

Russia's Conventional Precision Strike Capabilities, Regional Crises, and Nuclear Thresholds

DAVE JOHNSON



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Lawrence Livermore National Laboratory

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Author's Biography

Dave Johnson is a staff officer in the NATO International Staff Defence Policy and Planning Division, which he joined in 2005. In addition to his current work on aspects of NATO's defence policy, he has worked in the NATO-Russia Council on defense transparency, risk reduction, and NATO-Russia missile defense cooperation. He has also worked on security sector reform and capacity building in Georgia and Ukraine. Among his assignments as an officer in the United States Air Force, he served at the Air Staff as a Soviet and Russia-Eurasia politico-military analyst; in the Office of the U.S. Defense Attaché, U.S. Embassy, Moscow, as an assistant air attaché; at U.S. Strategic Command as division chief responsible for strategic warning and as division chief responsible for monitoring and assessment of Russian, Chinese, and rest-of-world missile and WMD threats; and at Supreme Headquarters Allied Powers Europe (SHAPE) and Allied Command Transformation (ACT) as Force Planning Manager. He holds a B.A. in Russian and East European Studies from the University of Illinois Champaign-Urbana and an M.A. in National Security Affairs from the Naval Postgraduate School. He is a graduate of the resident programs of the USAF Squadron Officer School, Air Command and Staff College, Armed Forces Staff College, and of the non-resident program of the Air War College.

Mr. Johnson's recent publications include *Russia's Approach to Conflict: Implications for NATO's Deterrence and Defence*, Research Paper No. 111 (Rome: NATO Defense College, 2015), *Nuclear Weapons in Russia's Approach to Conflict* (Paris: Fondation pour la Recherche Strategique, 2016) and *Exercise ZAPAD 2017 and Euro-Atlantic Security* (NATO Review Magazine, 2017).

The views expressed in this paper are the responsibility of the author and do not necessarily reflect those of the North Atlantic Treaty Organization.

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Preface by Brad Roberts

Russia's military annexation of Crimea in spring 2014 came as a shock to NATO, as did the near declaration of war on the West that accompanied it in President Putin's speech to the Duma, justifying the annexation. After all, for years NATO had sought strategic partnership with Russia and closer cooperation of various kinds, while sending various messages of strategic restraint to Moscow. It had put its focus on crisis management elsewhere and harvested from collective defense and deterrence capabilities to enable that effort. After the shock came the NATO response, in the form of decisions taken in the September 2014 Wales summit to begin to adapt the alliance's deterrence and defense posture to the new Russian challenge. Over the following two years, NATO took multiple important steps to increase its conventional deterrence posture in the Baltics and to proceed with the modernization of the nuclear sharing arrangements. At the summer 2016 Warsaw summit, it took additional steps, including strengthening declaratory policy on nuclear deterrence.

But even if NATO successfully resists at the conventional level, the adaptation of NATO's deterrence and defense policy and posture has yet to come to terms with Russia's strategy for ensuring that a conflict with NATO ends on terms acceptable to Russia. Russia has developed a set of concepts, doctrines, and capabilities to contain the risks of escalation by NATO—and to manage them effectively if necessary. This compels NATO to update its thinking, and perhaps also doctrines and capabilities, to ensure they remain credible and effective in securing the objectives of NATO's member states in peacetime, crisis, and war.

This promises to be difficult for the alliance as it faces many sensitive questions. Does NATO need a symmetric response to developments in Russian policy and posture? If an asymmetric one, what would that encompass? Should it return to "flexible response" or move forward to some new nuclear doctrine? If so, what? Can it put all of its strategic eggs in a nuclear basket, or can strategic deterrence be reinforced with new, non-nuclear means? Should it be? Should it rely on an offense-dominant strategy as a counter to Russia's strategy or would a mixed offense-defense strategy be more promising? If so, is it politically viable? How can it further strengthen its deterrence posture without making more difficult the challenge of political renewal with Moscow?

These hard questions cannot be answered in the abstract. They require a clear understanding of the new Russian military thinking about regional war and about the use of strategic weapons in such wars. The evolving roles of nuclear and non-nuclear weapons in regional wars and their effect on escalation and de-escalation thresholds are important elements of this new thinking.

So far at least, such topics have received scant attention among Western analysts and policymakers, while topics like hybrid warfare and information warfare have captured attention. To help fill this gap, we have turned to NATO's leading analyst on Russian military doctrine, Dave Johnson. Having made a career of studying developments in Russian military thinking, doctrine, and capabilities, and of interpreting and explaining them for NATO leadership, he writes on this topic with special authority. His work brings out the complexity of the topic, albeit in a clear and compelling way. His analysis helps to lay the foundation for decision-making by NATO and U.S. leaders about how to proceed to ensure that the alliance's deterrence and defense posture remains fit for purpose in the 21st century.

Brad Roberts

Director

Center for Global Security Research

Introduction

The potential for war between Russia and the West has returned after a long hiatus, despite the many efforts of the United States and its NATO allies to remake the relationship with Russia by putting it on a much more cooperative footing. A central question for the West is what role nuclear escalation by Russia might play in such a conflict. It is common today to hear Western experts argue that Russia's nuclear threshold has fallen—and that it will rise again as Russia's modernization of its general purpose forces plays out in coming years. A close examination of this topic points to a different set of conclusions. Russia's nuclear threshold has not so much fallen as changed, becoming more fluid and less predictable. The modernization that will matter to Russia's future nuclear threshold is not the modernization of the general purpose forces but the newly diversified strategic toolkit, which includes multiple new non-nuclear tools. Western deterrence strategies must adapt to a circumstance that appears somewhat similar to Cold War challenges but is in fact substantially different. To more fully explore these matters, this paper examines three closely related topics:

- Russia's evolving military doctrinal approach to regional conflict;
- Russia's integration of conventional precision weapons and nuclear weapons into a single strategic weapon set; and
- Russia's potential uses of conventional precision strike in regional crises and conflicts and their impact on nuclear thresholds.

This paper is based on an examination of Russian policy statements, military analyses and employment concepts, force modernization priorities, force structure, and recent exercises and operations.¹ Accordingly, it reflects the advice of Albert Wohlstetter, who once

wrote that “a sober analysis of Soviet choice from the standpoint of Soviet interest and the technical alternatives, and taking into account the uncertainties that a Russian planner would ensure against” arrives at a conclusion that runs counter to “Western-preferred Soviet strategies.”² We must avoid attributing Western-preferred strategies to the Russians. Russia’s military capabilities and options must be seen, as much as possible, for what they are. Russia’s strategic weapon set, as conceived and postured, is a principal tool for enabling Russia’s revisionist agenda, including by stressing U.S. extended deterrence guarantees and the trans-Atlantic link in peacetime, crisis, and war. So far at least, there has been a marked tendency among Westerners to focus exclusively and excessively on Russia’s nuclear doctrine, its potential nuclear threshold, and the probability of a Russian decision to cross the nuclear threshold and thereby to mis-understand the dynamic impact of conventional precision strike on Russian military strategy. The result is a flawed view of Russia’s deterrence and counter-escalation strategies and their potential implications. A clear-eyed understanding of this element of the Russian challenge to the Euro-Atlantic security architecture helps ensure a continued effective response by the United States and its NATO allies building on the adaptations to NATO’s deterrence and defense posture decided at the Wales and Warsaw summits of 2014 and 2016.

To help inform such a clear-eyed understanding, this paper proceeds as follows. It begins with a review of developments at the national leadership level in Moscow that inform strategic objectives. President Putin’s worldview is critical to understanding developments in Russian military thinking and doctrine. The paper then turns to developments in that thinking and doctrine bearing on Russia’s approach to future war, especially regional war. It then examines the evolution over the last two decades of Russian thinking about the ends and means of strategic deterrence. This in turn requires a full exploration of Russian thinking about the new strategic weapon set. This analytical foundation is then used to explain Russian views of possible escalation pathways in regional conflicts and to assess those views in light of available information.

The paper offers two main conclusions. First, the conventional-nuclear strategic weapon set is intended to enable Russia to exploit nuclear deterrence while employing conventional precision strike for crisis management, escalation control, and war fighting in regional cri-

sis scenarios. The evolving concepts and doctrine for employment of the strategic weapon set will cause conventional precision weapons to influence the timing of Russian leadership decisions on whether and when to cross the nuclear threshold. Second, Russia's conventional precision-strike capabilities will augment but not replace nuclear weapons in deterrence, intra-war deterrence, and warfighting roles.

References

1 When translations are provided in this essay, they are generally provided by the author.

2 As cited in Robert Zarate and Henry Sokolski, eds., *Nuclear Heuristics: Selected Writings of Albert and Roberta Wohlstetter* (Carlisle Barracks, Pa: Strategic Studies Institute, US Army War College, 2009), p. 184.

Russia's Geostrategic Perspectives and Strategic Objectives

Russian military planning is directly informed by President Putin's reinterpretation of Cold War history. The following translation of a 2017 Russian publication illustrates this point well:

The absence of clear methodological criteria and approaches to the understanding of such a multifaceted phenomenon, such as war and its diagnosis, has led to tragic results when entire empires were defeated and ceased to exist. Rome fell in this way. For the same reason, the USSR, which was unaware of the nature and character of the war that was already ongoing, was destroyed.

Our victorious enemy conducted against us, against the Soviet Union, a category of strategy not connected with the conduct of military operations. We invested all our resources into a military form of security for the state and waited for them to start shooting. They defeated the Soviet Union by relying on a non-military strategy of conflict, without traditional military operations, and dealt with us just as you deal with the loser in any war, whether a "hot" war or a "cold" war. They deprived us of a significant portion of our industry, agriculture, and our scientific and military potential. However, the geopolitical adversary miscalculated: the comprehensive potential accumulated during the Soviet period has turned out to be so solid that around it has started a process of rebirth of Russia as a world power.¹

Russia's chief aims are to rebuild a security perimeter against perceived external threats (primarily the United States and its NATO allies), to reassert a leading role for itself on the world scene, and to disrupt the current global security architecture to force negotiation of a new settlement. Toward this end, Russia has deliberately reversed its status as a comparatively passive factor in the multi-actor nuclear dimension of the security environment and as a cooperative arms control and disarma-

ment partner. Accordingly, Russia has re-established itself as a principal deterrence concern for the West by wielding its military forces, including its nuclear capabilities, for political and military effect. The hopeful and optimistic tone of the 2010 Nuclear Posture Review (NPR) Report about the U.S.-Russian strategic military relationship has given way to pessimism and concern as the sources of friction have become more numerous, Russian military power has grown, strategic stability has eroded, and President Putin's opposition to the post-Cold War European security order has become more clear.² Russia's strategic trajectory and the salience of nuclear weapons in its revisionist endeavors have completely overturned assumptions that guided Western policy for the first two decades after the collapse of the Soviet Union.

Moscow has chosen this path on the basis of its rejection of the post-Cold War liberal order, which President Putin considers antithetical to Russia's long-term interests. According to this Russian perspective, the United States and its "vassals" first tried to cause a Yugoslavia-like break-up of post-Cold War Russia and, failing that, conspired in a policy of containment to hobble an independent Russia.³ Russia was too strong to be broken up but too weak initially to defend its vital interests such as, for example, ensuring the proper disposition of Crimea at the time that Ukraine gained its independence.⁴ The United States and its "satellites" ignored a weakened Russia's interests and concerns, inflicting a series of humiliations on her while striving to build a unipolar world order.⁵ Simultaneously, the West tried, through its globalization campaign, to impose a political and cultural normative agenda at odds with Russia's historical and cultural roots and inimical to her long-term survival as a unified state. Finally, according to President Putin, after years of strategic perseverance, a revived and re-invigorated Russia was able to respond when the West crossed a line in Ukraine by encouraging an illegal coup d'état in Kiev that threatened Russia's strategic position on the Black Sea.⁶ Beyond its borders, Russia re-asserted its great power status by intervening in Syria to halt "serial murder of states" by the United States.⁷

Seven months after Russia's illegal annexation of Crimea, President Putin claimed in his remarks to the Valdai Club that the "old world order" is failing and must be replaced in order to prevent chaos. Arguing that no treaty was ever signed to establish the rules and standards of the post-Cold War order, he proposed nothing less than the negotiation of a new world order.⁸ His remarks were an implicit but clear rejection of the

Helsinki Final Act and most elements of the Euro-Atlantic security architecture by which the Cold War was brought to a peaceful conclusion.⁹ Coming in the aftermath of Russia's aggression against Ukraine, which resulted in the first forceful re-drawing of European borders since World War II, President Putin's verbal challenge was redundant. The message was already clearly understood by some in the West, including for example, a group of analysts who wrote in summer 2014 as follows:

*The major consequences of Russia's illegal annexation of Crimea and aggression in eastern Ukraine for the European security order can be summarised in the following way: geopolitical struggle has returned with a vengeance and will not go away. In a direct way, this presents a fundamental challenge to the permanent formation of a liberal, rules-based security order in Europe.*¹⁰

President Putin's 2014 remarks to the Valdai Club were also a belated articulation of the revisionist program he had long pursued and that had only become clearly evident for some observers with his aggression against Ukraine. Very little of the Euro-Atlantic security *acquis* was left unscathed by that time, in the aftermath of decisions that appear to have been taken in the watershed year of 2007. It was in February of that year, at the annual Munich Security Conference, that President Putin began elaborating the anti-Western narrative outlined above. In his view, the world had already "reached the decisive moment when we must seriously think about the architecture of global security."¹¹

In the interval between his 2007 Munich speech and his December 2014 address to the Valdai Club, President Putin contributed greatly to making his claims of the decline of the global security order a self-fulfilled reality. President Putin's 2007 Munich speech was followed by mass cyberattacks against Estonia, the restart of out-of-area, long-range bomber patrols, and the suspension of Russian compliance with the Conventional Forces in Europe (CFE) Treaty.

The following year, Russia re-started regular annual strategic combined arms exercises. The first such exercise was KAVKAZ 2008 which was conducted in July and which positioned sufficient forces in proximity to the Russia-Georgia border for Russia to conduct military operations against Georgia the following month.¹² Russia has continued its annual strategic combined arms exercises, rotating them among its Western, Southern, Central, and Eastern military districts, beginning with the Western Military District in 2009.¹³ In 2013, Russia revived another Soviet-era

practice: large scale “snap” exercises. These exercises are conducted on a surprise basis for the commands and troops involved, with the larger exercises being launched on command of President Putin acting in his role as Commander in Chief. According to General Gerasimov, Chief of the Russian General Staff, in the five years since President Putin ordered their re-implementation, the Ministry of Defense and General Staff have conducted 24 large-scale snap exercises to test the readiness of command and control, troops, and forces.¹⁴ The large-scale snap exercises can exceed the officially acknowledged size of the annual strategic combined-arms exercises several times over. One large-scale snap exercise in 2013 was estimated to involve up to 160,000 troops.¹⁵ Russia uses snap exercises and the artificial sub-division of large-scale exercises into numerous smaller exercises in order to circumvent its OSCE obligations to conduct military exercises in transparency with other concerned states and to apply appropriate confidence and security building measures.¹⁶ The mobilization and movement of Russian forces to Ukraine’s eastern border and to Crimea in February 2014 took place under the guise of a snap exercise.¹⁷ Minister of Defense Shoygu has attributed the success of Russia’s military intervention in Syria to the snap exercise programme launched by President Putin in 2013.¹⁸

It is believed that also in 2008, Russia began testing a ground-launched cruise missile with a range in violation of its obligations under the Intermediate Nuclear Forces (INF) Treaty.¹⁹ This activity puts a cornerstone treaty in jeopardy and fits with Russia’s general campaign of circumventing and undermining the treaty structure underpinning Euro-Atlantic security.

This partial review of a decade of destabilizing activities by Russia raises a vital question with regard to the revised deterrence relationship between Russia and the U.S. and its NATO allies: what other vital interests that it could not defend 25 years ago, such as Ukraine, might Russia feel strong enough to try to re-coup in the future?²⁰ Addressing a meeting of the FSB Collegium in early 2015, President Putin said that Russia’s national security situation will “change for the better only if we become stronger.”²¹ What implications would a “stronger” Russia have for other aspects of the post-Cold War settlement, including the security, sovereignty, and territorial integrity of newer NATO member states in Russia’s immediate neighbourhood? The centrality of nuclear capabilities in Russia’s 10-year destabilization campaign in the Euro-Atlantic region indicates that the nuclear dimension will loom large in any future crises or confrontations if Moscow decides to test such questions.

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- 2 The then-positive trend in US-Russian relations since the end of the Cold War as a factor in the nuclear security environment is noted in U.S. Department of Defense, *Nuclear Posture Review Report*, April 2010, pp. 4-5, https://www.defense.gov/Portals/1/features/defenseReviews/NPR/2010_Nuclear_Posture_Review_Report.pdf. The changed context for the 2017 NPR, including the U.S. perception of Russia as an aggressor to be deterred, is reflected in: The White House, National Security Strategy, February 2015, pp. 4-5 and 25, https://obamawhitehouse.archives.gov/sites/default/files/docs/2015_national_security_strategy.pdf; and Joint Chiefs of Staff, *The National Military Strategy of the United States 2015*, June 2015, pp. 3-4, 7, and 9, http://www.jcs.mil/Portals/36/Documents/Publications/2015_National_Military_Strategy.pdf.
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- 6 This narrative runs through speeches by President Putin and other Russian high officials. The most fulsome treatments include President Putin's speech to the Russian government and legislators after the annexation of Crimea: Obrashchenie Prezidenta Rossiiskoi Federatsii, Kremlin website, 18 March 2014, <http://news.kremlin.ru/news/20603> and his address to the Federal Assembly later the same year: Poslanie Prezidenta Federal'nomu Sobraniyu, Kremlin website, 4 December 2014, <http://kremlin.ru/events/president/news/47173>.
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- 13 Beginning in 2008, the annual strategic combined arms exercises in the Military Districts/Joint Strategic Commands have been: KAVKAZ (Caucasus) 2008, ZAPAD (West) 2009, VOSTOK (East) 2010, TSENTR (Center) 2011, KAVKAZ 2012, ZAPAD 2013, VOSTOK 2014, TSENTR 2015, KAVKAZ 2016, ZAPAD 2017. The next planned exercise is VOSTOK 2018. Following suspension of the strategic exercises after the Soviet collapse, Russia conducted a one-off ZAPAD 1999 before finally reinstating regular annual exercises since 2008. The Northern Fleet (Arctic) Military District, formed on 1 December 2014, has not yet been included formally in the annual exercise rotation but did conduct a major exercise concurrently with exercise ZAPAD 2017. It has also been involved in large-scale snap exercises.

