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Russia's Nuclear Doctrine

What We Know, What We Don't, and What That Means

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Introduction

What are Russia's plans for its nuclear weapons? As tensions between Russia on the one hand and the United States and the NATO and EU countries on the other have grown over the last two years, Kremlin officials have said a few things that appeared to emphasize Russia's nuclear capacity and perhaps even threaten its use.¹ This has led some Western scholars and analysts to argue that Russia has a low threshold for nuclear war: a terrifying proposition. No less than former U.S. secretary of defense William Perry recently described nuclear weapons as Russia's "weapon of choice."² Some have posited that Russia's nuclear doctrine can be described as "escalate to de-escalate," the idea that Russia might use a nuclear weapon to demonstrate intent in the midst of a conventional conflict and thus deter an adversary from further action.³ This has led to calls that the United States and NATO

¹ Pavel Baev, "Apocalypse a Bit Later: The Meaning of Putin's Nuclear Threats," Brookings Institution, April 1, 2015, <http://www.brookings.edu/blogs/order-from-chaos/posts/2015/04/01-putin-nuclear-threats-meaning>; Teis Jensen, "Russia Threatens to Aim Nuclear Missiles at Denmark Ships If It Joins NATO Shield," Reuters, March 22, 2015, <http://www.reuters.com/article/us-denmark-russia-idUSKBN0MI0ML20150322>. Elbridge Colby lists several examples in Elbridge Colby, *Nuclear Weapons in the Third Offset Strategy: Avoiding a Nuclear Blind Spot in the Pentagon's New Initiative* (Washington, DC: Center for a New American Security, January 2015).

² Steve Fyffe, "William Perry Warns of Nuclear Dangers in Drell Lecture," *Stanford CISAC News*, February 12, 2016, <http://cisac.fsi.stanford.edu/news/william-perry-warns-nuclear-dangers-drell-lecture>.

³ On "de-escalation," see James T. Quinlivan and Olga Oliker, *Nuclear Deterrence in Europe: Russian Approaches to a New Environment and Implications for the United States* (Santa Monica, CA: RAND, 2011), 28–32; and Nikolai N. Sokov, "Why Russia Calls a Limited Nuclear Strike 'De-escalation,'" *Bulletin of the Atomic Scientists*, March 13, 2014. For assertions that Russian doctrine today incorporates "de-escalation," see Colby, *Nuclear Weapons in the Third Offset Strategy*. (Colby takes a somewhat softer line in a later piece: Elbridge Colby, "Russia's Evolving Nuclear Doctrine and Its Implications," *Fondation Pour la Recherche Stratégique*, January 12, 2016, <http://www.frstrategie.org/publications/notes/web/documents/2016/201601.pdf>.) See also "Could U.S.-Russia Tensions Go Nuclear?," *Global Zero*, November 27, 2015, <http://www.globalzero.org/fr/press-media/news/could-us-russia-tensions-go-nuclear>; Steven Pifer, "Pay Attention, America: Russia Is Upgrading Its Military," *National Interest*, February 3, 2016, <http://www.nationalinterest.org/feature/pay-attention-america-russia-upgrading-its-military-15094>; and Matthew Kroenig, "The Renewed Russian Nuclear Threat and NATO Nuclear Deterrence Posture," *Atlantic Council*, February 2016, https://issuu.com/atlanticcouncil/docs/russian_nuclear_threat_0203_web/1. For a thoughtful discussion that includes Russian sources and concludes that a de-escalation strategy is in place, see Roger McDermott, *Russia's Conventional Military Weakness and Substrategic Nuclear Policy* (Fort Leavenworth, KS: Foreign Military Studies Office, 2011), <http://fmso.leavenworth.army.mil/Collaboration/international/McDermott/Russia-NuclearPolicy.pdf>.

need a more credible nuclear deterrent at a lower level of conflict.⁴ But is this really Russia's strategy, or is something else going on here? And either way, what might be the most effective U.S. and NATO response?

In this paper, I argue that the evidence that Russia's nuclear strategy is one of "de-escalation," or that it has lowered its threshold for nuclear use, is far from convincing. Rather, Russia's statements and behavior indicate more a desire to leverage its status as a nuclear power—less a lowering of the threshold than a reminder that escalation is possible, and that Russia must therefore be taken seriously. Moreover, and perhaps more importantly, even if I am wrong, and Russia indeed has a lower bar for nuclear first use than do other countries, this is driven by Russian concern that its conventional capacity is not sufficient. As a result, such a problem, if it exists, will not be solved by the lowering of the U.S. threshold for nuclear use. Rather, a lower U.S. threshold would lead Russia to doubt Washington's faith in its own conventional capabilities, damaging the value of the conventional deterrent. Moreover, lower nuclear thresholds from both countries, particularly if accompanied by the development of more "usable" nuclear weapons, would increase the risk of nuclear war.

I begin by looking at Russia's stated doctrine on nuclear use. I then examine three other important indicators of its intentions: statements by officials, exercises, and force development plans. I postulate, as Quinlivan and I have before, that the combination of what states write, what they say, what they exercise, and what they build should provide a good sense of their actual policy.⁵ Moreover, we should expect consistency between these. I close with conclusions and implications.

Interpreting Russian Doctrine

Nuclear weapon states have a strong incentive to be clear about what they do and do not intend to do with their nuclear weapons. This is because for nuclear weapons to be useful as deterrents, potential antagonists need to know that they face a nuclear threat. States therefore have two options: to clearly state the conditions under which nuclear weapons will be used, or to be vague, and allow others to assume a broad range of such conditions. A deterrent will surely be less effective, and the risk of catastrophic miscalculation higher, if states insist that the range of possible use is narrower than their actual intentions.⁶

The Russian Federation makes a point of including its nuclear weapon policy in its Military Doctrine. The most recent of these was issued about nine months after the start of the Ukraine crisis, in December 2014. The language it uses in regards to nuclear weapons is identical to that in the 2010 Military Doctrine:

⁴ Colby, "Russia's Evolving Nuclear Doctrine and Its Implications"; and Kroenig, "The Renewed Russian Nuclear Threat and NATO Nuclear Deterrence Posture."

