts that nuclear war cannot remain limited, then that could drive a self-fulfilling prophecy. If political and military leaders believed firmly that limited nuclear war inevitably leads to general nuclear war, then that could motivate them to build first strike nuclear postures and employ them as early as possible, not just in a conflict, but even in a crisis. Therefore, far from the caricature that many critics paint of nuclear "warfighters," recognizing the possibility that nuclear war could potentially remain limited, and for which preparations should be made, appears to be the more measured approach that seeks to avoid the extremes of forcing a President to choose between surrender or suicide.

This *analysis* proceeds in three parts. First, it examines how nuclear scholars through the decades have approached the topic of whether nuclear war could remain limited. Second, it briefly surveys how political and military leaders, both in the United States and in China and Russia, have perceived the possibility of limiting nuclear war. Finally, it examines some of the assumptions of those who believe limiting nuclear war is unlikely to be possible and thus not worth investing much time or capability in pursuing as an objective.

Nuclear Scholars and the Question of Limited Nuclear War

For all the differences among most of the major nuclear scholars that have influenced U.S. nuclear policy over the decades, they appear to agree generally on the question of whether nuclear war between two major powers can remain limited at some level. Note that this is distinct from the *likelihood* that nuclear war could remain limited—the former denotes whether it is *possible*, the latter whether it is *likely*.

Among the most confident that nuclear war could, and probably would, stay limited, Herman Kahn wrote consistently about how state leaders would likely seek any chance they could to achieve war termination during a nuclear conflict. He stated, "There is a paradox that occurs in estimates of escalation and the effects of the fear of escalation. It is the fear of eruption that makes it likely that there will be little or no escalation after the first use of nuclear weapons. Both sides are likely to be so frightened—both the attacker and the defender—that they are very likely to agree to some kind of compromise and cease-fire almost immediately after such a use."[5] Similarly, Henry Kissinger stated in 1957, "It is often argued that since limited wars offer no inherent guarantee against their expansion, they may gradually merge into all-out war. On purely logical grounds, the argument is unassailable. But it assumes that the major protagonists will be looking for an excuse to expand the war

[4] Herman Kahn, *On Thermonuclear War* (Princeton, NJ: Princeton University Press, 1960), p. 286.

[5] Herman Kahn, *On Escalation: Metaphors and Scenarios* (New York: Frederick A. Praeger, 1965), pp. 110-111.

whereas in reality both sides will probably grasp at every excuse, however illogical, to keep a thermonuclear holocaust from occurring."[6]

Bernard Brodie also believed that state leaders might be able to control the scope and scale of nuclear war. He stated, for instance, "Controlling escalation is really an exercise in deterrence, which means providing effective disincentives to unwanted enemy actions. Contrary to widely endorsed opinion, the use or threat of nuclear weapons in tactical operations seems at least as likely to check as to promote the expansion of hostilities."[7] Another nuclear scholar, Albert Wohlstetter, wrote on similar points and stated that there were inherent reasons why political and military planners would look to avoid unnecessary damage during attempts to limit war, for the purposes of both controlling escalation and accomplishing objectives. Wohlstetter wrote in favor of U.S. limited nuclear options, in part because the Soviet Union appeared to be preparing for just such a contingency; thus, as Wohlstetter pointed out, the Soviet leadership could decide for very rational reasons to attempt to limit nuclear warfare:

> Letting things get out of their political control, however, control that could decide the life or death of the party and their political order, is quite another matter. It has nothing whatsoever to recommend it in the Bolshevik canon… The Politburo does not encourage spontaneity in the use of nuclear weapons. Nor is there any evidence that, after a few nuclear weapons were used, the Politburo would allow everyone in physical possession of them to fire at will. The Soviets will, of course, use *threats* of uncontrollability. We have seen some outstanding examples. But the threats were quickly followed by a demonstration that the Soviet political leaders had no intention of letting things get out of control.[8]

These examples of Kahn, Kissinger, Brodie, and Wohlstetter—all staunch defenders of sizable U.S. nuclear arsenals to meet their calculation of basic deterrence requirements—demonstrate a common belief that a state's leadership could rationally pursue attempts to limit nuclear war. But what of the nuclear scholars who viewed U.S. nuclear deterrence requirements as less demanding, requiring fewer nuclear forces?

Perhaps the preeminent nuclear scholar from this school of thought, Thomas Schelling, answered the question directly from an interviewer in 1986 about whether a nuclear war must inevitably escalate, and stated:

> Will any nuclear war, no matter how it starts, or where it starts or on what scale it starts inevitably escalate to a huge intercontinental war? Certainly not inevitably. I really think it's doubtful whether even a nuclear war that began in some theatre would escalate to a large-scale intercontinental nuclear exchange… But, you see, if

---

[6] Henry A. Kissinger, *Nuclear Weapons and Foreign Policy* (New York: Harper & Brothers, 1957), pp. 143-144.

[7] Bernard Brodie, *Escalation and the Nuclear Option* (Santa Monica, CA: The RAND Corporation, June 1965), Memorandum RM-4544-PR, p. vi.

[8] Emphasis in original. Albert Wohlstetter, "Between an Unfree World and None: Increasing our Choices," *Foreign Affairs*, Vol. 63, No. 5 (Summer 1985), p. 986.

> you just ask the question, would anybody initiate the use of nuclear weapons on a small scale, if he expected it to escalate, the answer must be 'no.' If you expect it to escalate, you're wasting the opportunity to start the big war on your own terms. You're simply giving the enemy the chance to reciprocate in a manner of his choosing. Therefore the mere use of nuclear weapons, whether by us or by the Soviets, ought to be a pretty convincing demonstration that the war is not expected and not intended to get a whole lot larger. And that should put both sides on notice that we've now got a nuclear war that we're going to have to get stopped.[9]

Schelling made a similar point in one of his earlier writings: "If, though, the force can be made capable of surviving (and, if not, it can probably not seriously threaten retaliation but only threaten to make the enemy take the initiative), then the one-shot retaliatory strike that spends all weapons, and all bargaining power, in a futile act of heroic vengeance—an act so lacking in purpose as to make even the threat a dubious one—can be abandoned for a more serviceable strategy."[10]

Finally, Robert Jervis was arguably the least confident that nuclear war could ultimately be controlled; but, even he thought that such a strategy could be rational for a state leader to adopt. For instance, he stated, "A state unwilling to wage all-out war in responding to a major provocation could rationally decide to take actions which it believed entailed, say, a 10 percent chance of leading to such a war… Risk, of course, puts pressure on both sides. But a given level of risk may be acceptable to the defender of the status quo and intolerable to an aggressor; the threat to raise the risk to a given level may be credible when made by the former and not credible when made by the latter."[11] Or, as he stated in his classic work *The Meaning of the Nuclear Revolution*, "On the one hand, decision makers do not see a clear line that, once crossed, would definitely produce total war. Thus, the threat to use limited violence has at least some credibility; implementing it is not tantamount to committing national suicide. On the other hand, decision makers could not be sure that escalation would not occur."[12]

This brief survey of some of the leading nuclear scholars indicates that, despite many other differences on matters of deterrence, there is general agreement that it is not inevitable that nuclear war at a lower level must escalate to an all-out unrestrained conflict. Rather, a broad array of respected nuclear scholars agree that there are rational, even existential, reasons why state leaders would seek early on in a nuclear conflict to end it very quickly—again, assuming they have the operational means to do so.

---

[9] Thomas C. Schelling, as quoted in, "Interview with Thomas Schelling, 1986," *GBH Archives*, March 04, 1986, available at https://openvault.wgbh.org/catalog/V_5293F77426B84C68A360BD6283ACF4FC.

[10] Thomas C. Schelling, *Controlled Response and Strategic Warfare*, Adelphi Paper #19 (London: Institute for Strategic Studies, June 1965), p. 11.

[11] Robert Jervis, *The Illogic of American Nuclear Strategy* (Ithaca, NY: Cornell University Press, 1984), p. 134.

[12] Jervis, *The Meaning of the Nuclear Revolution*, op. cit., p. 81.

Survey of Key U.S. Leaders and Chinese and Russian Nuclear Doctrine

For nuclear war to be controllable to some significant degree, key political and military leaders on both sides likely will need to believe *or act as if they believe* nuclear war can be controlled. Some leaders like U.S. Secretary of Defense Harold Brown, as seen below, may have serious doubts that nuclear war can be controlled, but who believe nevertheless that the United States should still endeavor to do so. For the purposes of promoting restraint during war then, the key is that leaders act, and be seen as acting, in a way that demonstrates they *want* to control the scope of conflict. If both parties believe that control is possible, more desirable than the potential consequences of unrestrained nuclear war, and each party senses its opponent holds the same belief, then there is a chance that nuclear war could remain limited.

U.S. Secretary of Defense James Schlesinger was one of the primary proponents of NSDM 242, which highlighted the need to develop additional limited nuclear options for the President to respond more credibly in a greater number of scenarios, including limited nuclear employment. This effort became public and sparked accusations of "nuclear warfighting" and lowering the threshold for nuclear attack, to which Schlesinger responded in his *Annual Report* to Congress:

> Certainly it would be foolhardy to preclude the possibility that a nuclear conflict could escalate to cover a wide range of targets, which is one more reason why limited response options are unlikely to lower the nuclear threshold. But I doubt that any responsible policymaker would deliberately want to ensure escalation, and forego the chance for an early end to a conflict, by refusing to consider and plan for responses other than immediate, large-scale attacks on cities. Surely, even if there is only a small probability that limited response options would deter an attack or bring a nuclear war to a rapid conclusion, without large-scale damage to cities, it is a probability which, for the sake of our citizens, we should not foreclose.[13]

Here, Secretary Schlesinger emphasizes the idea that even if, as some critics believed, the likelihood of escalation restraint is low, the benefits of either deterring attack or ending a nuclear war quickly are so high that making the attempt to control escalation is both prudent and an obligation.

Other senior U.S. defense leaders, such as Secretary of Defense Harold Brown, were more explicit in their beliefs about the unlikelihood of controlling escalation—but they still believed the goal should remain the same. As Secretary Brown stated before Congress, "… I remain highly skeptical that escalation of a limited nuclear exchange can be controlled, or that it can be stopped short of an all-out, massive exchange. Second, even given that belief, I am convinced that we must do everything we can to make such escalation control possible,

---

[13] James R. Schlesinger, *Annual Defense Department Report, FY 1976 and FY 197T* (Washington, D.C.: Department of Defense, February 5, 1975), pp. II-6-II-7, available at https://history.defense.gov/Portals/70/Documents/annual_reports/1976-77_DoD_AR.pdf?ver=5Yhnnc5giX2RjfQtSjD-Vw%3d%3d.

that opting out of this effort and consciously resigning ourselves to the inevitability of such escalation is a serious abdication of the awesome responsibilities nuclear weapons, and the unbelievable damage their uncontrolled use would create, thrust upon us."[14]

Or, as Secretary of Defense Caspar Weinberger stated in his *Annual Report* to Congress:

> In order to ensure deterrence, we need to think about and plan against possible failures of deterrence. While we cannot predict how a conflict would escalate should deterrence fail, the credibility of our deterrent forces increases as we demonstrate flexibility in our response options and in our forces. That flexibility offers the possibility of terminating a conflict and reestablishing deterrence at the lowest level of violence possible, avoiding further destruction. Although there is no guarantee that we would be successful in creating such limits, there is every guarantee such limitations would not be achievable if we do not attempt to create them.[15]

In each of these examples, senior U.S. defense leaders express varying levels of confidence that nuclear war would stay limited, but all expressed a desire, and even an obligation, to try.

It is notable that these thoughts are not restricted to Cold War era U.S. officials. As the 2020 U.S. *Nuclear Employment Strategy* states, "Elements of U.S. nuclear forces, currently in the field or under development, provide flexible, credible, limited, and graduated response options so U.S. leadership has choices beyond inaction or large-scale responses… Limited and graduated U.S. response options provide a more credible deterrent to limited attack against the United States and our allies and partners than relying primarily on the threat of large-scale nuclear responses."[16]

As stated before, assuming political and military leaders on both sides have the required command and control capabilities to retain positive control, the three necessary components for nuclear war staying limited are that both sides believe nuclear war can be limited, that they prefer limited nuclear war to unlimited nuclear war, and that they sense the opponent (through his rhetoric or action) may believe the same.

It is worth examining this last point a little further—that the opponent must demonstrate some desire to also limit nuclear war. Russian nuclear doctrine and military journals indicate that officials have considered the possibility of limited nuclear war and would likely find it far more desirable than unlimited nuclear war. As an historical matter, this was not always the case. The Soviet Union, for instance, resolutely stood by its official position that limited

---

[14] Harold Brown, *Department of Defense Annual Report, Fiscal Year 1982* (Washington, D.C.: Department of Defense, January 19, 1981), p. 40, available at https://history.defense.gov/Portals/70/Documents/annual_reports/1982_DoD_AR.pdf?ver=2014-06-24-150904-113.

[15] Caspar W. Weinberger, *Report of the Secretary of Defense Caspar W. Weinberger to the Congress* (Washington, D.C.: Department of Defense, February 4, 1985), p. 46, available at https://history.defense.gov/Portals/70/Documents/annual_reports/1986_DOD_AR.pdf?ver=2016-02-25-102404-647.

[16] U.S. Department of Defense, *Report on the Nuclear Employment Strategy of the United States—2020* (Washington, D.C.: Department of Defense, 2020), p. 4, available at https://www.esd.whs.mil/Portals/54/Documents/FOID/Reading%20Room/NCB/21-F-0591_2020_Report_of_the_Nuclear_Employement_Strategy_of_the_United_States.pdf.

nuclear war was impossible and that even the smallest U.S. nuclear strike would cause a massive Soviet response.[17] After the Cold War, Soviet officials admitted that this rhetoric was simply meant to strengthen deterrence and, in general, they did not know how Soviet political leaders would react to a U.S. limited nuclear strike, other than to convene and discuss options.[18]

Currently though, the authors of perhaps one of the most authoritative reviews of Russian military doctrine and literature on limiting escalation conclude that the documents include discussions of, "…demonstrative measures intended to manage escalation during the crisis phase, and various approaches to inflicting damage that Russian military thinkers believe will manage an escalating conflict, or result in de-escalation."[19] Russia's latest official explanation of its nuclear policy, outlined in its 2020 *Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence*, states that, "In the event of a military conflict, this Policy provides for the prevention of an escalation of military actions and their termination on conditions that are acceptable for the Russian Federation and/or its allies."[20]

China's nuclear doctrine is less explicit than Russia's, yet even here there is some evidence in its military writings and force posture changes that Chinese officials consider limited nuclear war to be a real possibility. Christopher Twomey, for instance, cites a passage in the 2004 authoritative Chinese text *Science of Second Artillery Campaigns* that discusses holding nuclear forces in "reserve" for future operations—indicating that Chinese officials may believe limited nuclear war could be possible.[21] Noted commentators of Chinese nuclear strategy, Fiona S. Cunningham and M. Taylor Fravel, disagree with this particular interpretation, but interestingly note that, "A tactical nuclear weapons capability would provide strong evidence that China's nuclear posture had been influenced by the view that nuclear escalation could be controlled."[22] This, indeed, appears to be the course China is pursuing. Then-Commander of U.S. Strategic Command, ADM Charles Richard, testified "The PLA is developing and fielding precision strike nuclear delivery systems such as the dual use DF-26 intermediate-range ballistic missile (IRBM) and… the redesigned H-6N is capable of carrying a nuclear capable air-launched ballistic missile (ALBM) and conducting air-to-air

---

[17] John G. Hines, Ellis M. Mishulovich, and John F. Shull, *Soviet Intentions 1965-1985, Vol. 1: An Analytical Comparison of U.S.-Soviet Assessment During the Cold War* (McLean, VA: BDM Federal Inc., September 22, 1995), pp. 37-38, available at https://nsarchive2.gwu.edu/nukevault/ebb285/doc02_I_ch3.pdf.

[18] Loc cit.

[19] Michael Kofman, Anya Fink, and Jeffrey Edmonds, *Russian Strategy for Escalation Management: Evolution of Key Concepts* (Arlington, VA: CNA, April 2020), p. i, available at https://www.cna.org/reports/2020/04/DRM-2019-U-022455-1Rev.pdf.

[20] Vladimir Putin, "Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence," *MID.ru*, June 2, 2020, available at https://www.mid.ru/en/foreign_policy/international_safety/1434131/.

[21] Christopher P. Twomey, "China's Nuclear Doctrine and Deterrence Concept," chapter in, James M. Smith and Paul J. Bolt, eds., *China's Strategic Arsenal: Worldview, Doctrine, and Systems* (Washington, D.C.: Georgetown University Press, 2021), p. 55.

[22] Fiona S. Cunningham and M. Taylor Fravel, "Dangerous Confidence? Chinese Views on Nuclear Escalation," *International Security*, Vol. 44, No. 2 (Fall 2019), p. 88.

refueling for greater range and flexibility."[23] These new capabilities, plus the Department of Defense's view that Chinese strategists are increasingly discussing the utility of limited nuclear options, indicates that Chinese officials are at least open to the possibility that nuclear war could stay limited.[24]

Examining the Logic Behind Nuclear War Being Uncontainable

There is a certain logic, at least on the surface, behind the belief that nuclear war is, or is likely to be, uncontrollable in the end. Once state leaders begin employing the "ultimate weapon," the logic goes, the perceived pressures for other state leaders to limit their nuclear response in an attempt to signal a willingness to end the conflict will inevitably be lost in the fog of war, leading to a final desperate act of vengeance or vainglory. Among some of the more notable critiques, Herbert Scoville Jr., wrote:

> The procurement of new counterforce weapons generates pressures for escalation since both sides will know that unless they preempt a major element of their force could be wiped out. While it may be possible to limit a conflict if nuclear weapons were only used in the battlefield situation, it would seem very unlikely, if not impossible, for it to be controlled once even a few strategic weapons were exploded on the homeland of either the U.S. or the Soviet Union. Even a limited nuclear strike would result in millions of casualties and the pressure to retaliate would be tremendous. A flexible strategic capability only makes it easier to pull the nuclear trigger.[25]

Such strikes, according to Scoville, would likely result in unexpected damage and lead to mixed signals to the adversary leadership.

Desmond Ball, for his part, identified the likelihood of uncontrolled escalation as attributable to a number of areas, both technical (specifically the vulnerability of command and control) and political:

> The notion of controlled nuclear war-fighting is essentially astrategic in that it tends to ignore a number of the realities that would necessarily attend any nuclear exchange. The more significant of these include the particular origins of the given conflict and the nature of its progress to the point where the strategic nuclear exchange is initiated; the disparate objectives for which a limited nuclear exchange would be fought; the nature of the decision-making processes within the adversary

---

[23] Charles A. Richard, *Statement of Charles A. Richard, Commander, United States Strategic Command* (Washington, D.C.: Senate Armed Services Committee, April 20, 2021), p. 7, available at https://www.armed-services.senate.gov/imo/media/doc/Richard04.20.2021.pdf.

[24] U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China* (Washington, D.C.: Department of Defense, November 29, 2022), pp. 98-99, available at https://media.defense.gov/2022/Nov/29/2003122279/-1/-1/1/2022-MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA.PDF.

[25] Herbert Scoville Jr., "'First Use' of Nuclear Weapons," *Arms Control Today*, Vol. 5, No. 7/8 (July/August 1975), p. 2.

> governments; the political pressures that would be generated by a nuclear exchange; and the problems of terminating the exchange at some less than all-out level. Some of these considerations are so fundamental and so intemperate in their implications as to suggest that there can really be no possibility of controlling a nuclear war.[26]

Bruce Blair made similar points, stating, "… the unrealistic assumptions made about the cool logic of decision-making, the accuracy of intelligence on the nuclear strikes and their consequences, and the ability of both side [sic] to maintain command and control under conditions of nuclear attack… both the United States and the Soviet Union would quickly lose control over their nuclear arsenals in wartime, rendering all the notions of exploitable intra-war blackmail totally academic."[27] Such thinking is not confined to the scholarly realm; Senator Dianne Feinstein summarized her position, "Let me be crystal clear: There is no such thing as 'limited use' nuclear weapons…"[28]

Assessing the Criticisms

Yet, using some of the same assumptions that critics of limited nuclear options hold, there appear to be a number of logical gaps in their arguments. Specifically, there is the issue of their relative certainty that nuclear war will not come about because of the mutual fear of escalation—and yet, should a limited nuclear conflict occur nevertheless, that same overriding fear of escalation no longer appears to have the expected effect on leaders. It is unclear why, according to critics' logic, the failure of deterrence must result in the overwhelming pressure to escalate and not have the opposite effect, i.e., seeing the prospect of uncontrolled nuclear escalation more clearly after limited nuclear use may potentially dispel any expectations leaders had of victory at a tolerable cost, thus promoting restraint. As explained in a paper by the Joint Chiefs of Staff in 1977, "Enemy realization of the enormous destructive power available to be used after a limited exchange should serve to convince political leaders to stop and negotiate. These concepts were promulgated as Presidential guidance in NSDM 242."[29] In short, if the prospect of uncontrollable escalation is what deters escalation prior to conflict, the fact that conflict has broken out should not negate the possibility of deterrence serving to constrain further escalation.

---

[26] Desmond Ball, *Can Nuclear War Be Controlled?* (London: International Institute for Strategic Studies, Autumn 1981), *Adelphi Paper #169*, p. 36.

[27] Bruce G. Blair, "The Folly of Nuclear War-Gaming for Korea and South Asia," *Global Zero*, April 30, 2003, available at https://www.globalzero.org/wp-content/uploads/2019/03/BB_The-Folly-of-Nuclear-War-Gaming-for-Korea-and-South-Asia_04.30.2003.pdf.

[28] Dianne Feinstein, "There's No Such Thing as 'Limited' Nuclear War, *Washington Post*, March 3, 2017, available at https://www.washingtonpost.com/opinions/theres-no-such-thing-as-limited-nuclear-war/2017/03/03/faef0de2-fd1c-11e6-8f41-ea6ed597e4ca_story.html.

[29] U.S. Joint Chiefs of Staff, *Nuclear Weapons Employment Doctrine (U)* (Washington, D.C.: Joint Chiefs of Staff, May 9, 1977), p. 4, available at https://www.esd.whs.mil/Portals/54/Documents/FOID/Reading%20Room/Joint_Staff/99-A-0177_Nuclear_Weapons_Employment_Doctrine_9-May-1997.pdf.

For instance, Desmond Ball wrote, "Given the impossibility of developing capabilities for controlling a nuclear exchange through to favourable termination, or of removing the residual uncertainties relating to controlling the large-scale use of nuclear weapons, *it is likely that decisionmakers would be deterred from initiating nuclear strikes no matter how limited or selective the options available to them*."[30] This may be true in some cases, but if Ball is right that the deterrence effect of unlimited escalation works before nuclear employment, then he should not so quickly dismiss the deterrence effect after, for example, limited nuclear employment. Those same fears that affected state leaders before conflict would likely not disappear once a limited conflict breaks out—far from diminishing, in fact, they may increase in effect the more real the possibility of uncontrolled escalation becomes.