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Russian Military Thought and the Russian Approach to 21st Century Conflict

Russian military thinking is not aimed first and foremost at fighting and winning a war against NATO. Russia's first preoccupation is how to achieve its strategic objectives *without* direct military conflict if possible. The avoidance of general war, including strategic nuclear exchanges, is at the top of Russia's hierarchy of strategic aims.

However, many levels of military conflict lie between those two extremes of peace and general war and Moscow is investing intellectual and fiscal capital in the military capabilities to enable it to prevail at all of them. To date, Western interest in Russian thinking has generally focused on Russia's purported nuclear "escalate to de-escalate" strategy. While it is of course important to understand how Russia thinks about and plans for escalation, de-escalation, and war termination, that thinking and planning cannot be reduced to this simple label. It is also a mis-leading label in that it does not fully encompass Russia's approach, which is better understood as a strategic deterrence, counter-escalation, and warfighting strategy.

This distinction is particularly relevant to the question of where Russia's nuclear threshold lies and what could drive a decision to cross it, including the potential effects of conventional precision weapons on that decision. In connection with this, there is a powerful tension between Moscow's strategic aim to overturn the post-Cold War order, including through military intimidation and coercion, and the seemingly contradictory aim of avoiding general war. (See Figure 1) Risk is further compounded by the "blurring of the line between a state of war and peace;" the potential for war to break out quickly from that blurred line; and the related potential for rapid escalation.¹

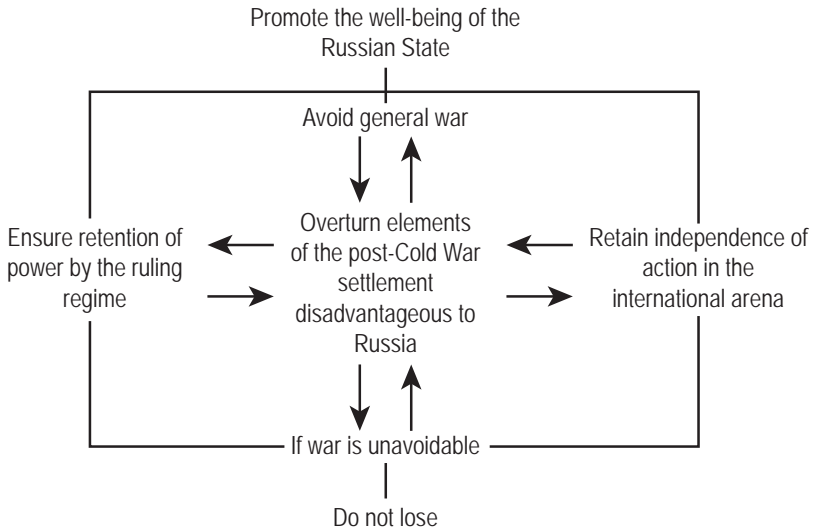


Figure 1. Hierarchy of Russian Federation National Objectives. Adapted by the author from Michael McCgwire, *Military Objectives in Soviet Foreign Policy*.²

The Russian General Staff and its supporting military research structures have noted the rapidly changing character of war. General Gerasimov, Chief of the General Staff, dwelled on this phenomenon at length in his remarks to the 2017 conference of the Military Academy of Sciences. He noted that conflicts of the 20th and 21st centuries differ from one another in various ways: by participants, weapons used, the forms and means of military activity and the changing ways various means of struggle contribute to achieving political aims. He also reviewed the many prefixed variations of war such as information war, economic war, non-contact war and hybrid war. General Gerasimov reminded his audience that the transformation of war in the 21st century had stimulated an active debate as to the exact understanding of the term “war,” with one side holding to a classic understanding and the other arguing that the character of war had changed to such an extent that direct armed conflict is no longer its most basic feature.

General Gerasimov argued further that modern military conflicts, whatever their character, have a single common attribute – the use of the means of military force. Thus, he concludes, “for the foreseeable future, the main content of modern wars and future wars will remain the same, and its main characteristic will be armed struggle.”³ On this basis, General Gerasimov concluded that it is reasonable to preserve

the understanding of the term “war” as currently given in the Russian Military Encyclopaedia:

War is the extreme form of resolution of contradictions, characterized by a sharp change in the relations between states, nations, and other subjects of politics and the transition to the use of means of armed and other types of violence to achieve socio-political, economic, ideological, territorial, national, ethnic, religious and other aims. The main content of war is armed struggle. Depending on the composition of the participants, wars are divided into bilateral and coalition; by scale - large-scale, regional and local; by the intensity of armed struggle - low, medium and high intensity; by type of resolved contradictions - interstate and intrastate; by the aims of the belligerents - aggressive, defensive, liberation, etc.; by the means of armed struggle used - with the use of weapons of mass destruction (WMD), using conventional means of destruction. Classification of wars on other grounds is also possible.⁴

General Gerasimov’s conclusion is important as it cuts through and rationalizes much of the debate that has occurred in Russia and in the West over forms of warfare, especially “hybrid warfare,” since the start of the Ukraine conflict in 2014. It is also fully in line with the apparent rationale behind Russia’s military acquisitions, force structure and posture, exercises, and operations, which appear to be aimed at achieving maximum flexibility. This prepares the military forces to operate effectively in low-intensity special operations such as the seizure of Crimea, low-to-mid intensity operations such as in Donbas, mid-intensity operations in distant theaters such as Syria, and high-intensity operations in regional or large-scale wars such as those that Russia exercises against NATO. This spectrum of potential intensity is key to understanding Russian military preparations for future war.

Equally key is Russian thinking about the different types of conflicts for which they must prepare. Russian military strategists distinguish local from regional conflicts. They expect local conflicts to be fought with limited forces and do not anticipate use of nuclear weapons. Regional conflicts are expected to originate either from an escalating local conflict or from a threatening period of rising tensions. And they expect regional conflicts to be fought by two or several states in a region, with national or coalition forces and with the use of conventional or nuclear means of combat.⁵ They also identify a third type of conflict: strategic conflict potentially involving large-scale nuclear exchanges. Their think-

ing about war with NATO fits squarely in the category of a regional war, though with the potential to escalate to the strategic.

Russian military planners expect conventional regional war to be characterized by:

- decisive aims by both sides and conduct of armed conflict in all domains;
- actions by groups or coalitions;
- the massive use of precision weapons of various basing means, electronic warfare and all-new means of armed conflict;
- the destruction of facilities in the rear area, of the economy and communications in the entire territory of the warring parties;
- the conduct of air operations with decisive strategic tasks.⁶

Also in their assessment, conventional regional wars in which nuclear weapon states or their allies are participating will be characterized by a constant threat of the use of nuclear weapons.⁷

Large-scale war is viewed as war between coalitions of states or the largest states of the world community. It can result from an escalation of local or regional war, by means of drawing in a significant number of states of various regions of the world. In large-scale war, the parties will pursue radical military and political goals. It will require the mobilization of all available material resources and spiritual forces of the participating states.⁸

Russian military writing generally reflects the view that strategic nuclear wars cannot be fought for rational political purposes. These writings recall the statements by Presidents Reagan and Gorbachev at Reykjavik that “a nuclear war cannot be won and must never be fought.”⁹

That said, Russian military writing also strongly suggests a role for nuclear weapons, including their limited use, in wars of various scales and intensities. This includes not just large-scale (strategic) war but also regional war. Nuclear war is to be avoided but use of nuclear weapons in war is contemplated.

Russia intends to fight in higher-intensity conflicts with a “whole of nation” approach. The approach unites government, military and the

people and was first enacted in the 2009 National Security Strategy and supporting strategic documents, including the updated 2014 Military Doctrine.¹⁰ This concept, which goes beyond the “whole of government” approach discussed in the West, is reflected in practice in the increasing centralisation of decision-making; the control of media and suppression of dissent; rhetorical and practical preparations to mobilize the government, economy, military and society for war; and the increasing militarisation of Russian society.

The defining characteristics of modern war identified by Russian military experts include:

- the beginning of military actions by groups of forces during peacetime;
- warfare by high-maneuver, non-contact operations by joint groups of forces;
- degradation of military-economic potential through quick destruction of critically important military and civilian infrastructure objectives;
- mass employment of conventional precision weapons with the constant threat of nuclear use, special forces, robotics and weapons based on new physical principles, such as lasers and magnetic rail guns, and participation by paramilitary units;
- simultaneous action on enemy forces at all depths of the area of operations;
- armed conflict in all physical and informational space;
- employment of asymmetric and non-linear means; and
- command and control of forces and means in a unified information space.¹¹

Collectively, these elements at their full stage of development are seen as comprising “Sixth Generation Warfare.” The Russian military views itself as operating at the level of Generation 5.5 Warfare, with aspirations toward further progress in the advanced technologies that characterize full-on Sixth Generation capabilities.¹²

Although the Russian Armed Forces have rapidly developed the means to compete on the modern battlefield, the Russian approach to conflict is geared toward achieving strategic aims without war (with a

primary concern being to stay below NATO's threshold for reaction). This approach has been popularly labelled in the West as "hybrid" war since the start of the conflict in Ukraine. For their part, if Russian officials and military analysts use the term "hybrid" at all, it is applied to the perceived Western model of warfare and regime change. Russians tend to refer to their own approach to conflict as "non-military means" or, more comprehensively, "new forms of armed conflict."¹³ For the most part, Russia's strategic deterrence concept also encompasses its all-domain approach to conflict. In addition to their sceptical view of the post-2014 re-definition of "hybrid", Russian military strategists scoff at the notion that using all levers of power in conflict is anything new.¹⁴

A Russian political-military expert has described the aim of the use of non-military means *by Russia* as "intended for the acquisition of additional strength (allies and friends), the weakening and elimination of military dangers and threats ([through] treaties, agreements, transformation of potential adversaries to neutrals etc.), the lessening of the possibility of aggression ([by] isolation of the adversary, creation of a negative image in social opinion, exposing of [their] plans, etc.), limitation, up to full rejection (in limited conditions), of the use of force." The non-military means to be employed, as described by this political-military expert and echoed in other statements by Russian political and military leaders, are broad and include: political-diplomatic, economic, legal, informational-psychological, information-technical, humanitarian, and spiritual-moral instruments, and defense of the social sphere.¹⁵

Information warfare, often referred to by Russian military experts as "information confrontation," is a major component of Russia's actions against the West. Because it is intended to slow or paralyze the ability of adversaries to observe, assess, decide, and act, information warfare may be the element of Moscow's non-military approach with the greatest potential impact during a crisis, conflict, or war. The Russian Ministry of Defense has strengthened Russia's already robust information operations by creating "Information Operation Forces," which Minister of Defense Shoygu announced in early 2017.¹⁶

Moscow backs up its non-military maneuvers against its adversaries with an increasingly capable, full-spectrum military, which is poised to act when non-military means fail, to deter potential reactions to Moscow's border adventures, and to exploit opportunities for easy wins. According to the preferred approach, Russia would be able to achieve its aims at the lower end of the x and y axes in Figure 2, with

non-military means at the forefront of the effort, supported by the constant pressure of military means, including nuclear threats. At its most menacing, this approach recalls Thomas Schelling's description of a "competition in risk-taking, a military-diplomatic manoeuvre with or without military engagement but with the outcome determined more by the manipulation of risk than by an actual contest of force."¹⁷ The potential for escalation in such scenarios is evident and is well-illustrated in Figure 2.¹⁸ This relates directly to questions of conventional precision strike capabilities, regional crises, and nuclear thresholds to be elaborated below.

The preference to achieve aims without the employment of military force in combat does not indicate a lack of preparedness to use military force if necessary. The Russian Armed Forces are structured, trained, and equipped to respond quickly and effectively in the event that Russia's vital interests are threatened, as in Ukraine, or when the political and military risks of an opportunity are assessed as manageable, as in

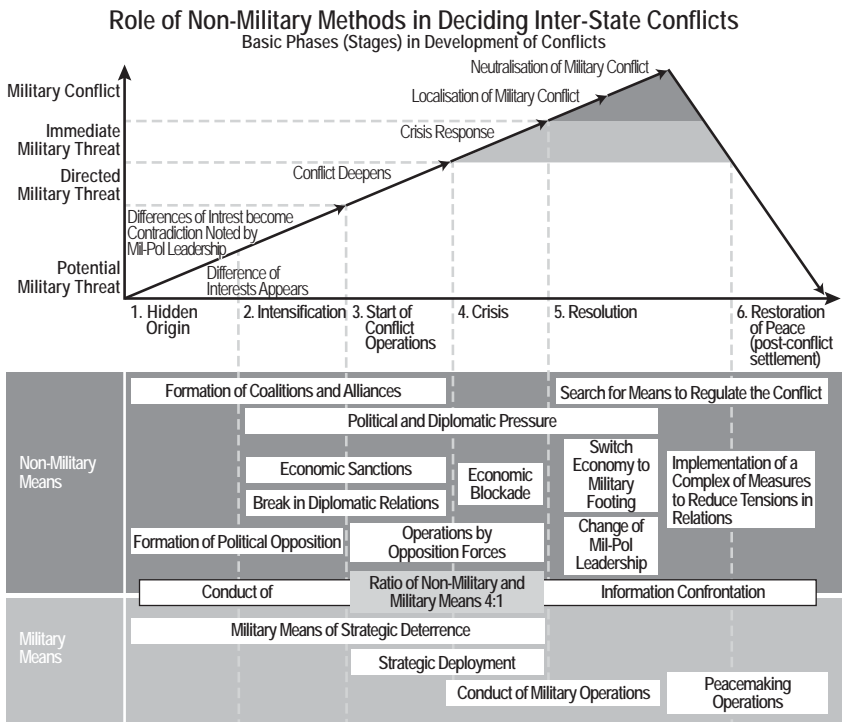


Figure 2. Illustration on Phases of Conflict Accompanying a Report of General Gerasimov's 2013 Remarks to the Russian Academy of Military Sciences.¹⁹

Syria. Russia has implemented a robust military exercise programme and maintains its armed forces in a state of readiness that matches the Russian perception of the potential for military conflict to erupt suddenly and escalate quickly.²⁰

In this context, a second point of tension is evident between Russia's aim to avoid general war and its intention to overturn the post-Cold War order. This tension derives from the enduring Russian strategic concepts (outlined in more detail below) of warfighting, including the relationship of strategic defense and offence and the imperative:

*to pre-empt the enemy in actions, as quickly as possible to deploy the Armed Forces, to inflict fire strikes as early as possible, to prepare operations quickly, and to conduct them at a higher tempo than is achievable by the enemy. As in the past, this comprises the main and determining factors to seize and retain in our hands the strategic initiative.*²¹

The potential for escalation is also reflected in the war footing that the Russian government and military have been on since early 2014. This is evident in the way that "the Kremlin has been de facto operating in a war mode" in the conduct of its multi-dimensional confrontation with the United States and its allies.²² It is also evident in the structures and procedures that Moscow has put in place to put the government on a war footing, including a de facto revival of the wartime STAVKA (the Soviet High Command), establishment and empowerment of the National Center for Direction of Defense, and the streamlining of military alert procedures.²³

Meanwhile, beyond their deterrence function, nuclear weapons are seen as having many roles in the non-kinetic war that Moscow sees itself as fighting. They serve to remind other nations of Russia's great power status and military might; cast a nuclear shadow over the global security environment; undermine confidence in NATO nations in the security architecture; are intended to stress NATO, the trans-Atlantic link, and US extended nuclear deterrence guarantees; and enable coercion of neighbours.

In sum, Russian military thought and planning has evolved considerably to reflect the Russian leadership's revised geostrategic perspectives and new strategic objectives. There has been significant innovation in that thought and planning over the last decade or more, including but not limited to new thinking about the roles of nuclear weapons in Russian military strategy, broadly defined.

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- 6 *Ibidem*, p. 90.
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- 13 "Hybrid" originated as a term to describe non-linear actions by non-state actors against state actors and gained widespread usage, referencing Hizballah approaches, after the 2006 Second Lebanon War. See, for example, I. Brun, *While You Were Busy Making Other Plans – the Other RMA*, *The Journal of Strategic Studies*, Vol. 33, No 4, 535-565, August 2010, pp. 535-565 and O. Tamminga, *Hybride Kriegsführung: Zur Einordnung Einer Aktuelle Erscheinungsform des Krieges*, *SWP-Aktuell* 27, March 2015, p. 1. President Putin used the term "controlled chaos" in his published manifesto on future defense policy just prior to the 2012 presidential elections in V. Putin, *Byt' Sil' nymi*. "Controlled chaos" is now in wide use among Russia's military leadership and analysts as in A. N. Belskii and O. V. Klimenko, *Politicheskiye Tekhnologii "Tsvetnykh Revoliutsii": Puti i Sredstva Protivodeistviya*, *Voennaya Mysl'*, No. 9, September 2014, pp. 3-11. An extended analysis of the related, and somewhat interchangeable term "strategy of attrition and destruction" is in V. I. Vorob'ev and V. A. Kitslev, *Strategii Sokrusheniya i Izmora v Novom Oblike*, *Voennaya Mysl'*, No. 3, March 2014, pp. 45-57. While generally using these terms, Russian analysts recognise the western use of "hybrid" to identify similar phenomena. Russian experts tend to use "hybrid war," "controlled chaos," and "technology of colour revolutions" to label actions directed against Russia or governments friendly to Russia, and refer to the same means and methods as part of "new forms of armed conflict," or simply "non-military means," when discussing modifications to Russia's approach to conflict and war.