⁵ Quinlivan and Oliker, *Nuclear Deterrence in Europe*, 5–9.

⁶ Note that few in the United States believed the USSR's "no first use" policy, in place from 1982 until the collapse of the USSR. See, for example, Harold A. Feiveson and Ernst Jan Hogendoorn, "No First Use of Nuclear Weapons," *Nonproliferation Review* (Summer 2003). It is more difficult, however, to find Russian analysts who discount it.

The Russian Federation shall reserve the right to use nuclear weapons in response to the use of nuclear and other types of weapons of mass destruction against it and/or its allies, as well as in the event of aggression against the Russian Federation with the use of conventional weapons when the very existence of the state is in jeopardy.⁷

This is a comparatively high bar in the world of nuclear weapon policies. It's a higher bar than that of the United States, which reserves the right to use nuclear weapons "to defend the vital interests of the United States and its allies and partners."⁸ It's also a higher bar than past Russian doctrines. In the 1990s, when Russia was newly independent and its armed forces weak, many, including its senior defense officials, saw the nuclear arsenal as Russia's only option to deter the broad range of threats—since its conventional capacity surely could not do so.⁹ The fact that the defense minister at this time was Igor Sergeev, a former missile troops commander, probably had an impact as well. It was during this time that the "de-escalation" argument became prominent in Russian analysis.¹⁰ It was reflected in the 2000 military doctrine, which allowed for nuclear weapon use under conditions of "large-scale aggression by conventional weapons in situations deemed critical to the national security of the Russian Federation."¹¹ It was also exercised explicitly in one large-scale exercise, Zapad 1999, in which a nuclear strike was used to end a conflict after Russia's conventional forces were overwhelmed.

Prior to the publication of the 2010 doctrine, many believed that the threshold would be lowered further. In 2009, a senior Navy official spoke of new nuclear-capable cruise missiles, indicating that there was an interest in greater nuclear capacity at a sub-strategic level in the Navy, at least.¹² Shortly before the doctrine's publication, then-Security Council Secretary Nikolai Patrushev suggested that it would allow for nuclear weapon use to deter conventional attack in local and regional conflicts, as well as permit "preventive" nuclear strikes.¹³ But when the doctrine was published, it did no such thing, as indicated above.

⁷ Embassy of the Russian Federation in the United Kingdom, "Military Doctrine of the Russian Federation, December 25, 2014: Section III, Para. 27," press release, June 29, 2015, <http://rusemb.org.uk/press/2029>.

⁸ White House, "FACT SHEET: Nuclear Weapons Employment Strategy of the United States," June 19, 2013, <https://www.whitehouse.gov/the-press-office/2013/06/19/fact-sheet-nuclear-weapons-employment-strategy-united-states>. For more detail, see U.S. Department of Defense, *Report on Nuclear Employment Strategy of the United States Specified in Section 491 of 10 U.S.C.* (Washington, DC: Department of Defense, June 12, 2013), <http://www.globalsecurity.org/wmd/library/policy/dod/us-nuclear-employment-strategy.pdf>.

⁹ See the discussion of that period in Olga Oliker and Tanya Charlick-Paley, *Assessing Russia's Decline: Implications for the United States and the U.S. Air Force* (Santa Monica, CA: RAND, 2002), http://www.rand.org/pubs/monograph_reports/MR1442.html.

¹⁰ The original argument is presented in V. I. Levshin, A. V. Nedelin, and M. E. Sosnovsky, "O Primenenii IAdernogo Oruzhiia Dlia Deeskalatsii Voennykh Deistvii," *Voyennaya Mysl* (May–June 1999): 34–37.

¹¹ Security Council of the Russian Federation, "Military Doctrine of the Russian Federation: Approved by Order of the President of the Russian Federation on April 21, 2000, Order No. 706."

¹² "Russia Could Focus on Tactical Nuclear Weapons for Subs," *Sputnik News*, March 23, 2009, <http://sputniknews.com/russia/20090323/120688454.html#ixzz42MhPlpTwwWhite>.

¹³ See the discussion in Quinlivan and Oliker, *Nuclear Deterrence in Europe*, 31–32.

Some argue that the language in Russia's official doctrine is sufficiently vague to still allow for preventive strikes.¹⁴ One might speculate that the classified annex on nuclear policy, released on the same day as the 2010 doctrine, might include a lower threshold for nuclear use.¹⁵ However, the whole point of deterrence doctrine is to signal to adversaries. If the threshold had been lowered, surely the doctrine would have reflected that. It seems therefore more likely that a policy debate took place, and that some participants, such as Patrushev, sought to create a *fait accompli* through public appeals. In the end, however, proponents of a lower bar for nuclear use had lost. This is supported by Patrushev's own statement after the doctrine was published, which echoed its language and underlined that nuclear weapons were tools of deterrence.¹⁶

That the language did not change in December 2014 would further seem a reaffirmation of that policy, even in the context of worsening ties with the United States. The new doctrine was rushed into print on the heels of the Ukraine crisis, and seemingly personally pushed by President Vladimir Putin. Sending signals to the West was perhaps its main purpose. If a lowered nuclear threshold was one of those signals, it would surely have been stated more clearly. Rather, the new doctrine's discussion of "conventional deterrence," a first for Russian military doctrine, appears to reflect the premium Moscow is placing on improving its conventional capabilities.

A final argument for why I do not think de-escalation is Russia's official strategy is that Russian proponents of such an approach are unhappy. While McDermott cites some Russian analysts who emphasize the importance of nonstrategic nuclear weapons to Russia, their comments appear to emphasize the importance of parity with the United States far more than they demonstrate a strategic shift to "de-escalation."¹⁷ Even more importantly, some of the same people who supported a "de-escalation" approach in the late 1990s are still writing about it now, and they are writing about it in the hopes that it will be adopted. They don't think that Russia has the capacity to implement "escalate to de-escalate," and argue that the armed forces should develop that capacity.¹⁸ On the one hand, it is worrying that officials within the Ministry of Defense also make this argument (oddly, in the one case I have found, by the coordinator of the Inspector General Directorate).¹⁹ On the other hand, the fact that it is made, and by those seemingly in the know, does suggest that it is not, actually, the strategy.