There is another apparent gap in the logic of believing that nuclear war likely would be uncontrollable: the survival instinct. True, as critics point out, the basic human instinct to survive may cause some state leaders to employ military options against their adversaries in a desperate attempt to escape destruction; but, that same instinct that underlies the "fight or flight" response may also prompt them to choose, however reluctantly, to exercise some restraint for fear of further destruction, i.e., to be deterred. As Herman Kahn pointed out, even those leaders seemingly most willing to take risks may find themselves on the precipice of destruction and change their minds: "Many have a feeling that thermonuclear war must be all-out and uncontrolled. This is a naïve point of view for two distinct reasons: first, it is not sensible, and second, it may not be true. Even if one tries to be uncontrolled, he may find himself being threatened so persuasively by an enemy that he will control himself at the last moment."[31]

Indeed, Kahn notes repeatedly in his works that political leaders are likely to understand the point that if they have any ambitions or goals, they must, at the most basic level, survive: "The first and most important of the attacker's objectives is *to limit damage to himself*… In all likelihood, the highest priority objective of the attacker will be to survive in some acceptable fashion. He might even be willing to choose damage-limiting tactics at the cost of seriously compromising his chances of victory."[32] This latter point is very important in studying the possibility of nuclear war remaining limited; except for the leader who is simply beyond deterrence, most political leaders have ambitions beyond those of the battlefield, not to mention the self-preservation instinct.[33]

Kahn, in his book *Thinking About the Unthinkable* further explains this point, writing, "But it is irrational for an attacker to ignore his own priority of interests in order to hurt the defender. The attacker is usually not nearly so interested in hurting the defender as he is in

---

[30] Emphasis in original. Ball, *Can Nuclear War Be Controlled?*, op. cit., p. 37.

[31] Herman Kahn, *Thinking About the Unthinkable* (New York: Horizon Press, 1962), p. 72.

[32] Emphasis in original. Kahn, *On Thermonuclear War*, op. cit., p. 165.

[33] Some political leaders in history could not be deterred, even with the most seemingly credible and destructive threats. For a few examples that span ancient to modern history, one need only look at the Melian dialogue, Adolf Hitler in his final months, and Fidel Castro and Che Guevarra during the Cuban Missile Crisis. For more on these examples and their relation to deterrence theory, see, Keith B. Payne, *The Fallacies of Cold War Deterrence and a New Direction* (Lexington, KY: The University of Kentucky Press, 2001).

the dual objects of achieving his military objective and escaping destruction himself."[34] The survival instinct, in other words, can cut both ways in a nuclear conflict. It can, according to some critics, place pressure on political leaders to believe their best chance for survival is through intra-war coercive bargaining with nuclear strikes on the adversary (with the possibility of uncontrolled escalation); or, the survival instinct can influence political leaders to reconsider their goals in light of new circumstances and choose to be deterred. Analysts can differ on which impulse will likely be stronger in a given situation, but by their own logic, critics of limited nuclear options should acknowledge the latter as a real possibility.

Conclusion

The question of whether nuclear war can remain limited is, thankfully, theoretical at this point—but informed speculation on the answers is certainly better than none at all. Some may be reluctant to discuss the factors that go into the planning process for nuclear escalation, perhaps for fear of sounding too provocative, but failing to do so may in fact make nuclear escalation more likely—whether by accident, misperception, or inadequate preparation. In effect, failing to prepare for limitation may facilitate the worst possible outcome. The stakes of escalation control are so high that even if informed speculation can only slightly increase the chances for success, then it is worth the effort.

A diverse range of nuclear scholars spanning the Cold War to today have written on their belief that nuclear war need not be uncontrolled and that there are rational reasons why political leaders will seek to limit the size and scope of their attacks in attempts to signal their limited political goals. There is no guarantee, each scholar acknowledges, that such signaling will work as intended, but there are at least reasons why each side would prefer a constrained war over an unconstrained war. Indeed, as stated by two noted scholars on the subject, "A progression of offers by each side is thus essential to ending the war short of the damage that would result if both sides refused to make any concessions and instead fought until one side could no longer continue. Both sides should prefer the outcome of this restrained war to that of an all-out war."[35]

There are three necessary components for nuclear war staying limited, assuming both sides have the requisite operational positive control capabilities over their forces: both sides must believe nuclear war can be limited, they must prefer limited nuclear war to unlimited nuclear war, and they must sense the opponent (through his rhetoric or action) may believe the same. These components may be necessary but not sufficient, given the fog and friction of war, and especially nuclear war, but they are important to note nonetheless. Senior U.S. defense leaders from the Cold War through today have agreed that limiting nuclear war is a possibility, even if there were differences in opinion over its likelihood. Russia's nuclear doctrine appears to assume nuclear war can be limited in some sense while China's nuclear

[34] Kahn, *Thinking About the Unthinkable*, op. cit., p. 61.

[35] Andrew J. Coe and Victor A. Utgoff, *Restraining Nuclear War* (Alexandria, VA: Institute for Defense Analyses, 2011), p. 6, available at https://apps.dtic.mil/sti/pdfs/ADA575230.pdf.

doctrine (and forces) appear to be in a great state of flux—although, even here, there are indications limited nuclear war is not deemed impossible.

Those who are skeptical that nuclear war can stay limited often present wholly valid points about the potential frailties of command and control structures, the stress of political pressure and military necessity, and the impact of emotions and fear on decision-making. Yet, many of these factors—far from agitating for escalation in all cases—may indeed promote restraint, thus presenting a gap in critics' logic. Rational thought, plus emotions, need not inevitably lead to escalation pressures only, since the basic human instinct for self-preservation may overwhelm even the strongest political and military logic for escalation. There is no guarantee, of course, but recognizing the possibilities and preparing appropriately may increase the prospects for limitation and help lead to improved tailored deterrence threats.

Ultimately, if leaders of nuclear-armed states decide nuclear war can stay limited, should stay limited, and can credibly communicate that belief through word or action, and retain positive control over their nuclear forces, there may be a chance to stave off escalation. As in all matters of statecraft, there is no guarantee of success, but the possibility itself should motivate analysts and decisionmakers all the more to prepare accordingly.

Matthew R. Costlow is a Senior Analyst at the National Institute for Public Policy and former Special Assistant in the Office of Nuclear and Missile Defense Policy, Department of Defense.

INTERVIEWS

As part of its continuing effort to provide readers with unique perspectives on some of the most significant national security issues of our time, National Institute has conducted a series of interviews with key subject matter experts on a variety of contemporary defense and national security topics. These expert views add important perspectives on the current debate and how the United States can best prepare to address forthcoming challenges successfully. This issue of National Institute's *Journal of Policy & Strategy* presents interviews with Gen. Glen D. VanHerck, Commander, North American Aerospace Defense Command (NORAD) and United States Northern Command (USNORTHCOM), and Michael Rühle, former Head of the Climate and Energy Security Section at NATO.

Gen. VanHerck discusses U.S. homeland defense posture and technology developments that are likely to affect future U.S. missile defense capabilities. He also comments on the importance of developing globally-integrated strategies and plans, the need to improve the defense acquisition process, efforts to share information with allies and partners, and the role of space in deterrence and defense. Mr. Rühle assesses the relevance and applicability of NATO's security strategy to the current international security environment. He also identifies the most serious security challenges facing the West and offers his perspective on allied views of nuclear deterrence, missile defense, and arms control.

An Interview with
General Glen D. VanHerck, USAF
Commander, North American Aerospace Defense Command (NORAD) and United States Northern Command (USNORTHCOM)

Q. You have described homeland defense as "the core mission of both USNORTHCOM and NORAD." In your experience, what is the most neglected aspect of U.S. homeland defense?

A. The greatest risk for homeland defense stems from our inability to change at the pace required by the strategic environment. Our lack of domain awareness, limited timely access to forces that are ready, trained, and equipped to operate throughout our areas of responsibility, including the Arctic, and a lack of resilient infrastructure, limit the capability of the U.S. military to fight in and from the homeland while protecting our ability to project power forward.

Q. What does Russia's missile use in Ukraine mean for the future of U.S. homeland missile defense programs?

A. Russia's illegal and immoral actions in Ukraine increase the very real risk of miscalculation and the conflict expanding beyond its current boundaries, placing the homeland at greater risk. We have seen Russia employ at least one type of its newest hypersonic technologies in combat in Ukraine, and we continue to watch Russia test and exercise highly capable weapons in Russia and in the Atlantic and Pacific Oceans, which pose new challenges to our defenses of maritime and air approaches to the homeland.

Q. The Command is in the process of developing the "Homeland Defense Design 2035." Why 2035? And can you discuss any preliminary findings from this effort?

A. We actually just completed Homeland Defense Design Next (2035). This is a forward-looking concept that captures my vision of how to start force design efforts now, to ensure we outpace our competitors in 2035. The vision aligns with projected threat developments beyond the Department's force development window of 2-7 years. This 15-year design timeframe allows for development and maturation of new concepts and technologies to address those projected threats to the homeland. A driving premise of this concept is that, while nuclear deterrence remains foundational to our strategic deterrence and homeland defense, projected developments in our strategic competitor's kinetic and non-kinetic capabilities exploit an increasing gap between our nuclear deterrence and conventional homeland defenses. HDD Next seeks to address this gap.

For example, in a future crisis or conflict, a potential exists for adversaries to disrupt our power projection from North America. Our lack of domain awareness, lack of available and ready forces, and lack of resilient infrastructure increase this risk. HDD Next is focused on countering these limitations. It defines and energizes the development of capabilities to increase our domain awareness, information dominance, and decision superiority.

As our competitors sprint to develop advanced cyber, maritime and hypersonic technologies, HDD Next recognizes our requirement to evolve homeland defense from a regional approach to one of globally-integrated layered defense. Our analysis of future conflict scenarios tells us we should minimize the use of expeditionary platforms and increase use of un-crewed autonomous capabilities, enabled through artificial intelligence and machine learning, to deter, and if necessary deny or defeat, threats to the homeland. Our analysis confirms that the United States and Canada must move quickly to improve domain awareness from the seafloor to space and cyberspace for all approaches to North America.

Q. What modern technology (U.S. or adversarial) do you see as potentially the most game changing for U.S. missile defense efforts in the next 5-10 years?

A. The only thing I can never give the Secretary of Defense and President enough of is time and decision space. More time and decision space allows for the development and employment of deterrence and defeat options, both kinetic and non-kinetic to include the use of the information space. The only way that we will be able to provide more time and

decision space is to process data and information more quickly and disseminate the information to decision makers. NORAD and USNORTHCOM are shifting away from solely missile defense to missile defeat, which includes endgame kinetic defeat to defend select critical infrastructure but also focuses on options early in the kill chain and preferably left of launch.

Homeland defense does not start in the homeland. It starts with my fellow combatant commanders and our asymmetric advantage of our network of allies and partners generating effects forward, both day to day and in crisis and conflict, through a network that enables globally integrated layered defense. By being able to operate within a potential adversary's observe-orient-decide-act (OODA) loop daily, we will create doubt in their minds making them question if they could ever be successful which equates to deterrence. And if deterrence fails, we will be able to create defeat and defend options more quickly enabling decision superiority. NORAD's and USNORTHCOM's ability to rapidly integrate systems, software, and platforms is critical to maintaining our competitive advantage, and we continue to prioritize digital transformation to enable agile decision-making for our leaders.

Q. What will be the role of autonomous systems in U.S. missile defense efforts? Do these technologies have the potential to increase the chance of miscalculation?

A. I believe there is a role for semi-autonomous systems in missile defense, and more broadly in defense of the homeland in general. Fully autonomous systems present an increased risk of removing the decision-maker from engagement decisions, which is why I assess that we will never fully automate our defense capabilities as a human must always be the check and balance on matters of homeland defense. Our new Homeland Defense Design Next (HDD-Next) incorporates both maritime and airborne un-crewed, semi-autonomous systems capable of providing domain awareness and generating kinetic and non-kinetic effects in the defense of critical infrastructure. Today we compete with the Joint Force for common platforms utilized for forward power projection. Our HDD-Next takes us in a direction to utilize less of the force required for forward power projection and in a direction of more efficient and effective force design for the future of Homeland Defense, including in the Arctic.

Q. You have testified that "our competitive edge is eroding" and "The successful defense of North America requires the Department of Defense to move beyond outdated assumptions and plans that do not fully reflect competitor capability, capacity, and intent to threaten the homeland." What specifically do you believe DoD needs to do to move beyond its current assumptions and plans in order to arrest the decline in U.S. competitive advantages?

A. First, we must move away from regionally-focused strategies and plans to globally-integrated and all-domain strategies and plans. Today's problems are all-domain and global yet we continue to develop regionally-focused solutions. I believe that the days of a single supported commander are over and that it's likely we'll have multiple supported

commanders simultaneously. We know that in a crisis with the PRC that we'll still have to deter other actors such as Russia, and likely have to continue to deter and defend from Violent Extremist Organizations (VEOs). Rather than build a regionally-focused plan that in some cases consumes 100 percent of Joint Force elements, I advocate for strategies and plans that start with global end states, global risk, and global resourcing, and then create realistic and executable globally-integrated strategies and plans that won't require us to adjudicate resources in crisis, which is where we would be today.

Second, our acquisition processes have served us well for the last four decades but yesterday's processes are too slow in today's digital and virtual world. Processes designed to build and field planes, ships, and tanks need to be adapted to field software-driven solutions. The use of virtual and data-driven capabilities should lead to parallel development and testing vice serial development and testing as we do today. We must go faster and accept more risk. Learning must include accepting failure, and moving on.

Finally, I believe that data and information are strategic assets. We must adapt to this reality and move quickly to field Combined Joint All-Domain Command and Control (CJADC2) capabilities and to share data and information across the stovepipes that exist today. Again, the only thing that I can never give enough of to the President or Secretary of Defense is time and decision space. We must link existing platforms and enable data-sharing with multiple commands, interagency, and international partners. Much of the data we need exists today, but we can't access it because of bureaucratic and organizational stovepipes. It is possible to rapidly improve domain awareness today if we streamline information sharing. NORAD and USNORTHCOM have demonstrated this potential through innovative programs such as Pathfinder and Northstar, and demonstrations including the Global Information Dominance Experiments (GIDE). It is especially important that we share information faster with our global network of Allies and partners, as they support a globally-integrated, layered defense of the homeland. This network of Allies and partners is our asymmetric advantage.

Q. Are U.S. missile defenses keeping pace with missile threats from North Korea and Iran? Are there additional missile defense activities the United States should pursue to ensure the security of the homeland against such threats?

A. I am confident in our current capability to defend the homeland against a limited ballistic missile threat from North Korea, however the pace and advancements we are seeing in North Korea's missile program are concerning to me. Advancements such as the Long Range Discrimination Radar (LRDR) and Next Generation Interceptor (NGI) are crucial for maintaining U.S. capability in the near-term and must be fielded in a timely manner. In the long term, U.S. policy must continue to address these evolving threats and inform investment decisions to maintain our advantage.

Q. Some believe the United States should continue to rely exclusively on nuclear deterrence to protect the homeland against nuclear threats from Russia and China. Others believe continued U.S. homeland vulnerability to great power nuclear threats is

increasingly risky and should be reconsidered. What is your view on defending the homeland against missile threats from Russia and China?

A. Strategic deterrence remains the foundation of homeland defense and it should remain so in the future. With that said, I do believe that integrated deterrence, or the use of all levers of our government, must continue to be part of homeland defense and this includes deterrence by denial which missile defeat falls into. Clearly this is a policy decision and our policy must always adapt to the growing threats from our potential adversaries. I am comfortable with today's policy that primarily relies on nuclear deterrence for ballistic missile threats from the PRC and Russia, however, as potential adversaries continue to develop capabilities to hold North America and our homeland at risk, I assess an increased risk to the strategic stability long assured by nuclear deterrence. We need policy to evolve to address these challenges, and NORAD and USNORTHCOM need the domain awareness to provide national leaders with the information and options they need.

Q. The role of space in homeland defense efforts has been limited primarily to sensors that can provide early warning and tracking of missile launches. Is it time to consider more robust space-based missile defenses, possibly to include space-based interceptors or directed energy systems?

A. Space based missile defense or defeat is clearly a policy decision. With that said, and as I stated before, policy must continually be assessed based on threats to our homeland. Our potential adversaries are not taking anything off the table and I don't believe that we should unilaterally do so either. I do believe that the space domain will play a more crucial role in the future of deterrence and defense. Today, U.S. Space Command manages the sensor network that provides NORAD and USNORTHCOM missile warning data, and without USSPACECOM doing that, I wouldn't have the domain awareness I need to execute the commands' missile defense and threat warning missions so crucial to continuity of government and nuclear force posture, both crucial to overall deterrence. Investments in space-based sensors are increasing the military's ability to detect a multitude of threats including hypersonic or other advanced threats. But missile defense also requires options to defeat or deter threats before they launch instead of focusing only on kinetic engagement. These options may be space-based in the future, and we may also have terrestrial options available now if we relook the processes to share information and integrate targeting across combatant commands and Allies and partners.

****

An Interview with
Michael Rühle
former Head of the Climate and Energy Security Section, NATO

Q. How do you assess the changes in the international strategic environment that have occurred over the past few decades? Is the NATO Alliance facing a more or less dangerous strategic situation and is the Alliance better prepared now to confront likely security challenges in the future?

A. Compared to the early 1990s, today's strategic environment looks far more dire: Russia's attack on Ukraine has brought war back to Europe, China is becoming increasingly assertive in pursuing its national interests, and the Middle East remains in turmoil. Other developments, ranging from Emerging Disruptive Technologies to climate change to fake news campaigns, also demonstrate that the environment in which NATO finds itself today is far more complex than in the immediate post-Cold War era. That said, if you look at NATO's transformation, notably since Russia's illegal annexation of Crimea in 2014, one can notice a steep learning curve. NATO's renewed focus on conventional and nuclear deterrence, and the substantial increase in Allied defense budgets are perhaps the most obvious signs, but one could also mention the designation of space and cyber as distinctive domains, the enhanced focus on resilience and new technologies, and the stronger role in the protection of critical energy infrastructure. Due to its multilateral makeup, things in NATO move slowly, but they do move.

Q. What do you consider to be the three most urgent strategic problems facing the West today and what should we do about them? Do European views on security threats align with or diverge from American views?

A. Problem No. 1: The rise of China as the West's global competitor. Both Europe and the United States have realized that China's rise could create a host of problems. However, I do not (yet) see an alignment of views between the transatlantic Allies. Since the U.S. debate is focused on the defense of Taiwan, it is far more alarmist. Moreover, only a few European allies have hard security interests in the Asia-Pacific region as well as the military power projection capabilities to defend them. That said, both the European Union and NATO have become much more outspoken about China as a country that challenges the West on many levels. In Europe, the discussion about de-risking supply chains or on the perils of selling important Western infrastructure to China is becoming far more serious – as it should be.

Problem No. 2: Russia's use of force to at least partly reverse Europe's post-1990 achievements. I do not believe that Putin wants to re-create the Soviet Union, but he has used military force several times to keep the West out of what his sidekick Medvedev called "Russia's zone of privileged interests." Lucky for us, the war in Ukraine is currently decimating Russian military power. Hence, a postwar Russia will be much weaker militarily,

which should temper Putin's ambitions. However, even after the war Russia will be a major player with whom the West will have to deal – through deterrence and, if at all possible, dialogue.

Problem No. 3: The rise of illiberalism within the West itself. It seems as if more and more people within Western societies respond to the world's complexities by reverting to simplistic answers, through denial, or even by getting hooked on conspiracy theories. This makes them particularly vulnerable to hostile fake news campaigns and to populists who promise easy fixes for all of their woes. This tendency towards a "post-truth" approach is a fundamental challenge for any responsible security policy, which must be based on rational thinking and facts. Illiberalism undermines Western cohesion, preventing the West from prevailing in the geostrategic competition that will increasingly characterize our strategic environment.

Q. In light of the ongoing Russian invasion of Ukraine, the greatest outbreak of Israeli-Palestinian violence in the Middle East in decades, Chinese threats to the autonomy of Taiwan, North Korea's accelerating missile program and nuclear threats, and Iran's enrichment of uranium to near weapons-grade levels, is NATO's 2022 Strategic Concept "fit for purpose" in addressing the security challenges of today and tomorrow?

A. In my view, the 2022 *Strategic Concept* pushes all the right buttons. It mentions Russia explicitly as a threat, and it refers to China as a concern. This is a major departure from the 2010 *Concept*, that was based on a partnership with Russia and did not even mention China. The *Concept* also refers to non-kinetic threats, which are becoming ever more important, and it touches upon other challenges, such as energy security and climate change. Of course, the real litmus test for NATO is not drafting a convincing policy document, but its willingness and ability to implement the key tenets of that document. The new *Military Strategy* and the new force plans indicate that, at least with respect to Russia, the *Concept* is being implemented. Add to this NATO's accelerated work on resilience as well as on innovation, and what you get is an alliance that is truly adapting to a changing security environment.

Q. French President Macron has suggested Europe should rely more on its own independent defense capabilities rather than depend heavily on the United States for its security. In your view, is this a good idea? What does it say about the credibility of U.S. extended deterrence guarantees? Do Europeans believe the United States "has their back" in the event of a wider conflict on the continent?

A. Like previous French Presidents, Emanuel Macron says sensible things, but does so in a way that is bound to alienate many observers, including his European neighbors. Getting Europe to do more on defense is a goal pursued by all U.S. administrations since 1949. In that sense, Macron has it right. However, his talk about European "strategic autonomy" makes it sound as if doing more on defense was part of Europe's self-assertion against U.S. dominance. This is a counterproductive rhetoric, as virtually all European countries want to organize

their security together with the United States and not alienate its key ally. It is true that many Europeans worry that the next U.S. administration may again look at NATO as a kind of business deal that works to the detriment of the U.S. taxpayer. But even if such views were to gain prominence in Washington, Europe's answer should not be to cry wolf about the alleged end of extended deterrence. Instead, Europe should double down on consultations with the United States on nuclear matters. A lot will depend on public rhetoric. For example, U.S. nuclear policy under President Trump was very strong on extended deterrence, but President Trump's dismissive attitude towards NATO and towards Europe obfuscated this positive development.

Q. Do you believe arms control can still play a role in reducing tensions and creating stability among the nuclear powers? Should arms control discussions be expanded to include China? And if China refuses to participate, what should the United States do?

A. The current environment is not conducive to arms control. Russia has violated agreements and China prefers to sit on the fence. It is important for the United States to call out both sides on their intransigence, if only to deflect criticism of being dismissive of arms control agreements. Arms control may still have some value, in particular when it comes to establishing mechanisms or procedures to prevent dangerous military incidents, for example. But major agreements like SALT or START will no longer be in the offing. Once China feels that its massive armament programs have put it on a par with the United States and Russia, its willingness to engage on arms control might perhaps increase. But for the foreseeable future, arms control will have to confine itself to small, practical and reversible steps to reduce nuclear dangers.

Q. NATO remains a nuclear alliance. But NATO's nuclear capabilities—particularly those U.S. nonstrategic nuclear weapons based in Europe—are limited and ageing, especially when compared to the nuclear forces of Russia. Would European NATO members be willing to consider a more robust deployment of U.S. nuclear weapons on their soil? Does an increase in NATO's nuclear potential make sense in today's volatile international security environment?

A. I am less concerned about specific weapons systems than about maintaining Allied consensus on the nuclear dossier. That's why I very much welcome the consolidation of NATO's nuclear dimension with new hardware, such as the F-35, NATO's exercises, and other aspects of its nuclear policy and posture. I would also note an unapologetic endorsement of nuclear deterrence, and a unanimous rejection of the Nuclear Ban Treaty. Hence, I see NATO moving in the right direction. Whether Russia's nuclear deployments will force NATO to respond with new nuclear deployments of its own is currently impossible to predict. What seems likely, however, is the inclusion of some Eastern European allies in NATO's nuclear sharing arrangements. While this may most likely require ending the 1997 NATO-Russia

Founding Act, it would mark a boost for extended deterrence. In any case, Russia's behavior has long invalidated the Founding Act.