- 14 "...it is mistaken to consider that the complex of such government-wide measures is something new or innovative; such actions have had their place in the entirety of the history of military art (interstate conflict), and naming them with terms such as 'hybrid' and with prefixes such as 'quasi,' 'neo,' and so forth only testifies to the pretensions of various authors to the role of leading researchers in military science." V. B. Andrianov and V.V. Loiko, *Voprosy Primeneniia VS RF v Krizisnykh Situatsiakh Mirnovo Vremeni*, *Voennaya Mysl'*, No. 1, January 2015, p. 68.
- 15 V. I. Lutovinov, *Razvitie i Spol'zovanie Nevoennykh Mer Dlya Ukrepleniya Voennoi Bezopasnosti Rossiiskoi Federatsii*, *Voennaya Mysl'*, No. 5, May 2009, pp. 2-12.
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- 21 V. A. Zolotarev, ed., *Istoriya Voennoi Strategii Rossii*, Moscow, Russian Ministry of Defense Military History Institute, Kuchkovo Pole Poligraf Resursy, 2000, p. 539.
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- 23 Dave Johnson, *Russia's Approach to Conflict – Implications for NATO's Deterrence and Defence*, pp. 4-5 and pp. 10-11. The STAVKA was the highest organ for strategic direction of Soviet Armed Forces during World War 2, subordinate only to the State Defense Committee. See *Voenniy Entsikopedicheskiy Slovar'*, *Voennoye Izdatel'stvo*, Moscow, 1986, p. 703; S. M. Shtemenko, *General'niy Shtab v Godiy Voiniy*, *Voennoe Izdatel'stvo*, Moscow, 1968, p. 29 and pp. 34-35 and J. Erickson, *The Soviet High Command: A Military-Political History, 1918-1941*, Frank Cass, London, 2001, pp. 597-617 and 602-603. The revived de facto STAVKA likely comprises President Putin, the Minister of Defense and the Chief of the General Staff, the Chiefs of the Services and Branches, and perhaps a few other high-ranking officers from the Defense Collegium. The STAVKA's control of operations in strategic directions would be executed through the General Staff, apparently with overall national defense enabled by the National Centre for Direction of Defense and the supporting legislation empowering the General Staff as the coordinating authority for national defense across all power ministries.

Strategic Deterrence

Russia's leadership has set out an approach to strategic deterrence that relies upon "interconnected political, military, military-technical, diplomatic, economic, informational and other means directed at prevention of the use of military force against Russia."¹ These components are divided into forceful (military) and non-forceful (non-military) categories. The military component of strategic deterrence comprises various means: general purpose (conventional) forces, non-nuclear or pre-nuclear (conventional precision weapons) forces, and nuclear (strategic and non-strategic) forces.² A translation of a Russian diagram of the strategic deterrence concept is at Figure 3.

Despite this comprehensive approach to deterrence, Russia still relies primarily on forceful (military) means. According to a Russian military expert,

Actions of intimidation, limitation, and coercion, which complement each other and are conducted within the framework of a unified strategic deterrence mechanism, lie at the base of strategic deterrence. However, for the near future, Russia will need to deter the leading world states by means of intimidation, the main determinant of which is the threat of use of the strategic deterrence forces of the Russian Federation Armed Forces, openly declared and delivered to the potential aggressor.³

In common usage by Russian military experts, the terms general-purpose forces⁴ and, to a somewhat lesser extent, conventional forces are used interchangeably and are understood in much the same way by U.S. and other Western militaries. Conventional precision weapons are designated as "non-nuclear" weapons, with that term understood to be distinct from "conventional."⁵ Russian experts sometimes use the term "pre-nuclear" but the term "non-nuclear" predominates and is favored in official documents such as the Military Doctrine.⁶

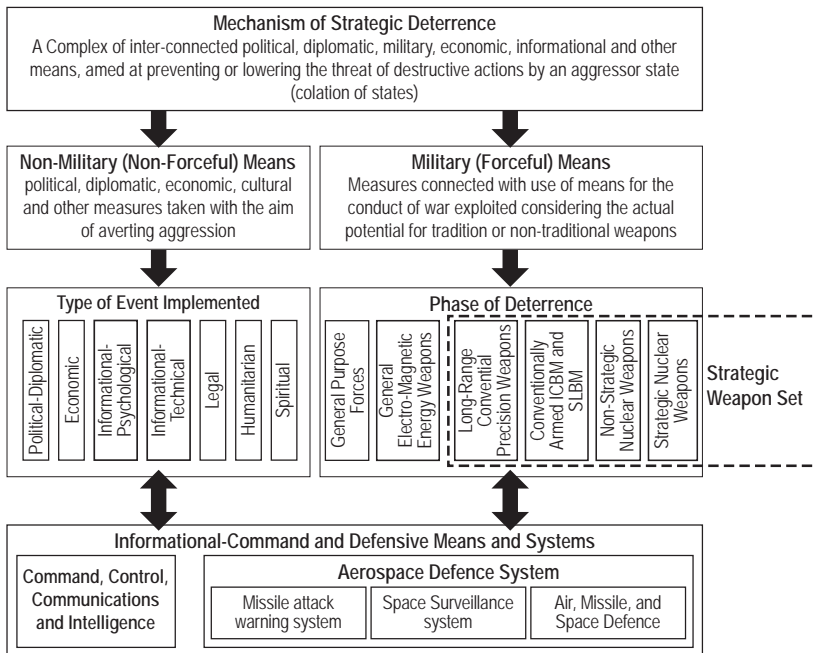


Figure 3. Strategic Deterrence Mechanism.⁷

The 2014 Military Doctrine identifies “strategic (nuclear and non-nuclear) deterrence as a fundamental task of the Russian Armed Forces.”⁸ In Russian policy, the main aim of strategic deterrence is “prevention of any form of aggression against Russia and her allies, and in the event of aggression – guaranteed defense of the sovereignty, territorial integrity and other vitally important national interests of the Russian Federation and its allies.”⁹ Conventional precision weapons were first assigned a role in strategic deterrence in the 2010 revision of Russia’s Military Doctrine and their role appeared to be reinforced in the 2014 revision.¹⁰ Evolving Russian concepts for the military component of strategic deterrence rely primarily on a mix of conventional precision (non-nuclear) weapons and nuclear weapons which are designated collectively as “strategic weapons.”

It should be recalled that Russia’s precision weapons are dual-capable, enabling precision strike by conventional *and* nuclear means. In an important related development, in 1999 the Russian Security Council approved the development of low-yield nuclear weapons.¹¹ The combination of precision strike with a variety of low-yield nuclear weapons adds another dimension of flexibility to the strategic weapon set,

provides more options to Russia's political leadership, and illustrates Russian concepts for fighting wars with nuclear weapons while avoiding all-out nuclear war. As Barry Watts has suggested, and as discussed further below, "Russian leaders appear to have a very different view [from U.S. leaders] about limited nuclear use in a theater context."¹²

Russia's strategic deterrence forces include in their composition:

- strategic offensive forces, comprising
- strategic nuclear forces – land-based (Strategic Rocket Forces), sea-based, and strategic nuclear aviation forces;
- non-strategic nuclear forces – the general purpose forces that possess land, sea, and air-launched non-strategic nuclear weapons;
- strategic non-nuclear forces – the general purpose forces that possess strategic non-nuclear weapons of varied basing.

Strategic defensive forces – the forces and means of the system of missile attack warning, space surveillance, missile defense, counter-space defense and counter air defense, providing for combat employment of strategic offensive forces.¹³

With the aim of supporting more flexible responses to changes in the military-political and strategic situation, the Russian concept of strategic deterrence envisions two tightly interconnected levels of strategic deterrence – global deterrence and regional deterrence. Regional deterrence is viewed as complementing global deterrence.¹⁴ Russian military theoreticians and planners view precision conventional and nuclear weapons as complementary in supporting strategic deterrence at the inter-connected regional and global levels. According to Russian military experts,

The threat of mass employment of, for the most part, strategic nuclear weapons for infliction of deterrent damage to the military-economic potential of the aggressor under any conditions is the basis for global deterrence. Regional deterrence is based on the threat of mass employment of non-strategic nuclear forces and strategic non-nuclear forces in any wars launched against Russia and her allies, the result of which could be the smashing of the enemy strike formations participating in the aggression and the infliction of deterring damage on the economy of the aggressor.¹⁵

Strategic deterrence “is carried out in peacetime and in periods of direct threat of aggression up to the stage of use of military forces” and “can occur in the course of an already beginning military conflict with the aim of deterring its escalation.” Moreover, “strategic deterrence should be conducted constantly right up to the stage of mass employment of nuclear weapons.”¹⁶

Russian military planners combine conventional precision (non-nuclear) weapons and nuclear weapons conceptually, doctrinally, organizationally, and operationally.¹⁷ Conventional precision weapons, viewed as having combat effectiveness for some purposes on a par with nuclear weapons, are designated as the first capability to be employed for strategic deterrence at the regional and global level.¹⁸ However, “in conditions when means for deterring the aggressor may prove insufficiently effective, it is necessary to consider nuclear and non-nuclear strategic weapons also as military means for the smashing of the aggressor.”¹⁹

It is important to note that precision conventional weapons complement but do not replace nuclear weapons. Russia’s political-military leaders appear to envision scenarios in which employment of conventional precision weapons, *coupled* with a nuclear deterrent threat, could be sufficient for “accomplishment of global and regional deterrence aims, de-escalation and termination of regional and large-scale aggression.”²⁰ Non-nuclear and nuclear deterrence are conceptually linked because strategic nuclear deterrence is viewed as creating the necessary preconditions for non-nuclear deterrence (by conventional precision weapons) to be effective. If an adversary does not capitulate in response to a precision conventional attack, Russia can escalate to nuclear employment. Non-nuclear deterrence is therefore based on: 1) threatened or actual infliction of deterrent levels or assigned levels of damage by conventional precision weapons linked to; 2) the threat of nuclear escalation of the conflict, potentially to the level of massed nuclear strikes:

*Deterrence of nuclear aggression is based on strategic nuclear retaliation according to the set role of the strategic nuclear forces. Deterrence of nuclear aggression creates the necessary preconditions for deterrence of aggression by use of conventional means of destruction.*²¹

In sum, Russian thinking about strategic deterrence has been a principal focus of military innovation. Russian thinkers and political and military leaders have set out significant new ideas about the roles and functions of deterrence in the current and future security environments. This thinking differs from past approaches in many ways, but one of the most important new facets is the role of non-military and non-nuclear means in supporting strategic deterrence objectives.

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- 6 The terminology used to refer to conventional precision weapons in official documents, statements by political and military leaders, and in military journals is varied. The 2014 Russian Military Doctrine refers to precision weapons (vysokotochnoye oruzhie), p. 12 and P. 23 and strategic non-nuclear precision weapon system (strategicheskaya neyadernaya sistema vysokotochnogo oruzhiya), p. 5. Other terms used to refer to conventional precision and conventional long-range precision weapons include: precision means of defeat (vysokotochniye sredstva porazheniya), precision non-nuclear (conventional) weapons for long range performance (vysokotochnoye neyadernoe (obychnoe) vooruzheniye v dal'noboinom ispolnenii); conventionally armed strategic weapon (strategicheskoe vooruzheniye v neyadernom osnaschenii); precision non-nuclear means of a large radius of operations (vysokotochniye neyadernykh sredstv bolshovo radiusa deistviya); precision combat complexes (vysokotochniye boeviye kompleksy); non-nuclear precision weapon system (neyadernaya sistema vysokotochnogo oruzhiya); strategic non-nuclear weapon (strategicheskoe neyadernoye oruzhie); conventional long range precision weapon (obychnoe dal'noboinogo vysokotochnoe oruzhie); and long-range precision weapon (vysokotochnoye oruzhiye bol'shoi dal'nosti).
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Strategic Operations

A key question for Western defense planners is how these new conceptual approaches to deterrence and war actually translate into Russian military planning. Russia's military strategy is based on the determination that "the activities of the armed forces should be maximally active and decisive, aimed at the complete defeat of the aggressor." This is "achieved only through a defensive-offensive strategy, i.e. the rational combination of defense, counter-offensive, and offensive."¹ The application of military force is guided by a system of strategic operations. Strategic operations are defined as

A form of military action of strategic scale, carried out by the Armed Forces and other troops during war. It is a set of coordinated and interrelated goals, tasks, place and time of strikes, operations and combat operations of the units and formations of various services of the Armed Forces, conducted simultaneously and consistently according to a single concept and plan to achieve the intended strategic goals.²

Strategic operations originated in the experience of World War I and related concepts were further developed in the inter-war period by Soviet military thinkers such as M. V. Frunze (who perceived the decisive potential of airpower, especially for bringing the battle to the enemy's rear area), G. S. Isserson (who developed the concept of deep operations), A. A. Svechin (who analyzed combining operations toward ultimate war goals under the rubric "strategic line of conduct"), and M. N. Tukhachevskiy (who envisioned combined arms formations conducting deep offensive operations).³

The concept of strategic operations was further developed under fire during World War II. The early years were disastrous for the Soviet Union because German forces seized and held the strategic initiative. This forced the Soviet Union to fight a two-year strategic defensive op-

eration on its own soil (1941-1942). Moscow rejected a passive defense, conducting offensive operations within its overall strategic defensive posture, paving the way for strategic counter-offensives, the second of which succeeded (1943). During this second phase of the war, strategic operations — most by groups of fronts — became the main method of conducting operations.⁴ Once Soviet forces had wrested the strategic initiative from the Germans, the Soviets enjoyed freedom of choice in the place, timing and direction of subsequent main strikes until achieving victory in 1945.⁵ Soviet military thinkers and planners drew critical conclusions from the experiences of World War II, analyzing and rationalizing them in subsequent decades.

Soviet military strategy continued to evolve in the post-war years, most notably in response to the appearance of nuclear weapons and their long-range delivery means and other major advances in military capabilities. The main lessons and principles described above were retained, and they remain a part of the present strategy and system of strategic planning and operations.⁶ Among the perceived changes brought by the new technologies were:

- the ability to destroy groupings of enemy forces throughout the entire depth of the theater;
- the requirement to accomplish main missions quickly due to the presence of nuclear weapons; an increased requirement for combined arms operations to defeat large enemy groupings;
- the requirement to recover and continue operations after enemy nuclear employment;
- and enemy nuclear delivery means as a priority target in conventional wars.⁷

For strategic operations initiated by using conventional weapons, the assigned missions were “to foil enemy attacks, inflict decisive losses on his groupings of armed forces deployed in the [theater], including nuclear delivery means, and seize and retain the strategic initiative.”⁸

Soviet and post-Cold War Russian military strategy and related concepts for strategic operations evolved further in response to the Third Revolution in Military Affairs (RMA) and its implications.⁹ Russian military thinkers have assessed that the character of strategic operations has again changed substantially. Consequently, they anticipate that strategic

counter-offensive and offensive operations, would “begin with a battle for air and sea dominance, powerful rocket-fire strikes and decisive offensives of mobile forces with follow-on introduction of the main forces.”¹⁰ Russian military experts assessed that the U.S. had adopted a global aerospace operation to achieve its strategic aims. In response, Russia developed a new form of strategic operation: the Strategic Operation for Deflection of Aerospace Attack.¹¹

On the basis of Russian military publications, the current system of strategic operations (most of which is depicted in the translated Russian illustration at Figure 4) comprises:

- Strategic Operation for the Deflection of Aerospace Attack
- Strategic Aerospace Operation
- Strategic Operation for the Destruction of Critically Important Targets¹²
- Strategic Nuclear Forces Operation
- Strategic Operation in a Continental Theater of Military Operations
- Strategic Operation in an Oceanic Theater of Military Operations

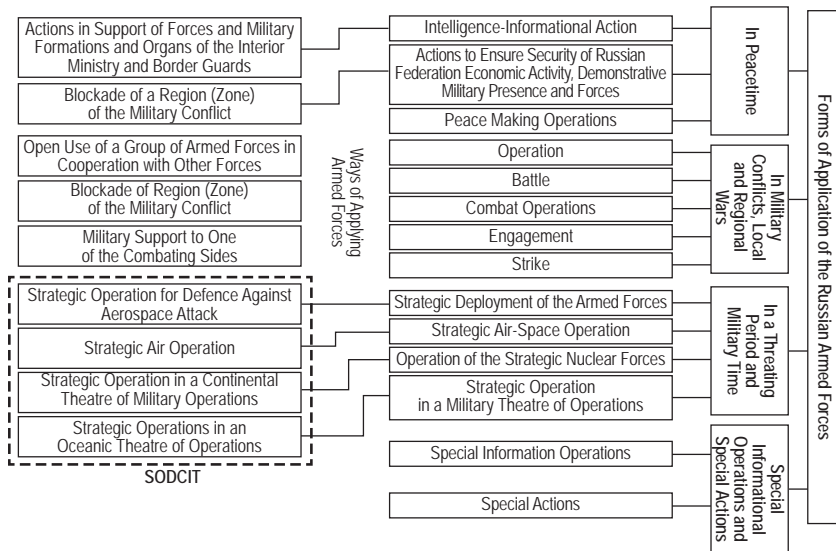


Figure 4. Forms of Application of the Russian Federation Armed Forces Including Strategic Operations.¹³

The Strategic Operation for the Deflection of Aerospace Attack is defined as a set of strategic measures and defensive-offensive actions aimed at detecting and repelling an aerospace attack by the enemy from all aerospace directions and protecting the armed forces and economic facilities from land, air, and space-based strategic strikes. The operation would be carried out by the Space Forces (Missile Attack Warning System, Missile Defense, Space Surveillance System) in cooperation with the Air Force, as well as the military assets of the Army and Navy. Its components are: operations of the Space Forces (Missile Attack Warning System, Missile Defense, Space Surveillance System) and air operations of aviation using groupings of zones and areas of air defense of the Air Force and Air Defense (Armies, Corps, and Divisions of Air Force and Air Defense Forces).¹⁴

The Strategic Aerospace Operation comprises a set of coordinated and interrelated goals, tasks, place and time of strikes, operations and combat operations by units and formations of the services and branches of the Armed Forces, with a decisive role of the Air Force, conducted according to a single concept and plan in one or several strategic aerospace directions. The purposes of the strategic aerospace operation are:

- defeat (deflection) of the enemy's aerospace attack;
- gaining dominance in the air and in the strategic space zone;
- defeat of his aerospace forces and means in the aerospace space, on land, and at sea;
- protection of the most important facilities of state and military command, economic facilities, infrastructure of the state and armed forces;
- destruction of enemy governmental and military command;
- defeat the enemy's strategic and operational deployment of forces;
- prohibition of inter-theater maneuver by enemy forces;
- reduction of military and economic potential.