Now, one can certainly postulate that the centralized and personalized Putin regime may define "the very existence of the state" as the continuing control of Russia by its current government, rather than imminent destruction of the nation as a whole. This is plausible. But while worrying, it is also likely to be consistent with past Russian approaches, at least over the last 15 or so years, and thus is unlikely to be a sign of a lowered threshold for nuclear use.

¹⁴ Yury E. Fedorov, "Russia's Nuclear Policy," in *Major Powers' Nuclear Policies and International Order in the 21st Century*, ed. Boeicho Boel Kenkyujo (Tokyo: National Institute for Defense Studies, 2010), 49–70. See also the discussion in McDermott, "Russia's Conventional Military Weakness and Substrategic Nuclear Policy."

¹⁵ "Rossiiskoe Iadernoe Oruzhie: Kriterii Primeneniia," *Natsional'naia Oborona*, no. 2 (February 2010).

¹⁶ Matvei Kozhukin, "Iadernoe Oruzhie—Faktor Sderzhivaniia," *Krasnaia Zvezda*, February 10, 2010.

¹⁷ McDermott, "Russia's Conventional Military Weakness and Substrategic Nuclear Policy."

¹⁸ Sergei Brezkun, "Rossii Nuzhna 'Lestnitsa' Ne Eskalatsii, a Deeskalatsii," *Nezavisimaya Gazeta*, November 27, 2015, http://nvo.ng.ru/concepts/2015-11-27/1_stairway.html.

¹⁹ Oleg Vladykin, "Gotovnost' I Preventivnomu Udaru," *Nezavisimaya Gazeta*, October 10, 2014, http://nvo.ng.ru/nvo/2014-10-03/1_strike.html.

What Officials Are Saying

I begin with the statements. Echoing Patrushev's comments of five years ago, we have heard threats against Western states. These tend to be somewhat vague and generally threatening, rather than specific in their intent. While some Russians in the public eye may note their country's ability to turn the United States into ash,²⁰ comments by actual officials, including, notably, Vladimir Putin, are not so clear. This is not to say that they are not disturbing. After all, they have included what can be seen as nuclear threats against Denmark should it choose to host NATO missile defenses.²¹ This threat is reminiscent of similar comments about Poland in 2008.²² Putin has also indicated that placing nuclear weapons on alert had been an option if Crimea had escalated, though the specific scenario he had in mind is not known.²³ The lack of clarity here suggests that Russian officials want to create an atmosphere of uncertainty regarding their nuclear intentions, but also that they are stopping short of direct nuclear threats in most cases. Rather, they emphasize that Russia is a nuclear power, so the shadow of nuclear escalation hangs over any conflict. This is the reverse of, for example, the U.S. approach, in which the official doctrine is broad, but senior officials tend to avoid such inflammatory rhetoric (there are exceptions, notably from some members of Congress²⁴). Intentionally, these comments say nothing about actual doctrine for nuclear use and certainly not about strategy.

What About Exercises?

Military exercises are intended to practice things that countries actually want their armed forces to be capable of doing. They are also often used by states as a way of signaling to other countries what their intentions are. Whether those signals are read correctly or not is a somewhat different question. In 1997, the United States' Army's 82nd Airborne Division carried out a parachute drop into the Central Asian republic of Kazakhstan, as part of a multinational peacekeeping exercise. The United States insisted that this exercise was not intended to threaten Russia, and even invited the Russians in on the planning. The Russians were still nervous, and continued to be for some time.²⁵

So, what do we see in Russian nuclear exercises, and what are we meant to see? First of all, Russia holds a substantial number of exercises each year, and many of them have a nuclear component.²⁶

²⁰ Lidia Kelly, "Russia Can Turn US to Radioactive Ash—Kremlin-Backed Journalist," Reuters, March 16, 2014, <http://www.reuters.com/article/ukraine-crisis-russia-kiselyov-idUSL6N0MD0P920140316>.

²¹ Jensen, "Russia Threatens to Aim Nuclear Missiles at Denmark Ship."

²² Damien McElroy, "Russian General Says Poland a Nuclear 'Target,'" *Telegraph*, August 15, 2008, <http://www.telegraph.co.uk/news/worldnews/europe/georgia/2564639/Russian-general-says-Poland-a-nuclear-target-as-Condoleezza-Rice-arrives-in-Georgia.html>.

²³ "Ukraine Conflict: Putin 'Was Ready for Nuclear Alert,'" BBC News, March 15, 2016, <http://www.bbc.com/news/world-europe-31899680>.

²⁴ See, for example, Kris Osborn, "Congressman Hunter Says U.S. Should Attack Iran with Tactical Nukes," *Defense Tech*, December 4, 2015, <http://www.defensetech.org/2013/12/04/congressman-hunter-says-u-s-should-attack-iran-with-tactical-nukes/>.

²⁵ Douglas J. Gillert, "U.S. Ventures Cautiously into Former Soviet Territory," *DoD News*, October 6, 1997, <http://archive.defense.gov/news/newsarticle.aspx?id=41521>; Roman Streshnev, "Kto Khoziain Na Kaspii," *Krasnaia Zvezda*, September 9, 2003, http://old.redstar.ru/2003/09/09_09/3_03.html.

²⁶ Johan Norberg, *Training to Fight: Russia's Major Military Exercises 2011–2014* (Stockholm: Swedish Defense Research Agency [FOI], December 2015), <http://foi.se/en/Search/Abstract/?rNo=FOI-R--4128--SE>.