Q. Should European countries invest more in missile defense technologies to protect NATO territory and populations in the event of a failure of deterrence? Is NATO currently doing enough in this area?

A. Russia's war against Ukraine has only reinforced the tremendous strategic value of missile defense, including for the defense of population centers. All major allies are investing in missile defense, and some have fielded quite advanced technologies. Missile defense remains expensive, however, and even a highly sophisticated defense can be overwhelmed, as we can see in Israel. And, of course, missile defense competes with other defense projects, some of which may appear more urgent. But the strategic rationale of missile defense is undisputed. The recent European Sky Shield initiative is another example of this. It envisages, among other things, the joint procurement of new air and missile defense capabilities, with a view to making them available to SACEUR, NATO's commander in chief.

Q. ***Is Europe too dependent on energy supplies from Russia that may be vulnerable to disruption as a result of political tensions? How can Europe best meet its energy needs in support of its security requirements?***

A. Russia's assault on Ukraine was accompanied by Moscow's weaponization of energy against Europe. This demonstrated once again that economic interdependence does not necessarily guarantee peace, and that Europe had to end its dependence on Russia as its main supplier. Thanks to other suppliers, mainly Norway and the United States, Europe was able to phase Russian energy largely out of their energy mix. This also includes NATO's armed forces, which used to rely heavily on Russian fuel. If you add to this the general energy transition away from fossil fuel, the West has many opportunities to blunt Russia's energy weapon. The main challenge of the future will be to avoid new dependencies on other potentially unreliable suppliers, such as China, which holds a considerable part of the known reserves of "rare earths" that are essential for "green" technologies, such as more capable batteries.

PROCEEDINGS

RESTRAINTS AT THE NUCLEAR BRINK: FACTORS IN KEEPING WAR LIMITED

The remarks below were delivered at a symposium on "Restraints at the Nuclear Brink: Factors in Keeping War Limited" hosted by the National Institute for Public Policy on May 23, 2023. The symposium explored the reasons why a state may be restrained from using nuclear weapons during a conventional conflict and why, if nuclear weapons are used, a state may choose to use them in a limited way. It highlighted the conclusions of the July 2023 Occasional Paper *by National Institute Senior Analyst Matthew Costlow.*

David J. Trachtenberg
David J. Trachtenberg is Vice President of the National Institute for Public Policy and served as Deputy Under Secretary of Defense for Policy from 2017-2019.

As I noted in the invitation to this webinar, this discussion will highlight the results of a forthcoming National Institute *Occasional Paper* by my colleague Matt Costlow that looks at the reasons why a state may be restrained from using nuclear weapons during a conventional conflict and why, if nuclear weapons are used, a state may choose to use them in a limited way.

Now, it is often assumed that any use of nuclear weapons will inevitably unleash an escalatory process that cannot be controlled; and that therefore, there can be no such thing as a "limited" nuclear war. For example, a review of the contemporary literature finds numerous assertions to this effect—many stated with a conviction approaching absolute certitude. As one analyst put it, "…the probability of being able to undertake limited nuclear attacks with no, or only limited, blowback on [one's] own self amounts to wishful thinking when the adversary has a secure second-strike capability."[1]

Other analysts have referred to the notion of a limited nuclear war as "dangerous fantasy" and argue that should Russia use tactical nuclear weapons in Ukraine, a nuclear response would be essential or else "the whole tapestry of nuclear deterrence across the world could unravel dangerously." They contend that "A conventional response to Russian nuclear use would need to be so devastating that it would likely provoke further nuclear use."[2]

As another analyst stated, "there is no such thing as a small nuclear war. Indeed, embracing the concept of limited nuclear war is folly to the highest degree, and we fool ourselves if we think using low-yield nuclear weapons will somehow help halt the escalation to all-out destruction."[3]

---

[1] Manpreet Sethi, "The Idea of 'Limited Nuclear War': As Impractical and Dangerous Now, As It Was Then," *Indian Foreign Affairs Journal* (Vol. 14, No. 3, July-September 2019), p. 244.

[2] John Gower and Andrew Weber, "Rhetoric in Ukraine has reinforced the fallacy of limited nuclear exchange," *Bulletin of Atomic Scientists*, October 21, 2022, available at https://thebulletin.org/2022/10/rhetoric-in-ukraine-has-reinforced-the-fallacy-of-limited-nuclear-exchange/.

[3] Deverrick Holmes, "There is no such thing as a small nuclear war," Center for Arms Control and Non-Proliferation, July 12, 2019, available at https://armscontrolcenter.org/there-is-no-such-thing-as-a-small-nuclear-war/.

And others have noted, "we have exactly zero experience of managing nuclear escalation against a nuclear-armed power and so we have little reason for confidence."[4] And as one recent report concluded, "No one knows whether and how the use of nuclear weapons against another nuclear-armed state would be kept limited and would not escalate."[5]

On the other hand, the notion of automatic nuclear escalation is not a universally held view. As some analysts have noted, "the Russian military does not believe that limited nuclear use necessarily leads to uncontrolled escalation" and that "The Russian military believes that calibrated use of conventional and nuclear capability is not only possible but may have decisive deterrent effects."[6]

The debate over whether there can be a limited use of nuclear weapons dates back to the days of the Cold War. In his writings, Colin Gray discussed the possibility of imposing what he called "severe escalation discipline" on an adversary.[7] Other deterrence scholars have also wrestled with this issue, with many arguing against such a possibility. Yet, as Henry Kissinger wrote in 1965: "No one knows how governments or people will react to a nuclear explosion under conditions where both sides possess vast arsenals."[8]

But what about the notion that a nuclear state may refrain from nuclear use even at the risk of suffering a conventional defeat? The U.S. defeat in Vietnam is sometimes cited as an example. And some may see nuclear escalation by Russia in Ukraine as unlikely, given Moscow's apparent willingness to absorb massive conventional force setbacks in its failure to subjugate Kyiv. While the so-called "nuclear taboo" has held for nearly eight decades, there are worrisome signs of fragility. As former Russian President Dmitry Medvedev has stated, "The defeat of a nuclear power in a conventional war may trigger a nuclear war."[9] Is this just bluster?

Now, while much has been written about the prospects and likelihood of nuclear escalation, relatively little has appeared detailing the possible factors that may mitigate against escalation from the conventional to the nuclear level, or the considerations that may influence decision makers to refrain from escalating a nuclear conflict. It is this important consideration—as well as examining how U.S. decision makers might influence an adversary's deterrence calculus in order to decrease the risks of nuclear escalation—that Matt's *Occasional Paper* seeks to address.

---

[4] James Acton tweet, October 7, 2022, available at https://twitter.com/james_acton32/status/1578383815881498624?s=20&t=94JqW05lAOKEhxIV_jBG0w.

[5] George Perkovich and Pranay Vaddi, *Proportionate Deterrence: A Model Nuclear Posture Review*, Carnegie Endowment for International Peace, 2021, p. 5, available at https://carnegieendowment.org/files/Perkovich_Vaddi_NPR_full2.pdf.

[6] Michael Kofman and Anya Loukianova Fink, "Escalation Management and Nuclear Employment in Russian Military Strategy," *War on the Rocks*, September 19, 2022, available at https://warontherocks.com/2022/09/escalation-management-and-nuclear-employment-in-russian-military-strategy-2/.

[7] Colin S. Gray, "The Case for a Theory of Victory," *International Security* (Vol. 4, No. 1, Summer, 1979), p. 86.

[8] Quoted in Sidney D. Drell and Frank von Hippel, "Limited Nuclear War, *Scientific American* (Vol. 235, No. 5, November 1976), p. 37, available at https://sgs.princeton.edu/sites/default/files/2019-10/drell-vonhippel-1976.pdf.

[9] Guy Faulconbridge and Felix Light, "Putin ally Medvedev warns NATO of nuclear war if Russia defeated in Ukraine," *Reuters*, January 19, 2023, available at https://www.jpost.com/breaking-news/article-729004.

* * * * * * * * * *

Matthew R. Costlow
Matthew R. Costlow is Senior Analyst at the National Institute for Public Policy and former Special Assistant in the DoD Office of Nuclear and Missile Defense Policy.

Thank you, Dave, and thank you to this distinguished panel of participants for their willingness to contribute on such an important topic. Please be on the lookout for my report when it is published next month as an *Occasional Paper*—I hope my remarks today will provide you with an enticing preview.

I titled my paper "Restraints at the Nuclear Brink: Factors in Keeping War Limited"—and I chose the word "restraints" because I wanted to emphasize the fact that a state leader may be tempted to employ nuclear weapons for a whole host of reasons—but there may be some factors that promote restraint in the face of temptation. For the purposes of this paper, I am not interested in scenarios where a leader is not considering nuclear employment, or is simply bluffing. As Herman Kahn famously noted, we do not build our nuclear deterrent against such threats as "even a frown may deter them."

Instead, I am interested in three scenarios specifically: First, why a nuclear-armed state may choose not to employ nuclear weapons against a non-nuclear state. Second, why two nuclear-armed states in a conventional conflict may refrain from employing nuclear weapons. And third, why nuclear-armed states in a conventional conflict may limit their nuclear strikes against one another. The theme, as you can see, is asking what factors might drive restraint and why. As I make clear throughout the paper, this analysis is not predictive. I am *not* arguing that all conflicts involving nuclear-armed states will stay limited.

The goal of the paper, instead, is to focus on those factors that may promote restraint—because if we can identify them, then we can convey them to U.S. and allied decisionmakers so that they can better tailor their deterrence threats. If they have in mind some of the factors that may promote adversary restraint, then they can ask the Intelligence Community more precise questions to, hopefully, receive more precise answers. In one of the classic works of the field, Richard Smoke's 1978 *War: Controlling Escalation*, he concluded that often there was fairly clear information available to decisionmakers that could have prevented them from inadvertently stepping over an adversary's "red line"—but the decisionmakers could not ask for something they did not consider.

This report is an effort to make sure decisionmakers ask the right questions, the relevant questions, so they are best-informed to make a tailored deterrence threat or de-escalate as the scenario may dictate. I should note that one of the primary reasons I wanted to write this report was my frustration with the constant media reports about how even the smallest action by Ukraine or the United States could lead to Russian nuclear employment. What was missing from all these commentaries was any sense of why Russia may choose *not* to employ nuclear weapons, even if it was severely tempted to.

Decisionmakers are constantly bombarded with fears, some probably real and some probably imagined, that if they make the wrong move, then nuclear war is the inevitable

result. And perhaps in some cases that is true. But studying all the ways we could stumble into a nuclear war, while absolutely useful, is only half the necessary information. For U.S. decisionmakers to make informed choices about vital U.S. interests, they need to know both the reasons why an adversary may employ nuclear weapons, and the reasons why he may not. Only then can they make informed decisions on U.S. courses of action, decide on their own "red lines," etc.

I apologize for the long windup, but I think it is important to understand why looking at this topic is so vital for decisionmakers today and in the future. For the last half of my remarks, let me provide you with a sampling of some of my findings and then a provocative conclusion that I hope will prompt some discussion. To give you an idea of how I approached this topic, I will briefly go over a few of the reasons I believe a nuclear-armed state may choose *not* to employ nuclear weapons against a non-nuclear armed state during a conventional conflict.

To reiterate, I am not predicting this will always be the case, but just laying out some of the possibilities. If we know about some of these theoretical possibilities, we can make better policy in actuality.

One potential reason why a state may refrain from employing nuclear weapons against a non-nuclear opponent is that doing so might cause other opponents currently not party to the conflict to enter into it as participants. Richard Smoke, who I mentioned earlier, called this "triggering a latent national interest." That is, by employing nuclear weapons, a state leader may be raising the stakes of the outcome of the conflict to such a degree that other states enter the conflict against the nuclear aggressor. Other states could enter the conflict for a whole host of reasons—whether it is to enforce the norm of nuclear non-use, to punish the nuclear aggressor, to make sure the aggressor does not benefit militarily from nuclear employment as a deterrent against those who in the future who might contemplate the same action, etc.

Another related reason why a state may refrain from nuclear employment is that using nuclear weapons against a non-nuclear state may damage relations with critical allies and partners. This dynamic may be evident in Russia's decision to, so far, not employ nuclear weapons against Ukraine—because doing so may endanger (economically and politically potentially) its relationship with critical states like India, Iran, and China. Without their support, or at least relative silence, Russia could falter even more in its conventional war against Ukraine—making the prospect of employing nuclear weapons appear to be not worth the cost.

Let me mention just one more potential reason why a state may refrain from nuclear employment—and that is because nuclear employment might cause other states to impose such heavy economic sanctions (among other responses) on the aggressor that it imperils domestic stability. States like Russia and China have made implicit deals with their domestic populace that essentially say that if the people allow the dictators to have full political power, then the dictators will provide stability and economic prosperity for the citizens. Dictators may therefore have to balance the perceived benefits of nuclear employment politically and militarily versus the potential domestic costs.

I should note here that these reasons I have just mentioned are not mutually exclusive and each one, in and of itself, may not be the deciding factor in a choice of restraint—but by identifying the possibilities, decisionmakers can ask the regional experts and the Intelligence Community what factors are potentially the most relevant, and how might the United States be able to influence the impact of those factors on the adversary.

I will close with one my conclusions from the paper that I found somewhat unsettling. Throughout the course of writing down all these potential reasons for restraint, I was struck by the number of them that were both potentially important *and* somewhat out of the U.S. control. That is, those factors most relevant to an adversary choosing restraint may be the same factors that are the most difficult for the United States to influence. U.S. deterrence threats, in other words, may play a less significant role than the internal calculations and values in the adversary's mind. It is far more comforting to believe that the United States will be in the driver's seat in influencing whether the adversary escalates a given situation, but as the late great scholar Colin Gray reminds us, deterrence is a relationship that both sides must voluntarily enter into. They may be reluctant to, but there must be agreement at some level—and the United States can only offer so many incentives for restraint (or conversely, disincentives against non-restraint).

In the end, the other state's leaders will make a decision in their mind about the relative importance of factors that the United States can control and the factors unique and internal to the adversary, which the United States can perhaps, at best, only indirectly influence. This was something of a sobering conclusion for me, but I think it illustrates the importance of tailored deterrence all the more. If the United States can study its adversaries, their values, their worldviews, their capabilities and vulnerabilities, and all those factors relevant to restraint—even the slightest edge in what we know may make all the difference in a conflict over the highest of stakes. Thank you and I look forward to the other panelists' presentations and the discussion afterward.

* * * * * * * * * *

Bradford Clark
Bradford Clark is Assistant Professor at National Defense University.

Thank you, David, for the kind introduction and to the National Institute for hosting a webinar on this important topic. Before I begin, let me say that, although currently assigned as an instructor at the Eisenhower School, I will soon return to my home organization, OSD Policy. For that reason, it is important to note that the views presented are my own and do not necessarily represent the views of the Department of Defense, OSD Policy, or the National Defense University.

I am going to focus my remarks on escalation in the context of an armed conflict between two nuclear states. Since I am presently playing the role of an academic at one of the war colleges, I will go out on a limb and try to center my remarks around a concept important to

Clausewitz, which is the centrality of the political objective,[10] here applied to managing escalation risks. Unlike some of the escalation dynamics discussed by the other speakers, this is one factor we can, or should, be able to control.

First, I want to step back briefly and ask why a state might escalate to nuclear employment. In simplest terms, escalation is driven by the perception that nuclear use, despite the tremendous and potentially existential risks, is nevertheless still a better option than all the other alternatives. The political objective—how it is defined, communicated, and perceived—is central to the adversary's decision calculus on this point. By focusing on the competing political objectives, and in particular our own objective, I believe there is some hope, even an expectation, of avoiding nuclear escalation.

This belief stems from the likelihood, with one important potential exception, that the United States will be the stronger combatant and, as a *status quo* power, will be fighting for limited political objectives. Because the armed conflict need not necessitate regime change as a political objective—after all, the adversary cannot hope for this and the United States perhaps should not strive for this—any conflict would be a "limited war" as Clausewitz conceived it[11] and therefore might remain a "limited war" as the nuclear theorists conceived it.[12] If an adversary's survival is not at stake, they may come to believe that neither initial nuclear employment nor further escalation is a better option than all the other alternatives, including defeat in the conflict.

Central to U.S. conceptions of "tailored deterrence" is the idea of "stakes." In particular, the idea that an imbalance in stakes could lead an adversary to theories of victory based on limited nuclear escalation. Stakes and political objectives are not quite the same thing. I take stakes to mean the perceived or felt importance of the state interest at risk in the conflict. The political objective flows from this but is narrower. It is the political outcome the state wishes to achieve or to avoid in the conflict (to protect or advance its stakes). Except for China, any war between the United States and a nuclear adversary would be *a war of the strong against the weak*. Consequently, the adversary's political objective, however limited at the outset, will be impacted by the exercise of U.S. military power. The adversary's stakes and political objective may converge quickly at "survival."[13]

Given U.S. and allied conventional dominance over most potential nuclear adversaries, two things are likely true: (1) With the possible exception of China in a Taiwan scenario, it is likely to be a war that the adversary did not seek or thought it could avoid in the course of some lesser military adventure. (2) In such a conflict, the adversary would likely see the United States as the aggressor. If the adversary perceives its territorial integrity or political survival is at stake, it is conceivable to imagine it, as the weaker state, threatening or using

---

[10] Carl von Clausewitz, *On War*, edited and translated by Michael Howard and Peter Paret (Princeton, NJ, Princeton University Press, 1989), Book VIII, Chapter 5, p. 602.

[11] Clausewitz, *On War*, pp. 611-613.

[12] Keith B. Payne, "The Great Divide in US Deterrence Thought," *Strategic Studies Quarterly* (Summer 2020): 23.

[13] Thomas G. Mahnken, "Future Scenarios of Limited Nuclear Conflict," in *On Limited Nuclear War in the 21st Century*, edited by Jeffrey A. Larsen and Kerry M. Kartchner (Stanford, CA, Stanford University Press 2014), p. 130.

nuclear weapons to forestall a military defeat and/or to force a political settlement, much as we conceived of such use during the Cold War.[14]

However, unless and until the adversary escalates to nuclear weapons, two other things are likely true regarding the stakes or political objective: (1) The conflict is unlikely to involve an existential threat either to the United States or, given Russia's present weakness and absent an invasion of Taiwan, to a U.S. ally or partner. (2) The U.S. political objective, at least at the outset, is likely to be limited, either a return to the prewar *status quo*, or the cessation of some military or other malign activity, perhaps with some penalty imposed on the adversary for initiating the conflict. It is of course possible to imagine the adversary committing an act so heinous that the United States initiated a war for an unlimited political objective, but my focus is on what I see as more likely sources of conflict—mistake or miscalculation in the operation of adversary foreign policy. In a war fought for limited political objectives by the United States against a conventionally weaker adversary, there is every reason to believe the conflict could be kept below the nuclear threshold.

Of course, there is risk. Limited aims do not mean limited means. We need not self-deter. Within the boundaries of reason and law, the United States can and should use the means required to accomplish its political objectives. Any use of force risks provoking escalation, and even limited means can seem extreme where there is conventional overmatch; indeed, U.S. conventional superiority is often considered a driver of competitors' nuclear programs.[15] Even so, escalation need not necessarily follow conventional overmatch. Policy might be able to control passions and is intended to do so.

We have some sense of how to do this. Many of the crisis management theories and techniques developed during the Cold War are intended to control and effectively communicate the U.S. political objective. Crisis management techniques[16] together with the ordinary functioning of deterrence logic should enable the United States, in a war fought for limited political objectives, to positively influence the three variables identified in the Deterrence Operations Joint Operating Concept (DOJOC): an adversary's perception of benefits, perception of the costs, and perception of the consequences of restraint.[17] Our specific declaratory policy in the NATO and Korean contexts (any "employment . . . against NATO would fundamentally alter the nature of a conflict,"[18] any North Korean nuclear attack "will result in the end of that regime."[19]) is as much about influencing an adversary's

---

[14] Kerry M. Kartchner and Michael S. Gerson, "Escalation to Limited Nuclear War in the 21st Century," in *On Limited Nuclear War in the 21st Century*, edited by Jeffrey A. Larsen and Kerry M. Kartchner (Stanford, CA, Stanford University Press 2014), p. 151.

[15] See, e.g., Robert J. Peters, "The Red Zone: Understanding an Escalatory Pathway that the Adversaries are Exploring—and We Are Not," Air University, May 9, 2022, available at https://www.airuniversity.af.edu/Wild-Blue-Yonder/Article-Display/Article/3021286/the-red-zone-understanding-an-escalatory-pathway-that-the-adversaries-are-explo/. As an aside, the extent to which this point is accurate is the extent to which efforts to reduce the role of nuclear weapons through advanced conventional capabilities may be self-defeating.

[16] For a summary list of crisis management measures, *see* Kartchner and Gerson, *supra*, at pp. 160-161.

[17] Department of Defense, *Deterrence Operations Joint Operating Concept*, Version 2, December 2006, p. 20.

[18] NATO 2022 Strategic Concept, paragraph 28.

[19] Department of Defense, *Nuclear Posture Review*, 2018, p. 33; 2022 Nuclear Posture Review, p. 12.

calculations on the third DOJOC variable as it is about influencing the cost-benefit analysis of the first two variables.

Nuclear escalation need not become the adversary's "least-worst" option. As my colleague Don Stoker once pointed out, "political aims don't escalate, they change."[20] Acknowledging the messiness of a democratic system, and the unpredictable political forces any conflict is likely to generate, it is ultimately up to us through our political leadership to change them or not.

Up to this point I outlined a hopeful outcome in part by describing relatively hopeful circumstances, a U.S. conflict with a weaker nuclear state without an existential risk (absent nuclear attack) to the United States or an ally. There are more difficult scenarios in which my argument has less force. The first is a conflict with China over Taiwan's independence, which could quickly push both sides to maximalist political aims. The Russia-Ukraine War may test whether a nuclear power is prepared to lose a war involving a vital interest without, at least, *attempting* to pull the nuclear lever. If it does not, a U.S.-China fight over Taiwan almost certainly will. China might view defeat as a threat to the territorial integrity of China (that is, the United States taking sides in a civil war with a rogue province) and to the Party's rule. Were the United States to enter the war on behalf of Taiwan, defeat would involve an existential threat to an ally, if not to the free and open international order and the U.S. system of alliances that supports it.

The second more difficult scenario is restoring deterrence. Much of my argument is focused on deterring escalation in the first instance. Once escalation occurs everything is more difficult. Our nuclear policies in NATO and Korea are explicit that adversary resort to nuclear weapons—"employment" or "attack," respectively—could change the character of the conflict, that is, the political aim. This is likely true in any scenario, regardless of specific declaratory policy.

The political objective remains central to escalation dynamics. Conflict "offramps" become more consequential as the violence spins up. Offramps should be explored and pursued. In such cases our confidence in deterring further escalation and restoring deterrence may depend as much on the mechanisms and capabilities discussed by the other presenters today than on moderating political aims. Limited options may be critical to incentivizing or compelling an adversary to take an offramp. Declaratory policy and considerations of credibility and prestige may constrain options.[21] However, in circumstances where escalation or the underlying stakes involved have not (or not yet) taken both sides to maximalist political objectives, our most effective means of ensuring adversary restraint may remain preventing the stakes from becoming existential from the adversary's perspective.

---

[20] Donald Stoker, *Why America Loses Wars: Limited War and US Strategy from the Korean War to the Present*, (Cambridge, UK, Cambridge University Press, 2022), pp. 60-61.