The Strategic Aerospace Operation includes: air operations; combat actions of long-range aviation using conventional means of destruction; military operations of troops (forces) to repel aerospace attacks and

defeat of the enemy in other directions; information and intelligence; support of combat actions not part of the Armed Forces services or branches; special operations. The scale of Strategic Aerospace Operations depends on the character and scale of the war; objectives of the operations and assigned tasks; composition, condition and combat capabilities of the forces, the forms and methods of their actions; composition and capabilities of their forces and means. The operation could cover several regions or the whole territory of the country, space from extremely low altitudes to the far boundary of the strategic space zone. The depth of the operation would be determined by the range of the enemy's aerospace means and the enemy's forces and means.¹⁵

The Strategic Operation of the Nuclear Forces is defined as a form of use of the Armed Forces of the Russian Federation, an integral part of the strategic operations system, representing a set of coordinated and interrelated targets, the place and time of military operations, and strikes of nuclear forces (means) conducted under a single concept and plan under the leadership of the Supreme Command and the direct control of the General Staff for the solution of strategic tasks. The purpose of the Strategic Operation of Nuclear Forces is the de-escalation (including termination) of aggression launched against the Russian Federation and its allies and the defeat of an aggressor who has used or is ready to use nuclear or other types of weapons of mass destruction against the Russian Federation. The scope of the Strategic Operation of Nuclear Forces would depend on the political and strategic objectives of the war, its nature and the composition of the states participating in the war. The operation would be global in scope, covering all or several strategic aerospace directions, and would be conducted at intercontinental range. The probable duration could be three to five days or more. The basis of the operation would be the first massive nuclear strike by Strategic Nuclear Forces (SNF), as well as the first massive nuclear strikes of strategic formations in the theater of operations (strategic direction), inflicted by all or most of the available means. The subsequent nuclear strikes within the framework of the Strategic Operation of Nuclear Forces would be carried out on the orders of the Supreme Command as the situation is clarified, the results of the nuclear strike are assessed, and the combat capability of the nuclear forces is restored. The Strategic Operation of Nuclear Forces includes: nuclear strikes and combat operations of the strategic nuclear forces; nuclear strikes and combat operations of formations and units equipped with

non-strategic nuclear weapons of land, air and sea basing, including the use of nuclear mines by engineer troops, as well as the actions of the Space Forces and troops that are not part of the services and branches of the Armed Forces. The Strategic Rocket Forces would participate in the Strategic Operation of Nuclear Forces together with the maritime and aviation components of the strategic nuclear forces.¹⁶

The Strategic Operation in a Continental Theater of Operations is defined as a set of coordinated operations and actions by various services of the Armed Forces, conducted within the boundaries of the continental theater of operations for the achievement of assigned military-political goals. It is carried out with the decisive role of the Land Forces and Air Forces with the participation of the Navy and Special Forces. A Strategic Operation in a Continental Theater could encompass the entire continental theater of operations and the adjoining coastal oceanic and maritime zones of the theater of operations. The operation could continue for a period of several weeks to a few months. It could include a number of simultaneous and sequential frontal operations, including one or two air operations in the theater, a number of air defense operations, several amphibious and anti-landing operations, as well as a system of massive fire-strikes (and in nuclear war, nuclear missile strikes), and a set of supporting measures. These activities could be conducted in the following order depending on their nature and content — defensive, counter-offensive, and offensive strategic operations in the continental theater of operations.¹⁷

The Strategic Operation in the Oceanic Theater of Operations is a system of agreed-upon and coordinated military operations in the operationally important regions of the ocean and the seas, as well as in adjacent coastal areas and airspace. Its aims would be to disrupt enemy attacks from the sea; gain dominance in the ocean (sea); defeat important coastal targets; defeat the main naval forces of the enemy and its troops in the coastal areas; disrupt ocean transport of the enemy; and to protect friendly lines of communications, bases, and coastal facilities. The Navy would carry out the operation in coordination with other elements of the Armed Forces. It could include a number of successive operations of the fleet, army operations on the coastal flanks, air, air-naval, and amphibious assault and anti-landing operations, as well as a system of fire strikes, naval strike and reconnaissance operations and support measures. In the future, instead of strategic operations in the Atlantic and Pacific Oceans, operational and strategic operations of

the fleets and the operational groups of forces and forces interacting with them will be more characteristic. In exceptional cases, it would be possible to unite the strategic actions of the Russian Navy as a whole.¹⁸

The Russian system of strategic operations and the related concepts have been evolving since the collapse of the Soviet Union. In particular, “the theory and practice of the strategic aerospace operation is constantly improving.”¹⁹ As a result, the Ministry of Defense has undertaken a sequence of five major reorganizations, amid near-constant lower-level adaptations, of the Russian air, air and missile defense, and space forces since 1991.²⁰ This likely reflects Russian prioritization of the “aerospace adversary” as a primary threat and the defeat of the postulated “mass aerospace attack” as a primary mission with a resulting constant effort to ensure an effective response. It also likely indicates that the Russian military has found it challenging to address this problem.

Partly as a consequence of the ongoing evolution of Russian military thought, several variations of current strategic operations are discussed in Russian open literature but the main delineations of strategic air, air defense, land, and maritime operations in various forms appear relatively constant. Other strategic operation concepts appear to nest within the overarching set of strategic operations. The Strategic Operation for Destruction of Critically Important Targets (SODCIT) appears to be one of these. This may be due to two evident aspects of SODCIT: its all-domain nature (aerospace, maritime, land forces, Special Forces, cyber, electromagnetic, etc.) and its apparent coordinated targeting function across domains. Because it is directly related to the question of conventional precision strike and nuclear thresholds, SODCIT is discussed more fully below.

The annual strategic joint exercises in the Military Districts (ZAPAD, KAVKAZ, TSETR, and VOSTOK) and the large-scale snap exercises, both of which now tend to involve multiple Military Districts and increasingly complex combined arms operations, test the Armed Forces’ ability to implement the strategic plans.²¹ The system of strategic plans and operations encompasses an array of basic operational planning documents for the full range of operational activities by, for example, fronts and fleets.

The Russian concept of “strategic operations” is, thus, the mechanism by which military activities can be planned and coordinated to support strategic objectives. These “strategic operations” have no clear counterparts in Western military thought, except perhaps by

analogue to the joint operating concepts of the U.S. military. They are essential for understanding how Russia expects to successfully deter and defend against NATO.

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Conventional Precision Strike Concepts, Doctrine, and Capabilities

The Soviet military foresaw conventional precision-strike capabilities as one outcome of what Soviet analysts called “the third revolution in military affairs” (RMA).¹ Soviet analytical conclusions were borne out when the U.S.-led coalition crushed the Soviet-equipped and trained Iraqi military in a 30-day air campaign and three-day land campaign. Soviet analysts subsequently concluded that conventional precision weapons had the potential to accomplish tasks previously assigned to nuclear weapons.² These perceptions and conclusions have been reinforced as the U.S. further developed its precision strike capabilities and employed them in Yugoslavia, Afghanistan, Libya, Syria, and a second time in Iraq.³ Russia’s leaders found their high level of dependence on nuclear weapons during the lean years of the 1990s constraining and dangerous.⁴ In their view, nuclear weapons were not credible responses to the security threats and challenges pressing in on Russia in the immediate post-Cold War era.⁵ The Russian military assessed the growing U.S. conventional precision strike capabilities as a significant future threat to Russia. Russian strategists determined that the most effective response would be the development of an analogous countervailing capability.⁶ This was in line with the principle of adequacy of responsive measures, calling for rough equivalency with the means and methods used by the adversary for deterrence.⁷

Consequently, the development and fielding of conventional precision strike capabilities have been high priorities in Russia’s intensive military modernization efforts undertaken since 2008. Simultaneously, Russian leaders have consistently identified modernization of the nuclear forces as the number one priority even as they pursued

conventional precision strike capabilities.⁸ As demonstrated by its operations in Ukraine and Syria and its program of large and increasingly sophisticated exercises, Russia's modernization efforts are paying off with flexible and usable military forces.⁹ That flexibility is well illustrated in Russia's strike capabilities; the capabilities now available to Russia consist of redundant, overlapping, long-range, dual-capable missile coverage of nearly all of Europe from within Russian territory, airspace, and home waters.

Russia's strategic weapons set is designed to enable "demonstrative, single or grouped employment of nuclear and non-nuclear means at various stages of development of inter-state conflicts corresponding to the situation, intended to provide for various levels of deterrent damage, the upper limit of which is unacceptable damage."¹⁰ While theater weapons are often the focus of Western analysis, intercontinental ballistic missiles are integrated in this concept as well.¹¹ The strategic weapons set is integrated in

- planning demonstration strikes;
- developing concepts for limited strikes to de-escalate conflicts and force the adversary to cease hostilities on conditions favorable to the Russian Federation;
- development of the concept for strategic operations for the destruction of critically important targets;
- and development of the concept for employment of long-range precision weapons in operations of the armed forces in a strategic direction.¹²

Figure 5 illustrates part of Russia's precision strike capability.

Russian strike planning is guided by a number of concepts about needed levels of damage. These include "deterrent," "dosed," "assigned," and "unacceptable" damage levels. These concepts too have evolved in the context of strategic deterrence by mixed non-nuclear and nuclear means, in particular for the containment and de-escalation of regional conflicts. One team of Russian military experts has defined "deterrent damage" as "strictly dosed damage, inflicted by nuclear and/or strategic non-nuclear means on the facilities of vitally important infrastructure of the aggressor country."¹³ Deterrent damage and assigned damage concepts are part of Russia's recently developed approach to escalation

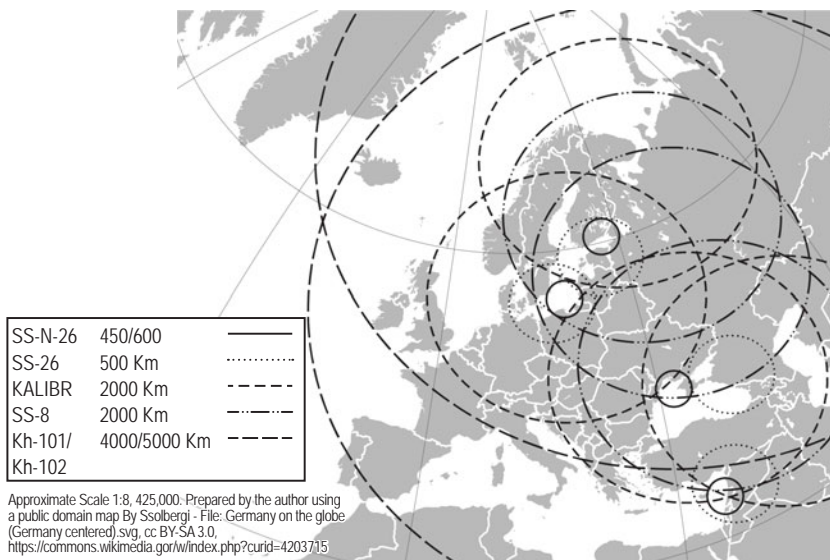


Figure 5. Approximate coverage of five operational/operational-strategic precision strike weapons from illustrative positions within Russian and Russian-controlled territory.¹⁴

control. These concepts are intended to draw a distinction with “unacceptable” damage levels, which have customarily been assigned a meaning close to the concept of “guaranteed destruction” associated with the McNamara criteria.¹⁵ In that context, the term signified “the traditional aim of the strategic nuclear forces, which were assigned to inflict an annihilating strike on the aggressor, i.e. maximum possible damage.”¹⁶

Use of these terms has become fluid as the Russian military elaborates new concepts of deterrence. For example, in some contexts, “unacceptable damage” is still used as a synonym for “guaranteed destruction” or annihilation. More recently, “unacceptable damage” has also been defined as “damage of a scale that would place in doubt the achievement of the aims of the armed conflict, *but would not deprive the adversary of alternatives for de-escalation.*”¹⁷ This suggests more general usage of the term to indicate the level of damage, at any level of intensity of a conflict, which the adversary finds unacceptable and that compels him to sue for peace.

Parallel to this, “assigned damage” has also been used more flexibly to denote whatever level of damage designated to be inflicted at that level of intensity of conflict. The term is currently used in Russian military literature to indicate both meanings (annihilation or limited destruction) and should be examined in the context of each usage. For

example, the most demanding task assigned to the Soviet and Russian strategic nuclear forces has been to be able to inflict assured destruction in all circumstances, i.e. even after an attempted disarming first strike by the adversary. This is described in the current military doctrine as “unacceptable damage” and as “assigned damage” in earlier versions of the military doctrine. Since the overall Russian strategic nuclear force structure did not change in the interval, the assigned level of damage at that time likely also rose to the level of assured destruction.

The initial re-thinking in the early 1990s of the concept of “unacceptable damage” was a first step toward the present-day concepts for use of the strategic weapon set, including the potential use of conventional precision strike for deterrence and for the limited use of nuclear weapons. In particular, the concept of objective and subjective criteria for unacceptable damage appears to provide a basis for exploration of ever-lower levels of damage, potentially *perceived* as unacceptable by the adversary, and sufficient to compel war termination.¹⁸ This concept appears to be an effort to reconcile the perceived requirement to maintain rough numerical parity of nuclear weapons with the United States, and the perceived decline in the level of damage required, for subjective perceptual reasons, to deter an adversary or compel him to terminate aggression. The intention appears to be, on one hand, to continue to justify substantial forces comparable in size to those of the United States on the basis of objective criteria derived through scientific methods, including modeling. On the other hand, subjective criteria can be used to model various levels of assigned damage, down to an unknown minimum, at which an adversary will capitulate. The minimum force requirements to support this level of damage would not justify force levels required for the assured destruction mission but would be useful for limited nuclear war scenarios. Subjective criteria for unacceptable levels of damage are therefore proposed as a supplement to objective criteria.¹⁹

The emergence of new terms and shifts in the usage of established terms is symptomatic of the ongoing evolution of Russian deterrence thinking. Many factors are driving the rapid evolution of Russian deterrence concepts, including the selective targeting and calibrated damage made possible by conventional precision strike. Russian military experts have noted that the precision with which enemy targets can be struck “allows variation of the planned level of such losses corresponding to the aims of deterrence or coercion of the opposing side to

terminate armed resistance (localization and termination of conflict).”²⁰ Further evolution of these concepts and the related terminology will occur as the Russian armed forces refine their theories of deterrence to suit evolving circumstances, to exploit new capabilities, and to provide maximum operational flexibility to the political leadership.

Psychological and Cognitive Elements

Russian thinking about the psychological and cognitive elements of deterrence appears to be another area of rapid development. Russian experts argue that this topic was neglected in the past, with the nuclear threat being addressed from a sociopsychological perspective “only indirectly.” With few exceptions, Russian psychologists had not analyzed the international nuclear confrontation itself until this decade.²¹ This may be in part because “deterrence” as understood in the West and its related concepts were out of line with Communist Party ideology and not considered “legitimate” until the 1990s.²² This is not to say that the Soviet Union did not implement deterrence. A post-Soviet Russian military expert has noted that, “nuclear deterrence itself was strongly criticized, but in practice the military-political leadership of the country followed precisely this principle.”²³ Official policy seems to have had a stultifying effect on research into and application of deterrence theory, perhaps limiting the Soviet military to a brute approach of “strength deters and weakness provokes.” Despite these ideologically-imposed distortions, “in the domestic [Russian] theory of strategic deterrence the majority of experts have no doubt in the role of the psychological function in the mechanism of deterrence by forceful means.”²⁴ By the early 2010s, Russian military experts considered that domestic theories of strategic deterrence lagged behind “foreign analogs in terms of developing its conceptual models.”²⁵

Russian military experts recognized that, in contrast, psychology has long been a major element of deterrence thinking in the West. Despite the informational element of Russia’s approach to strategic deterrence, it was noted that, by 2010, “the psychological aspect has had an insignificant role and only recently is an intensification of domestic research into this question observed.”²⁶ This has been one strand of the efforts to develop a Russian national approach to strategic deterrence and the outcomes are becoming evident.

Of particular relevance to the main topic of this paper, it appears that

Russian military strategists are using developing concepts of subjective criteria for unacceptable levels of damage as context for examination of the psychological and cognitive aspects of deterrence. Russian military experts recognized in the early 1990s, while thinking through the first post-Soviet revisions of their approach to nuclear deterrence, that levels of unacceptable damage could vary widely between nations due to culture-based perceptions. For one nation, unacceptable damage could be “a simple lowering of the quality of life and for others – millions of casualties accepted as fully justified in achieving social-political goals.”²⁷ Russian military analysts have continued to develop this concept, with one suggesting that, “for European countries with high standards of quality of life of the population, with a certain ‘European’ style of life, destruction of economic facilities which define those standards, would be more significant.”²⁸ Following this line of thought toward the psychological dimension of deterrence, another Russian military analyst has suggested that calculation of actual damage may not matter as much as calculation of how the damage is perceived by the adversary’s leadership and population. In order to be implemented, this approach would require detailed research into and deep understanding of the target nation’s infrastructure and its sub-elements, and of its governmental-social structure and processes in order to determine the adversary’s likely “threshold of unacceptability.”²⁹ This is an excellent example of Russia’s emerging approach to using its strategic weapon set to inflict calibrated damage for coercion and escalation control.