Those nuclear exercises that are based on a discernable scenario generally exercise some sort of escalation, a pathway in which conflict culminates in nuclear use. This escalation is not, in and of itself, “escalating to de-escalate.” In order to find evidence of that strategy, we would need to see what we saw in Zapad-99: reliance on nuclear use in a heretofore-conventional context not for military effects, and not to preserve the state or an ally, but to stop the conflict in an advantageous way. (Use of nuclear weapons to preserve the state would, of course, be an example of using nuclear weapons in the face of an existential threat.)

It is difficult to read this into Russia’s recent exercises. From what is known about them, they are in line with a more linear view of escalation: a long-held Russian concern that a conventional conflict could escalate to large-scale nuclear use. They also align with Russia’s stated doctrine of using nuclear weapons in the event of an existential threat, including that posed by an adversary’s strategic nuclear arsenal. Russian strategic forces are meant to deter such threats from emerging.

This applies to the exercises commonly cited as examples of Russia planning to use nuclear weapons to “de-escalate.” Examining, for example, the exercises held since 2008 and listed in the National Institute for Public Policy’s 2015 “Russia’s Nuclear Posture” report, it is notable that almost all involve strategic, not tactical, systems.²⁷ This does not disprove the “escalate to de-escalate” hypothesis. While a “de-escalation strategy” would involve tactical use of nuclear weapons, that does not mean that nonstrategic systems are required. Rather, strategic weapons could be used in a tactical way: a strategic bomber was used in Zapad 1999. However, that is not what we see in these exercises.

What do we see? Russia appears to have held large-scale strategic nuclear forces exercises roughly every fall from 2008 to 2014, at least.²⁸ In March 2014, there was also an exercise that postulated a large-scale nuclear strike.²⁹ It was followed by a May exercise the same year, whose scenario included a nuclear attack on Moscow.³⁰ Another large-scale exercise was held in February 2015.³¹ One was ongoing at the time of this writing March 29–April 2, 2016.³² This list may not be comprehensive, but what is notable about it is that while some Western sources argue that tactical nuclear systems were used in several of these exercises,³³ nothing in the Russian reporting on them reflects this. Rather, these exercises appear meant to test the readiness and command and control of Russia’s strategic

²⁷ National Institute for Public Policy, “Russia’s Nuclear Posture,” 2015, <http://www.nipp.org/wp-content/uploads/2015/04/Russias-Nuclear-Posture.pdf>.

²⁸ Vladimir Shishlin, “Troinoi Raketnyi Pusk,” Interfax, October 28, 2010, <http://www.interfax.ru/russia/162602>; “V Rossii Proshli Ucheniia Sil laderoii Triady,” Interfax, October 20, 2012, <http://www.interfax.ru/russia/271873>; “V Rossii Poshli Proverka i Ucheniia Sil laderogo Sderzhivaniia i Voenno-Kosmicheskoi Oborony,” TASS, October 30, 2013, <http://tass.ru/bezopasnost/702049>; Mark Trevelyan, “Russia’s Strategic Nuclear Forces to Hold Major Exercise This Month,” Reuters, September 3, 2014, <http://uk.reuters.com/article/uk-ukraine-crisis-russia-exercises-idUKKBN0GY0H620140903>.

²⁹ Oleg Vladykin, “Gotovnost’ k Massirovannomu ladernomu Udaru,” *Nezavisimaia Gazeta*, March 26, 2014, http://www.ng.ru/armies/2014-03-26/6_strike.html.

³⁰ “Putin Provel Planovuiu Trenirovku po Upravleniiu VS RF,” RIA Novosti, May 8, 2014, http://ria.ru/defense_safety/20140508/1006990657.html.

³¹ “Raketnye Voiska Strategicheskogo Naznacheniia Nachali Samoe Masshtabnoe Za Poslednie Gody Uchenie,” Interfax, February 12, 2015, <http://www.interfax.ru/russia/423615>.

³² Ministry of Defence of the Russian Federation’s Facebook page, March 29, 2016, <https://m.facebook.com/1492252324350852/photos/a.1492313031011448.1073741828.1492252324350852/1726400847602664/?type=3&theater>.

³³ National Institute for Public Policy, “Russia’s Nuclear Posture.”

nuclear forces, and thus to maintain Russia's ability to deter a strategic attack. It is therefore difficult to argue that the purpose of these exercises is actually preparation for tactical use.

There are exceptions. Western sources consistently report that Zapad 2009, in fall of that year, involved a tactical nuclear strike on Poland.³⁴ Leaving aside that Russian reporting on the exercise does not mention nuclear use, it is important to note that Zapad 2009 took place just as the debate on the new doctrine was ongoing, and there was, as discussed above, widespread speculation that the nuclear threshold would drop. It is possible that, as in 1999, this exercise (and perhaps others at that time) was testing a likely new doctrine—which in this case did not come to pass.

What exceptions have we seen since the 2010 doctrine was issued? One exercise that may have modeled smaller-scale nuclear use was Vostok-2010. This exercise included the launch of a Tochka-U missile, which can carry either nuclear or conventional warheads (as many systems can). At the time, McDermott suggested that the circumstances of the strike were "similar to that of a simulated tactical nuclear strike."³⁵ The greater accuracy of the Tochka-U if nuclear-armed may be one factor leading to that conclusion.³⁶ Russian reporting indicated the possible use of a nuclear mine, but these references soon disappeared from official sources.³⁷ In 2014, the Vostok exercise for conventional forces coincided with a strategic rocket forces exercise in the same region. It may well have included a scenario for escalation from conventional to nuclear. Again, the nuclear forces in use were strategic, and their exercise was sufficiently complex to suggest that they were testing something other than a "de-escalatory" strike.³⁸ It is worth noting that the Vostok exercises are held in the Far East (Vostok means East, just as Zapad means West), and while China is never named as the plausible adversary, there are more than a few reasons to think that its capabilities are the main planning parameter for this exercise series.³⁹

More worrying is what has been termed a "mock nuclear attack" on Sweden in March 2013, as part of an exercise involving dual-capable medium-range Tu-22M3 bombers.⁴⁰ A NATO report described this as a nuclear exercise.⁴¹ An anonymous Russian source neither confirmed nor denied this, when asked

³⁴ Roger McDermott, "Belarus and Russia Prepare Zapad 2013 Military Exercise," *Eurasia Daily Monitor* 10, issue 71 (April 16, 2013), http://www.jamestown.org/single/?tx_ttnews%5Btt_news%5D=40736&tx_ttnews%5BbackPid%5D=381; Hans M. Kristensen and Robert S. Norris, "Russian Nuclear Forces, 2016," *Bulletin of the Atomic Scientists*, April 15, 2016; McDermott, "Russia's Conventional Military Weakness and Substrategic Nuclear Policy."