[21] "If considered rationally, prestige, too, is an elastic value to which it is pertinent to apply the conception of reasonable price." Bernard Brodie, *War & Politics* (New York, NY, MacMillan Publishing Co., Ltd., 1973), p. 161. Brodie's comment was directed to his analysis of Vietnam but applies with equal force to escalation considerations as much of our deterrence theory and strategy depend on rational cost/benefit perceptions.

The implication of this might be that, against a nuclear adversary, the American penchant for "regime change" may no longer be operative. That juice may not be worth the nuclear squeeze, although present calls for regime change in the Russia-Ukraine conflict indicate that demand signal may be difficult to quiet (and there may be instances where regime change is the only right and appropriate objective). Similarly, given the emerging "two nuclear peers" strategic context, it may be in the U.S. interest to limit its political aims in a conflict with one nuclear power—so to limit the conflict—to reduce opportunities and incentives for adventurism by a second nuclear power.

To return to Clausewitz, if we cannot limit our political objectives, and specifically to avoid maximalist political objectives where not required for an acceptable political settlement, we risk triggering the dynamic Clausewitz identified in his chapter on "Relative Strength."[22] Clausewitz observes that where the weaker side cannot protect itself by restricting its goals in the conflict, it must compensate with the "inner tension and vigor" inspired by the danger. "Where the disparity of strength is so great that no limitation of objectives will provide protection . . . the tension will, or should, build up to one decisive blow. . . . At that point the greatest daring, possibly allied to a bold stratagem, will seem the greatest wisdom."[23]

Threatening unacceptable damage to deter escalation may not succeed if an adversary sees defeat as an equivalently unacceptable outcome. In such circumstances, desperate escalatory gambles, such as attacks meant to de-couple allies or to "sober" but "not embitter,"[24] might be seen as viable alternatives. We should avoid that scenario if we can.

* * * * * * * * * *

Harrison Menke

Harrison Menke is a Special Advisor to the Director of the Defense Threat Reduction Agency and a current doctoral candidate in Missouri State University's Defense and Strategic Studies program. The views expressed are his own and do not reflect the official policy or position of the Defense Threat Reduction Agency, Department of Defense or the U.S. Government.

Thank you to the National Institute for Public Policy for inviting me to speak on this topic. I just want to note that the views expressed are those of the speaker and do not reflect the official policy or position of the Defense Threat Reduction Agency, Department of Defense or the U.S. Government.

Everyone put a lot of food for thought on the table, and it reflects the importance and timeliness of this topic. In reflecting on the question at hand, I thought I'd turn to Cold War history. As a shameless plug, my colleague Greg Giles and I are nearing the finish line on a

[22] Clausewitz, *On War*, pp. 282-284.

[23] Ibid., pp. 283-284.

[24] Sergey Brezkun, "Russia Needs Not an Escalation but a De-escalation Ladder," *Nezavisimoye Voyennoye Obozreniye* (online article) (November 27, 2015), cited in Brad Roberts, "On Theories of Victory Red and Blue," Livermore Papers on Global Security No. 7 (Lawrence Livermore National Laboratory, Center for Global Security Research, June 2020), p. 50.

multi-year study that looks at how the United States and Soviet Union thought about and integrated nuclear and conventional forces.

Certainly, it is clear both the great powers perceived incentives not to escalate. This includes longstanding strategic issues like fear of escalation, expected damage and destruction, international pressure, and at least for the United States reputational and normative reasons.

But what really stuck out to me given the scope of our study was the tactical and operational frictions that could have or did impact decision-making. This suggested to me that restraint could be driven both top-down, or by internal leadership considerations, but also bottom-up in ways that might promote caution. This goes beyond "deterring the individual trigger-pullers," but point to more systemic issues related to organizing, training, equipping, and planning. Let me give you a few examples:

In the mid to late 1950s, the U.S. Army began to deploy large numbers of nuclear weapons to Europe—to include the Redstone missile, Nike Hercules surface-to-air missile, and Honest John rockets.[25] But there was a catch; significant investment in these projects came at the expense of operational readiness as the Service shifted to the Pentomic Division experiment. At the end of May 1958, the Seventh Army reported that although technically competent, most units lacked sufficient personnel and were experiencing shortages in essential electronics, spare parts, and communications equipment.[26] As such, only 21 of its 49 atomic artillery and missile units were considered operationally ready.[27] The Army education and training systems also struggled to keep up with the rising demand for nuclear specialists to the point where "our employment capability was being impaired seriously because the training program was lagging so far behind weapons availability."[28] Despite nearly doubling the weapon systems available, these shortcomings raised concerns amongst Army Senior Leaders about the risk of mission failure. USAREUR commander General Hodes warned in 1958 that USAREUR had "reached a point of calculated risk" and that the accomplishment of his wartime mission was no longer a "foregone conclusion."[29]

The Soviets apparently had similar challenges. Despite the coherence achieved among Soviet doctrine, strategy, and capabilities, the Soviet General Staff by the late 1970s had begun to question the utility of large-scale nuclear employment. This was, in part, a recognition of the heroic assumptions made in Soviet planning. For example, Soviet planners assumed at least a 40-50 km, and in some cases 100 km, per day rate of advance in a nuclear environment.[30] Soviet engineers posited that removal of debris from a roadway would take

---

[25] Donald A. Carter, *Forging the Shield: The U.S. Army in Europe, 1951-1962* (Washington, DC: United States Army Center of Military History, 2015), p. 331.

[26] Ibid, p. 307.

[27] Ibid, p. 307.

[28] Major DeBow Freed, USA, "Nuclear Weapons Employment Training," *Military Review* 40, no. 1 (April 1960), p. 63.

[29] Carter, op cit., pp. 312-313.

[30] Interview with Gen. M.A. Gareev, in John G. Hines, Ellis M. Mishulovich, and John F. Shull, "Soviet Intentions 1965-1985, Volume II: Soviet Post-Cold War Testimonial Evidence," BDM Federal, Inc., September 22, 1995, p. 74.

an engineer platoon only 3.5 hours after a 300-kiloton surface detonation.[31] Moreover, Soviet plans assumed that, despite massive casualties, they would still secure vital objectives. New General Staff leaders questioned these assumptions and demanded greater scrutiny, which led to discomfiting results. In a command post exercise in 1974, a NATO nuclear strike resulted in 50 percent losses for some Pact units and the virtual destruction of the Soviet Third Shock Army.[32] Other exercises similarly witnessed 30 to 50 percent of Pact personnel and equipment lost to nuclear strikes.[33] The Soviet generals were less concerned by the destruction of personnel and material, but about how those losses would hinder the ability to achieve objectives rapidly—speed being the centerpiece to the Soviet theory of victory. According to analyses conducted by the General Staff in the 1970s, all significant movement would cease for several days.[34] These lessons, among other things, led N.V. Ogarkov to a "fundamental reassessment of the role of these weapons, and to a break in previous views on their place and importance in war, on methods of conducting engagements and operations, and even the possibility of waging war at all with the use of nuclear weapons" when he became Chief of the General Staff in 1977.[35]

Finally, some weapon systems lacked clear guidance that inhibited their use. For instance, it is not clear that the U.S. Navy had a realistic plan to use nuclear-armed surface-to-air missiles (SAMs). Then Director of Strategic and Theater Warfare Rear Admiral Holland explained this challenge to Congress in 1984: "When you see an incoming flight of aircraft or missiles, how do you know it is nuclear? How do you know if you should use nuclear weapons? When should you? Under what circumstances?"[36] Further complicating matters was that use of nuclear-armed SAMs would require presidential authority. Unless such release authority had been pre-delegated, it was highly unlikely that it could be requested and granted during a tactical engagement. When asked if the Navy had taken presidential approval for use of nuclear weapons into account in its battle plans, Holland said, "I don't think it is realistic, but it is factored in... We have not come to grips with that part of the problem. We keep trying."[37]

To be sure, the competition between the costs and benefits of restraint are highly dynamic and difficult to predict with any confidence. For the Soviets, any hesitancy might have risked failing to preempt a large-scale NATO nuclear attack—a primary fear and primary motivator. So I don't want to oversell any of these things as so damning that they would have in and of themselves swayed either U.S. or Soviet leaders from executing nuclear

---

[31] Maj.-Gen. G. Ostapchuk, "The Rapid Elimination of the Aftereffects of Enemy Nuclear and Chemical Strikes," *Military Thought*, 1974. Declassified on May 2, 2015.

[32] "Soviet Concepts for Employment of Nuclear Weapons in a Conflict with NATO—Evidence from Warsaw Pact Military Exercises," Memorandum, Office of Strategic Research, Central Intelligence Agency, March 24, 1978. Declassified on July 18, 2012, p. 8.

[33] "Soviet Concepts," op. cit., p.6.

[34] "Interview with Gareev," op. cit., p. 74.

[35] N.V. Ogarkov, *Istoriya uchit bditel'nosti* (Moscow: Voyenizdat, 1985), p. 51. Found in Mary FitzGerald, "Marshal Ogarkov on Modern War: 1977-1984," *Center for Naval Analyses*, November 1986, p. 20.

[36] Walter Pincus, "Nuclear Missile Has Navy in a Quandary," *Washington Post*, January 14, 1984.

[37] Ibid.

operations. When compared to concerns like destruction of the state, the items I discussed almost seem trivial.

But what these examples might suggest are potential sources that, when coupled with the other high-level factors such as those discussed, could help tip an adversary's calculus toward restraint. Following repeated demonstrations of Russian technical failure and operator/command incompetence in the Ukraine War, particularly in long-range strike, the Kremlin might be less confident in these systems effectiveness for a limited nuclear operation, complicating the cost-benefit calculation.

Or, similar to the cases of the U.S. Army and Navy during the Cold War, uncertainties regarding readiness or proficiency might limit the types of options perceived to be available or viable, even if they may not prevent a decision-maker from deciding a nuclear response was necessary. And, as we look out at other potential adversaries rapidly putting into service new weapons at a break-neck speed, there is the potential for capabilities to outpace doctrine and training, possibly adding other levers of restraint. This may include command and control—as potential adversaries look to improve resilience and speed they may unwittingly exacerbate vulnerabilities.

While these bottom-up factors may be difficult to ascertain and affect, if discovered they could offer a slight, but potentially useful means to influence decision-making in a future conflict. I think by looking for those things perhaps beginning by questioning some of our own assumptions, we can better understand the holistic picture of what might or might not affect an adversary's unique decision calculus regarding nuclear employment.

With that, and I'm probably over my time limit, I will turn it back over to the moderator. Thank you and I look forward to any questions you may have.

COMPARING SOVIET, RUSSIAN, AND CHINESE INFLUENCE OPERATIONS

The remarks below were delivered at a symposium on "Comparing Soviet, Russian, and Chinese Influence Operations" hosted by the National Institute for Public Policy on June 14, 2023. The symposium explored the tactics and effects of influence operations by the Soviet Union, Russia, and China and suggested approaches that can be taken by the U.S. government to counter them. It highlighted the conclusions of a forthcoming Occasional Paper *on the subject by John Gentry.*

David J. Trachtenberg
David J. Trachtenberg is Vice President of the National Institute for Public Policy and served as Deputy Under Secretary of Defense for Policy from 2017-2019.

As I noted in the invitation to this webinar, this discussion will highlight the results of a National Institute *Occasional Paper* by John Gentry that looks at the various propaganda and disinformation tactics used by the Soviet Union, Russia, and China to influence Western opinion, particularly in the United States, in ways that serve to cast doubt on the resilience of Western societies and increase sympathy and support for the policies of U.S. adversaries. On Monday, National Institute published an abbreviated version of John's analysis as an *Information Series*, which is available on our website and titled, "Information Operations against the United States: Defensive Actions are Needed." I will post a link to the paper in the chat box for those interested.

Foreign influence operations are extensive, and those of great power adversaries directed against the United States are well funded and designed to have long-term effects. Many rely on large communities of their own nationals living or studying abroad to help convey their messaging. China's so-called "Confucius Institutes" operate at more than 500 universities worldwide, propagating viewpoints sympathetic to the positions taken by the Chinese Communist Party and leadership. While the efforts of the Soviet Union, Russia, and China have exhibited similarities in approach, there have been significant differences in their objectives.

For example, rather than defeat the United States, as the Soviets sought to do, China is focused on co-opting the rest of the world through the use of economic, political, and diplomatic measures, including its "Belt and Road Initiative." Russia's propaganda efforts have been widespread; and although its influence abroad is significant in areas of Africa, the Middle East, and elsewhere, its aggression against Ukraine and repeated nuclear threats have arguably impacted, at least partially, the attractiveness of its messaging. Yet the United States is still operating at a disadvantage vis-à-vis Russia when it comes to effectively convincing others of the fallacies in Moscow's disinformation narratives. Surprisingly, some of Russia's public posturing regarding its war of aggression against Ukraine is resonating among foreign audiences.

Some Russian tactics appear to be more sophisticated than those used by their Soviet predecessors and, in an age of internet connectivity and social media, the ability to propagate

a falsehood worldwide is relatively easy. As a famous quotation (often misattributed to Mark Twain or Winston Churchill) states, "A lie gets halfway around the world before the truth has a chance to get its pants on."[1]

Just yesterday, France reportedly uncovered a huge Russian disinformation campaign. According to one account, "The main narratives pushed by the disinformation campaign are the ineffectiveness of sanctions against Russia; the alleged Russophobia of Western states; the supposed predominance of Nazi ideology among Ukrainian officials; and the negative effects of welcoming Ukrainian refugees for European countries." It was "spreading pro-Russian content; impersonating media… as well as government websites including France's ministry of European and foreign affairs; creating websites on francophone news with polarizing angles; and coordinating fake accounts to spread the content created…."[2]

Indeed, the influence operations of U.S. adversaries show no signs of slackening—in fact, just the opposite. The question is how best can the United States counter these efforts?

The United States has often been criticized for its poor public diplomacy efforts and its perceived failure to counter effectively the propaganda and disinformation campaigns of its major adversaries. U.S. international broadcasting media like the Voice of America have been riddled with controversy, political intrigue, and confusion over its charter and mission. Similarly, the State Department's Global Engagement Center has encountered difficulties with respect to funding and programming activities that effectively refute adversary narratives.

Nevertheless, there are a number of actions that the United States can take to counter the effect of adversary influence operations. To maximize the chance of success, these actions should reflect a whole-of-government approach, involving the Departments of State, Defense, Treasury, Homeland Security, and other federal entities. A number of recommendations are outlined in the *Occasional Paper* and the *Information Series* that are the subject of this symposium, and which I expect will be a topic of discussion today.

* * * * * * * * * *

John A. Gentry
John A. Gentry is adjunct professor at Georgetown University, a former CIA analyst, and a retired U.S. Army officer.

Thank you, David. I would like to share a bit about the origins of my "Influence Operations of China, Russia, and the Soviet Union: A Comparison," mention some of its key points, and extend the conversation a bit by discussing U.S. vulnerabilities to influence operations and

[1] See Aryssa Damron, "Fact Check: Did Winston Churchill Author This Quote about How Fast Lies Travel?,"CheckYourFact.com, available at https://checkyourfact.com/2019/05/31/fact-check-winston-churchill-lie-halfway-world-truth-pants/. Also see Niraj Chokshi, "That Wasn't Mark Twain: How a Misquotation Is Born," *The New York Times*, April 26, 2017, available at https://www.nytimes.com/2017/04/26/books/famous-misquotations.html.

[2] Laura Kayali and Clea Caulcutt, "France exposes mega Russian disinformation campaign," *Politico*, June 13, 2023, available at https://www.politico.eu/article/france-accuses-russia-of-wide-ranging-disinformation-campaign/.

what the United States can do about them. I am pleased that some of the sources from which I drew in writing my paper and one of my peer reviewers also are on this panel.

This paper is an expansion of my article, "Belated Success: Soviet Active Measures against the United States," which was published in *American Intelligence Journal* Vol. 39, Issue 2 (2022). As a long-time intelligence officer, the growing divisions in the United States in recent years seemed to me to be consistent with decades-long Soviet efforts to sow dissension within the United States designed to induce the country to collapse from within. I concluded that Soviet active measures efforts, which rely heavily on disinformation campaigns, do indeed—present tense—account for many of America's political troubles. The Soviets institutionalized many of their campaign techniques and messages, meaning they are still affecting America long after the demise of the USSR. Because it is clear that China and Russia also have malign intentions vis-a-vis the United States and have run influence operations for years, and because most discussion of them focus on the activities of single states, I decided to compare the three efforts, which share many similarities but have important differences.

Among my conclusions: all three countries had/have large, well-financed programs that seek variously to literally destroy the United States (the Soviets), succeed the United States as the world's dominant power (China), or help restore the imperial glories of the Soviet Union (Russia). They clearly have had considerable success, keeping enthusiasm high for continuing their expensive efforts.

The three countries provide examples of different techniques that target different audiences. The Soviets aimed to destroy its capitalist enemies and the United States, appealing to Marxists and left-leaning people in the United States to help them. Russia's President Vladimir Putin aims to split the West to help him push back NATO expansion since the 1990s, a prerequisite for restoration of the Soviet empire; because he recognizes the failings of communism, he also has sought to generate support from some right-wing parties and politicians to produce splits in NATO and the European Union that advance Russian interests. In contrast, China seeks to reshape world institutions in China's image and eventually replace the United States and the West as the world's dominant power by winning friends and influencing others, sometimes with aggressive "sharp" power that is coercive but rarely violent.

Technologies have changed dramatically over time, but the goals of attackers have remained fairly constant. The Soviets wrote stories for Western journalists or gave them notes from which to write in their own styles, and they forged documents incriminating targets, often based on actual documents their spies stole. In contrast, Russia and China now use social media, and the Internet generally, and they own print and electronic media in the West overtly, something the Soviets could not do. All use sophisticated psychological persuasion techniques including variants of "reflexive control," which is designed to convince targets to act in ways that benefit attackers, usually unknowingly.

Russia and China conduct many of their influence operations overtly by buying Western newspapers, sponsoring conferences, and operating large media bureaus in New York City,

for example. China sends ideology-laden students to Western universities as agents of influence. The Russians now hire American public relations firms to lobby Congress.

All three countries have prominently targeted American universities, knowing that universities are especially important educators and influencers of young people who are future generations of national decision-makers. All have been successful—the Soviets and Chinese spectacularly so. Soviet influence became massive and obvious on campuses in the 1960s, when Marxism, with no small help from the KGB, became popular. China's campaign has been much more overt, featuring cash payments, large numbers of full tuition-paying students, and the establishment of Confucius Institutes, which are influence peddlers and dens of espionage. All of these activities have been acceptable to most university administrators, creating over time large domestic bases of support for foreign influence operators.

The time horizons of the groups are different—and seem to be keys to success. The Soviets aimed for success over "decades." China initially had a 100-year plan—from success in the civil war of 1949 to 2049. Former Communist Party leader Deng Xiaoping famously advocated a "hide and bide" strategy— "hide capabilities and bide time" until China is ready to make its big move, although current President Xi Jinping has been less patient, generating negative international reactions to China's recent aggressiveness. Russia has a shorter time horizon, which seemingly is a function of Putin's impatience. Time seems to be an important element of successful influence operations because slow achievement of goals creates a sense of "creeping normalcy" in which victims do not realize they are under attack until it is too late.

Such successes raise unsettling questions about how to handle U.S. citizens who now are agents of foreign influence, sometimes knowingly but often not, who have constitutional protections of free speech that include calls for revolution if they are not accompanied by overtly violent actions. If influence operations pose growing, existential threats, which I believe they do, must constitutional protections change? If so, how can this be done in ethical and legal ways that are not worse than the influence operations themselves? And how can society ameliorate vulnerabilities to future influence operations, including the continuing effects of now institutionalized successes at American universities and new techniques that may be developed? No U.S. government agency seems fully aware of the threat, let alone has tools to act effectively. As a law enforcement agency, the FBI cannot counter legal influence operations. And it is not clear that the divided American people now trust the U.S. government to accurately identity and effectively fight foreign influence operations. This is a major challenge, which merits serious thinking about how the United States got into the mess it now is in.

* * * * * * * * * *

Olga Bertelsen
Olga Bertelsen is Associate Professor of Global Security and Intelligence at Tiffin University and an expert on Russian information operations.

In his study, which is a comparative analysis of influence operations conducted by the Soviet Union, the Russian Federation, and China, Dr. Gentry offers a well-articulated and multi-layered argument, grounded in his meticulous research and his deep understanding of the history of Russian and Chinese intelligence.

Part of Dr. Gentry's argument is that Soviet influence operations were designed to subvert Western societies and eventually to destroy the Western capitalist system by using a variety of tools. There was a strong ideological component in Soviet operations that were designed to: sow discord among Western political and military elites and diaspora ethnic groups; inflame divisions among Americans and provoke political instability and social unrest in target countries; influence the electoral processes; incite violence and foment revolutions in the countries of the so called collective West; and importantly, these operations known as active measures aimed at shaping historical narratives and discourse consistent with the Soviets' interests and provoking people's distrust of their own governments. The Soviets understood very well that whoever controls the narrative has power, and this power might be projected in time and space.

The long-term design of these operations implied raising a generation of people that would question the foundational values of their own countries, as well as cultural traditions and practices of the lands where they were born. The ultimate goal was to discredit democracy and provoke chaos and political instability in target countries which would help replace government and political systems with the ones based on Marxian principles and beliefs. Indeed, as Dr. Gentry has argued, the effect of these operations continues to unfold in front of our eyes in the form of Marxian or leftist indoctrination at our universities and certain narratives pushed by the "liberal" press.[3]

Soviet defector Yuri Bezmenov who escaped to the West in 1970 was correct, and Dr. Gentry seems to appreciate Bezmenov's assessment offered in the 1980s. Forty years ago Bezmenov suggested that Soviet active measures were extremely successful, especially in the United States. In his publications and speeches, he emphasized that America had already lost the ideological war, and one could no longer undo the influence of active measures unless the United States immediately and urgently recognized the problem and did something about it.[4]

In its own way, Putin's Russia has been pursuing the goals of the last stage of the Soviet plan to ideologically subvert the West, which certainly solidified the Soviets' success. We, of course, cannot place the blame totally on the Soviets or on the Russians for the process of

---

[3] John A. Gentry, *Influence Operations in China, Russia, and the Soviet Union: A Comparison* (Fairfax, VA: National Institute Press, 2023)/*Occasional Paper* (National Institute for Public Policy), vol. 3, no. 5 (May 2023): v-84.

[4] Tomas Schuman (Yuri Bezmenov), *Love Letter To America*, available at https://www.economicsvoodoo.com/wp-content/uploads/Yuri-Bezmenov-Love-Letter-To-America.pdf; Yuri Bezmenov, "Psychological Warfare Subversion & Control of Western Society," *YouTube*, available at https://www.youtube.com/watch?v=5gnpCqsXE8g.

trivialization of information and disinformation, imposed by Americans on Americans. However, decades of Russian influence on American politics and culture, a process that is especially transparent to those who formerly resided in the Soviet Union and had been exposed to active measures for decades, resulted in the severe departure of American society from democratic norms.[5] It manifests itself in misrepresentation, deletion, and suppression of information inconvenient for those subscribing to Marxian-like views.

The promotion of one view that dominates discourse has become quite noticeable for more and more Americans. The emergence of a discursive formation (Michel Foucault's term) that dominates public space makes people fear to express an alternative point of view, which results in a gradual loss of their analytical perspective. People's unwavering beliefs and convictions nurtured by the Soviet propaganda machine that pounded a single message in their heads for decades, albeit nicely packaged and even intellectualized, thwarted their collective defensive power and curtailed fruitful intellectual exchange with those who express polar opposite views.