Russian military and non-military expert writing on the psychological element of deterrence indicates that Russian deterrence approaches primarily target the minds of adversary decision-makers.³⁰ Russian experts recognize that “the decision to deliver a nuclear strike in a crisis situation is the prerogative of a very limited group of people.”³¹ Consequently, potential outcomes of a nuclear confrontation, “depend to a high degree on the psychological features of a small number of individuals.”³² The adversary population and society are a secondary target.³³ One area of research proposes linking the psychological effects inflicted on the adversary population by lowering overall quality of life (the degree to which quality of life is affected and the percentage of population affected) to calculations of deterrent effect on the decision-makers. The impact on quality of life would be calculated based on the estimated importance of the targeted facility as “an element of the functionality of the governing mechanism” and “of the psychological

background [created] for the population and the government of the state" by its destruction.³⁴

As to aims, two Russian military experts have recently written that "the decision-making sphere and the entire cognitive sphere of modern military conflict are a kind of virtual field of combat, on which an intellectual battle between the commanders and staffs of the opposing sides unfolds."³⁵ Russian military strategists have identified several aims of the intellectual battle on the strategic deterrence front. These include:³⁶

- to convince the political-military leadership and society of the state (or coalition of states) of the potential aggressor of the catastrophic consequences of a retaliatory or pre-emptive nuclear impact;³⁷
- to convince the political-military leadership and society of the state (or coalition of states) of the potential aggressor of the futility of [trying to] achieve by forceful means military and political objectives;³⁸
- to frighten, constrain, or coerce potential adversaries;³⁹
- to convincingly demonstrate readiness to employ all available means in order to compel [by fear of] unavoidable retribution the opposing side from opening military conflict with Russia;⁴⁰
- to deter the eventual adversary from wide-scale use of means of aerospace attack by convincing him (with accurate or distorted information) that Russian military capabilities would make that suicidal;⁴¹
- to demonstrate readiness and resolve to use force by employment of non-strategic nuclear weapons in conditions of escalation of a military conflict.⁴²

Although direct study of the psychological element of deterrence may have lagged for some years, Russia has a deep reservoir of thought about psychology in conflict to draw upon, including in particular so-called "reflexive control." Reflexive control is "directed at the psyche of the opposing commander" with the "aim to place the adversary in difficult positions for continuing combat or to compel him to take decisions that objectively lead to defeat."⁴³ Enough reflexive control measures are identical to deterrence measures (such as demonstrations of force, elevation of force readiness, and limited strikes) to raise the question

whether “reflexive control” was not, at least in part, a politically acceptable euphemism for deterrence during the Soviet era. Whether that is the case or not, contemporary Russian military strategists have drawn a connection between strategic deterrence and reflexive control, opening the door to future elaboration of their deterrence theory drawing upon reflexive control.⁴⁴

In the current security environment, Russian concepts for employment of reflexive control against coalitions are of particular interest. Unsurprisingly, the principal aim in conflict with a coalition adversary is its dissolution. Russian strategists perceive this as achievable because, “the interests and internal assessments of individual state-participants do not fully align.” In conflict, the side (Russia) imposing “reflexive control” would seek to destroy a coalition by

- forceful pressure with actual threats on individual coalition members in order to convince them to leave it;
- powerful strikes on the leader of the coalition, during which actions against the other allies are not conducted;
- strikes on a weak ally with the aim of his withdrawal from battle, restraining vacillators from actions on the side of the coalition, and influencing the psychology of his allies;
- political and diplomatic measures aimed at strengthening confrontations within the coalition, presenting privileges and advantages separately to its members;
- flexible policy manifesting greater indulgence toward a defeated coalition member that leaves the coalition at an earlier stage of conflict.⁴⁵

Although much of the Russian study in these areas focuses on aspects of crisis and war, it is clear that Moscow applies many of these principles and approaches in peacetime. The assiduous efforts by President Putin and other high-level Russian officials to highlight nuclear weapons in the “psychological background” of the current security environment is one example. In general, Russia is re-shaping perceptions on the psychological front using a range of political, diplomatic, military, and other activities in order to deter a perceived threat of aggression and to create more favorable conditions for Russia in case of actual conflict.

Conventional Precision Strike for Strategic Deterrence

One of the most noteworthy aspects of the Russian concept of conventional (non-nuclear) precision weapons' role in strategic deterrence is their instrumentality. They are assigned the same function as nuclear weapons: to deter by the threat of infliction of deterrent, prescribed or "dosed" levels, or unacceptable levels of damage on an adversary. Russian leaders and military experts do not elaborate upon their role in pre-conflict strategic deterrence much beyond that. Policy statements and military analyses focus more on their intra-war deterrence and warfighting roles. The Russian military doctrine document states, "in fulfilling activity of strategic deterrence of a forceful nature, the Russian Federation foresees the *use* of precision weapons."⁴⁶ Elsewhere, the doctrine focuses on the "creation of new types of precision weapons and *means for their combat use*."⁴⁷ President Putin has had a similar focus when speaking about conventional precision weapons, saying that "a state with such weapons [conventional (non-nuclear) precision weapons] at its disposal seriously increases its offensive potential."⁴⁸

Then-Prime Minister Putin emphasized instrumentality in 2012, writing that, "by the mass adoption of high-precision non-nuclear weapons of a large radius of action, the tendency to consolidate behind them the role of weapons of decisive victory over the enemy, including in global conflict, will become more and more evident."⁴⁹ He observed at the same time that conventional long-range precision weapons "are comparable to employment of nuclear weapons in results but more 'acceptable' in political and military terms."⁵⁰ In the same context, President Putin has said that the new armaments plan will "take strategic non-nuclear forces to a qualitatively new level enabling the neutralization of any military threat to Russia."⁵¹ This taken-for-granted instrumentality is perfectly in line with the nature of conventional precision weapons. However, it is starkly at odds with the Russian conception of them, along with nuclear weapons, as twin pillars of strategic deterrence — whose primary utility is in their non-use. It is on this conceptual basis and the supporting doctrinal and operational elements that the distinction between conventional and nuclear weapons begins to blur and questions about thresholds arise. This operational integration and blurring of the distinction between conventional and nuclear weapons is depicted at Figure 6.

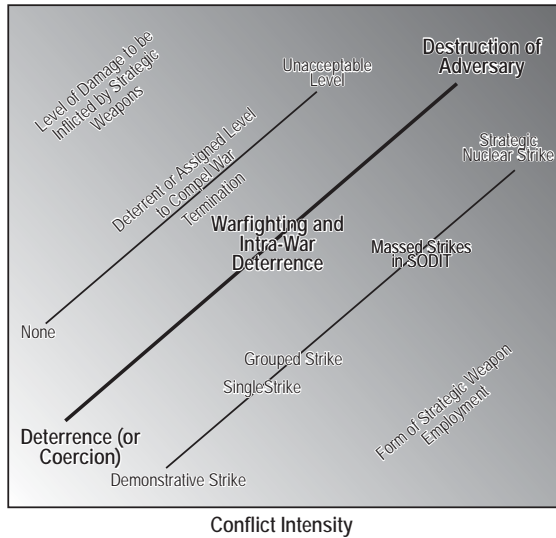


Figure 6. Intended levels of damage and related forms of strategic (non-nuclear and nuclear) weapons strikes employed at escalating levels of conflict intensity.⁵²

The Functions of Conventional Precision Weapons

Drawing upon Russian military analysis and employment concepts, the functions envisaged for conventional precision weapons include⁵³:

- to be used in support of strategic deterrence;⁵⁴
- to counterbalance the large-scale deployment of conventional long-range precision weapons by other countries, principally the U.S.;⁵⁵
- to increase Russia’s offensive potential;⁵⁶
- to achieve strategic and political goals for which the utility of nuclear weapons has declined;⁵⁷
- to deter potential aggressors in armed conflicts, and local and regional wars through demonstrated readiness to conduct retaliatory or warning strikes for infliction of prescribed or deterring levels of damage to groups of forces as well as to the enemy’s military-economic potential;⁵⁸
- to test the will of the adversary to continue aggression;⁵⁹
- to de-escalate and terminate armed conflicts on terms

acceptable to Russia by infliction of prescribed or deterring levels of damage to groups of forces as well as to the enemy's military-economic potential through demonstrative, single or grouped employment of non-nuclear and nuclear means, potentially simultaneously, at early stages of inter-state conflict, up to the maximum of infliction of unacceptable levels of damage;⁶⁰

- to fulfil strategic objectives in “distance” (stand-off) war at operational and operational-strategic depth of the TVD,⁶¹ and in distant continental regions;⁶²
- to participate in strategic operations for the destruction of critically important targets (SODCIT);⁶³
- to destroy the enemy's military-economic potential by means of attack from the sea of critically important facilities;⁶⁴
- to inflict unacceptable damage on the enemy with the aim of forcing him to terminate military operations in conditions guaranteed to provide for the national interests of the Russian Federation;⁶⁵
- to disorganize systems of government and military control;⁶⁶
- to degrade the effectiveness of enemy actions on the sea and from the sea;⁶⁷
- to destroy key targets in operations conducted in coordination with general-purpose forces.⁶⁸

Within the strategic weapons concept, there is large overlap of these functions with those of nuclear weapons.⁶⁹

Forms of Strategic Weapons Employment

Here, it is worth highlighting two of the designated functions for conventional precision weapons: “demonstrative, single or grouped employment of non-nuclear means” and “strategic operations for the destruction of critically important targets (SODCIT).” These could describe the lower and upper ends of the non-nuclear or pre-nuclear operational phase envisioned by Russian military planners in an escalating conflict. At the lower end of the scale, single or limited conventional precision strikes, perhaps targeted for demonstrative purposes

(minimal casualties and physical damage) could be an initial option for de-escalation and containment of a local or regional conflict. At the upper end of the scale, massed conventional precision strikes for operational effect would be part of multi-domain strategic operations for the destruction of critically important targets.⁷⁰ The concept of employing conventional precision weapons potentially simultaneously with or followed by nuclear means at an undetermined point along this scale is particularly significant to the discussion of critical thresholds below.

The aim of employing any part of the strategic weapon set in combat is “de-escalation of military actions and their termination on conditions favorable to the Russian Federation.”⁷¹ Russian military experts see the potential use of non-strategic nuclear weapons in this role as “a demonstration to the enemy of resolve to defend [Russia’s] interests by escalating the use of nuclear weapons (sequentially: tactical, operational-tactical, operational, and operational-strategic) and forcing him to forego further aggression by the threat of use of strategic nuclear weapons.”⁷²

At the lower end of the scale are the demonstrative strike and the single strike. These should be considered separately.⁷³ One Russian source suggests that critically important facilities could be designated for a demonstrative strike by precision weapons, intentionally avoiding casualties or any grave negative impact on population survival.⁷⁴ This would seem to call for a facility that is close enough to a population centre or otherwise monitored for an attack to be observed immediately, unmanned or lightly manned in order to keep casualties to a minimum, and assessed as having no dangerous secondary effects. If analysis of the Russian intention is correct, this is the strike option with the smallest escalatory potential. A demonstrative strike fitting this profile could be intended as a warning before the intensification of a crisis to direct conflict, or the escalation of an ongoing conflict.

The second option, the single strike, should be considered separately from the demonstrative strike as it is not limited in terms of casualties, military-operational impact, or potential side effects. It appears in Russian military writing as deliberately separate from demonstrative strikes, seemingly intended to achieve more than minimal damage — a next level of warning, possibly for use in a rapidly intensifying crisis or in the early stage of an escalating conflict.

The third option is the grouped (limited) strike. This option can be adjusted for size and effect depending on the circumstances and, un-

like the first two options, is intended to achieve deterrent levels of damage against an adversary. Though intended for deterrent effect, its military-operational aims mean that it straddles the line between intra-war deterrence and warfighting. In this context, the grouped (limited) precision conventional strike presents the first critical threshold in the pre-nuclear phase of a conflict.

Russian military authorities view these first three strike options, along with other means of demonstrations of force or limited strikes for de-escalation (or coercion) as applicable in the *early* stages of a conflict, i.e. possibly before a state of war is declared (See Figure 7). This could be potentially significant in legal and practical terms in certain scenarios of escalating crises. The Russians assign a specific meaning to “Time of War” (literally “Military Time”, *Voennoe Vremya* [Военное Время]), which is considered to begin with a declaration of war by one side or the other or the start of actual aggression. A declaration of the “Time of War” would normally be accompanied by a presidential declaration of martial law (either nationwide or in specific national territories) and partial or full military mobilization, if it has not already taken place.⁷⁵ Martial law (*Voennoe Polozhenie* [Военное Положение]) would comprise a “set of economic, political, administrative, military and other measures” in support of defense against or termination of aggression.⁷⁶ These legal steps would be elements of a Russian transition to full-scale war on a national basis. It is significant, in particular in terms of understanding for crisis management and for warning purposes, that substantial kinetic operations are potentially foreseen in advance of such steps.

The notion of significant kinetic operations before declaration of “Time of War” and martial law is in line with Russian assessments that modern conflicts have the potential for rapid escalation. Russian military planning reflects this. Therefore, while the Russian approach to escalation control may be finely calibrated, it may also be time-compressed.⁷⁷ These three initial de-escalatory precision conventional options would be implemented against the backdrop of generally heightened tensions and war preparations, including the nuclear component. Aerospace, aerospace defense, and nuclear forces would be brought to increased readiness and some elements would be deployed as an inter-state crisis sharpened, prior to a demonstrative, single, or grouped strike. General-purpose forces would also be mobilized and deploying. The tension in these circumstances between de-escalatory and escalatory dynamics is obvious.

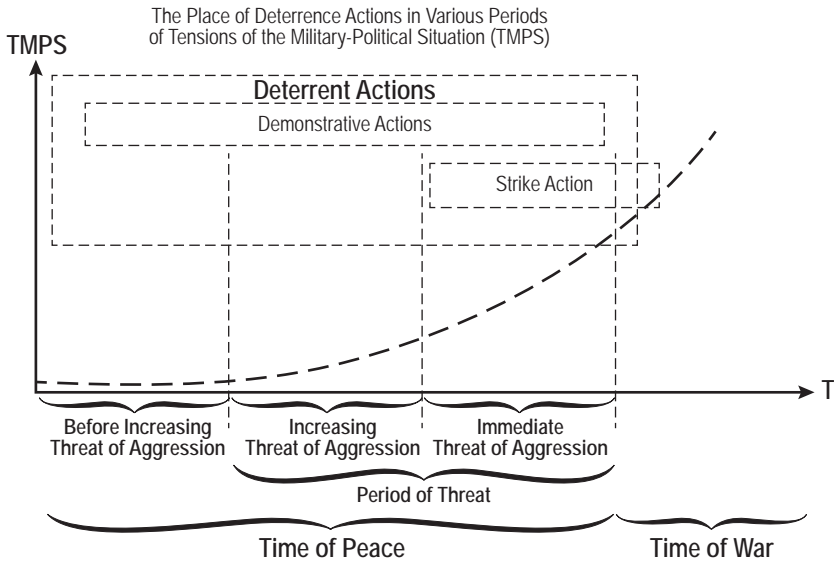


Figure 7. Deterrent Actions in Peace and War.⁷⁸

Given its limited scope and aims, the grouped (limited) strike might be, in practical terms, the maximum level of effort by precision conventional (non-nuclear) weapons for the containment and de-escalation of a local or regional conflict. If grouped strike, along with concurrent operations by general-purpose forces, deterrence signalling by aerospace and nuclear forces, and activity on the diplomatic front do not succeed in terminating the conflict on terms favourable to Russia (capitulation by the adversary or a satisfactory negotiated settlement), Moscow could consider continuing operations or halting them (de facto capitulation). Russian military analysts also recognize that attempts to de-escalate a conflict in its early stages through employment of conventional precision weapons, particularly against critical enemy targets, could instead lead to escalation.⁷⁹

Barring capitulation, nuclear employment would follow: Russian military experts have noted, “if non-nuclear means do not prevent him [the adversary] from starting or continuing aggression, then the transition to the use of nuclear weapons would be justified and unavoidable.”⁸⁰ This situation would represent the failure or near-failure of Russia’s secondary theory of victory: to achieve its aims quickly by localizing a regional conflict through the achievement of local superiority of

general-purpose forces and leveraging nuclear capabilities for aggressive sanctuarization. Sanctuarization of one's own homeland by nuclear deterrence emerged in French deterrence thinking.⁸¹ French defense experts subsequently adapted the original concept to describe leveraging of nuclear capabilities for territorial aggression. Jean-Louis Gergorin developed the concept with reference to Iraq and North Korea.⁸² French experts have used the term in connection with Russia since 2014.⁸³ In this context, aggressive sanctuarization is the extension of the nuclear umbrella along with anti-access and area-denial capabilities (A2/AD) beyond Russian territory into adjoining air, land, and maritime spaces or over territory seized by aggression. The extension of the nuclear umbrella over seized territory would be a major component of the "fait accompli" that some Western analysts have indicated could be an option for Moscow on Russia's borders, including in the Baltic region.⁸⁴ Ukraine was a case study in aggressive sanctuarization.⁸⁵

Failure to induce NATO to sue for peace on terms acceptable to Moscow would constitute a failure of Russian strategy, resulting in a protracted conflict pitting Russia against a large and militarily and economically powerful coalition. In these conditions, a decision by Moscow to continue combat would set the stage for rapid escalation of the conflict with intensified operations across all domains. One element of this would be grouped (limited) and massed conventional precision or nuclear missile strikes as part of the Strategic Operation for the Destruction of Critically Important Targets (SODCIT).⁸⁶

The Strategic Operation for the Destruction of Critically Important Targets (SODCIT)

An understanding of the Russian SODCIT concept can be extracted from both governmental and military writings, including those that characterize Russian thinking about the SODCIT-like operations they attribute to the likely adversary (the United States). SODCIT is a multi-domain operation intended to destroy critical enemy facilities in order to achieve a strategic objective. Grouped or massed missile strikes are envisioned as part of SODCIT. The Russian military defines a strategic objective as "a planned result of military operations in a war, campaign, or strategic operation, the achievement of which leads to the desired development or radical changes in the military-political situation and strategic environment, contributing to the further successful conduct

of the war and its victorious conclusion.”⁸⁷ SODCIT is referred to in Russian military publications in a distinctive way, in contrast to other strategic operations, seemingly indicating that it is a cross-cutting element or sub-element of other strategic operations.