³⁵ Roger McDermott, "Reflections on Vostok 2010: Selling an Image," *Eurasia Daily Monitor* 7, issue 134 (July 13, 2010), http://www.jamestown.org/single/?tx_ttnews%5Btt_news%5D=36614&no_cache=1#.VvwL3eIrIdU.

³⁶ McDermott, "Russia's Conventional Military Weakness and Substrategic Nuclear Policy."

³⁷ Vladimir Shishlin, "'Vostok-2010' Bez Konkretnykh Protivnikov," *Interfax*, June 28, 2010, <http://www.interfax.ru/russia/143079>; McDermott, "Russia's Conventional Military Weakness and Substrategic Nuclear Policy"; Quinlivan and Oliker, *Nuclear Deterrence in Europe*, 58.

³⁸ Norberg, *Training to Fight*, 44–48.

³⁹ Roger McDermott, "Vostok 2014 and Russia's Hypothetical Enemies," *Eurasia Daily Monitor* 11, issue 167 (September 23, 2014), http://www.jamestown.org/single/?tx_ttnews%5Btt_news%5D=42859&no_cache=1.

⁴⁰ Armin Rosen, "NATO Report: A 2013 Russian Aerial Exercise Was Actually a 'Simulated Nuclear Attack' on Sweden," *Business Insider*, February 3, 2016, <http://www.businessinsider.com/nato-report-russia-sweden-nuclear-2016-2>.

⁴¹ Jens Stoltenberg, *The Secretary General's Annual Report 2015* (Brussels: NATO, 2015), http://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2016_01/20160128_SG_AnnualReport_2015_en.pdf. This report also suggests that Zapad 2013 had a nuclear component, but no other reports on that exercise indicate this. See Kristensen and Norris, "Russian Nuclear Forces, 2016."

by Russian journalists, but noted that “both sides” conduct such exercises.⁴² While this is certainly concerning, and, if NATO is correct, indicates that Russia did exercise nonstrategic weapons in a tactical role, we do not know whether it fits a “de-escalation” model. In fact, it doesn’t make a lot of sense. For one thing, if Russia was to attack proximate Sweden, surely it would use a missile rather than medium-range bombers. While the exercise likely served a signaling purpose, just what that signal was is not clear.

Thus, most of Russia’s nuclear strategic exercises appear routine, and in keeping with maintaining the force. Others exercise Russian doctrine regarding how escalation might take place. Some, however, are outliers. If the last were accompanied by Russian confirmation regarding the doctrines and approaches they were modeling, we might have some sense of the intent. Instead, we generally have silence and denials. One possibility is that, in line with the Russian statements described above, this is part of a conscious Russian effort to demonstrate not a clear strategy, but rather vagueness and ambiguity: Thomas Schelling’s “threat that leaves something to chance.”⁴³ This tells us not that the nuclear threshold has been lowered for purposes of nuclear use, but perhaps that the Russians are intentionally signaling unpredictability, rooted in a desire to remind the world of their nuclear status. This, of course, aligns well with the somewhat random threatening statements discussed above.

Modernization

What, then, of modernization plans? There is no question that Russia has been modernizing its strategic nuclear forces. So are other nuclear weapon states, including the United States.⁴⁴ Russia has been working on new missiles, new submarines, and has, after many years of delays, finally developed a new cruise missile in both nuclear and conventional variants (the Kh 101/102) for its strategic bombers. Insofar as these developments contribute to a more secure, reliable deterrence arsenal, replacing aging systems, one could argue that they are positive developments. And it is true that many of Russia’s systems are aging, and most of these improvements have been long in the making. The United States certainly intends to keep its systems updated, though the specifics of, and funding for, modernization are subject to debate.⁴⁵

But while more stability would be welcome, Russian investments in its strategic systems perpetuate historical tendencies to focus resources on silo-based systems rather than on survivable mobile ICBMs and SLBMs, or on effective and reliable early warning. Russia is even developing a new, heavy

⁴² “Voennyye Nazvali Iadernoe Planirovanie Rossii Otvetom Na Analogichnye Deistviia NATO,” Lenta.ru, February 4, 2016, <https://lenta.ru/news/2016/02/04/nuclear/>.

⁴³ Thomas C. Schelling, *The Strategy of Conflict* (Cambridge, MA: Harvard University Press, 1960), 187–203.

⁴⁴ Hans M. Kristensen and Robert S. Norris, “Slowing Nuclear Weapon Reductions and Endless Nuclear Weapon Modernizations: A Challenge to the NPT,” *Bulletin of the Atomic Scientists*, July 1, 2014.

⁴⁵ Richard Sokolsky and Gordon Adams, “A Firewalled Nuke Fund Is Bad Budgeting and Bad Planning,” Carnegie Endowment for International Peace, April 6, 2016, <http://carnegieendowment.org/2016/04/06/firewalled-uke-fund-is-bad-budgeting-and-bad-planning/iwrn>; U.S. Department of Energy, National Nuclear Security Administration (NNSA), “Fiscal Year 2017: Stockpile Stewardship and Management Plan—Biennial Plan Summary,” March 2016, http://nnsa.energy.gov/sites/default/files/nnsa/inlinefiles/FY17SSMP%20Final_033116.pdf; Kingston Reif, “Budget Would Raise Nuclear Spending,” *Arms Control Today*, March 2016, https://www.armscontrol.org/ACT/2016_03/News/Budget-Would-Raise-Nuclear-Spending.