Yet I completely agree with Dr. Gentry that among the three entities (the Soviet Union, Russia, and China) the Russian Federation does appear to be the weakest.[6] Cultural realignment under Putin and his aggressive political course disrupted a very subtle process of continuity in the realm of Russian intelligence, a paradox that many did not expect from a person with an intelligence background. In addition, a cult of money and personal prosperity among Russian intelligence officers that Alexander Litvinenko was concerned about and rebelled against, as well as the militarization of Russian society, negatively impacted chekists' professionalism. The international community began to observe slipshod work and the inability of chekists to cover their tracks. In other words, a lack of professionalism and a lack of commitment among chekists, be it a FSB or GRU officer, to hold themselves to a high level of standards and consistency have become quite transparent.

In my view, this trend emerged because of the general cynicism and pragmatism of Russian society exacerbated by the double standards and duplicity of its political "elites" (elites are in name only; their individual histories suggest that they, with few exceptions, should be characterized as bloodthirsty gangsters). This trend has been remarkably displayed by the Russians domestically and in the territories they have occupied in Ukraine since February 2022.

Having said that, we should not underestimate Russia's information warfare in the domain of history. The roots of these practices and Russia's persistent efforts at subverting the West were designed and planted by Soviet intelligence agencies. During the last two decades the Russian secret services have been promoting historical myths and designing disinformation operations aimed at shaping public opinion and people's psyches. The belief has been that this approach would help Russia achieve superiority in all spheres and shape

[5] The KGB used the term "active measures" for both domestic and foreign subversive operations.

[6] Gentry, *Influence Operations in China, Russia, and the Soviet Union*, 79.

the psychological profile and ideological preferences of its military personnel and population.[7]

The Russian secret services have co-opted scholars, sponsored pro-Russian Western academic centers, NGOs, and think tanks, and created front organizations that spread Russian propaganda and disinformation. One has to systematically attend conferences organized by Slavic professional associations to realize the massive scale of false narratives spread by scholars seduced by Russian money.[8] Russian intelligence agencies have successfully used Russian academics to establish and foster relationships with foreign educational centers and scholars, who more frequently than not have been unaware of the fact that they have been targeted and are communicating with Russian agents of influence. Groomed by the Russian secret services, Western historians have gradually embraced the arguments and talking points emanating from the Kremlin, and have often inadvertently become active participants in Russian covert operations, contributing greatly to the popularity of Russian narratives. They have uncritically repeated these narratives at international conferences and reposted them on social media platforms.[9]

Furthermore, in contrast to the Soviets who preferred to target leftist scholars and politicians, Russia expanded the list of its targets, aiming to shape the views of the political left and political right. One might want to consult with an excellent study by Anton Shekhovtsov on Russian influence on the political right in Europe.[10] Russia appears to be quite successful in buying influence of prominent Western liberal and conservative politicians. Beyond Schroder and Lebedev that Dr. Gentry mentioned, we should keep in mind that a "close and trusting collaboration" has been established between Putin and Henry Kissinger since the early 1990s. Kissinger was Putin's supporter during Russia's invasion of Georgia in 2008, and when Russia invaded Ukraine in 2014 and 2022. According to Marcel H. van Herpen, Kissinger "is the ideal lobbyist for the Kremlin, because he abstains from asking annoying questions about democracy and human rights."[11]

In this context, another Russian agent of influence should be mentioned here who was both a political activist and a scholar—the late Stephen F. Cohen who passed away in 2020. An American scholar of Russian Studies, he justified Putin's aggressive political course by

---

[7] Blagovest Tashev, Michael Purcell, and Brian McLaughlin, "Russia's Information Warfare: Exploring the Cognitive Dimension," *MCU Journal* 10 (2019): 129–47 (p. 132); Timothy L. Thomas, "Dialectical versus Empirical Thinking: Ten Key Elements of the Russian Understanding of Information Operations," *Journal of Slavic Military Studies* 11 (1998): 40–62.

[8] On the process of Russian cooptation in Western academia, see Olga Bertelsen, "Russian Front Organizations and Western Academia," *International Journal of Intelligence and Counterintelligence*, January 13, 2023, available at https://www.tandfonline.com/doi/full/10.1080/08850607.2022.2147807.

[9] Andrew Radin, Alyssa Demus, and Krystyna Marcinek, "Understanding Russian Subversion Patterns, Threats, and Responses," in *Rand Corporation*, available at https://www.rand.org/content/dam/rand/pubs/perspectives/PE300/PE331/RAND_PE331.pdf, p. 14.

[10] Anton Shekhovtsov, *Russia and the Western Far Right: Tango Noir* (London: Routledge, 2017).

[11] Marcel H. van Herpen, "The Strange Putin-Kissinger Friendship," *Cicero Foundation* (Commentary No. 16/01), January 2016, available at https://www.cicerofoundation.org/wp-content/uploads/Marcel_H_Van_Herpen_The_Putin_Kissinger_Friendship.pdf, p. 5.

promoting Putin's narrative about NATO's alleged threat to the Russian Federation.[12] Together with his wife Katrina vanden Heuvel, the publisher, part-owner, and former editor of the magazine *The Nation*, Cohen infamously spread pro-Kremlin narratives. Worse, he sponsored professional associations, sat on editorial boards of numerous peer-reviewed journals, and shaped the doctoral theses and minds of many of his Ph.D. students. These are only a few examples in the sea of Russian influence operations in Western academia. Their scale is massive, and in this context, Dr. Gentry's suggestion seems debatable. In his paper, he wrote:

> …there does not seem to have been a systematic Russian effort to re-shape the ideological orientation of Western universities, as the Soviets did, or to court major Western institutions as broadly as China does, although pro-Russian persons surely appear overtly at Western academic conferences. [13]

Nevertheless, I agree with Dr. Gentry that Chinese operations in American academia, and more broadly, among Western intellectual and political elites, are more substantial, given the fact that the Chinese diaspora and exchange students are legally obliged to serve the Chinese government and its secret services. The sheer numbers of educational exchange programs and Chinese students in the United States alone, cultural diplomacy, and oral and written disinformation distributed through these channels surpass the Russian efforts.

Another point that I would like to stress concerns fears and paranoia that the Soviet Union, Russia, and China have displayed. Dr. Gentry has aptly noted that all three countries presented themselves as victims of Western conspiracies and the West's militant posture. I would argue that for Putin this narrative serves merely as a cover for and a justification of his neo-imperial aspirations and actions, so we should not take his talking points for granted. There is no fear or paranoia there, when the Russians identify the Ukrainians as fascists and NATO as an aggressive and militant alliance. These narratives simply served Putin as a shield and a rationale he offered to the international community for a full-fledged invasion of Ukraine.

In terms of the scope of Russian target priorities, which according to Dr. Gentry, are somewhat *narrower* than Chinese, I would suggest some other term in this context: Russian priorities are rather *flexible*, and they depend exclusively on the internal political dynamics in the United States. A weak political leadership in the United States inspires Putin to expand the geography, the scale, and the intensity of his operations; a strong political leadership in the Unted States sends a strong message to Putin to hold his horses. And he does, or at least he did in the past.

Another extremely interesting and important aspect of active measures that Dr. Gentry briefly discussed in his paper is about how the Soviets (and today the Russians) financed/finance their influence operations.[14] Indeed, the KGB began to hide funds before

---

[12] See the Munk Debates of two teams, Stephen Cohen and Vladimir Pozner Jr. vs Garry Kasparov and Anne Applebaum, "The West vs Russia," *YouTube*, October 14, 2017, available at https://www.youtube.com/watch?v=XPomKoLW8cU.

[13] Gentry, *Influence Operations in China, Russia, and the Soviet Union*, p. 51.

[14] Gentry, *Influence Operations in China, Russia, and the Soviet Union*, p. 28.

perestroika in the early 1980s, investing them abroad in front organizations and various NGOs. What is less known is that the KGB funds were combined with the party money that were partially utilized to finance influence operations. The Russian FSB and the GRU still use these funds for their influence operations abroad because the interest on the billions of dollars earned over the decades is mindboggling. Those Russians who tried to trace the KGB and party money all died under mysterious circumstances. Among them was Yulian Semenov, a Soviet and Russian writer, and Artiom Borovik, a Russian investigative journalist and media magnate.[15] By the way, the latter was also a vocal critic of Putin. In Borovik's last publication he quoted Putin who said: "There are three ways to influence people: blackmail, vodka, and the threat to kill."[16], So despite the fact that Russia has been less sophisticated and professional than its predecessor there is a significant continuity between the Soviet and Russian approaches to influence operations, which are generously financed and seem to have a serious impact on the West that goes along with narratives promoted by Soviet and Russian intelligence.

In conclusion, Dr. Gentry is correct suggesting that in light of the scale of Chinese and Russian influence operations, countering them is an urgent task. The United States experiences an existential crisis that seems to deepen rather rapidly. As Jaroslaw Martyniuk, the author of the *Monte Rosa: Memoir of an Accidental Spy*, has suggested, "much of the harm is self-inflicted, but a good part is due to hostile outside players such as Russia and China sowing discord."[17] A week ago (6-7 June 2023), the second meeting of the Counterterrorism Law Enforcement Forum was hosted in Oslo by the U.S. Departments of State and Justice and the Government of Norway. The State Department Deputy Coordinator for Counterterrorism Ian Moss emphasized Russia's damaging role in promoting false narratives about Nazi Ukraine, and announced that the Bureau of Counterterrorism is awarding $2 million "for new projects designed to counter Russian disinformation and publicize Russia's hypocrisy on this front."[18] This is a wonderful initiative, yet it is a very modest investment, considering the scale of Russian influence/disinformation operations and the facts offered in Dr. Gentry's article.

There should be efforts on national and global levels to mitigate the negative effects of Chinese and Russian influence campaigns, but the first step--recognizing the problem—is the most difficult from an epistemological perspective. As Bezmenov suggested, for an ideologically subverted nation, it is a great challenge to change its perspective and begin to question its own views and beliefs.

---

[15] On Borovik's and Semenov's interactions, see Vladimir Solov'iov, *Zapiski Skorpiona: Roman s pamiat'iu* (Moskva: Ripol Klassik, 2007), pp. 253-256.

[16] Radio Free Europe/Radio Liberty, Business Watch, "Oleg Kalugin: 'Man in the News Once Again," April 9, 2002. Also, Yuri Felshtinsky and Vladimir Pribylovsky, *The Age of Assassins: The Rise and Rise of Vladimir Putin*, London: Gibson Square Books, 2008), pp. 116-121.

[17] Jaroslaw Martyniuk, "What Do Russia, Antifa and Black Lives Matter Have in Common?," *The Ukrainian Weekly*, June 26, 2020, available at https://www.ukrweekly.com/uwwp/what-do-russia-antifa-and-black-lives-matter-have-in-common/.

[18] "Second Meeting of the Counterterrorism Law Enforcement Forum," *U.S. Department of State*, June 7, 2023, available at https://www.state.gov/second-meeting-of-the-counterterrorism-law-enforcement-forum/.

RUSSIA'S NEW START SUSPENSION: DOES ARMS CONTROL MATTER?

The remarks below were delivered at a symposium on "Russia's New START Suspension: Does Arms Control Matter?" hosted by the National Institute for Public Policy on July 18, 2023. The symposium was based on an Information Series *analysis by National Institute's Research Scholar Dr. Michaela Dodge that explored the implications of Russia's "suspension" of the New START Treaty and what Moscow's actions mean for the future of arms control more broadly.*

David J. Trachtenberg
David J. Trachtenberg is Vice President of the National Institute for Public Policy and served as Deputy Under Secretary of Defense for Policy from 2017-2019.

As I noted in the invitation to this webinar, this discussion will highlight a recent National Institute *Information Series* by my colleague Michaela Dodge, which argues that Russia's "suspension" of its New START Treaty obligations is not a cause for concern but rather an indication that Moscow is not interested in improving relations with the United States and the West. Further, she notes that Russia has long used the arms control process to disadvantage the United States and to seek unilateral advantage for itself.

Indeed, Vladimir Putin has explicitly declared that Russia will not consider returning to compliance with New START unless and until the United States abandons its active support for Ukraine and fundamentally changes its attitude toward Russia. As Russian Deputy Foreign Minister Sergei Ryabkov stated, "Until the United States changes its behavior, until we see signs of common sense in what they are doing in relation to Ukraine... we see no chance for the decision to suspend New START to be reviewed or re-examined."[1]

Given Russia's attitude, one must ask whether arms control even matters. In the United States, arms control is seen by some as essential to strategic stability, reduced tension, and greater predictability and transparency in the strategic relationship with Russia. In reality, the inflated expectations of arms control supporters have failed to be realized and the results have often been less than advertised.

Indeed, the New START Treaty allowed Russia to build up its nuclear weapons, contained poor verification measures, and produced little meaningful benefit for U.S. security. The prospect of arms control serving American national security interests is dubious at best when the political goals and strategic objectives our arms control partner are fundamentally at odds with our own.

Despite this reality, there are those who believe Russia's disregard for treaty obligations requires the United States to redouble its arms control efforts and who see Russia's nuclear threats as an indication that arms control is needed now more than ever. Indeed, President

[1] "Russia will not rejoin nuclear treaty unless U.S. changes Ukraine stance - deputy foreign minister," *Reuters*, March 1, 2023, available at https://www.reuters.com/world/europe/russia-will-not-rejoin-nuclear-treaty-unless-us-changes-ukraine-stance-deputy-2023-03-01/.

Biden has stated that the United States is ready to seek a follow-on treaty to New START, provided Russia is willing to accommodate the U.S. desire to negotiate in good faith.[2] And just last week, the Under Secretary of State for Arms Control and International Security reportedly declared that the United States is "ready to have discussions with Russia" on arms control.[3] Yet, it seems such an approach is divorced from reality and is little more than wishful thinking.

In a forthcoming article, Keith Payne and I argue that in the contemporary threat context "it is a demonstrable mistake" to expect arms control to solve the problems of an adversary seeking to displace the United States as the dominant world power and that "preventing nuclear use now rests largely on strengthening deterrence to minimize the prospects for war."[4]

So, rather than lament the demise of the New START Treaty, the United States should take this opportunity to reassess the role of arms control in U.S. national security strategy and should reconsider the adequacy of U.S. nuclear posture in light of Russia's nuclear threats and apparent hostility toward meaningful arms reductions and China's refusal to engage in any arms control discussions while it actively increases and enhances its own nuclear potential.

The current U.S. nuclear modernization program was initiated well over a decade ago, when the U.S. relationship with Russia and China was seen as relatively benign compared to today. In today's more dangerous international environment, a re-evaluation of U.S. nuclear posture is long overdue.

Given the current international security situation, arms control may not matter at all. The United States can certainly defend its interests without signing paper agreements with opponents who treat them as disposable. But the prospect of any meaningful arms control agreement, if such an outcome is even possible, is non-existent without a strengthened nuclear deterrent to back up the U.S. negotiating posture.

* * * * * * * * * *

Michaela Dodge
Michaela Dodge is Research Scholar at the National Institute for Public Policy.

Thank you to the National Institute and to Dave for hosting this somewhat provocatively titled symposium. I am also grateful to my co-panelists and to attendees that you all could join us for what I promise to be an interesting discussion.

---

[2] The White House, "President Biden Statement Ahead of the 10th Review Conference on the Treaty on the Non-Proliferation of Nuclear Weapons," August 1, 2022, available at https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/01/president-biden-statement-ahead-of-the-10th-review-conference-of-the-treaty-on-the-non-proliferation-of-nuclear-weapons/.

[3] "US Ready For New START Treaty Talks With Russia—Arms Control Under Secretary," *Sputnik News*, July 11, 2023.

[4] Keith B. Payne and David J. Trachtenberg, "Arms Control in the Emerging Deterrence Context," *Information Series,* No. 559, July 19, 2023, available at https://nipp.org/wp-content/uploads/2023/07/IS-559.pdf.

In my remarks, I would like to make the following three points. One, we should not worry about Russia's New Strategic Arms Reduction Treaty (New START) suspension. Two, we should worry about today's geopolitical environment. Three, we are better off without arms control if we cannot realistically appreciate the opponents' goals and how they use arms control to achieve them.

Recently, I published a piece making the case that Russia's New START suspension does not matter. I felt that it was an intellectually consistent position with the treaty's criticism that my colleagues and I put forth during the New START ratification debate. We criticized the treaty as effectively unverifiable, omitting tactical nuclear weapons in which the Russians maintain a significant advantage, limiting missile defense, and the fact that the United States had to make a majority of reductions while the Russians could build up in some treaty categories. We lost the argument.

The Biden Administration extended the Treaty without any preconditions in February 2021. It was spurned by Putin a year later when he suspended the Treaty's implementation. The intellectual inconsistency of some of New START's proponents has come into full light since. Whereby we were told that New START must be ratified during the lame duck session, they are suddenly telling us they "do not see that Russian suspension constitutes an extraordinary event that jeopardizes US supreme interests."[5] In the context of invading Ukraine the second time in less than 10 years, the Russians are literally telling us the treaty is done for now. The State Department cannot certify that Russia is in compliance with the treaty. And that is not an extraordinary event that jeopardizes U.S. supreme interests? To arms control proponents, process seems more important than substance and the substance does not appear to matter at all.

Let us now consider the geopolitical context in which the arms control process resides today. It wouldn't be a National Institute symposium without a Colin Gray quote: "The political antagonism that generates the objective need for alleviation via arms control—always assuming, again fallaciously, that arms control could control—is the very reason why arms control must fail…."[6]

And fail it must. Since Russia's full-scale invasion of Ukraine, the Russians have issued an unprecedent number of nuclear threats. They think these threats are working in some ways. Medvedev recently reminded people that wars can be ended very quickly by signing a peace treaty or by nuking the other party.[7]

---

[5] Rose Gottemoeller and Marshall L. Brown, Jr., "Legal aspects of Russia's New START suspension provide opportunities for US policy makers," *Bulletin of Atomic Scientists*, March 2, 2023, available at https://thebulletin.org/2023/03/legal-aspects-of-russias-new-start-suspension-provide-opportunities-for-us-policy-makers//.

[66] Colin S. Gray, *House of Cards: Why Arms Control Must Fail* (Ithaca, New York: Cornell University Press, 1992), pp. X, 16-19.

[7] "Medvedev names options to stop war: Either negotiations or nuclear strike," *Ukrainska Pravda*, July 5, 2023, available at https://finance.yahoo.com/news/medvedev-names-options-stop-war-122615769.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAJs07l1oJK8Jm6uqXJ8TdCsHuzra91Z2SfxOP549lL41Y19vVLhDMWoDvCEOXBQcBfSSE0dHAiTIO_wh5zzp3FbQb7lrtFdWUpOWzK_iuHOjGDhvIMHbLeprm_ALQwCr5td4X2eBQNwz7jvGMG3NN3X7sqq7eLcfZrxoH7q9h9OW.

The Russians also tell us they value their nuclear superiority, quantitatively and qualitatively. Putin recently emphasized that "we have more such nuclear weapons than NATO countries. They know about it and never stop trying to persuade us to start nuclear reduction talks. Like hell we will, right? A popular phrase. Because, putting it in the dry language of economic essays, it is our competitive advantage."[8] The list of similar Russian statements could go on and on.

While New START was a bilateral treaty, one cannot forget China's "breathtaking" nuclear buildup.[9] U.S. adversaries are revisionist powers hostile to the U.S.-built and maintained world order—that is why their nuclear weapons are a problem. If one was comforted by the existence of New START at this particular juncture, I have a lovely seaside property to sell to you in the Czech Republic.

U.S. arms control proponents do not appear to recognize the importance of adversary goals harmful to the United States and how they use the arms control process to advance them. Secretary of State Antony Blinken said that the United States remains "ready to talk about strategic arms limitations at any time with Russia irrespective of anything else going on in the world or in our relationship."[10] Rose Gottemoeller, former Under Secretary for Arms Control and International Security, wrote that "America does not link nuclear arms limits to other issues: they are an existential necessity in their own right…"[11]

Far from being an "existential necessity" divorced from "anything else going on in the world or in our relationship," arms control discussions will always be subjugated to politics. The problem is the aggressive revisionist intentions of those who possess arms, not arms per se. Arms control discussions will not matter at best and be hurtful at worst for as long as the United States separates the political context from negotiations.

My third, and perhaps most disputable, point is that unless the geopolitical environment changes, we are better off without arms control discussions of the kind we have pursued since the end of the Cold War. We have stopped paying attention to how others use arms control to advance their own objectives at U.S. expense. Having no arms control process would help us preserve programmatic and intellectual flexibility to assess what we need for credible deterrence in a new environment. We would avoid the temptation to limit systems preemptively, in the vain hope that doing so will entice our adversaries to agree with us at some point in the indeterminate future. We would save manpower and resources that could be better spent pursing more productive endeavors. Perhaps it would take us less time to call out noncompliance and violations. One could say that we can do all those things during arms

---

[8] Vladimir Putin, Remarks at the Plenary session of the St Petersburg International Economic Forum," June 16, 2023, available at http://en.kremlin.ru/events/president/news/71445.

[9] Charles Richard, *Remarks at the Space and Missile Defense Symposium*, August 12, 2021, available at https://www.stratcom.mil/Media/Speeches/Article/2742875/space-and-missile-defense-symposium/.

[10] U.S. Department of State, "Secretary Antony J. Blinken Remarks to the Press," February 21, 2023, available at https://www.state.gov/secretary-antony-j-blinken-remarks-to-the-press-7/.

[11] Rose Gottemoeller, "The west must act now to break Russia's nuclear fever," *The Financial Times*, June 15, 2023, available at https://www.ft.com/content/91c51eb9-65df-44f0-977d-db922c3e97e9.

control negotiations, but I am afraid history shows us that doing them becomes that much more difficult with vested interests and Russian propaganda hijacking the process.

Perhaps one could feel better about where matters stand had it not been for a history of terrible difficulties trying to get violators back into compliance with their treaty obligations. Not a single time has the United States been able to bring a violator back into compliance with an arms control agreement absent a significant change in political relations that had nothing to do with the agreement in question. A related problem is the limited U.S. ability to adjust to new international realities and stop pursuing policies that have outlived their usefulness.

Ideally, we would leverage the situation to increase uncertainty about our strategic planning in the adversaries' minds. We would influence them to channel their investments into defense or less productive (for them) areas of competition. That would be difficult to do in the nuclear area today, given the abysmal state of U.S. nuclear weapons infrastructure and anti-competitive nuclear weapons policies we've pursued since the end of the Cold War. But we ought to be intellectually free and serious in developing these pursuits.

What might make sense is what Kenneth Adelman called arms control without agreements. If arms control measures can reduce "the likelihood of war, the scope of war if it occurs, or its consequences,"[12] we ought to be open to them. These do not need to be synonymous with limitations or constraints.

Regrettably, it is difficult to make the case that arms control does not matter, given the continued emphasis on it within U.S. official circles. But an objective analysis of the historical record should make us much more comfortable with the idea of no arms control, at least for the foreseeable future.

* * * * * * * * * *

Robert G. Joseph
Robert G. Joseph is former Under Secretary of State for Arms Control and International Security and Special Envoy for Nonproliferation.

David has asked that I talk about the future of arms control. But before I do that, let me first compliment Michaela on her article. It's a somewhat odd but very rewarding feeling for me when a former student of mine does a better job than I could in taking on conventional wisdom about arms control and national security—in exposing the fallacies and myths associated with arms control that have had a powerful, persistent, and pernicious effect on U.S. nuclear policy and force posture.

In her article, Michaela puts forth a cogent set of observations and arguments that make clear the fundamental disconnect between the practice of arms control and prevailing geostrategic realities over the course of many years across both Republican and Democrat

[12] Ibid., p. 77.

administrations. As she points out, this disconnect has come at a substantial cost to U.S. security.