The definition of a critically important target (or facility)⁸⁸ can be extracted from Russian government documents on civil defense: “a target (or facility), the destruction or suspension of functionality of which would lead to loss of control of the economy of the Russian Federation, of a subject⁸⁹ of the Russian Federation, or of the territorial unity of the Russian Federation, her unrecoverable negative change (destruction) or a substantial lowering of the security of the vital functions of the population.”⁹⁰ One Russian document surveying U.S. government documents on critical infrastructure demonstrates the correlation between Russian concepts of domestic critical facilities and critical enemy targets — they generally match.⁹¹

The Russian government’s criteria for designating a Russian facility as critically important are: its significance to the national economy; the damage to the prestige of the state that its destruction or loss of functionality would inflict; and the possible threat to the population or territory caused by the destruction of the facility or the loss of its functionality. The sub-criteria for “damage to the prestige of the State” include impairment of the control of the state or a region; harm to the authority of the state, including in the international arena; exposure of state secrets and confidential scientific-technical and commercial information; impairment of the combat readiness and capabilities of the armed forces; and impairment of the stability of the financial or banking system.⁹²

At the operational level, a Russian military expert has defined critically important enemy targets as: “key military infrastructure facilities at the tactical or operational level, and economic infrastructure facilities or dual-purpose facilities, the timely destruction (neutralization) of which leads to the guaranteed reduction of the combat potential of a group of forces (military formation), denies control and mobility for an extended period and creates the threat of disruption or failure of fulfillment of the assigned military task.”⁹³

The general categories of the target set for SODCIT as derived from a number of related Russian military articles are shown in Figure 8. At the operational and operational-strategic levels, the intended targets reflect the overall aims of rapidly disrupting adversary command

and control (C2), destroying his offensive means, disorganizing major formations, and impeding the disembarkation and reception, staging, and onward movement of follow-on forces and critical supplies. At the strategic level, the objectives are to disrupt national command and control, destroy strategic strike capabilities, destroy military forces and stockpiles, disrupt governance at the national and regional level, disrupt the means of production and transportation, and impede the embarkation of follow-on forces and critical supplies. The number of targets and level of destruction can be calibrated in line with the Russian assessment that “modern war is characterized by a shift in strike-damage priorities from destruction of the enemy to destruction of his key facilities.”⁹⁴ Within this context, Russian military operational analysis and planning for the strategic weapons set has included work to develop damage-level criteria for deterrent effect, and to identify critical components and sub-components within systems for selective targeting with conventional precision weapons.⁹⁵

<p>Tactical-Operational SODCIT Target Categories</p> <p>Category 1 Conventional Precision Strike Forces Artillery Military Command Posts</p> <p>Category 2 Air Defense Units Armor Concentrations Communications Nodes</p> <p>Category 3 Logistics Infrastructure Transport Infrastructure Ammunition, Equipment, and Materiel Stockpiles Petroleum, Oil, and Lubricants</p>	<p>Operational-Strategic SODCIT Target Categories</p> <p>Category 1 Nuclear Forces Conventional Precision Strike Forces Government and Military Command Posts</p> <p>Category 2 Battle Management/Fire Control Centers Air and Missile Defense Facilities Communications Nodes Space Surveillance Segments</p> <p>Category 3 Governmental and Administrative Nodes Logistics Infrastructure Transportation Infrastructure Ammunition, Equipment, and Materiel Stockpiles Petroleum, Oil, and Lubricants Industrial Facilities Hydrocarbon Production, Transport and Storage Chemical Production Facilities Power Plants (hydrocarbon and nuclear) Power transmission Infrastructure</p>	<p>Strategic SODCIT Target Categories</p> <p>Category 1 Strategic Nuclear Forces Strategic Non-Nuclear Forces Strategic Government and Military Command Posts</p> <p>Category 2 Battle Management/Fire Control Centers Air and Missile Defense Facilities Communications Nodes Space Surveillance Segments Weapons Stockpiles</p> <p>Category 3 Governmental and Administrative Nodes Industrial Facilities Hydrocarbon Production, Transport and Storage Chemical Production Facilities Power Plants (hydrocarbon and nuclear) Power Transmission Infrastructure Logistics and Transportation Infrastructure</p>
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Figure 8. Lists of SODCIT Target Categories Derived from Russian Assessments of Adversary and Domestic Critically Important Targets/Facilities.⁹⁶

The Strategic Operation for Repelling the Enemy Aerospace Attack

SODCIT is designed to address the Russian military perception of the changed character of modern war: inter-state disagreements can escalate quickly into direct military conflict, and the initial phase of conflict can be decisive.⁹⁷ The Strategic Operation for Repelling the Enemy Aerospace Attack is the defensive twin to the offensive SODCIT operation.⁹⁸ The two operations are intended to be implemented simultaneously (along with other strategic operations), as indicated in Russian military policy and analysis and as demonstrated by Russia's strategic exercises. The overlapping means and objectives of the SODCIT and defensive aerospace campaigns reflect the Russian perception that strategic offense and defense are blurred in modern war.⁹⁹ The pre-emptive and counter-offensive elements of the Strategic Operation for Repelling the Enemy Aerospace Attack exemplify this. The "total combat potential of any opposing group of forces can be reduced by means of pre-emptive destruction (suppression) of its forces and means (in defense, by destruction of the means of aerospace attack before launch; for implementation of strike objectives, by destruction of means of aerospace defense)."¹⁰⁰

Likewise, aerospace capabilities and effects are merging the land and maritime theaters and pushing aerospace and maritime forces to the forefront of "non-contact" war.¹⁰¹ The SODCIT and defensive aerospace campaigns are part of Russia's military response to the perceived threat of a mass aerospace attack by the U.S. and its NATO Allies and as such have a strong pre-emptive component.

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14 Figure 1 is illustrative of the overlapping, redundant coverage of NATO Europe by Russia's precision strike weapons systems, all of which are dual-capable or have nuclear analogs. It depicts approximate ranges from notional launch points within Russian territory, in its coastal waters, or from within national airspace. It only partially depicts the available weapon set, does not depict the complete order of battle of the indicated weapons systems, and entirely omits ranges and azimuths achievable if launched from contested spaces away from Russian territory. See Persson, *Russian Military Capability in a Ten-Year Perspective*, pp. 86-90 for a more complete order of battle and graphical depiction of coverage; and Pavel Podvig's website, Russian Strategic Nuclear Forces, <http://russianforces.org/> for current updates on order of battle, systems capabilities, and force modernization.

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20 Sukhorutchenko, Zel'vin, Sobolevskii, Napravleniya Issledovaniy Boevykh Vozmozhnostei Vysokotochnogo Oruzhiya Bol'shoi Dal'nosti v Obychnom Snaryazhenii, p. 33.

21 A. L. Zhuravlev, T. A. Nestik, V. A. Sosnin, Sotsial'no-Psikhologicheskie Aspekty Strategicheskoi Stabil'nosti i Yadernogo Sderzhivaniya v Sovremennom Mire: Postanovka Problemy i Praktika Issledovaniya; *Znanie, Ponimanie, Umenie*, No. 3, 2012, p. 118.

22 Yu. A. Pechatnov, Analiz Otechestvennykh i Zarubezhnykh Podkhodov k Prazbotke Kontseptual'nykh Modelei Silovogo Strategicheskogo Sderzhivaniya, *Vooruzhenie i Ekonomika*, Vol. 2, No. 14, 2011, p. 32. On Soviet reactions to Western deterrence concepts, see Lawrence Freedman, *The Evolution of Nuclear Strategy*, London, Palgrave Macmillan, 2003, pp. 245-257.

23 V. M. Zakharov, Yadernoe Sderzhivanie v Sisteme Voennykh Mer Predotvrashcheniya Voiny, *Voennaya Mysl'*, No. 2, February 1994, p. 8.

24 Yu. A. Pechatnov, Metodicheskii Podkhod k Opredeleniyu Sderzhivayushchego Ushcherba s Uchetom Sub'ektivnykh Osobennostei ego Vospriyatiya Veroyatnym Protivnikom, p. 24.

25 Ibidem, p. 32.

- 26 Yu. A. Pechatnov, Analiz Otechestvennykh i Zarubezhnykh Podkhodov k Formirovaniyu Kontseptsii i Mekhanizma Sderzhivaniya ot Razvyazyvaniya VoЕННОi Agressii, *Vooruzhenie i Ekonomika*, Vol. 3, No. 11, 2010, pp. 14-15
- 27 Zakharov, Yadernoe Sderzhivanie v Sisteme Voennykh Mer Predotvrashcheniya Voiny, p. 10.
- 28 A. V. Skrypnik, Metodicheskii Apparat Ranzhirovaniya Kriticheskii Vazhykh Ob'ektov Protivnika v Tselyakh Resheniya Zadachi Silovogo Strategicheskogo Sderzhivaniya, *Vooruzhenie i Ekonomika*, 3 (15) 2011, p. 131.
- 29 Yu. A. Pechatnov, Metodicheskii Podkhod k Opredeleniyu Sderzhivayushchego Ushcherba s Uchetom Sub'ektivnykh Osobennostei Ego Vospriyatiya Veroyatnym Protivnikom, *Vooruzhenie i Ekonomika*, 3(15) 2011, pp. 24-25.
- 30 Either the "decision-making organ" (Organ Prinimayushchii Reshchenii (OPR)) or, more individually, the Decision-Making Individual(s) (Lits(a) Prinimayushchii(e) Reshchenii (LPR)). See Yu. A. Pechatnov, Metodicheskii Podkhod k Opredeleniyu Sderzhivayushchego Ushcherba s Uchetom Sub'ektivnykh Osobennostei ego Vospriyatiya Veroyatnym Protivnikom, p. 25; and Skrypnik, Metodicheskii Apparat Ranzhirovaniya Kriticheskii Vazhykh Ob'ektov Protivnika v Tselyakh Resheniya Zadachi Silovogo Strategicheskogo Sderzhivaniya, p. 130.
- 31 A. L. Zhuravlev, T. A. Nestik, V. A. Sosnin, Sotsial'no-Psikhologicheskie Aspekty Strategicheskoi Stabil'nosti i Yadernogo Sderzhivaniya v Sovremennom Mire: Postanovka Problemy i Praktika Issledovaniya, *Institut Psikhologii Rossiiskoi Akademii Nauk, Sotsial'naya i Ekonomicheskaya Psikhologiya*, 2016, Vol 1, No. 1, p. 117.
- 32 Ibidem.
- 33 Yu. A. Pechatnov, Metodicheskii Podkhod k Opredeleniyu Sderzhivayushchego Ushcherba s Uchetom Sub'ektivnykh Osobennostei ego Vospriyatiya Veroyatnym Protivnikom, p. 25.
- 34 A. V. Skrypnik, Metodicheskii Apparat Ranzhirovaniya Kriticheskii Vazhykh Ob'ektov Protivnika v Tselyakh Resheniya Zadachi Silovogo Strategicheskogo Sderzhivaniya, p. 129.
- 35 See I. M. Popov and M. M. Khamzatov, *Voina Budushchego: Kontseptual'nye Osnovy i Prakticheskie Vyvody*, Moscow, Kuchkovo Pole, 2017, pp. 396-404 on "Penetrating the Decision-Making Cycle." The quotation may be found on page 404.
- 36 Some of the functions of conventional precision weapons listed further on in the paper also relate to psychological aspects of deterrence, such as testing the adversary's will.
- 37 V. I. Polegaev, V. V. Alferov, O Neyadernom Sderzhivanii, Ego Rol'i i Meste v Sisteme Strategicheskogo Sderzhivaniya, p. 5.
- 38 Ibidem, p. 8.
- 39 A. L. Khryapin, V. A. Afanas'ev, Kontseptual'nye Osnovy Strategicheskogo Sderzhivaniya, p. 8.
- 40 V. I. Lutovinov, Razvitie i Ispol'zovanie Nevoennykh Mer Dlya Ykrepleniya VoЕННОi Bezopasnosti Rossiiskoi Federatsii, *Voennaya Mysl'*, No. 5, May, 2009, p. 10.
- 41 A. N. Koval'chuk, Yu. I. Mushkov, Pokazateli Effektivnosti Vozdushno-Kosmicheskoi Oborony, Puti Opredeleniya i Obespecheniya ikh Kraterial'nykh Znacheniya, *Voennaya Mysl'*, No. 9, September 2014, p. 19.
- 42 Ob Utverzhdenii Osnov Gosudarstvennoi Politiki Rossiiskoi Federatsii v Oblasti VoENno-Morskoi Deyatel'nosti na Period do 2030 Goda (new Russian Naval Doctrine), 20 July 2017, p. 15. Kremlin Website, <http://kremlin.ru/acts/bank/42117>.
- 43 M. D. Ionov, O Refleksivnom Upravlenii Protivnikom v Voennom Konflikte, *Voennaya Mysl'*, No. 1, January-February 1995, p. 46.
- 44 A. L. Khryapin, D. A. Kalinkin, V. V. Matvichuk, Strategicheskoe Sderzhivanie v Usloviakh Sozdaniya SShA Global'noi Sistemy PRO i Sredstv Global'nogo Uudara, p. 19. "Consequently, strategic deterrence can be considered as a specific form of the reflexive policy of our state, manifested for the most part by influence on the military-political leadership of the aggressor (including coalitions) by imposing fear of the consequences of the guaranteed use of the strategic deterrence forces."
- 45 M. D. Ionov, O Refleksivnom Upravlenii Protivnikom v Voennom Konflikte, p. 50.
- 46 Voennaya Doktrina Rossiiskoi Federatsii 2014, paragraph 26. Italics added.
- 47 Ibidem, paragraph 46. e.

- 48 V. Putin, Soveshchanie o Vypolnenii Gosprogrammy Vooruzheniya na 2011-2020 Gody, President of Russia Official Website, 19 June 2013, <http://news.kremlin.ru/news/18368/print>. He was referring to US nonnuclear precision weapons, but went on to argue for continued efforts to deploy more in the Russian Armed Forces.
- 49 V. Putin, Byt' Sil'nymi: Garantii Natsional'noi Bezopasnosti Dlia Rossii, *Rossiskaya Gazeta*, No. 5708 (35), 20 February 2012, <http://www.rg.ru/2012/02/20/putin-armiya.html>.
- 50 Ibidem.
- 51 V Natsional'nom Tsentr Upravleniya Oborony Proshlo Rasshirenoe Zasedanie Kollegii Minoborony Rossii, 22 December 2016, http://function.mil.ru/news_page/country/more.htm?id=12106806@egNews.
- 52 This illustration developed by the author on the basis of the Russian military research sources cited in this paper. See, in particular, the text on pages 28-30 on the related terminology of deterrent, assigned, and unacceptable levels of damage.
- 53 This is an amended and updated version of a list originally compiled by the author in Dave Johnson, *Nuclear Weapons in Russia's Approach to Conflict*, Fondation pour la Recherche Stratégique, Research Paper No. 06, 2016, November 2016, pp. 40-41.
- 54 *Voennaya Doktrina Rossiiskoi Federatsii 2014*, paragraph 26.
- 55 A. A. Protasov, V. A. Sobolevskiy, V. V. Sukhorutchenko, Planirovaniye Primeneniya Strategicheskikh Vooruzhenii, p. 24.
- 56 V. Putin, Soveshchanie o Vypolnenii Gosprogrammy Vooruzheniya na 2011-2020 Gody, President of Russia Official Website, 19 June 2013, <http://news.kremlin.ru/news/18368/print>.
- 57 S. G. Chekinov, S. A. Bogdanov, Prognozirovaniye Kharaktera i Soderzhaniya Voin Budushchego: Problemy i Suzhdeniya, *Voennaya Mysl'*, No. 10, October 2015, p. 47.
- 58 V. M. Burenok, O. B. Achasov, Neyadernoe Sderzhivanie, *Voennaya Mysl'*, No. 12, December 2007, pp. 12-15; A. L. Khryapin, V. A. Afanas'ev, Kontseptual'nye Osnovy, pp. 11-12.
- 59 Ibidem, pp. 12-13.
- 60 V. M. Burenok, O. B. Achasov, Neyadernoe Sderzhivanie, pp. 12-15; L. Khryapin, V. A. Afanas'ev, Kontseptual'nye Osnovy, pp. 11-12; and R. G. Tagirov, Yu. A. Pechatnov, V. M. Burenok, K Voprosu ob Opredelenii Urovnei Nepriemlemnosti, unpaginated, paragraph 22.
- 61 As defined in the Military Encyclopedia of the Russian Ministry of Defense website, Teatr Voennykh Destvii (TVD), Theater of Military Operations, "is a vast territory of a continent and its adjoining seas or an ocean (sea) water area with islands and the coast of adjacent continents, as well as the airspace above them, within which the strategic groupings of the Armed Forces are deployed and military actions of a strategic scale can be fought." http://encyclopedia.mil.ru/encyclopedia/dictionary/details_rvs.htm?id=14091@morfDictionary
- 62 V. I. Polegaev, V. V. Alferov, O Neyadernom Sderzhivanii, Ego Rol'i i Meste v Sisteme Strategicheskogo Sderzhivaniya, p. 7.
- 63 A. A. Protasov, V. A. Sobolevskiy, V. V. Sukhorutchenko, Planirovaniye Primeneniya Strategicheskikh Vooruzhenii, p. 27.
- 64 Ob Utverzhenii Osnov Gosudarstvennoi Politiki Rossiiskoi Federatsii v Oblasti Voennno-Morskoj Deyatel'nosti na Period do 2030 Goda (new Russian Naval Doctrine), p. 14.
- 65 Ibid, p. 17.
- 66 M. V. Fomin, Osobennosti Formirovaniya Ratsional'noi Sistemy Boevykh Sredstv Dal'nei Aviatсии, *Voennaya Mysl'*, No. 5, 2007, p. 26.
- 67 Ibidem, p. 26.
- 68 Ibidem, p. 27.