MIRVed ICBM to replace the SS-18, although this long-standing effort has run into the usual delays.⁴⁶ Although Russia touts heavy, silo-based ICBMs as capable of penetrating U.S. defenses in a second-strike scenario, silo-based systems are generally thought of as first-strike or launch-on warning weapons, because an adversary would almost certainly destroy them in their own first strike. Meanwhile, Russia's early-warning capability has deteriorated substantially since the Cold War, greatly limiting its capacity to accurately assess when a launch-on-warning is called for. This is without a doubt unstable. But while Russia's strategic force posture is concerning, it is also, as noted, in line with its historical postures. It therefore does not indicate a drop in Russia's nuclear threshold (although it may increase the risk of a Russian nuclear launch on false warning).

There is also talk that Russia is working to develop low-yield nuclear weapons and/or modernizing its nonstrategic nuclear weapons, perhaps with the intent of creating a class of nuclear weapons less likely to draw a nuclear counterattack and are therefore more "usable." Most who make this case point to a single point of evidence: comments by Viktor Mikhailov, once Russia's minister of atomic energy and former director of one of its nuclear weapons laboratories, regarding a "nuclear scalpel."⁴⁷ Mikhailov did, indeed, make several statements about Russia developing lower-yield tactical weapons. He made those statements between 1999 and 2002. He died in 2011. Mikhailov never described these systems as anything other than possibilities, perhaps things that Russian developers could do, if directed and funded. However, he also said that they were not, in fact, so directed or funded. He did suggest, at times, that scientists might be working on them nonetheless.⁴⁸ Others consistently denied this, however. Despite Mikhailov's early comments being made when "escalate to de-escalate" was seriously considered as policy, officials made it clear that Russia was not working on anything of the sort, although some, including Mikhailov, argued that the United States was developing such capabilities.⁴⁹ While it is possible that these nascent technologies of a decade or more ago have had a resurgence, I, for one, would need more evidence to be convinced.

Here is what we do know about Russia's nonstrategic nuclear arsenal. It likely comprises about 2,000 warheads, half of which have operationally assigned roles, according to Igor Sutyagin. These are

⁴⁶ "Sarmat Strategic Missile to Be Test-Fired from Plesetsk in 2016," *Russia Beyond the Headlines*, January 12, 2016, https://rbth.com/news/2016/01/12/sarmat-strategic-missile-to-be-test-fired-from-plesetsk-in-2016_558701. Meanwhile, the original SS-18 is no longer receiving servicing from the Ukrainian firm that had been providing maintenance. "Ukrainyts Bol'she Ne Obsluzhivaiut Rossiiskuiu Raketu 'Satana,'" *Ukrainisaia Pravda*, December 12, 2014, <http://www.pravda.com.ua/rus/news/2014/12/16/7052175/>.

⁴⁷ Steven Pifer, "Pay Attention, America: Russia Is Upgrading Its Military," *National Interest*, February 3, 2016, <http://www.nationalinterest.org/feature/pay-attention-america-russia-upgrading-its-military-15094>; Keith B. Payne, and Mark B. Schneider, "Russia's New National Security Strategy: Stark Realities Confronting the West," *RealClearDefense*, February 12, 2016, http://www.realcleardefense.com/articles/2016/02/12/russias_new_national_security_strategy_109016.html.

⁴⁸ David Hoffman, "Russia's Nuclear Future Is Uncertain," *Washington Post*, August 31, 1999, <http://www.washingtonpost.com/wp-srv/inatl/daily/aug99/arzamas31.htm>; Aleksandr Khokhlov, "Esli Chechentsy Zaimutsia Iadernym Shantazhom, Chechni Na Zemle Ne Ostanetsia," *Izvestia*, December 3, 2002, <http://izvestia.ru/news/270360>.

⁴⁹ Hoffman, "Russia's Nuclear Future Is Uncertain"; Vladimir Gubarev, "Akademik Viktor Mikhailov, Atomshchik, Zaiavliaiushchii O Sebe: 'Ia-lastreb: 'Schast'e Zhit' I Tvorit,'" *Pravda*, March 4, 2000, <http://www.pravda.ru/news/world/04-03-2000/909675-0/>; Aleksandr Emel'ianenkov, "Iadernyi Skal'mel' Nam Poka Ne Zakazyvali," *Rossiiskaia Gazeta*, May 8, 2004, <http://rg.ru/2004/05/08/ilkaev.html>.

various kinds of missiles and bombs, both air and sea launched.⁵⁰ Russian policy is to keep the weapons, for the most part, in central storage, separate from the delivery vehicles to which they are assigned (exceptions to this rule are air defense and ballistic missile defense forces and ships on combat patrol), so their use would require moving them to where the systems, some of which are dual use, are based.⁵¹

These dual-use systems have also fueled concerns in the West, because Russia has been building up its surface-to-air and ballistic and cruise missile capacity. Some systems—most notably the Iskander ground-based ballistic missile, with a range up to 500 kilometers (km),⁵² and the Kalibr sea-based cruise missile, with range of 300–2,500 km—have attracted particular attention because both can be deployed in nuclear and conventional variants (ranges may vary based on whether a nuclear or conventional weapon is used).