In 2010, I testified against New START—pointing out the fatal flaws in what I thought was the most poorly negotiated treaty governing U.S. and Soviet, now Russian, nuclear forces. Under its terms, the United States needed to make significant reductions in its strategic forces while Russian forces rose in numbers. Some strategic systems, including future novel capabilities, were not covered under the treaty, giving Russia additional unilateral advantages. And verification was pathetically weak, also playing to Russia's favor—as we knew Moscow's unblemished record of cheating on previous treaties.

Perhaps most significant, the treaty was a fraud to begin with. Although sold to the Senate and public as a 1/3 reduction in deployed strategic warheads of both sides, it was nothing of the sort. The change in the bomber counting rule—and the accounting move from actual deployed to attributable warheads—meant that both the United States and Russia could deploy more warheads than was allowed in the previous treaty.

But the Obama Administration did a good job selling the treaty as an important step in resetting the U.S.-Russian relationship—and the seemingly unquenchable American thirst for arms control prevailed. The debate was less about facts or logic, it was more about arms control as an article of faith. The results are now in as Moscow has, in my view, achieved overall nuclear superiority which has contributed to its decision to invade its neighbor and to threaten NATO with the prospect of nuclear use. Quite the reset.

The Senate resolution of ratification did suggest that any further arms control negotiations should include so-called non-strategic nuclear forces—a category of weapons in which Russia has a massive advantage. It also called for Chinese forces to be included out of concern that Beijing might grow closer to Moscow and expand its own nuclear forces—both of which have happened.

So what about the future of arms control? Having reaped the benefits of New START, Moscow has walked away from the treaty and has rebuffed Biden Administration efforts to negotiate a follow-on treaty. Why—because it is in Moscow's interest to do so. It has the advantage and is determined to retain it.

As for non-strategic weapons, I remember speaking to Sergey Kislyak about the prospects for negotiating an agreement covering these systems. His response was that Moscow has no interest in doing so. He was delighted to point out that we had very few of these weapons left where Moscow had retained thousands—another arms control legacy.

So what about China? Beijing, like Moscow, has rejected repeated offers from the Biden administration to even discuss, let alone negotiate, arms control limitations. As Michaela notes, China embarked on what has been called a breathtaking expansion of its strategic nuclear forces—in addition to already possessing 95 percent of the world's INF missiles. It doesn't want any impediments to matching and then even possibly exceeding U.S. forces. It doesn't see arms control contributing to its security goals. Like Moscow, it is not seeking a better world but rather unilateral advantages.

And what about North Korea? Here arms control efforts have failed for over thirty years—as Pyongyang's arsenal has grown from a few weapons to 40-60 today, to perhaps according

to a recent RAND study, over 200 by 2027—accompanied by an ever-increasing missile capability. And the U.S. policy response is to call again for North Korea to denuclearize through negotiations—something it has flatly and repeatedly rejected. There is simply no sense of reality here.

Iran is seen by the Biden team as the most promising candidate for negotiating an arms control agreement. But this is absolute insanity—going from a position of seeking a longer and stronger JCPOA to what is reportedly being considered today — an unwritten agreement not to exceed 60 percent uranium enrichment. This craziness is a reflection of the inability of arms control practitioners to acknowledge failure and to design new approaches, new strategies to deal with growing problems.

Bill Graham, an old friend of mine, once referred to arms control as a problem masquerading as a solution. No matter how apparent the failure is, the proposed solution is to call for more arms control. And don't expect an end to the bad ideas or the negative security consequences that follow. Whether it's build-down, or no first use commitments, or any of the other stale chestnuts from the arms control cupboard, they are only recycled—they never go away.

Despite the resistance of Russia, China, North Korea, and Iran, my take on the future is that arms control will continue to be a prominent fixture of American policy—never mind the failures of the past and the negative effects it has on American security policy. So, if others won't negotiate with us, who will we negotiate with? The answer is clear: we will negotiate with ourselves. It's more than virtue signaling and a distorted notion of leading by example, it's an ideology of a religious nature.

I will end with one example—the desire of the arms control community (and policy of the current administration) to use missile defenses as a bargaining chip—based on the decades old myth that defenses are destabilizing. While we should be focused on defending against rogue state threats and deterring Russian and Chinese coercive threats—to which advanced defenses could contribute significantly—the Biden Administration rules out developing missile defense capabilities to achieve these imperative security goals—all in the name of arms control.

* * * * * * * * * *

Susan J. Koch
Susan J. Koch is former Director for Proliferation Strategy on the National Security Council Staff and Deputy Assistant Secretary of Defense for Threat Reduction Policy.

In my view, the end to U.S.-Russian arms control—disguised by Russia as a suspension of New START provisions—might matter. But there is a major caveat.

In the 1990s, with the Cooperative Threat Reduction Program, we had broad and deep access to Russian nuclear and strategic sites. With that gone, we had only the imperfect access of New START verification measures. In that area, I believe that something—New START—was better than nothing.

Further, Russia could well take advantage of an end to New START limits on deployed strategic forces. However, the odds of the United States doing so are slim to none.

The caveat is that the benefits from continuation of New START would be realized only if Russia complied with the Treaty. And that is improbable.

As for the future, there is virtually no near-term possibility for the kind of arms control agreement to which we have become accustomed since the Reagan-Gorbachev era—one which provides for intrusive verification and significant reductions in deployed forces.

The Biden Administration agrees that there is little to no foreseeable chance of a return to negotiated verifiable arms reductions. The November 2022 *Nuclear Posture Review* emphasizes the administration's support for further negotiated arms reductions, but also the impossibility of achieving them without one or more willing, reliable partners. And right now, Russia and China are the antitheses of willing, reliable partners.

The chances may be better—not necessarily good, but better—for applying a broad definition of arms control that includes risk reduction. In important ways, that approach would return to the origins of U.S.-Soviet arms control.

The Cuban Missile Crisis in October 1962 taught both sides that, while they did not agree on much, they did share a vital interest in avoiding nuclear catastrophe. For that, they needed to find some common ground. That common ground was very limited during the 25 years between the Cuban Missile Crisis and the signature of the Intermediate Nuclear Forces (INF) Treaty. Nevertheless, the two sides could agree on a few arms control achievements during that period.

The first U.S.-Soviet arms control accord emerged directly from the Missile Crisis. The June 1963 Hotline Agreement established a direct communications link between the two capitals—a link whose absence was felt acutely during the crisis. The Hotline may not seem like a significant achievement, but it was created because both sides realized for the first time that they had a common interest in avoiding nuclear disaster, and for that, they needed to communicate.

Although the United States and Russia and the United States and China no longer need anything like the primitive Hotline, they do need to recognize the need to communicate. China might be inching there with the recent trips by Secretaries Blinken and Yellen. However, China still needs to accept the defense contacts and regularized political-military dialogues that it has long refused.

The situation may be even worse with Russia. During the 1990s, we had closer ties than we ever could have imagined. U.S.-Russian political-military contacts gradually dwindled over the Putin years until they reached a nadir with the Russian invasion of Ukraine in 2022. Contacts with Russia may now be even harder to revive than those with China.

The year 1963 also saw quick U.S.-Soviet agreement on the Limited Test Ban Treaty, which banned all but underground nuclear testing. In 1968, they agreed on the Nuclear Nonproliferation Treaty—showing their common interest in barring further entry into the nuclear weapons club.

In the early 1970s, the sides agreed on confidence-building measures to reduce the danger of incidents at sea and of nuclear accidents or miscalculation. We also concluded the

Anti-Ballistic Missile (ABM) Treaty and the Interim Agreement on Strategic Offensive Arms (SALT I). Those last two just go to show that sometimes nothing is better than something.

Some would say that we are once again at a point where nothing is better than something regarding negotiated verifiable nuclear arms reductions. I disagree. Instead, my view is that future arms reduction agreements could carry some potential benefits. That is not to say that such agreements are possible in the foreseeable future, but that—if they ever do become possible—they might serve US security interests.

First, U.S. and allied security would benefit from a verifiable agreement that constrains short-range nuclear forces and the new kinds of strategic delivery vehicles that are not constrained by the New START Treaty.

Second, depending on the composition of the Congress, arms reductions—or at least the pursuit of same—might be a necessary price for continued legislative support for needed nuclear force improvements.

Third, agreed U.S. arms reductions with Russia and/or China may be important in reinforcing allied reassurance and removing a potential incentive for allied nuclear proliferation.

Finally, no past offensive nuclear arms reduction agreement prevented the United States from deploying forces that were both strategically necessary and politically feasible. The same is likely to be true for any future agreement. Even if the Executive Branch completed an agreement with Russia and/or China that unduly constrained the United States, there would be little likelihood of its winning Senate approval.

This paper mentions the potential benefits (or absence of costs) of future negotiated arms reductions only to urge that they not be dismissed out of hand, not because they might be realized any time soon. For the foreseeable future, verifiable arms reduction agreements with Russia or China are not achievable. The most that the United States can—and indeed, should—do is instead to pursue communications and transparency measures. That effort probably should start with China, which may be the more open of our two major adversaries, and then, when possible, with Russia.

John A. Gentry, *Neutering the CIA: Why US Intelligence Versus Trump Has Long-Term Consequences* (Estes Park, Colorado: Armin Lear Press Inc., 2023), 478 pp.

The U.S. "intelligence community" (IC) is less a homogeneous "community" than a collection of multiple diverse agencies and offices throughout the U.S. government and military, each with its own history and distinct culture. Though often considered to be non-partisan in its approach, various components of the IC have come under scrutiny from various quarters for playing to perceived partisan biases and agendas. The Central Intelligence Agency (CIA) is one such organization that has repeatedly been accused of playing politics with national security by favoring the particular political proclivities of certain presidents and skewing analyses to support the preferred policies of this or that administration.

In his book, *Neutering the CIA: Why US Intelligence Versus Trump Has Long-Term Consequences*, former CIA analyst John Gentry dissects the culture and political biases of the CIA to argue that the agency—including its senior leadership—allowed a general and widely-held dislike of President Trump to color its analyses and assessments, all to the detriment of U.S. national security.

Much of the book recounts Gentry's own personal experiences while at CIA and the experiences of others within that organization and elsewhere in the intelligence community. Some readers may be offput by the author's recounting of information received in private correspondence from unnamed sources. Even so, there is much here to generate concern. Noting that he "personally experienced a variant of the 'politicization' of intelligence," which he observes is traditionally defined as "the injection of political or ideological perspectives into intelligence analyses in order to advance personal, political, or organizational goals" (p. I), Gentry argues that politicization of the IC reached new heights during the Trump Administration and "potentially has much greater ramifications for the IC and the United States as a whole" than what he experienced in the 1980s (p. V).

Of course, the charge of politicizing intelligence is not new. One of the most significant examples occurred during the Clinton Administration when the CIA sent a letter to Senate Democrats citing key judgments from a National Intelligence Estimate (NIE 95-19) that were then publicized to defend President Clinton's opposition to the missile defense policies congressional Republicans sought to mandate in the annual National Defense Authorization Act (NDAA). Clinton's opposition led him to veto the "must-pass" bill, leaving angry Republicans to charge that intelligence had been politicized to support the administration's preferred policy. Several subsequent investigations, including by the "Rumsfeld Commission" and the General Accounting Office (now the Government Accountability Office, GAO), determined that the NIE was severely and methodologically flawed. A panel headed by former Director of Central Intelligence Robert Gates (who also served as President Obama's Secretary of Defense) was set up to consider the politicization charge. The Gates panel also concluded that the NIE's analysis was faulty, but that the assertion that it was politicized to support a particular policy outcome was unfounded. Nevertheless, in the context of a highly partisan debate over missile defense policy, the perception of

politicization of intelligence lingered.[1] While this specific example is not addressed in the book, there are numerous other more recent examples that are documented, including the apparently false accusations of Trump collusion with Russia over the 2016 election and the administration's reaction to the coronavirus pandemic.

Gentry is especially critical of some of the policies enacted by Directors of National Intelligence (DNIs) and the CIA during the Clinton and Obama years, noting that they reflected an effort to push social agendas such as the "diversity and inclusion" movement. He is particularly critical of former DNI James Clapper, who after leaving government service became a commentator on CNN where he "regularly criticized President Trump on a wide variety of issues, including many non-intelligence topics" (p. 147). Leon Panetta, John Brennan, and others, Gentry argues, sought to dictate social and preferential hiring policies that some within the IC saw as "controversial and divisive." He notes that both Clapper and Brennan "changed policies, structures, and incentives in ways designed to change CIA's organizational culture in ways that would be both politically significant and enduring" (p. 149). He recounts Brennan's acknowledgement that in the 1976 presidential election Brennan actually voted for Gus Hall, the candidate of the Communist Party of the USA, and, according to Gentry, "advocated political activism repeatedly to employee groups, with evidently considerable success" (p. 151). Gentry notes the lack of empirical data to back up the claim that "demographic diversity" improved the performance of the IC, while noting that the Soviet leadership considered this "America's greatest political vulnerability" (p. 193).

Gentry's criticism of the social engineering policies of the IC under Democratic administrations should not be mistaken as a full-throated endorsement of Donald Trump. Indeed, he notes that many of Trump's claims before and after being elected president were "factually incorrect" (p. 201). Trump's language and "polarizing rhetoric" were "needlessly abrasive" (pp. 226, 231) and angered many IC professionals, who perceived his attitude to be an "assault on intelligence" (p. 207), and Trump's initial rejection of the IC's conclusion that Russia sought to interfere in the 2016 election sparked intense distrust. Gentry acknowledges that Trump said "many disparaging and incorrect things about the intelligence community" (p. 213); yet he explains that Trump's apparent aversion to daily intelligence briefings was not unique among U.S. presidents, noting, for example, that former Director of Central Intelligence James Woolsey resigned "because he could not get time on [President] Clinton's calendar" (p. 220). Indeed, after Trump appointed Mike Pompeo to be his Director of the CIA, Pompeo was added as a member of the president's Cabinet and the "Principal's Committee"—only the second time a CIA director had been elevated to such a stature.

Nevertheless, Gentry argues that the reaction to Trump by intelligence professionals "amounted to a new and important form of overt politicization" (p. 232). He contends,

[1] As then-Senator Jon Kyl (R-AZ) stated at the time, "the conclusion that flowed from the faulty assumptions of the CIA National Intelligence Estimate had the effect of allowing unwarranted political conclusions to be reached and preached…. Because of the CIA's letter to Senators at the time that we were debating the national missile defense amendment, policy was affected." See *Congressional Record*, July 31, 1998, p. S9522, available at https://irp.fas.org/congress/1998_cr/s980731-rumsfeld.htm.

"Negative reactions to Trump by professional intelligence officers, current and former… were so unusual by historical standards and because they dwarfed the pro-Trump commentary" (p. 232). Gentry criticizes former Deputy CIA Director Michael Morell for publishing an article in 2016 alleging that "Mr. Putin had recruited Mr. Trump as an unwitting agent of the Russian Federation" by noting that Morell "broke a long-standing taboo by invoking his intelligence credentials to rationalize a domestic, partisan political action—a vote for [Hillary] Clinton" (pp. 234-235). Brennan is also criticized for his "emotional" and "outlandish" anti-Trump comments. The leaking to the press of negative information by intelligence professionals in opposition to presidential policies is not unprecedented, but Gentry argues the anti-Trump leaks were "more numerous and longer-lasting than ever before" (p. 234).

Neutering the CIA documents chronologically the scope and extent of the extensive criticism of Candidate, then President Trump, by current and former CIA officials. Gentry contends that the anti-Trump attacks by Brennan, Clapper, and Michael Hayden—another former Director of the CIA—stood in sharp contrast to the traditionally apolitical postures of intelligence leaders. The book also acknowledges that while some intelligence professionals saw it as their moral duty to leak information or speak out vigorously, others believed that doing so would bolster concerns over politicized intelligence and ultimately harm the credibility of the IC.

Gentry also discusses whether a "Deep State" exists within the intelligence community and whether "politicization by omission" occurs. He concludes that "Politicization of intelligence, however generated, damages the credibility, the perceived trustworthiness, and thereby the value of US intelligence" (p. 389). With respect to the debate over whether it is appropriate to speak out publicly or to remain silent, he compares and contrasts the standards of conduct used by the IC with those of the military, arguing for a "national debate about 'civil-intelligence relations'" (p. 408).

No doubt some readers of *Neutering the CIA* will see it as a partisan defense of Trump and an attempt inappropriately to sully the reputations of intelligence community analysts and leaders who were highly critical of the nation's 45th president. Yet this conclusion is unsupported by the numerous criticisms of Donald Trump leveled by Gentry throughout the pages of this book; Gentry makes clear that many of Trump's statements were wrong, polarizing, mercurial, and inconsistent regarding intelligence. However, whatever one thinks of Trump's style and language, Gentry asserts "The most critical asset that intelligence has in its relationship with senior leaders is its credibility," which he argues is something the IC lost as a result of its vociferous anti-Trump posturing.

Prophetically, he argues that the "Trump-IC conflict [is] the first of a series of ideology-based struggles" that "we will see again" (p. VII). He notes that "the preponderance of evidence points strongly to the continued existence of a politicized IC that will cause problems for years to come—long after Trump has left the political scene" (p. 414). He calls for significant reforms of the intelligence community, including investigating "the state of political activism" within the IC and "the extent to which analytic products are being politicized, with what slant" (p. 423). He also states that the IC must do better in combatting

leaks, suggesting the increased use of polygraphs. More radical structural changes may be needed, he argues, though he acknowledges there are downsides to such an approach.

These and other recommendations may be viewed by some readers as ideologically motivated, and Gentry's conclusion that at least some of the IC's work is ideologically partisan may be challenged by others, but the information in *Neutering the CIA* definitely provides important food for thought rarely presented publicly.

Reviewed by David J. Trachtenberg
National Institute for Public Policy

* * * * * * * * * *

John D. Maurer, *Competitive Arms Control: Nixon, Kissinger, & SALT 1969-1972* (New Haven CT: Yale University Press, 2022), 312 pp.

In *Competitive Arms Control: Nixon, Kissinger, & SALT 1969-1972*, John D. Maurer introduces the concept of competitive arms control, i.e., arms control crafted to channel great power competition to areas of a state's competitive advantages and away from its disadvantages. To demonstrate the concept, Maurer provides a detailed account of the Strategic Arms Limitation Talks (SALT) negotiations during the Nixon Administration. He argues that SALT negotiations cannot be understood solely as a cooperative endeavor between the United States and the Soviet Union because of the important influence of "arms control competitors," or those who wanted to utilize arms control to obtain an advantage for the United States.

The author's account of interagency arguments between arms control "competitors" (represented by Secretary of Defense Melvin Laird) and "cooperators" (represented by the chief U.S. delegate to SALT and the Arms Control and Disarmament Agency Director Gerard Smith) during SALT negotiations is as comprehensive as it is competently executed; the author relies on numerous declassified documents as well as interviews and popular accounts of negotiations from direct participants.

Maurer's work improves a general understanding of the arms control process and introduces a useful additional dynamic that so far has been underappreciated in the general discourse on arms control. Yet, students of arms control may find the analysis lacking. Given what transpired during the SALT negotiations and the agreements' implementation, the SALT agreement may be considered an example of how one should *not* conduct competitive arms control negotiations. The author's praise of the SALT process in that context sounds odd. After all, the U.S. negotiations were marked by a deterioration of its negotiating positions and with it, most of the leverage the United States had going in.

The U.S. decision to limit U.S. missile defenses may have been seen as necessary to reach an agreement with the Soviets, but it certainly was not a sound mark of a competitive arms control approach, as the author interprets it. Restrictions imposed by the Anti-Ballistic Missile Treaty hampered significant *future* advancements in an area of U.S. competitive advantage at the time the treaty was signed without substantive reductions in Soviet

offensive capability—and that is even before one considers the lack of Soviet compliance with arms control agreements in contrast to U.S. adherence to the letter of treaties.

The SALT agreements permitted and codified Soviet offensive force superiority in exchange for future U.S. technological improvements (which in many ways ended up not materializing for a host of separate reasons). They made it harder for the United States to take advantage of its technological superiority--the opposite effect of what should have occurred had the agreement been truly competitive. The author presents the process as a mix of a competitive and cooperative approach; yet, the strategic implications of SALT were a failure from a competitive arms control perspective, and from the perspective of U.S. interests. The discussion of SALT's implementation would provide an important indicator of the degree to which were the cooperative and competitive arms control approaches successful.

At the end of the day, the concept of competitive arms control should include negotiating from a position of strength, coupled with a realistic appreciation of political relations among nations. The fact that the United States let its relative strategic position atrophy during negotiations and then did not give up *all* the advantages it had in the SALT agreements can hardly be considered a mark of competitiveness.

The author's extrapolation to the assessment of the New Strategic Arms Reduction Treaty (New START) negotiations is similarly off the mark; the Obama Administration pursued the treaty with the Russian Federation as a cooperative endeavor under the "reset" policy and negotiations resulted in an agreement significantly disadvantageous to the United States. The fact that the United States had to make a majority of treaty accountable nuclear weapon reductions while Russia started below permitted numbers in two of the three treaty-defined categories is a mark of an agreement that is not based on a sound competitive approach. Indeed, the Obama Administration's "reset" policy with Russia precluded serious competitive approaches because the Administration was interested in obtaining an agreement as soon as possible, Russia was no longer considered an adversary, and the potential of conflict with it was considered low. In other words, the Administration did not take time to seriously consider or negotiate competitive arms control approaches.

The concept of competitive arms control warrants further exploration but the examples the author selected for illustrating it are not always appropriate. Despite this broader conceptual problem, the book is an interesting and accessible account of the inter-agency dynamic during SALT negotiations and worth an interested reader's time.

Reviewed by Michaela Dodge
National Institute for Public Policy

* * * * * * * * * *

John H. Maurer and Erik Goldstein, eds., *The Road to Pearl Harbor: Great Power War in Asia and the Pacific* (Annapolis, MD: Naval Institute Press, 2022), 224 pages.

A growing great power in the Pacific, fueled by nationalism and resentment, threatens Western powers and their allies who are slow to recognize the threat and adjust their military postures. That scenario should sound familiar, and two of the pre-eminent scholars of naval history have edited a concise general history in *The Road to Pearl Harbor* which helps connect the dots between the past and the present. John H. Mauer and Erik Goldstein recognize the parallels between Imperial Japan and today's China are not exact, but as the aphorism goes, "history may not repeat itself, but it does rhyme."

The editors' main purpose in assembling this work is to explain why World War II occurred, with the concluding chapter focusing on present-day China and its military doctrine. Their goal is not to prophesy about an impending war, but rather to shine a light on history "to illuminate the dangers that currently confront American leaders." The editors generally succeed in their stated goal.

Each chapter is between 20 and 30 pages and focuses on a major combatant in the Pacific theater of World War II, and more specifically, on leaders of those states. In the editors' words, "We analyze the menu of foreign policy and strategy choices open to these leaders and explain why the steps they took led to war... we pay close attention to the domestic political and international settings in which they operated. Their internal and external surroundings both provided opportunities for action as well as constrained their policy menu of choice to act creatively." Each chapter's author wisely steers away from speculative history and excessive "what if" questions, and focuses instead on the factors that affected each leaders' decision-making – a range that includes factors as diverse as their earlier responsibilities in government, personal interactions, budget constraints, military advisors, and more.