69 One of the clearest examples of the functional blending of the weapons is found in Protasov, Sobolevskiy, and Sukhorutchenko, *Planirovaniye Primeniya Strategicheskikh Vooruzhenii*, pp. 9-27. Compilations and assessments of the functions of nuclear weapons that precede the development of non-nuclear deterrence concepts demonstrate the similarity of functions assigned to conventional precision weapons with those assigned to nuclear weapons. See for example David Yost in *Russia's Non-Strategic Nuclear Forces*, *International Affairs*, vol. 77, No. 3, July 2001, pp. 531-551. It is quoted in full in Johnson, *Nuclear Weapons in Russia's Approach to Conflict*, p. 33. See also Stephen M. Meyer, *Soviet Theater Nuclear Forces Part I: Development of Doctrine and Objectives*, London, IISS, 1984, pp. 25-30. Current studies, including those cited in this paper, demonstrate the contemporary congruence of the missions assigned conventional precision strike and nuclear strike, especially non-strategic nuclear weapons.

70 On the range of means used for SODCIT, see S. A. Polevoi, *Inzhenernoe Obespechenie Zhivuchesti Kriticheskii Vazhnykh Obektov v Oborone Motostrelkovoi Brigady, Voennaya Mysl'*, No. 9, September 2011, p. 70. As one example of employment of special forces for destruction of critically important targets see: Spetsnaz Provel Operatsiyu po Unichtozheniyu Ob'ektov "Protivnika" na Kubani, 25 June 2017, TV Zvezda website, <https://tvzvezda.ru/news/forces/content/201706251155-lotr.htm>.

71 L. Khryapin, V. A. Afanas'ev, *Kontseptual'nye Osnovy*, pp. 11.

72 O. N. Ostapenko, S. V. Baushev, and I. V. Morozov, *Informatsionno-Kosmicheskoe Obespechenie Gruppировок Voisk (Sil) VS RF – Uchebno-Nauchnoe Posobie*, p. 101.

73 The notion of a demonstrative strike, as understood in the West, is relatively new in Russian military writing. "Demonstrative activities" were previously defined as feints by military forces intended to deceive an adversary as to actual intentions, a component of maskirovka. Demonstrations of force were defined as activities such as increased readiness, troop movements, or exercises to exert pressure. This definition did not include use of force for demonstrative purposes. See *Demonstrativnyye Deistviya*, (demonstrative activities) and *Demonstratsiya Sily*, (show of force), *Voenna-Entsiklopedicheskii Slovar'*, Moscow, 1986, p. 228. More recently, as used in recent writing about demonstrative strikes for deterrence and de-escalation purposes, the understanding of the term appears to match the common usage in the West. This understanding can be summarized as a limited strike used as a warning and display of will, intended to have no or minimal casualties, and little or no operational military impact. For recent examples of usage of the term demonstrative strike in line with a western understanding on the basis a Russian interpretation of a US demonstration strike, see Vasilii Kashin, *Kak Raketniy Udar SSChA po Baze Shairat Otrazitcy na Mezhdunarodnykh Otnosheniakh*, LENTA.ru, 8 April 2017, https://lenta.ru/articles/2017/04/08/kashin_on_us_strikes/ and Il'ya Kramnik, *Po Grani Dopustimogo: Kakimi Mogut Byt' Posledstviya Amerikanskogo Udara po Sirii*, 7 April 2017, LENTA.ru, <https://lenta.ru/articles/2017/04/07/massaraksh/>.

74 V. M. Burenok, O. B. Achasov, *Neyadernoye Sderzhivanie*, p. 12-15 on demonstrative strikes using precision conventional (non-nuclear) weapons as an option in the early stages of inter-state conflict.

75 *Voennoe Vremya*, in Russian Military Encyclopedic Dictionary, Russian Ministry of Defense website, <http://encyclopedia.mil.ru/encyclopedia/dictionary/details.htm?id=4363@morfDictionary>.

76 *Rossiiskaya Federatsiya Federal'ny Konstitutsionny Zakon O Voennom Polozhenii*, 16 January 2002, Chapter II, Article 5, paragraph 1., <http://pravo.gov.ru/proxy/ips/?docbody=&nd=102074700&rdk=3>; and *Rossiiskaya Federatsiya Federal'ny Konstitutsionny Zakon o Vnesenii Izmeneniya v Federal'ny Konstitutsionny Zakon "O Voennom Polozhenii"*, 28 June 2017, <http://publication.pravo.gov.ru/Document/View/0001201707010033>.

77 R. G. Tagirov, Yu. A. Pechatnov, V. M. Burenok, *K Voprosu ob Opredelenii Urovnei Nepriemlnosti*, unpaginated, paragraph 22.

78 Illustration translated by the author from O. N. Ostapenko, S. V. Baushev, and I. V. Morozov, *Informatsionno-Kosmicheskoe Obespechenie Gruppировок Voisk (Sil) VS RF – Uchebno-Nauchnoe Posobie*, p. 86.

79 A. V. Skrypnik, *O Vozmozhnom Podkhode k Opredeleniyu i Mesta Oruzhiya Napravlennoi Elektromagnitnoi Energii v Mekhanizme Silovogo Strategicheskogo Sderzhivaniya*, p. 45.

80 V. M. Burenok, O. B. Ochasov, *Neyadernoye Sderzhivanie*, p. 1.

81 On the emergence of the concept and term "sanctuarization" in French deterrence thinking, see Lucien Poirier, *Des Stratégies Nucléaires*, Paris, Hachette, 1977, pp. 299-304 and Jean Guisnel and Bruno Tertrais, *Le Président et la Bombe*, Paris, Odile Jacob, 2016, pp. 89-93.

- 82 Jean-Louis Gergorin, "Deterrence in the Post-Cold War Era," *New Dimensions in International Security, Part II, Adelphi Papers 266, Winter 1991/92*, pp. 9-10; and also on the post-Cold War emergence of the term "aggressive sanctuarization," see François Géré, "World Governance of Civilian and Military Nuclear Energy," December 2009, pp. 24-25, www.world-governance.org.
- 83 On Russia's use of aggressive sanctuarization, see Camille Grand, "Nuclear Deterrence and the Alliance in the 21st Century," *NATO Review*, 2017, pp. 2-3, <http://www.nato.int/docu/review/2016/Also-in-2016/nuclear-deterrence-alliance-21st-century-nato/EN/index.htm>.
- 84 For example, Keir Giles has written that "one of the many scenarios mooted for how Russia could cause the political implosion of NATO involves a snap exercise being diverted with some legitimizing pretext into the border area of a front-line state, taking and holding a small slice of territory, digging in and activating an air defense dome, and then announcing that in the event of a counter-attack Russia will use nuclear weapons. NATO nations might then consider that they face a choice between nuclear war, and surrender and the collapse of the entire rationale for the existence of the alliance." Keir Giles, *Russia's 'New' Tools for Confronting the West: Continuity and Innovation in Moscow's Exercise of Power* (London: Royal Institute of International Affairs, March 2016), p. 68.
- 85 On Russia's leveraging of nuclear capability for aggressive sanctuarization of annexed Crimea and the area of operations in eastern Ukraine, see: Dave Johnson, *Russia's Approach to Conflict – Implications for NATO's Deterrence and Defence*, pp. 8-9; and Jacek Durkalec, *Nuclear-Backed Little Green Men: Nuclear Messaging in the Ukraine Crisis* (Warsaw: Polish Institute of International Affairs Report, July 2015), https://www.pism.pl/files/?id_plik=20165.
- 86 Strategicheskaya Operatsiya po Porazheniyu Kriticheskii Vazhnykh Ob'ektov (Стратегическая Операция по Поражению Критически Важных Объектов). On the application of single, grouped, and massed strikes see, for example, A. V. Belomytsev, M. G. Valeev, N. L. Romas', O Formakh Bor'by s Vozdushno-Kosmicheskimi Protivnikom, *Voennaya Mysl'*, No. 5, May 2014, pp. 3-9.
- 87 See Akhromeev, ed., *Voенно-Энциклопедический Словар'*, Moscow, 1986, p. 710 and the entry for strategicheskaya tsel' in Military Encyclopaedia of the Russian Ministry of Defense website, <http://encyclopedia.mil.ru/encyclopedia/dictionary/details.htm?id=10379@morfDictionary>.
- 88 Kriticheskyy Vazhny Ob'ekt (KVO). Usefully or confusingly, ob'ekt in civilian usage means facility. In military usage ob'ekt can mean facility, objective, or target depending on the context. For this reason, the author translates Kriticheskyy Vazhny Ob'ekt (KVO) as either critically important facility or critically important target, depending on the context of the reference document. For the most part, ob'ekt is translated as facility when the context is reference to a part of Russian infrastructure to be defended. Ob'ekt is translated as target when the context is the reference to an adversary facility to be defeated.
- 89 Subjects of the Russian Federation federal state include republics, territories, regions, cities of federal significance, and autonomous regions.
- 90 Federal'nyy Zakon ot 08.03.2015 г. № 38-ФЗ O Vnesenii Izmenenii v Federal'nyy Zakon o "Zashchite Naseleniya i Territorii ot Chrezvychaynykh Situatsii Prirodnogo i Tekhnogennogo Kharaktera," 8 March 2015, <http://kremlin.ru/acts/bank/39475>. For an earlier and slightly different wording, see Poruchenie Prezidenta RF ot 28.09.2006 № Пр-1649, *Osnovy Gosudarstvennoi Politiki v Oblasti Obespecheniya Bezopasnosti Naseleniya RF i Zashchishchennosti Kriticheskii Vazhnykh i Potentsial'no Opasnykh Ob'ektov ot Ugroz Tekhnogennogo, Prirodnogo Kharaktera i Terroristicheskikh Aktov*, p. 1, <http://www.admgansk.ru/category/1142>.
- 91 V. N. Tsygichko, G. L. Smolyan, D. S. Chereshkin, *Obespechenie Bezopasnosti Kriticheskikh Infrastruktur v SShA (Analiticheskiy Obzor)*, Trudy ISA RAN, 2006, Vol 27, <http://www.isa.ru/proceedngs/images/documents/2006-27/4-34.pdf>.
- 92 Deputy Minister of the Russian Federation for Civil Defense, Emergency Situations and Liquidation of Natural Disasters, *Metodika Otneseniya Ob'ektov Gosudarstvennoi i Negosudarstvennoi Cobstennosti k Kriticheskii Vazhnykh Ob'ektam Dlya Natsional'noi Bezopasnosti Rossiiskoi Federatsii*, 17 October 2012, pp. 6-8, <http://central.mchs.ru/upload/site4/files/bea08465669b520c2603f73058fe188a.pdf>.
- 93 S. A. Polevoi, *Inzhenernoe Obespechenie Zhivuchesti Kriticheskii Vazhnykh Obektov v Oborone Motostrelkovoi Brigady*, p. 69.
- 94 Marina Eliseeva, *Uroki na Vse Vremena*, *Krasnaya Zvezda*, 27 October 2010, http://old.redstar.ru/2010/10/27_10/1_06.html.

95 For example, see V. V. Sukhorutchenko, N. A. Morozov, A. N. Kornienko, K. Opredeleniyu Ponyatiya "Kriticheskii Vazhnyi Obekt," *Voennaya Mysl'*, No. 4, April 2016, pp. 27-31. The authors suggest that almost any facility could fall under the official definition of a critical facility or target, which they find overly broad. They propose a systems analysis approach that identifies "critical aggregates" in order to estimate system degradation in addition to destruction or total loss of functionality as a measure of precision weapons effectiveness.

96 These lists endeavour to depict the approximate division of target categories at tactical-operational, operational-strategic, and strategic levels, with the categories presenting an approximate prioritization as indicated in the related Russian military and governmental literature. According to the Russian literature, actual prioritization of targets would depend on subjective criteria related to the specific adversary. Derived from: A. V. Skrypnik, *Metodicheskii Apparat Ranzhirovaniya Kriticheskii Vazhnykh Ob'ektov Protivnika v Tselyakh Resheniya Zadachi Silovogo Strategicheskogo Sderzhivaniya*, pp. 129-140; V. Denisov, O. Gorupai, ZAPAD 2009: V Edinom Boevom Stroyu, *Krasnaya Zvezda*, 29 September 2009, http://old.redstar.ru/2009/09/29/3_01.html; S. A. Polevoi, *Inzhenernoe Obespechenie Zhivuchesti Kriticheskii Vazhnykh Obektov*; Deputy Minister of the Russian Federation for Civil Defense, *Metodika Otneceniya Ob'ektov Gosudarstvennoi i Negosudarstvennoi Cobstennosti k Kriticheskii Vazhnykh Ob'ektam*; Federal'noe Gosudarstvennoe Ychrezhdenie "Vserossiiskii Nauchno-Issledovatel'skii Institut Po Probleмам Grazhdanskoi Oborony i Chrezvychnykh Situatsii (Federal'ny Tsentri Nauki i Vysokikh Tekhnologii, Metodicheskie Rekomendatsii po Opredeleniyu Perechnya Ob'ektov, Podlezhashchikh Maskirovke ot Sovremennykh Sredstv Porazheniya, Moscow, 2010, pp. 8-9; and Yu. I. Maevskii, *Kontseptual'nye Podkhody k Formirovaniyu Prostranstvenno-Raspredelennykh Sistem Radioelektronnoi Borby*, AO Kontsern Radioelektronnye Tekhnologii Website, <http://www.ntc-reb.ru/article9.html>.

97 See, for example, N. Makarov, *Reforma Daet Nuzhnye Rezultaty, Nezavisimoe Voennoe Obozrenie*, 17 February 2012, http://nvo.ng.ru/realty/2010-12-10/1_reform.html; V. Gerasimov, *Tsennost' Nauki v Predvidenii, Voennno-Promyshlennyy Kur'er*, 27 February 2013, <http://VPK-news.ru/issues/14626>; and *Nachal'nik Rossiskovo Genshtaba Raskazal Zhurnalistam o Zadachakh i Roli Natsional'novo Tsentra po Upravleniiu Oborony RF*, 1 November 2014, Russian Ministry of Defense website http://function.mil.ru/news_page/country/more.htm?id=11998309@egNews.

98 *Strategicheskaya Operatsiya Po Otrazheniyu Vozdushno-Kosmicheskogo Napadeniya Protivnika (Стратегическая Операция По Отражению Воздушно-Космического Нападения)*

99 Eliseeva, *Uroki na Vse Vremena*.

100 A. N. Koval'chuk, Yu. I. Mushkov, *Pokazateli Effektivnosti Vozdushno-Kosmicheskoi Oborony, Puti Opredeleniya i Obespecheniya ikh Krterial'nykh Znacheniya*, p. 22.

101 Makarov, *Reforma Daet Nuzhnye Rezultaty*; Gerasimov, *Tsennost' Nauki v Predvidenii*; and *Nachal'nik Rossiskovo Genshtaba Raskazal Zhurnalistam o Zadachakh i Roli Natsional'novo Tsentra po Upravleniiu Oborony RF*.

Conventional Precision Strike in Regional Crises and Conflicts

In application, Russia's concept of strategic deterrence represents an expectation to prevail in local and regional conflicts through its demonstrated preparedness to fight a nuclear world war. This is reflected in Russian military research during the 2000s, which arrived at a new understanding of strategic deterrence, linking it to regional and local deterrence and identifying a key role for strategic weapons (nuclear and precision conventional weapons) at all levels.¹ The Russian military aims for deterrence or containment of local and regional conflicts but recognizes their inherent escalatory potential.²

Russia's interventions in Georgia and Ukraine were both strategic deterrence operations from Moscow's perspective. Both operations had the strategic aim of blocking the target country's integration into Western defense and political institutions. Russia leveraged nuclear capabilities in both operations in order to deter outside military intervention supporting the targeted states, an effect termed "localization of the conflict" in Russian military writings.³ In both cases, Russia's leadership opted for military intervention after weighing Russia's stake against the calculated political and military risks, including the likelihood of outside military intervention.⁴ The operations in Georgia and Ukraine embodied Russia's primary theory of victory in action: "to achieve its strategic aims while avoiding direct military confrontation with NATO."⁵

Russia's intervention in Syria shares similarities with those earlier aggressions but also differs in a significant and dangerous way. Along with retaining its base at Tartus and its foothold in the eastern Mediterranean, Russia's strategic aims in Syria included preserving Assad in power by preventing the U.S.-led coalition from attempting regime change. Moscow perceived such an attempt as increasingly likely and acted quickly to foreclose it with its surprise expeditionary force de-

ployment to Syria in September 2015. Russia was equally quick to demonstrate its conventional (non-nuclear) precision strike capability with KALIBR cruise missile strikes and Kh-101 cruise missiles against anti-Assad forces. These strikes began in October 2015 and have continued intermittently ever since. The KALIBR cruise missile strikes also convey an implicit nuclear message given that the system is dual-capable. The deterrence message to NATO was clear enough, and President Putin has made the point explicitly.⁶

The new and dangerous element was the introduction of Russian military forces into a theater of ongoing operations in proximity to U.S. and other coalition forces and in direct combat operations against coalition proxies. Russia effectively interposed a tripwire force between Assad and the Western coalition. This imposed a requirement for the United States to de-conflict operations with Russia.

Russia's precision strike capabilities and related concepts and doctrine blending them with nuclear capabilities are most significant in the context of regional conflict scenarios. A nuclear exchange between Russia and the United States or NATO in the form of a "bolt from the blue" attack by one side against the other is extremely unlikely. Instead, as Michael Quinlan argued a decade ago, "non-nuclear war between East and West is by far the likeliest road to nuclear war" in Europe.⁷

Russia's 2015 National Security Strategy and 2014 Russian Military Doctrine note a tendency toward regional instability and conflict.⁸ In 2015, the U.S. Joint Chiefs of Staff likewise assessed that "today, the probability of U.S. involvement in interstate war with a major power is assessed to be low but growing."⁹ President Putin flagged-up the escalatory potential of regional conflicts after Turkey shot down a Russian fighter that had crossed into Turkish airspace from Syria. He expressed his hope that such incidents would not lead to a large-scale collision but said that, if such circumstances arose, Russia would defend its security interests "with all obtainable and available means."¹⁰

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Conventional Precision Strike, Escalation Milestones, and Nuclear Thresholds

These evolutionary and revolutionary developments in Russian military thought have important implications for our understanding of the ways in which wars between Russia and the West might unfold, escalate, and terminate. Our old thinking about thresholds, ladders, and “spasms” must give way to a new logic of regional conflict with a strategic dimension.