The Kalibr was long in development, and is an update of past systems. It has seen some use in Syria (obviously in a conventional variant), where the Iskander has also been spotted. The Kalibr generated attention in 2015 amid speculation that it might have been tested in a ground-based variant, thus violating the Intermediate-Range Nuclear Forces (INF) treaty. But in and of itself, it changes nothing about Russian operations or planning.⁵³

The Iskander, for its part, was in development since the mid-1990s. For many years, it was discussed only as a conventional weapon. Indeed, its developers at the Mashinostroenie Design Bureau were quick in 2000 and in 2004 to reject any notion that it might be nuclear armed; while the idea was mentioned in passing, the greater concern was continuing delays with the system.⁵⁴ The same was true in 2007, when deployments began.⁵⁵ In 2008, Western media reported that Iskanders might be deployed with nuclear weapons in Belarus and Kaliningrad. Russian sources, however, denied that there was any plan to do so.⁵⁶ After the August 2008 Georgia War, however, Viktor Zarazin, of the Duma's Defense Committee, floated the idea that a tactical nuclear deployment in Kaliningrad might be possible, as a counter to NATO's tactical nuclear weapons, should Russia's president deem it

⁵⁰ Igor Sutyagin, *Atomic Accounting: A New Estimate of Russia's Non-Strategic Nuclear Forces*, Occasional Paper (London: Royal United Services Institute, November 2012), https://rusi.org/sites/default/files/201211_op_atomic_accounting.pdf.

⁵¹ Ibid.

⁵² The range is 500 km for the cruise missile variant; it is less for the ballistic missile variant. Moreover, because the INF treaty bans ground-based missile systems, nuclear or conventional, with ranges between 500 and 5,500 km, the Iskander and other systems are declared and tested at ranges short of 500 km.

⁵³ Jeffrey Lewis, "Sokov on Russian Cruise Missiles," *Arms Control Wonk* (blog), August 25, 2015, <http://www.armscontrolwonk.com/archive/207801/sokov-on-russian-cruise-missiles/>. See also Pavel Podvig, "Sorting Fact from Fiction on Russian Missile Claims," *Bulletin of the Atomic Scientists*, June 22, 2015, <http://thebulletin.org/sorting-fact-fiction-russian-missile-claims8414>.

⁵⁴ Dmitrii Litovkin, "Nashi Prioritety: 'Iskander' Iz Kolomny," *Krasnaia Zvezda*, March 10, 2000, <http://dlib.eastview.com/browse/doc/3313327>; V. Kulikov, "Vesti S Poligonov: 'Iskander,'" *Na Strazhe Rodiny*, September 7, 2004, <http://dlib.eastview.com/browse/doc/7195196>.

⁵⁵ Il'ia Kedrov, "Asimmetrichnyi Zapusk 'Iskandera,'" *Voenna-Promyshlennyyi Kur'er*, no. 21, June 6, 2007, <http://dlib.eastview.com/browse/doc/12105333>.

⁵⁶ Pavel Bruntal'skii, "'Iskander' Vstupil V Psikhologicheskuiu Voinu," no. 49, December 19, 2015, <http://dlib.eastview.com/browse/doc/13136886>; Viktor Miasnikov, "Evropeiskoe Pro Dovinogo Naznacheniia," *Nezavisimoe Voennoe Obozrenie*, July 18, 2008, <http://dlib.eastview.com/browse/doc/18632080>.

necessary.⁵⁷ Later that year, then-President Medvedev spoke of possible Iskander deployments to Kaliningrad—but without mentioning a nuclear capability.⁵⁸ More recently, however, Russian press reports have begun touting the Iskander's possible nuclear role.⁵⁹ Thus, what is clear is that the Iskander could be armed with nuclear weapons (as, in theory, could most systems), and the Russians have realized that the prospect makes the United States and its NATO allies nervous.

Also worth noting is Russia's work on a hypersonic boost glide vehicle. Russia is not alone in working on this technology: the United States and China, among others, are doing so as well, and are probably further along. However, Pavel Podvig has speculated that Russian approaches to this system might have a nuclear component (as the U.S. version is unlikely to).⁶⁰ Still, at this point, we do not know what Russian plans actually are.

The most worrying development in all of this is not the systems themselves, but Russia's having seized on the dual-use nature of many of them as a mechanism for unnerving the United States and NATO. I do not see this as evidence of a lowered nuclear threshold, however. Instead, as with exercises and statements, it creates an image of a Russia eager to exploit U.S. and allied fears of its nuclear capabilities. Further lending credence to this goal is the infamous "leak" last year of Russian plans for a highly destructive new "nuclear torpedo," which looked a bit like plans from the 1950s.⁶¹ The disclosure of the system seems likely to have been intentional, and thus another effort at signaling a combination of unpredictability and nuclear weapon capacity.

Thus, as with exercises, nothing about Russia's nuclear modernization program seems to support either an "escalate to de-escalate" strategy or a true lowering of the nuclear threshold. Russia is modernizing old systems and building some new ones. But in doing this, it seems very much to be taking advantage of actions that might unnerve the United States and its NATO allies. While there may be inconsistencies among strategy, statements, exercises, and force development, this is the one constant.

What Does This Mean, and What If I'm Wrong?

Russia's nuclear strategy is not obvious. If its exercises modeled behavior that was in line with stated doctrine, which was espoused by officials, and weapons modernization was in line with improving capabilities to fulfill that doctrine, we would be confident of what the Russians intended. Instead, there are disconnects: Some exercises and weapons-development plans are in line with stated strategy, others seem poorly connected to it. Officials are careful to avoid directly contradicting

⁵⁷ Vitalii Denisov, "Iskander: Dostoinyi Protivovos," *Krasnaia Zvezda*, September 6, 2008, <http://dlib.eastview.com/browse/doc/18860215>.

⁵⁸ Philip P. Pan, "Russia Gives Obama Brisk Warning," *Washington Post*, November 6, 2008, <http://www.washingtonpost.com/wp-dyn/content/article/2008/11/05/AR2008110502987.html>.

⁵⁹ "Live Tactical Missile Firing Touted by Russia's Western Command," RT, June 2, 2014, <https://www.rt.com/news/163068-iskander-missile-shooting-exercise/>.

⁶⁰ Pavel Podvig, "Blurring the Line between Nuclear and Nonnuclear Weapons: Increasing the Risk of Accidental Nuclear War?," *Bulletin of the Atomic Scientists*, April 15, 2016.