The chapters are arranged loosely in chronological fashion beginning with British Prime Minister David Lloyd George's efforts at peacemaking, followed by Imperial Japan's naval leadership's protest against and removal of the Washington naval treaties of the 1920s and 1930s. The third chapter focuses on Chiang Kai-shek and his often competing priorities in tamping down a Communist insurgency while battling Imperial Japan's invasion. The fourth and fifth chapters concern, respectively, Winston Churchill's and Franklin Roosevelt's evolving approaches to relations with Japan before World War II. The sixth chapter examines the year 1941 from the perspective of China, Japan, the United States, and Great Britain – helping to highlight some of the immediate causes of Japan's attack on Pearl Harbor. The seventh and final chapter focuses less on contemporary China's leader, Xi Jinping, and more on Chinese military doctrine – specifically its emphasis on crippling an adversary's logistics, preferably through speed and surprise.

The Road to Pearl Harbor will be of greater interest to a general readership since specialists are unlikely to find anything remarkably new in its pages. True to the book's overall purpose, however, each chapter examines some of the most pertinent factors in each leaders' decision-making. In this sense, each chapter is a mini-case study in grand strategy

as state leaders confronted often competing priorities, both foreign and domestic. This dynamic is especially important for general readers to understand since the temptation in studying history is to look back with perfect hindsight and judge a leader's actions, instead of (correctly) examining what they did know when they made their decisions.

The Road to Pearl Harbor is a good book, but what holds it back from being great is a missing concluding chapter. As the reader progresses through the book, especially a reader well-informed on current events, the parallels between then and now are quite glaring in some cases, and more subtle in others. In both cases, however, a concluding chapter that highlighted these parallels (and discontinuities where they exist) would have tied the book together nicely. As it is, the book ends with a sobering examination of China's military doctrine and its forces, but no explicit connection to WWII. Thus, readers are left to answer for themselves what lessons should today's leaders draw from the pre-WWII experience?

When read as a general guide on how and why World War II began in the Pacific theater, *The Road to Pearl Harbor* is a valuable and concise introduction to the lay reader. Although marred by a lack of a summary conclusion, those interested in grand strategy, leadership decision-making, and the causes of war will find it an engaging read.

Reviewed by Matthew R. Costlow
National Institute for Public Policy

This Issue's "Documentation" section reprints the Executive Summaries from two important recently-published reports. Document No. 1 is the Executive Summary from the bipartisan and consensus report of the 2023 Strategic Posture Commission, which reviewed and made recommendations on America's many tools of state power, including conventional forces, nuclear forces, and missile defenses. Document No. 2, reprinted below, is an illustration of one aspect of the threat environment the Strategic Posture Commission had to consider in making its recommendations: the Department of Defense's 2023 *Military and Security Developments Involving the People's Republic of China*. The conclusions in both documents will undoubtedly make an impact on U.S. and allied officials and should serve as calls to action.

Document No. 1. Madelyn R. Creedon and Jon L. Kyl, Chair and Vice Chair, *America's Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States*, Executive Summary (Washington, D.C.: Institute for Defense Analyses, October, 2023), pp. vii-xi.

EXECUTIVE SUMMARY

The United States faces a strategic challenge requiring urgent action. Given current threat trajectories, our nation will soon encounter a fundamentally different global setting than it has ever experienced: we will face a world where two nations possess nuclear arsenals on par with our own. In addition, the risk of conflict with these two nuclear peers is increasing. It is an existential challenge for which the United States is ill-prepared, unless its leaders make decisions now to adjust the U.S. strategic posture.

The Congressional Commission on the Strategic Posture of the United States was established by the Fiscal Year (FY) 2022 National Defense Authorization Act (NDAA), and concludes that America's defense strategy and strategic posture must change in order to properly defend its vital interests and improve strategic stability with China and Russia. Decisions need to be made now in order for the nation to be prepared to address the threats from these two nuclear-armed adversaries arising during the 2027-2035 timeframe. Moreover, these threats are such that the United States and its Allies and partners must be ready to deter and defeat both adversaries simultaneously.

We arrive at these conclusions following a comprehensive year-long review of the threats America faces and its strategy and planned capabilities to address those threats. The evidence demonstrates that the U.S.-led international order and the values it upholds are at risk from the Chinese and Russian authoritarian regimes. The risk of military conflict with those major powers has grown and carries the potential for nuclear war. Therefore, the Commission reached the unanimous, non-partisan conclusion that today's strategic outlook requires an urgent national focus and a series of concerted actions not currently planned. In sum, we find that the United States lacks a comprehensive strategy to address the looming two nuclear-peer threat environment and lacks the force structure such a strategy will require.

In reaching that overall conclusion, we make clear that the fundamentals of America's deterrence strategy remain sound, but the application of that strategy must change to address the 2027-2035 threat environment. Those changes drive necessary adjustments to the posture of U.S. nuclear capabilities—in size and/or composition. A full spectrum of non-nuclear capabilities is also essential to the nation's strategic posture. Such adjustments, in turn, drive the need to strengthen and expand the capacity of the infrastructure required to sustain and enhance U.S. strategic capabilities. In addition, Allies and partners are central to our findings regarding strategy and posture. We also emphasize the need for robust risk reduction efforts as fundamental to the U.S. approach in the new threat environment.

Adhering to the stipulations of our mandate, the report that follows delineates 131 findings and makes 81 recommendations. Those findings and recommendations are found at the beginning and end, respectively, of each chapter that follows; a complete list is also included following the report's conclusion. Our most important recommendations are summarized here:

STRATEGY

- To achieve the most effective strategy for stability in light of the 2027-2035 threat environment, the Commission identifies three necessary changes:
    - The United States must develop and effectively implement a truly integrated, whole-of-government strategy to address the 2027-2035 threat environment.
    - The objectives of U.S. strategy must include effective deterrence and defeat of simultaneous Russian and Chinese aggression in Europe and Asia using conventional forces. If the United States and its Allies and partners do not field sufficient conventional forces to achieve this objective, U.S. strategy would need to be altered to increase reliance on nuclear weapons to deter or counter opportunistic or collaborative aggression in the other theater.
    - The size and composition of the nuclear force must account for the possibility of combined aggression from Russia and China. U.S. strategy should no longer treat China's nuclear forces as a "lesser included" threat. The United States needs a nuclear posture capable of simultaneously deterring both countries.
- The Commission recommends the United States maintain a nuclear strategy consistent with the Law of Armed Conflict (LOAC), based on six fundamental tenets—assured second strike, flexible response, tailored deterrence, extended deterrence and assurance, calculated ambiguity in declaratory policy, hedge against risk—and apply these tenets to address the 2027-2035 threat.

STRATEGIC POSTURE

In the context of a strategic posture deploying both conventional and nuclear capability, the Commission believes the traditional role of nuclear weapons in U.S. defense strategy remains

valid and of continuing importance: deterrence of adversaries; assurance of Allies; achieving U.S. objectives should deterrence fail; and hedging against adverse events.

- The Commission recommends fully and urgently executing the U.S. nuclear modernization Program of Record (POR), which includes replacement of all U.S. nuclear delivery systems, modernization of their warheads, comprehensive modernization of U.S. nuclear command, control, and communications (NC3), and recapitalizing the nuclear enterprise infrastructure at the DOD and DOE/NNSA.
- The current modernization program should be supplemented to ensure U.S. nuclear strategy remains effective in a two-nuclear-peer environment.
- Comprehensive risk-mitigating actions across U.S. nuclear forces must be executed to ensure that delays in modernization programs or early age-out of currently deployed systems do not result in militarily significant shortfalls in deployed nuclear capability.
- The U.S. strategic nuclear force posture should be modified to:
    - Address the larger number of targets due to the growing Chinese nuclear threat.
    - Address the possibility that China will field large-scale, counterforce-capable missile forces that pose a threat to U.S. strategic nuclear forces on par with the threat Russia poses to those forces today.
    - Assure the United States continues to avoid reliance on executing Intercontinental Ballistic Missile (ICBM) launch under attack to retain an effective deterrent.
    - Account for advances in Russian and Chinese integrated air and missile defenses (IAMD).
- The U.S. theater nuclear force posture should be urgently modified to:
    - Provide the President a range of militarily effective nuclear response options to deter or counter Russian or Chinese limited nuclear use in theater.
    - Address the need for U.S. theater nuclear forces deployed or based in the Asia-Pacific theater.
    - Compensate for any shortfall in U.S. and allied non-nuclear capabilities in a sequential or simultaneous two-theater conflict against Russia and China.
    - Address advances in Russian and Chinese IAMD.

NUCLEAR SECURITY ENTERPRISE INFRASTRUCTURE AND ORGANIZATION

- The Commission recommends the DOD and DOE/NNSA strategic infrastructure be expanded to have sufficient capacity to:
    - Meet the capability and schedule requirements of the current nuclear modernization POR and the requirements of the force posture modifications recommended by the Commission in time to address the two-peer threat.

  - Provide an effective hedge against four forms of risk: technical failure of a warhead or delivery system, programmatic delays, operational loss of delivery systems, and further deterioration of the geopolitical environment.
  - Flex to respond to emerging requirements in a timely fashion.
- To support the proposed strategy, the Commission recommends Congress fund an overhaul and expansion of the capacity of the U.S. nuclear weapons defense industrial base and the DOE/NNSA nuclear security enterprise, including weapons science, design, and production infrastructure. Specifically:
  - Congress should fund the full range of NNSA's recapitalization efforts, such as pit production and all operations related to critical materials.
  - Congress should forge and sustain bipartisan consensus and year-to-year funding stability to enable the defense industry to respond to innovative DOD contracting approaches and invest with more certainty.
  - Congress should enact annual DOD and DOE authorization and appropriation bills before the beginning of each fiscal year.
  - Congress should place the purview of all "050" programs (President's Budget line item for "national security") that are in NNSA under Defense appropriations subcommittees (House Appropriations Committee-Defense (HAC-D), Senate Appropriations Committee Defense (SAC-D).
  - Cabinet Secretaries, working with states and union leaders, should establish and increase the technical education and vocational training programs required to create the nation's necessary skilled-trades workforce for the nuclear enterprise.
- The Commission recommends a number of specific actions to expand the capacity and effectiveness of the nation's infrastructure and supply chain for its strategic capabilities.

NON-NUCLEAR CAPABILITIES

- The Commission recommends: The United States urgently deploy a more resilient space architecture and adopt a strategy that includes both offensive and defensive elements to ensure U.S. access to and operations in space.
- The United States and its Allies take steps to ensure they are at the cutting edge of emerging technologies—such as big data analytics, quantum computing, and artificial intelligence (AI)—to avoid strategic surprise and potentially enhance the U.S. strategic posture.
- The United States prioritize funding and accelerate long-range non-nuclear precision strike programs to meet the operational need and in greater quantities than currently planned.

- The United States develop and field homeland IAMD that can deter and defeat coercive attacks by Russia and China, and determine the capabilities needed to stay ahead of the North Korean threat.
- The Secretary of Defense direct research, development, test and evaluation into advanced IAMD capabilities leveraging all domains, including land, sea, air, and space. These activities should focus on sensor architectures, integrated command and control, interceptors, cruise and hypersonic missile defenses, and area or point defenses. The DOD should urgently pursue deployment of any capabilities that prove feasible.
- The Secretary of Defense and the Military Departments transfer operations and sustainment responsibility for missile defense to the appropriate Military Departments by 1 October 2024. This will allow the Missile Defense Agency (MDA) to focus on research, development, prototyping and testing.

ALLLIES AND PARTNERS

The Commission believes it is in the U.S. national interest to maintain, strengthen, and when appropriate, expand its network of alliances and partnerships. These relationships strengthen American security by deterring aggression regionally, before it can reach the U.S. homeland, while also enabling U.S. economic prosperity through access to international markets. Withdrawing from U.S. alliances and partnerships would directly benefit adversaries, invite aggression that the United States might later have to reverse, and ultimately decrease American, allied, and partner security and economic prosperity. Further, the Commission believes that our defense and the defense of the current international order is strengthened when Allies can directly contribute to the broader strategic posture, and the United States should seek to incorporate those contributions as much as possible.

- The Executive branch should recognize that any major change to U.S. strategic posture, policies, or capabilities will have great effect on Allies' perceptions and their deterrence and assurance requirements. As a result, any changes should be predicated on meaningful consultations.

RISK REDUCTION

The Commission believes it is of paramount importance for the United States to work to reduce strategic risks. This involves activities and programs across the U.S. government, including in nonproliferation and arms control, as well as maintaining strong, viable, and resilient military forces.

- The Commission recommends that a strategy to address the two-nuclear-peer threat environment be a prerequisite for developing U.S. nuclear arms control limits for the 2027-2035 timeframe. The Commission recommends that once a strategy and its

related force requirements are established, the U.S. government determine whether and how nuclear arms control limits continue to enhance U.S. security.

- The Commission recommends that the United States continue to explore nuclear arms control opportunities and conduct research into potential verification technologies in order to support or enable future negotiations in the U.S. national interest that seek to limit all nuclear weapon types, should the geopolitical environment change.
- Where formal nuclear arms control agreements are not possible, the Commission recommends pursuing nuclear risk reduction measures to increase predictability and reduce uncertainty and the chances for misperception and miscalculation.

The 2009 Congressional Commission on the Strategic Posture of the United States reported that the United States was at "a moment of opportunity, . . .but also a moment of urgency"—because the security environment had improved and the threat of nuclear proliferation was the principal concern. Since 2009, the security environment has dramatically worsened and new existential threats have emerged. This Commission concludes that the United States now faces a high-stakes challenge that requires urgent action. Nevertheless, the Commission has not seen the U.S. government demonstrate the urgency and creativity required to meet the challenge. Nothing other than synchronized steps taken by the Executive and Legislative Branches will craft the strategy and build the posture the nation requires.

The challenges are unmistakable; the problems are urgent; the steps are needed now.

* * * * * * * * * * *

Document No. 2. U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China, 2023* (Washington, D.C.: Department of Defense, October 2023), pp. ii-xii, available at https://media.defense.gov/2023/Oct/19/2003323409/-1/-1/1/2023-MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA.PDF.

EXECUTIVE SUMMARY
UNDERSTANDING CHINA'S STRATEGY

CHINA'S NATIONAL STRATEGY

- The PRC's national strategy is to achieve "the great rejuvenation of the Chinese nation" by 2049. The strategy is a determined pursuit of political, social, and military modernity to expand the PRC's national power, perfect its governance, and revise the international order in support of the PRC's system of governance and national interests. The PRC views the United States as deploying a whole-of-government effort meant to contain the PRC's rise, which presents obstacles to its national strategy.

- The PRC characterizes its view of strategic competition in terms of a rivalry among powerful nation states, as well as a clash of opposing ideological systems. PRC leaders believe that structural changes in the international system and a confrontational United States are the root causes of intensifying strategic competition between the PRC and the United States.
    - In March 2023, Xi Jinping told delegates to the Chinese People's Political Consultative Conference that "Western countries led by the United States have implemented comprehensive containment, encirclement and suppression against us, bringing unprecedented severe challenges to our country's development."
- The PRC's strategy entails deliberate and determined efforts to amass, improve, and harness the internal and external elements of national power that will place the PRC in a "leading position" in an enduring competition between systems.
- In the 20th Party Congress Political Work Report, the CCP expanded on its calls to prepare for an increasingly turbulent international climate, while reporting it had "enhanced" the PRC's security on all fronts and "withstood political, economic, ideological, and natural risks, challenges, and trials."

FOREIGN POLICY

- The PRC's foreign policy seeks to build a "community of common destiny" that supports its strategy to realize "the great rejuvenation of the Chinese nation." The PRC's ambition to reshape the international order derives from the objectives of its national strategy and the Party's political and governing systems.
- Beginning late 2022 Beijing launched a diplomatic 'charm offensive' targeting European countries in an apparent effort to improve perceptions of Beijing following years of 'wolf warrior' diplomacy and COVID isolation.
- In April 2022, Xi Jinping announced the Global Security Initiative (GSI). Echoing the previous year's rollout of the Global Development Initiative (GDI), Beijing has promoted GSI extensively and attempted to insert GSI language into multilateral forums and documents.
- Russia's war on Ukraine in February 2022 represented a major, unexpected challenge for the PRC as it sought to react to the largest military conflict in Europe since the end of World War II. As Beijing deliberates the scale and scope of materiel commitments to Russia's war on Ukraine, it probably will seek to balance its strategic partnership with Russia while avoiding reputational or economic costs that could result from its assistance.

ECONOMIC POLICY

- At the end of 2022, China abruptly reversed its zero-COVID policy. The decision to implement China's reopening took most by surprise and was probably triggered by

country-wide protests against the PRC's zero-COVID policies, economic pressures, and fiscal difficulties for local governments.

- The 20th Party Congress emphasized the importance of quality growth rather than the speed of growth. General Secretary Xi also highlighted "common prosperity," more equitable access to basic public services, a better multi-tiered social security system, and cultural and green developments as a few of the PRC's economic initiatives.
- The PRC's ongoing military modernization objectives are commensurate with and part of China's broader national development aspirations.

CHINA'S BELT AND ROAD INITIATIVE (BRI)

- The PRC uses BRI to support its strategy of national rejuvenation by seeking to expand global transportation and trade linkages to support its development and deepen its economic integration with nations along its periphery and beyond.
- In 2022, BRI projects saw mixed economic outcomes, experiencing both growth and decline. However, overall spending on BRI projects remained consistent with the previous year and Beijing continued to prioritize public health, digital infrastructure, and green energy opportunities.
- Overseas development and security interests under BRI will drive the PRC towards expanding its overseas security relationships and presence to protect those interests.

MILITARY-CIVIL FUSION (MCF) DEVELOPMENT STRATEGY

- The PRC pursues its Military-Civil Fusion (MCF) (军民融合) Development Strategy to "fuse" its security and development strategies into its Integrated National Strategic System and Capabilities in support of China's national rejuvenation goals.
- The PRC's MCF strategy includes objectives to develop and acquire advanced dual-use technology for military purposes and deepen reform of the national defense science and technology industries and serves a broader purpose to strengthen all of the PRC's instruments of national power.
- Since early 2022, the CCP appears to have been deemphasizing the term "Military Civil Fusion" in public, in favor of "integrated national strategic systems and capabilities."

DEFENSE POLICY AND MILITARY STRATEGY

- In 2022, the PRC's stated defense policy remained oriented toward safeguarding its sovereignty, security, and development interests, while emphasizing a greater global role for itself. The PRC's military strategy remains based on the concept of "active defense" (积极防御).

- PRC leaders stress the imperative of strengthening the PLA into a "world-class" military by the end of 2049 as an essential element of its strategy to rejuvenate the PRC into a "great modern socialist country."
- In October 2022, Xi secured his third term as the general secretary of CCP at the Party Congress and his appointment of loyalists to top positions in the CMC probably will enable Xi to expand upon military modernization and operational goals during his next 5-year term.
- During his October 2022 speech at the opening ceremony of the 20th Party Congress, Xi reaffirmed his commitment to the PLA's 2027 milestone for modernization to accelerate the integrated development of mechanization, informatization, and intelligentization of the PRC's armed forces. If realized, this capability milestone could give the PLA the capacity to be a more credible military tool for the CCP's Taiwan unification efforts.
- In 2022, the PLA continued discussing a new "core operational concept," called "MultiDomain Precision Warfare (多域精确战)" (MDPW). MDPW is intended to leverage a C4ISR network that incorporates advances in big data and artificial intelligence to rapidly identify key vulnerabilities in the U.S. operational system and then combine joint forces across domains to launch precision strikes against those vulnerabilities.
- COVID-19 mitigation measures and multiple outbreaks throughout 2022 probably did not significantly impact PLA combat readiness.

FORCES, CAPABILITIES, AND POWER PROJECTION

- The PLA has sought to modernize its capabilities and improve its proficiencies across all warfare domains so that, as a joint force, it can conduct the full range of land, air, and maritime as well as nuclear, space, counterspace, electronic warfare (EW), and cyberspace operations.
- The PLA's evolving capabilities and concepts continue to strengthen the PRC's ability to "fight and win wars" against a "strong enemy (强敌)" (a likely euphemism for the United States), counter an intervention by a third party in a conflict along the PRC's periphery, and project power globally.
- **People's Liberation Army Army (PLAA).** The PLAA continues to modernize equipment and focus on combined arms and joint training in effort to meet the goal of becoming a world class military. The PLAA demonstrated a new long-range fire capability in the PLA military response to the August 2022 U.S. Congressional Delegation (CODEL) visit to Taiwan. The PLAA continues to incorporate a twice a year conscript intake. The long-term effects of the policy are not clear.

- **People's Liberation Army Navy (PLAN).** The PRC has numerically the largest navy in the world with an overall battle force of over 370 ships and submarines, including more than 140 major surface combatants. The PLAN is largely composed of modern multi-mission ships and submarines. In 2022, the PLAN launched its third aircraft carrier, CV-18 Fujian.
    - It also commissioned its third YUSHEN class Amphibious Assault Ships (LHA) and has likely begun construction on a fourth as of early 2023. In the near-term, the PLAN will have the ability to conduct long-range precision strikes against land targets from its submarine and surface combatants using land-attack cruise missiles, notably enhancing the PRC's power projection capability.
    - The PRC continues to challenge foreign military activities in its exclusive economic zone (EEZ) in a manner that is inconsistent with the rules of customary international law as reflected in the United Nations Convention on the Law of the Sea. At the same time, the PLAN conducts activities in the EEZs of other countries, including the United States, Australia, Philippines, Vietnam, and Malaysia.
- **People's Liberation Army Air Force (PLAAF) and PLAN Aviation.** The PLAAF and PLAN aviation together constitute the largest aviation force in the Indo-Pacific region. The PLAAF is rapidly catching up to western air forces. The PLAAF continues to modernize with the delivery of domestically built aircraft and a wide range of UASs. In October 2019, the PLAAF signaled the return of the airborne leg of its nuclear triad after the PLAAF publicly revealed the H-6N as its first nuclear-capable air-to-air refuelable bomber.
- People's Liberation Army Rocket Force (PLARF). The PLARF is advancing its long-term modernization plans to enhance its "strategic deterrence" capabilities. The PRC is developing new ICBMs that will significantly improve its nuclear-capable missile forces and will require increased nuclear warhead production, partially due to the introduction of multiple independently targetable reentry vehicle (MIRV) capabilities.
    - The PRC may be exploring development of conventionally-armed intercontinental range missile systems. If developed and fielded, such capabilities would allow the PRC to threaten conventional strikes against targets in the continental United States, Hawaii, and Alaska.
- **Strategic Support Force (SSF).** The SSF is a theater command-level organization established to centralize the PLA's strategic space, cyberspace, electronic, information, communications, and psychological warfare missions and capabilities. The SSF's Network Systems Department (NSD), sometimes referred to as the Cyberspace Force (CSF; 网络空间部队), is responsible for information warfare with an integrated mission set that includes cyberspace warfare, technical reconnaissance,

electronic warfare, and psychological warfare. The PLA SSF's Space Systems Department (SSD), sometimes referred to as the Aerospace Force (ASF; 航天部队), is responsible for military space operations. The PRC continues to develop counterspace capabilities—including direct-ascent anti-satellite missiles, co-orbital satellites, electronic warfare, and directed-energy systems—that can contest or deny an adversary's access to and operations in the space domain.

- **Joint Logistic Support Force.** The JLSF is concentrating its efforts on improving joint strategic and campaign-level logistic efficiencies through training and integrating civilian products and services. The JLSF supports multimodal transportation methods to facilitate the movement of PLA forces and equipment for training.
- **Special Operations Forces (SOF).** Despite unilateral and multilateral training, all of China's SOF units lack real-world combat experience. China's SOF does not have a national-level special operations command to oversee all of China's SOF activities. Despite an emphasis to conduct joint training, theater commanders have no authority over PAP units, making it difficult to incorporate PAP SOF into PLA training exercises.

JOINT CAPABILITIES IN DEVELOPMENT

- The PLA is aggressively developing capabilities to provide options for the PRC to dissuade, deter, or, if ordered, defeat third-party intervention in the Indo-Pacific region, and to conduct military operations deeper into the Indo-Pacific region and globally.
- The PLA has undertaken important structural reforms and introduced new military doctrine to strengthen joint operations and is testing joint capabilities in and beyond the First Island Chain (FIC).

JOINT CAPABILITIES FOR COUNTERINTERVENTION

- The PRC's counter-intervention strategy aims to restrict the United States from having a presence in the East and South China Sea regions—within the FIC—and increasingly to hold at risk U.S. access in the broader Indo-Pacific region.
- **Long-Range Precision Strike and Supporting ISR.** PLA texts state that precision attack in all warfare domains is critical in modern war. PLA writings state that precision weapons are not only force multipliers, but also a means of "war control" to prevent escalation.
- **Integrated Air Defense System (IADS).** The PRC has a robust and redundant IADS architecture over land areas and within 300 nm (556 km) of its coast that relies on an extensive early warning radar network, fighter aircraft, and a variety of SAM systems. The PRC has also placed radars and air defense weapons on outposts in the SCS, further extending the range of its IADS.

- **Hypersonic Weapons.** The PRC's deployment of the DF-17 HGV-armed MRBM will continue to transform the PLA's missile force. The system is possibly intended to replace some older SRBM units and is intended to strike foreign military bases and fleets in the Western Pacific, according to a PRC-based military expert.

ADVANCING TOWARDS AN INFORMATIZED MILITARY

- The PLA considers information operations (IO) as a means of achieving information dominance early in a conflict and continues to expand the scope and frequency of IO in military exercises.
- The PLA is pursuing next-generation combat capabilities based on its vision of future conflict, which it calls "intelligentized warfare," defined by the expanded use of AI and other advanced technologies at every level of warfare.
- The PRC is advancing its cyberspace attack capabilities and has the ability to launch cyberspace attacks—such as disruption of a natural gas pipeline for days to weeks—in the United States.

SPACE AND COUNTERSPACE CAPABILITIES

- The PLA views space superiority, the ability to control the space-enabled information sphere and to deny adversaries their own space-based information gathering and communication capabilities, as critical components to conduct modern "informatized warfare."
- The PLA continues to invest in improving its capabilities in space-based intelligence, surveillance, and reconnaissance (ISR), satellite communication, satellite navigation, and meteorology, as well as human spaceflight and robotic space exploration.
- The PLA continues to acquire and develop a range of counterspace capabilities and related technologies, including kinetic-kill missiles, ground-based lasers, and orbiting space robots, as well as expanding space surveillance capabilities, which can monitor objects in space within their field of view and enable counterspace actions.

NUCLEAR CAPABILITIES

- Over the next decade, the PRC will continue to rapidly modernize, diversify, and expand its nuclear forces. Compared to the PLA's nuclear modernization efforts a decade ago, current efforts dwarf previous attempts in both scale and complexity.
- The PRC is expanding the number of its land-, sea-, and air-based nuclear delivery platforms while investing in and constructing the infrastructure necessary to support further expansion of its nuclear forces.
- In 2022, Beijing continued its rapid nuclear expansion, and DoD estimates that the PRC possessed more than 500 operational nuclear warheads as of May 2023—on track to exceed previous projections.

- DoD estimates that the PRC will probably have over 1,000 operational nuclear warheads by 2030, much of which will be deployed at higher readiness levels and will continue growing its force to 2035 in line with its goal of ensuring PLA modernization is "basically complete" that year, which serves as an important milestone on the road to Xi's goal of a "world class" military by 2049.
- The PRC probably will use its new fast breeder reactors and reprocessing facilities to produce plutonium for its nuclear weapons program, despite publicly maintaining these technologies are intended for peaceful purposes.
- The PRC probably completed the construction of its three new solid-propellant silo fields in 2022, which consists of at least 300 new ICBM silos, and has loaded at least some ICBMs into these silos. This project and the expansion of China's liquid-propellant silo force is meant to increase the peacetime readiness of its nuclear force by moving to a launch-on-warning (LOW) posture.
- The PRC is fielding the DF-5C, a silo-based liquid-fueled ICBM armed with a nuclear warhead with a multi-megaton yield. The PRC is fielding the longer-range JL-3 SLBMs on its current JIN class SSBN, rendering them capable of ranging the continental United States from PRC littoral waters.

CHEMICAL AND BIOLOGICAL RESEARCH

- The PRC continues to engage in biological activities with dual-use applications, which raise oncerns [sic] regarding its compliance with the Biological Weapons Convention (BWC). This includes studies at PRC military medical institutions on potent toxins with dual-use applications.
- The PRC likely possesses capabilities relevant to chemical and biological warfare that pose a threat to U.S., Allied, and partner forces, military operations, and civilian populations.
- The United States cannot certify that the PRC has met its obligations under the Chemical Weapons Convention (CWC) due to concerns regarding the PRC's research on pharmaceutical-based agents (PBAs) and toxins with potential dual-use applications.

OPERATIONAL STRUCTURE AND ACTIVITIES ON CHINA'S PERIPHERY

- The PRC continues to refine military reforms associated with the establishment of the Eastern, Southern, Western, Northern, and Central Theater Commands, which are organized based on the PRC's perception of peripheral threats.
- Under the direction of the CMC, each Theater Command has operational authority over the PLA conventional forces within the theater.

- In August 2022, the PLA carried out large-scale joint military exercises aimed at pressuring Taiwan. The exercises included firing ballistic missiles over Taiwan's main island, over a dozen naval patrols, and hundreds of flights into Taiwan's claimed ADIZ.

DEVELOPMENTS IN THE SECURITY SITUATION IN THE SCS

- The PRC states that international military presence within the SCS is a challenge to its sovereignty.
- Throughout 2022, the PRC deployed PLAN, CCG, and civilian ships to maintain a presence in disputed areas, such as near Scarborough Reef and Thitu Island, as well as in response to oil and gas exploration operations by rival claimants within the PRC's claimed "nine-dash line."
- During 2022, the PRC conducted multiple coercive actions against the Philippines in the SCS, including cutting the tow line of a Philippine Navy vessel, executing dangerous maneuvers in close proximity to Philippine vessels; and reportedly reclaiming several unoccupied land features in the SCS, which the Philippines noted contravenes the Declaration of Conduct on the South China Sea's undertaking on self-restraint and the 2016 Arbitral Award.

DEVELOPMENTS IN THE SECURITY SITUATION IN THE TAIWAN STRAIT

- In 2022, the PRC amplified diplomatic, political, and military pressure against Taiwan. The PLA's increased provocative and destabilizing actions in and around the Taiwan Strait included ballistic missile overflights of Taiwan, sharply increased flights into Taiwan's self-declared ADIZ and a series of major military exercises near Taiwan.
- At the 20th Party Congress in 2022, Xi Jinping repeated the CCP's longstanding public position that China seeks peaceful unification with Taiwan but would never renounce the use of force as an option.
- The PLA practiced elements of each of its military courses of action against Taiwan during its August 2022 large-scale military exercise aimed at pressuring Taiwan, and again in April 2023 in response to Taiwan president Tsai Ing-wen's transit of the United States.

PLA COERCIVE AND RISKY OPERATIONAL BEHAVIOR

- Between the fall of 2021 and fall of 2023, the United States has documented over 180 instances of PLA coercive and risky air intercepts against U.S. aircraft in the region—more in the past two years than in the previous decade. Over the same period, the PLA has conducted around 100 instances of coercive and risky operational behavior against U.S. Allies and partners, in an effort to deter both the United States and others from conducting lawful operations in the region.
- Examples of the PRC's coercive and risky operational behavior against U.S. and Allied aircraft have included lasing; reckless maneuvers; close approaches in the air or at

sea; high rates of closure; discharging chaff or flares in front of, or in close proximity to, aircraft; and other actions.

- The PLA's behavior contravenes flight safety protocols and the international maritime rules of the road, and increases the risk of a major accident, incident, or crisis, including the potential for loss of life.

THE PLA'S GROWING GLOBAL PRESENCE

- CCP leaders view the PLA's growing global presence as an essential part of the PRC's international activities to create an international environment conducive to China's national rejuvenation.
- The CCP has tasked the PLA to develop the capability to project power outside China's borders and immediate periphery to secure the PRC's growing overseas interests and advance its foreign policy goals. This has led to the PRC's greater willingness to use military coercion— and inducements—to advance its global security and development interests.
- In 2022, the PLA continued to normalize its presence overseas through participation UN peacekeeping operations and anti-piracy escorts in the Gulf of Aden and waters off Somalia. The also PLA restarted in-person military diplomacy in 2022 that was suspended due to COVID-19.

PLA OVERSEAS BASING AND ACCESS

- The PRC is seeking to expand its overseas logistics and basing infrastructure to allow the PLA to project and sustain military power at greater distances. If realized, a global PLA military logistics network could disrupt U.S. military operations as the PRC's global military objectives evolve.
- Beyond the PLA support base in Djibouti, the PRC is very likely already considering and planning for additional military logistics facilities to support naval, air, and ground forces projection.
- In June 2022, a PRC official confirmed that the PLA would have access to parts of Cambodia's Ream Naval Base. The PRC probably also has considered other countries as locations for PLA military logistics facilities, including Burma, Thailand, Indonesia, Pakistan, Sri Lanka, United Arab Emirates, Kenya, Equatorial Guinea, Seychelles, Tanzania, Angola, Nigeria, Namibia, Mozambique, Bangladesh, Papua New Guinea, Solomon Islands, and Tajikistan.
- The SSF operates tracking, telemetry, and command stations in Namibia, Pakistan, Argentina, and Kenya. The SSF also has a handful of Yuan-wang space support ships to track satellite and ICBM launches.

LESSONS LEARNED FROM RUSSIA'S WAR ON UKRAINE

- The PRC almost certainly is learning lessons from the Russian war of aggression in Ukraine that are most applicable to the PRC's goal of strengthening its whole-of-government approach to countering a perceived U.S.-led containment strategy.
- Western sanctions against Russia almost certainly have amplified the PRC's push for defense and technological self-sufficiency and financial resilience.

RESOURCES AND TECHNOLOGY FOR FORCE MODERNIZATION

- The PRC's long-term goal is to create an entirely self-reliant defense-industrial sector—fused with a strong civilian industrial and technology sector—that can meet the PLA's needs for modern military capabilities.
- The PRC has mobilized vast resources in support of its defense modernization, including through its Military-Civil Fusion (MCF) Development Strategy, as well as espionage activities to acquire sensitive, dual-use, and military-grade equipment.
- In 2022, the PRC announced its official annual military budget would increase by 7.1 percent, continuing more than 20 years of annual defense spending increases and sustaining its position as the second-largest military spender in the world.

DEVELOPMENTS AND TRENDS IN ITS DEFENSE INDUSTRY

- China's hypersonic missile technologies have greatly advanced during the past 20 years and many of the PRC's missile programs are comparable to other international top-tier producers.
- China is developing beyond-visual-range air-to-air missiles and exploring missile capabilities that improve target-selection and make the missiles more resistant to countermeasures.
- In 2022, China launched its first domestically designed and manufactured aircraft carrier, featuring an electromagnetic catapult launch and arresting devices. The carrier will be able to deploy up to 70 aircraft, including J-15 fighters and Z-9C anti-submarine helicopters.

ESPIONAGE ACTIVITIES SUPPORTING CHINA'S MILITARY MODERNIZATION

- The PRC presents a sophisticated, persistent cyber-enabled espionage and attack threat to military and critical infrastructure systems through its efforts to develop, acquire, or gain access to information and advanced technologies.
- There have also been multiple U.S. criminal indictments since 2015 involving espionage by PRC nationals, naturalized U.S. citizens or permanent resident aliens from the PRC, as well as U.S. citizens, for their efforts to illegally acquire information and technology to advance PLA modernization.

DEFENSE CONTACTS AND EXCHANGES IN 2022

- In 2022, the PLA largely denied, cancelled, and ignored recurring bilateral engagements and DoD requests for communication. The PLA's refusal to engage with DoD has largely continued in 2023.
- The PLA's refusal to engage in military-to-military communications with the United States, combined with the PLA's increasingly coercive and risky operational behavior, raises the risk of an operational incident or miscalculation spiraling into crisis or conflict.
- DoD is committed to re-opening lines of communication with the PRC to ensure competition does not veer into conflict. DoD's objectives in opening lines of communication include ensuring crisis communications channels, reducing strategic and operational risk, and avoiding misperceptions.

This issue's "From the Archive" introduces the Executive Summary of the 2009 Strategic Posture Commission Report. The bipartisan report marked a major high-level effort to rejuvenate the consensus on the direction of the U.S. strategic posture and identified the necessary steps required to do so. Commission identified "a moment of opportunity to revise and renew U.S. nuclear strategy, but also a moment of urgency." Regrettably, the international security environment has deteriorated dramatically since 2009, making it difficult to find and take advantage of cooperative opportunities that the Commission hoped for at the time when the report was written.

AMERICA'S STRATEGIC POSTURE
THE FINAL REPORT OF THE CONGRESSIONAL COMMISSION ON THE STRATEGIC POSTURE OF THE UNITED STATES

William J. Perry, Chairman and James R. Schlesinger, Vice-Chairman, 2009, United States Institute of Peace Press

Executive Summary

U.S. nuclear strategy begins with the central dilemma that nuclear weapons are both the greatest potential threat to our way of life and important guarantors of U.S. security. A breakdown of international nuclear order would be a catastrophe for the United States among many others. Preservation of that order requires that we work to reduce nuclear dangers by effective deterrence, arms control, and nonproliferation.

This is a moment of opportunity to revise and renew U.S. nuclear strategy, but also a moment of urgency. The opportunity arises from the arrival of a new administration in Washington and the top-down reassessment that must now begin of national security strategy, of approaches to nuclear security, and of the purposes of U.S. nuclear weapons and their supporting capabilities. The urgency follows, internationally, from the danger that we may be close to a tipping point in nuclear proliferation and, domestically, from an accumulation of delayed decisions about the nuclear weapon program.

In addressing the challenges of nuclear security for the decades ahead, the United States must pursue a comprehensive strategy. So long as nuclear dangers remain, it must have a strong deterrent that is effective in meeting its security needs and those of its allies. This is a challenge that has changed fundamentally over the last two decades—and largely for the better. The nuclear deterrent of the United States need not play anything like the central role that it did for decades in U.S. military policy and national security strategy. But it remains crucial for some important problems.

While deterrence plays an essential role in reducing nuclear dangers, it is not the only means for doing so, and accordingly the United States must seek additional cooperative measures of a

political kind, including for example arms control and nonproliferation. This is a time when these approaches can be renewed and reenergized.

These components of strategy must be integrated into a comprehensive approach. They can be mutually complementary and self-reinforcing. But sometimes there are conflicts and trade-offs, and these must be clearly identified and hard choices made.

The body of this report includes a total of nearly 100 findings and recommendations. These elaborate constructive steps that can be taken now to adapt the components of strategy to the challenges and opportunities in front of the nation. The main themes of these findings and recommendations are as follows.

On the security environment: Over the last two decades, the security environment of the United States has changed considerably and generally for the better. The threat of nuclear Armageddon has largely receded. At the height of the Cold War, the U.S. nuclear arsenal numbered over 32,000 weapons and the Soviet arsenal over 45,000; today, the United States has reduced its arsenal of operationally deployed strategic nuclear warheads to approximately 2,000 and Russia is not far behind. The two have also withdrawn about 14,000 tactical nuclear weapons from forward deployments. But new challenges have emerged, especially the threat of nuclear terrorism and increased proliferation. The opportunities to further engage Russia and China, as well as U.S. allies and other partners, to meet these new challenges are rising. President Obama has pledged to work for the global elimination of nuclear weapons, but until that happens, to maintain a safe, secure, and reliable deterrent force. The conditions that might make possible the global elimination of nuclear weapons are not present today and their creation would require a fundamental transformation of the world political order. But this report spells out many steps that can significantly reduce nuclear dangers and that are available now.

On the U.S. nuclear posture: The principal functions of the U.S. nuclear posture are to create the conditions in which nuclear weapons are never used, to assure allies of the U.S. commitment to their security, and to discourage unwelcome competition while encouraging strategic cooperation. Though the Cold War calculus to achieve these goals was effective at the time, the U.S. nuclear posture needs to change to cope with the new, more complex and fluid threat environment. A great deal of change has already occurred. The nuclear force of the United States is a small fraction of what it was at the end of the Cold War and the U.S. reliance on nuclear weapons in national military strategy and national security strategy has been substantially reduced. This process can continue, assuming that Russia is willing to remain involved in the process. The sizing of U.S. forces remains overwhelmingly driven by the requirements of essential equivalence and strategic stability with Russia. For the deterrence of attacks by regional aggressors and even China, the force structure requirements are relatively modest. The focus on Russia is not because the United States and Russia are enemies; they are not. No one seriously contemplates a direct Russian attack on the United States. Some U.S. allies located closer to Russia, however, are fearful of Russia and its tactical nuclear forces. The imbalance in non-strategic nuclear weapons, which greatly favors Russia, is of rising concern and an illustration of the new challenges of strategic stability as reductions in strategic weapons proceed. The need to reassure U.S. allies and also to hedge

against a possible turn for the worse in Russia (or China) points to the fact that the U.S. nuclear posture must be designed to address a very broad set of U.S. objectives, including not just deterrence of enemies in time of crisis and war but also assurance of our allies and dissuasion of potential adversaries. Indeed, the assurance function of the force is as important as ever. The triad of strategic nuclear delivery systems should be maintained for the immediate future and this will require some difficult investment choices. The same is true for delivery systems of non-strategic nuclear weapons.

On missile defense: Missile defenses can play a useful role in supporting the basic objectives of deterrence, broadly defined. Defenses that are effective against regional aggressors are a valuable component of the U.S. strategic posture. The United States should develop and, where appropriate, deploy missile defenses against regional nuclear aggressors, including against limited long-range threats. These can also be beneficial for limiting damage if deterrence fails. The United States should ensure that its actions do not lead Russia or China to take actions that increase the threat to the United States and its allies and friends.

On declaratory policy: Declaratory policy is a signal of U.S. intent to both friends and prospective enemies and thus an important aspect of the overall strategic posture. To be effective, it must be understood to reflect the intentions of national leadership. While an element of calculated ambiguity remains essential, there should be enough clarity that potential foes will be deterred. The United States should underscore that it conceives of and prepares for the use of nuclear weapons only for the protection of itself and its allies in extreme circumstances.

On the nuclear weapons stockpile: So long as it continues to rely on nuclear deterrence, the United States requires a stockpile of nuclear weapons that are safe, secure, and reliable, and whose threatened use in military conflict would be credible. The Stockpile Stewardship Program and the Life Extension Program have been remarkably successful in refurbishing and modernizing the stockpile to meet these criteria, but cannot be counted on for the indefinite future. The Commission observes that the debate over the proposed Reliable Replacement Warhead revealed a lot of confusion about what was intended, what is needed, and what constitutes "new" and believes that, as the nation moves forward, it must be clear about what is being initiated (and what is not) as well as what makes a weapon "new" and what does not. Alternatives to stockpile stewardship and life extension involve to varying degrees the reuse and/or redesign of components and different engineering solutions. The decision on which approach is best should be made on a type-by-type basis as they age. So long as modernization proceeds within the framework of existing U.S. policy, it should encounter minimum political difficulty. As a matter of U.S. policy, the United States does not produce fissile materials and does not conduct nuclear explosive tests. Also the United States does not currently seek new weapons with new military characteristics. Within this framework, it should seek the possible benefits of improved safety, security, and reliability available to it.

On the nuclear weapons complex: The physical infrastructure is in serious need of transformation. The National Nuclear Security Administration (NNSA) has a reasonable plan but it lacks the needed funding. The intellectual infrastructure is also in trouble. Redesignating the weapons laboratories as national security laboratories and strengthening their

cooperation with the Departments of Defense, State, and Homeland Security and also the intelligence community can help with both of these problems. NNSA has not achieved the original intent of the law that created it; it lacks the needed autonomy. This requires that the NNSA Act be amended to establish NNSA as a separate agency reporting to the President through the Secretary of Energy, along with other provisions aimed at ensuring the needed autonomy.

On arms control: The moment appears ripe for a renewal of arms control with Russia, and this bodes well for a continued reduction in the nuclear arsenal. The United States and Russia should pursue a step-by-step approach and take a modest first step to ensure that there is a successor to START I when it expires at the end of 2009. Beyond a modest incremental reduction in operationally deployed strategic nuclear weapons, the arms control process becomes much more complex as new factors are introduced. One of the most important factors will be the imbalance of non-strategic nuclear weapons. In support of its arms control interests and interest in strategic stability more generally, the United States should pursue a much broader and more ambitious set of strategic dialogues with not just Russia but also China and U.S. allies in both Europe and Asia.

On nonproliferation: This is also an opportune moment to reenergize nonproliferation. Success in advancing U.S. nonproliferation interests requires U.S. leadership. Despite the occasional failure of nonproliferation, the historical track record is good, and there is good reason to hope for continued success in the years ahead. The risks of a proliferation "tipping point" and of nuclear terrorism underscore the urgency of acting now. The United States should pursue a broad agenda to strengthen the international treaty system and the institutions that support its effective functioning. It is especially important that it prepare to play a leadership role at the 2010 NPT Review Conference.

On the Comprehensive Test Ban Treaty (CTBT): The Commission has no agreed position on whether ratification of the CTBT should proceed. But recognizing that the President has called for the Senate to reconsider U.S. ratification, the Commission recommends a number of steps to enable Senate deliberation, including preparation of a comprehensive net assessment of benefits, costs, and risks that updates arguments from a decade ago.

On prevention and protection: Since nonproliferation does not always succeed and deterrence is sometimes unreliable, the overall strategy must be supplemented with additional steps to prevent nuclear proliferation and terrorism and protect ourselves from its consequences. The Commission supports measures such as the Proliferation Security Initiative and the Global Initiative to Combat Nuclear Terrorism and also encourages stronger "whole of government" approaches to reduce the risks of nuclear smuggling into the United States. We note also that the United States has done little to reduce its vulnerability to attack with electromagnetic pulse weapons and recommend that current investments in modernizing the national power grid take account of this risk.

On visions of the future: The Congress charged the Commission to look to the long term in formulating its recommendations about the U.S. strategic posture. As we have debated our findings and recommendations, it has become clear that we have very different visions of what

might be possible in the long term. Fundamentally, this reflects our differences over whether the conditions can ever be created that might enable the elimination of nuclear weapons. But our debates have also brought home to us that, despite our differences over the long term, we share to a very significant degree a vision of the nearer term. And it is a hopeful vision. We reject the notion that somehow it is inevitable that international nuclear order will collapse. On the contrary—the past successes of the United States and its international partners in meeting and reducing nuclear dangers make us more hopeful for the future. We embrace the possibility that over the next decade or two nuclear dangers will be further reduced. Despite our many differences of opinion about possibilities and priorities, we have come together around a strategy that offers pragmatic steps for bringing this vision closer to reality. It is firmly grounded in the strategic tradition of the United States in balancing deterrence and other means, including principally arms control and nonproliferation, to reduce nuclear dangers. This strategy is also essential to the preservation of the tradition of nuclear non-use, which is now deeply rooted in six decades of experience and strongly serves U.S. interests.