⁶¹ "Russia Reveals Giant Nuclear Torpedo in State TV 'Leak,'" BBC News, November 12, 2015, <http://www.bbc.com/news/world-europe-34797252>.

doctrine, but happy to make vague and ominous pronouncements. This is unnerving, but it falls short of a convincing case of a coherent strategy of “escalating to de-escalate” or even of a lowered nuclear threshold (if that were the case, surely officials would be more direct in their statements, and the doctrine would have been changed). Instead, what is consistent appears to be a concerted effort on Russia’s part to identify and exploit ways to keep the West off-balance, including by the effective mechanism of nuclear brandishing. It appears to be Russia’s hope that in this way, it can be effective even in the context of far smaller conflicts, where nuclear escalation would otherwise seem highly unlikely.⁶²

A nuclear-weapon state whose primary goal is making others nervous is likely to be successful in that goal, for good reason. Even absent a strategic force posture of overreliance on less-survivable systems paired with weak early warning, Russia’s behavior is destabilizing. It also has long-term repercussions. As Pavel Podvig argues, the emphasis on dual-use systems (and specifically on their dual-use nature) risks muddying the water and removing clear distinction between nuclear and conventional weapons.⁶³ I do not urge complacency. But the trick is to respond in ways that increase stability, rather than decrease it—to avoid falling into the Russian trap.

It is possible, of course, that I have misread Russian doctrine. Indeed, it is possible that Russia has intentionally written its doctrine to be misleading and I have fallen for it. That Russia in fact intends not just to leverage its nuclear arsenal to unnerve other states, but that it might actually use those weapons. However, even if I am wrong, I have largely the same prescription.

Whether Russia is lowering its nuclear threshold, or simply leveraging itself as a nuclear power, it is doing this in large part because of its conventional weakness. Note the emphasis on developing “conventional deterrence” in the doctrine—Russia does not want to be reliant on nuclear weapons. Moreover, when Russians write about NATO and U.S. capabilities, it is not their nuclear supremacy they focus on, but their advanced conventional technologies, which are mentioned in the military doctrine, among other documents and statements. Russia is worried about, and therefore deterred from certain actions, first and foremost by the threat that the United States and its allies would use their conventional supremacy to do great damage to Russian forces and preclude their military victory.⁶⁴ Relying on a nuclear arsenal to overcome this is dangerous, because the credibility of taking such an action is questionable.

Russia’s reported development of lower-yield weapons, and its perceived lower threshold for nuclear use, are cited by some as reasons that the United States should develop such capabilities itself, and make clearer its own intent to use nuclear weapons in a range of possible cases.⁶⁵ This would be

⁶² Jacek Durkalec, *Nuclear-Backed “Little Green Men”: Nuclear Messaging in the Ukraine Crisis* (Warsaw: Polish Institute of International Affairs, July 2015), <http://www.pism.pl/publications/PISM-reports/Nuclear-Backed-Little-Green-Men-Nuclear-Messaging-in-the-Ukraine-Crisis>.

⁶³ Podvig, “Blurring the Line between Nuclear and Nonnuclear Weapons.”

⁶⁴ For a more-detailed argument, which accepts the premise that Russia has a “de-escalation” strategy, see Michael Krepon and Joe Kendall, “Beef Up Conventional Forces; Don’t Worry about a Tactical Nuke Gap,” *Breaking Defense*, March 28, 2016, <http://breakingdefense.com/2016/03/beef-up-conventional-forces-dont-worry-about-a-tactical-uke-gap/>.

⁶⁵ Colby, “Russia’s Evolving Nuclear Doctrine and Its Implications”; Kroenig, “The Renewed Russian Nuclear Threat and NATO Nuclear Deterrence Posture.”

counterproductive, enhancing rather than countering Russia's destabilizing doctrine. The notion that effective deterrence requires carefully calibrated equivalence at each step of any possible escalation ladder is faulty.⁶⁶ The idea that military strategists will (or should) define their response based on the throw-weight of a weapon used, rather than its effects and the broader strategic framework, implies little faith in one's strategists. The fact is that conventional deterrence can be enough to prevent use of these lower-scale weapons, should they emerge: if Russia is worried about U.S. conventional capabilities, it is worried about them in the context of a response to a nuclear strike as well as a conventional one. Moreover, if that is not enough, the United States has a range of nuclear options, and a declaratory policy that allows for their use.

In fact, lowering the nuclear threshold of the United States and NATO would signal to the Russians that Washington and Brussels are less confident in their conventional superiority and capacity than Russia is. This, in turn, could lead the Russians to doubt that capacity. This would weaken, not strengthen, NATO and U.S. deterrence. Moreover, a move by either Russia or the United States to develop "usable" low-yield nuclear weapons themselves would eliminate the very thing that makes the nuclear deterrent work—that nuclear use is so destructive as to be unthinkable. This also doesn't strike me as a particularly good idea. Nor is joining the Russians in seeking to take advantage of the ambiguities presented by dual-use systems.

The Russian government is irresponsible when it escalates the rhetoric on nuclear weapons, when it simulates nuclear strikes on NATO allies, and when it makes vaguely menacing statements that reference its nuclear might. It is irresponsible on purpose, relying on its status as a nuclear power to attempt to deter a broad range of actions, when these threats are not, in fact, credible. The United States and its European allies and partners should unquestionably hold Russia accountable for this behavior, and emphasize that it will not be tolerated and that it will continue to undermine Russia's standing globally. They should themselves avoid vague and unclear language and ambiguity and make clear their priorities and interests. They should also husband and continue to develop their already strong conventional capabilities and make clear their intentions to use them to defend those defined interests, when military capabilities are appropriate means of doing so. And, of course, they should maintain their nuclear deterrent. But they should not lower its threshold.

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⁶⁶ Adam Mount, "The Indelicate Balance of Nuclear Modernization," *Bulletin of the Atomic Scientists*, January 28, 2016, <http://thebulletin.org/indelicate-balance-nuclear-modernization9132>.

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