As a point of departure, let us consider the distinctions between peace and conventional war and between conventional and nuclear war. During the Cold War, they were relatively clear. Today, they are blurred. Russian threat perceptions and approaches to conflict have largely erased the clear distinction between peace and war.¹ Russian concepts and doctrine for employment of the strategic weapons set erases the distinction between conventional and nuclear war. In place of the former clear distinctions, we have an on-going, low-intensity conflict with inherent escalation potential and blended conventional-nuclear capabilities ready for employment at any level of conflict that Russia’s political leadership directs. This is the context for the interaction between conventional (non-nuclear) precision strike and nuclear thresholds.

“The Nuclear Threshold”

Every Western military planner and political leader worried about conflict with Russia wants to know when (and why) Russia’s leaders might resort to the employment of nuclear weapons. Where is Russia’s nuclear threshold? The short answer is simple: we don’t know and they probably don’t either. But a longer answer is necessary.

There is good reason to think that Russia’s nuclear threshold is

lower than before. After all, Russia's increasingly assertive foreign policies, leveraging of its nuclear arsenal for political effect, and changes in the profile of nuclear weapons in military exercises and in the context of Russian aggression since 2008 all imply that this is so.

The perception widely held among Western commentators that Russia has adopted a nuclear doctrine of what has been labeled "escalate to de-escalate" has been a particular catalyst for this speculation. The perception of Russia's underlying concept of "escalate to de-escalate" (limited nuclear employment in certain scenarios) is valid. But the label itself is unhelpful and misleading in several respects. First, it imputes to Russia an inconsistent, ill-considered, and contradictory nuclear doctrine which is not supported by fact. Second, the impression has arisen that the term "escalate to de-escalate" appears in Russia's military doctrine, but it does not.² Third, the term seems to have caused Western analysts to over-focus their analysis on potential nuclear employment by Russia as a consequence of a failing conventional military operation — the "escalate out of failed conventional aggression" scenario.³

In fact, Russia's approach to applying full-spectrum military capabilities, in combination with all other levers of state power, is well-considered in conceptual and practical terms. The phrase "escalate to de-escalate" is not to be found in any version of the Russian Military Doctrine document, but the potential for regional conflicts to escalate and the role of non-nuclear and nuclear weapons in containing and de-escalating them is a consistent theme.⁴ Finally, recent experience shows that Moscow will not limit itself to "escalating out of failed conventional aggression," but is prepared to escalate in defense of gains made through successful conventional aggression in line with the "aggressive sanctuarization" concept perceived by Western (primarily French) analysts and referenced above.

On the question of where Russia's nuclear threshold lies, nuclear thresholds fall within the parameters of available nuclear capabilities. They must be assessed in the context of this military reality and the related political context. Stated doctrine and declaratory policy alone do not determine nuclear thresholds. Those elements, along with a nation's security and foreign-policy track record, and observable nuclear capabilities, force structure, and posture, can give a good indication. In the end, no outsider can be certain of where a nuclear weaponstate's nuclear threshold lies, especially in the heat of a crisis. On the other

hand, a nuclear weapon state can calibrate the degree of ambiguity and uncertainty that it imposes on other nations about its nuclear threshold. This depends to some extent on how the nation tailors its declaratory policy, whether and how the nation chooses to leverage its nuclear capability, and, most importantly, the nuclear capability it decides to build.

A “nuclear threshold” is not a fixed point in space or time. It is a political decision to use nuclear weapons in response to a variety of triggers, any of which — according to some national metric or in combination with other triggers — could lead to that decision. The level of conflict at which the nuclear threshold can be crossed is not decided in the moment. It is determined, in part, by earlier decisions shaping the nuclear forces.

The available nuclear forces reflect political guidance on the range of circumstances in which the military should be prepared to implement a political decision to employ nuclear weapons. The military puts that political guidance into effect over the course of years.⁵ The nuclear capabilities, force structure, and posture developed (or not developed), according to political guidance constitute what is available for the moment that the political leadership decides to cross the nuclear threshold.⁶ Vipin Narang has noted that:

We can be confident that peacetime postures are both accurate and effectively capture what a state has available to deploy and employ should a conflict occur. A state that physically lacks tactical nuclear weapons or survivable second-strike forces, or the organization to employ them as such, cannot develop them in the time-frame of a crisis or conflict...A state may operationalize its posture in a conflict or crisis, but it cannot easily change its posture.⁷

The nuclear threshold of a nation with nuclear capability, force structure, and posture designed to support a policy of minimum deterrence evidently has a nuclear threshold somewhere at the high end of the conflict scale. The nation’s political leaders would have little ability to shift that threshold on short notice. An adversary nation might not know the exact nuclear threshold of its opponent, but could discern a band of level of conflict below which it would be unlikely to fall and above which it would be increasingly likely.

At the other end of the spectrum, the nuclear threshold of a nation with nuclear capability, force structure, and posture designed for deterrence and warfighting at all levels of conflict would be less evident.

Such a nuclear force would reflect guidance to provide the political leadership with the maximum array of options. This, in turn, would enable the political leadership to decide where its nuclear threshold lies according to the risks, threats, and opportunities arising in a particular set of circumstances. Declaratory policy could specify some red lines but the observable nuclear capabilities in such a case would impose maximum ambiguity and risk on other nations, in particular in a crisis. The blending of nuclear and conventional capabilities would amplify ambiguity and blur distinctions between weapons types and related thresholds for employment. Russia's nuclear forces, as part of the strategic weapon set, are a good example of this.

Russia has fielded modernized, flexible, and survivable strategic nuclear forces, non-strategic nuclear capabilities, and dual-capable systems that provide "options for diverse and continuous nuclear operations at the sub-strategic level that are truly unique."⁸ In light of these capabilities, it is pointless to speculate about how "high" or "low" Russia's nuclear threshold might be. Characterizing Russia's nuclear threshold as fixed at *any* level also misses the intention behind Russia's chosen precision conventional and nuclear capabilities, force structure, and posture, which is to provide maximum flexibility and options to the political leadership.

Russia's political-military leadership has outlined some aspects of nuclear thresholds in public statements and, especially, in the Military Doctrine document.⁹ These policy statements provide insight into some red lines, but Russia's nuclear threshold in a crisis or conflict would be comparatively unconstrained by practical limitations and would be subject to political decisions in the circumstances of the moment. The bottom line is that Russia's nuclear threshold would be wherever the president, as commander-in-chief, chooses.

Russian military experts have written on this topic that:

At the doctrinal level the conditions have been determined in which a nuclear weapon might be launched in the event of an armed attack on Russia or her allies by a nuclear state or by states connected by treaty to a country that possesses nuclear weapons. In other words, a fairly wide range of variants is implied for when a preventive nuclear strike might be inflicted. In practice, however, designated formal indications can hardly serve as the basis for putting into action the nuclear weapon in any of its [possible] quantities or forms. The situation will be closely analyzed each time and a concrete decision taken, by which a preliminary warning could precede a direct nuclear strike.¹⁰

Forms of Weapons Employment and Multiple Possible Nuclear Thresholds

Up until now, Western speculation has focused on where *the* Russian nuclear threshold is, framing a potential Russian decision to employ nuclear weapons as an all-or-nothing proposition (and in a broadly theoretical context). But Russian military thinking does not reflect such a binary approach. In contrast, Russia has integrated inherently flexible nuclear capabilities with conventional precision strike assets into a single strategic weapons set designed to inflict calibrated levels of damage for strategic effect. Moscow is developing concepts and doctrine for limited strategic war as framed by the Russian precision conventional and nuclear strategic weapon set. In this light, rather than thinking of a single nuclear threshold, it is more accurate and useful to recognize that Russia has multiple critical pre-nuclear and nuclear thresholds.

Once disaggregated, these thresholds cannot all be labelled as “high” or “low.” For example, avoiding the employment of nuclear weapons on the territory of the homeland is a top Russian national objective. It follows that a Russian decision to employ nuclear weapons on the homeland of another nuclear weapon state (NWS) would not be taken lightly — a relatively high threshold. However, because of the military capabilities it possesses, Russia has more options than simply not using nuclear weapons against another nuclear weapon state (NWS) in order to prevent or mitigate nuclear retaliation. In certain circumstances, this fact would bear upon the timing of a Russian decision to employ nuclear weapons against another NWS. At the other end of the scale, Russian military modeling, analysis, and exercises indicate consideration of, and capability for, the early and pre-emptive use of nuclear weapons at various levels of intensity, either sequential to or simultaneously with employment of conventional precision strike for strategic effect. A number of possible escalation milestones, critical thresholds and variations of weapons employment lie between the two extremes of non-use and a massed intercontinental nuclear strike as illustrated in Figures 9a and 9b.

The milestones and thresholds outlined below do not represent a progressive “escalation ladder.” Some of the available forms of weapons employment outlined by Russian military experts *might* be sequential and others might be skipped altogether. Leadership choices will depend on the circumstances.

Several other factors could also increase uncertainty around escalation decisions for both sides, and so increase risk and impair the manageability and controllability of escalation within limited conflicts between Russia and NATO. These include:

Non-Nuclear War as Limited Strategic War

NATO allies have said that “any employment of nuclear weapons against NATO would fundamentally alter the nature of a conflict.”¹¹ For its part, Russia would intend, in an escalating conflict, to impose “radical changes in the military-political situation and strategic environment” by use of precision conventional strikes.¹² The Russian vision of radically changing the military-political situation and strategic environment suggests that Moscow believes that its strategic weapons set and the strategy for its employment enable limited strategic war as “primarily a contest of resolve,” as described by Klaus Knorr.¹³ This would impose upon Russia’s enemies an amalgam of conventional precision strikes, nuclear signaling, concurrent multi-domain operations and intended rapid strategic effect that would compel crisis decisions much more quickly than conventional force-on-force operations of the Cold War era would have. These could be deeply damaging to crisis stability. A potential paradox of Russia’s strategy for employment of its strategic weapons set could be that successful conventional precision strikes in SODCIT could impose an early nuclear decision on the adversary, while failure could force an early nuclear decision on Russia.

Limited Nuclear War

Russia’s leaders recognize the catastrophic consequences of global nuclear war. But they appear to have come to a different view of the consequences of regional nuclear war.

In describing the Strategic Operation of Nuclear Forces, Russian military experts have written that, “*in full-scale form* such an operation is dangerous for both parties, it can lead to a global ecological catastrophe, the effect of ‘nuclear winter’ and ‘nuclear night’ in connection with which in practical terms such an operation should be excluded.”¹⁴ But they also envision that “under certain circumstances the possibility of conducting [nuclear operations] of a strictly limited quantity of means with a deliberately minimized number of targets for destruction and methods of striking in order to avoid unpredictable effects on the

territory of our own country and natural environment” would be a viable option.¹⁵

In other words, the threat of a global nuclear strike in the most extreme circumstances remains. But there is another option for nuclear strikes in a selected theater of military operations, including by “a massed nuclear attack or with preliminary selective strikes with a limited number of means in designated regions (zones).”¹⁶ Pre-emptive nuclear strikes have been adopted into Russia’s nuclear strategy since the 1990s.¹⁷ A Russian military expert has said of this approach that, “at the present time the Russian Federation uses a concept based on the ideas of Mutual Assured Destruction and limited nuclear war.”¹⁸ The Russian concepts and capabilities for use of conventional precision weapons for deterrence and to achieve outcomes similar to use of nuclear weapons in combat and concepts and capabilities for limited use of nuclear weapons are closely intertwined and suggest an unavoidable dynamic between them.

The Non-Nuclear Strategic Triad and Nuclear Thresholds

This way of thinking about escalation thresholds is obviously informed by the addition of non-nuclear means to the strategic deterrence toolkit. Conventional precision strike assets, offensive cyber capabilities, and space capabilities comprise a kind of non-nuclear triad. They have the potential to interact, individually and possibly together, with decision-making about nuclear thresholds in various ways.

During the Cold War, with its tidy division of conventional and nuclear forces, the escalation pathways were clear—or seemed so. A European war could have been expected to run its course for many days or weeks before critical questions might come about whether and how to employ nuclear weapons. But if nuclear weapons were used, they were expected to have immediately decisive and hugely escalatory effects.¹⁹ Today, in contrast, efforts early in a war to gain decisive effects with conventional strategic strikes and with operations in cyberspace and outer space could be escalatory, by putting the vital interests of attacked nations immediately at risk. In addition, initial steps across the nuclear threshold at the regional level of war might not, in Russian thinking, put the vital interests of the United States at risk, or even those of many of its NATO allies.

Command and control is one clear point of intersection with nuclear

deterrence calculations; Russia is explicit on this in its military doctrine document. There appears to be widespread emerging awareness of the potential implications of offensive cyber for strategic stability. Russian Minister of Defense Shoygu has noted cyber's potential to achieve effects comparable to weapons of mass destruction.²⁰ Russian military cyber experts have assessed offensive cyber as having a potential for effective pairing with conventional precision strike for deterrence purposes.²¹ U.S. experts have also recognized the potentially destabilizing effect of employing cyber capabilities against nuclear threats.²² The commander of U.S. Cyber Command has noted offensive cyber's potential to affect U.S. vital interests and its potential deterrence implications, including ambiguity of intent.²³

In this exploration of Russian thinking about escalation thresholds, three further aspects require discussion. The first relates to ambiguity. A conflict between Russia and NATO would, by Russian design, include maximum ambiguity regarding Russia's potential nuclear employment. The integration of conventional precision and nuclear weapons for identical roles and missions ensures this. Operationally, all of Russia's precision-strike weapons are dual-capable or have a nuclear analogue. Consequently, the activities of precision-strike platforms would be freighted with nuclear ambiguity during an escalating crisis even prior to the beginning of the kinetic phase of conflict. This ambiguity could be mitigated to some extent by intelligence, surveillance and reconnaissance (ISR), but the effectiveness of ISR capabilities could be expected to diminish as the conflict progresses — all the more so if conventional precision strikes succeed in hitting critical military targets, including command and control nodes.²⁴

The second additional point relates to command and control. The Russian President, in his role as commander-in-chief, is the sole political decision-making authority for employment of nuclear weapons.²⁵ The President, the Minister of Defense, and the Chief of the General Staff comprise the Russian National Command Authority (NCA)-equivalent and their mutual participation is required for nuclear authorization and attack options to be transmitted through the General Staff to the nuclear forces.²⁶

But this isn't the whole story. Prior to a presidential decision to cross the nuclear threshold, the commanders of the military districts (joint operational commands), who would become frontal or theater commanders in wartime, would have command and control of many

of the same dual-capable delivery systems in their conventional mode: precision-strike capabilities with ranges between 500 and 2000 kilometres. Given the doctrinal and operational linkage of non-nuclear (precision conventional) weapons to nuclear forces, how would employment of conventional precision weapons for strategic effect in a regional conflict be controlled?

This would be a key question in scenarios involving nuclear-capable adversaries. Until now, conventional precision weapons have been used in permissive environments where there was little or no risk of nuclear escalation. This would not be the case in a regional scenario pitting Russia and NATO against each other. If Russian political-military leaders see non-nuclear (conventional precision) weapons as setting the conditions for de-escalation or for achieving decisive strategic effect, how would this be accounted for in command and control arrangements and operational planning for conventional precision weapons? Would the Russian President be drawn into nuclear war by a “chain of tactical decisions on use of conventional means of deterrence” and combat made by military commanders at the front?²⁷ Russia’s increasingly centralized command and control may, in part, address this.

The third additional point is about missile defense. U.S. and NATO ballistic missile defense (BMD) could interact with Russia’s strategy for the calibrated use of its strategic weapons, including the intention to inflict deterrent levels, to affect Russia’s thresholds. Russian leaders and experts have long argued that U.S. and NATO BMD will weaken Russia’s nuclear deterrent capability.²⁸ Russian officials have focused their objections on the assertion that U.S. and NATO BMD could undermine Russia’s strategic deterrent capability by enabling interception of ICBMs bound for the continental United States. Many U.S. experts and even some Russian experts regard this as implausible for technical reasons.²⁹ Russian officials might also assess that U.S. and NATO BMD could constrain or eliminate some options and gradations at the regional level of Moscow’s strategic deterrence strategy.³⁰ One Russian military expert has said explicitly that “the possibility that U.S. BMD could achieve a limited interception of ballistic missiles in the near future could possibly violate the principle of ‘dosing’ and guaranteed fulfilment of assigned ‘de-escalatory’ activities.”³¹

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Contextual Thresholds

Russian military thinking about escalation thresholds is informed not just by the doctrinal factors as discussed above but also by what might be called contextual factors — that is, factors deriving from the overall context in which future crises and conflicts will occur. Russian leaders have tried to set expectations in the United States about Russia's behavior in such crises and conflicts and their efforts can be expected to have an impact on escalation pathways.

Setting the Expectation that U.S. Actions Will be Contested

Russia sent a strong message with its interventions in Georgia, Ukraine, and Syria — that it is prepared to use military force to counter perceived infringements on its interests. This willingness and ability to run military risks in regional disputes is an important perceptual and psychological threshold. In effect, Russia has confronted the United States with a situation it has not faced since the end of the Cold War: the necessity to engage in crisis management and escalation control in a regional conflict instead of the decisive defeat strategy it has favored for the last 25 years.¹ Russian Minister of Defense Shoygu summed up the results of the Syrian deployment as having “created on the southern flank of NATO a group of Russian armed forces that cardinally changes the alignment of forces in the region.”² Russian leaders want U.S. leaders to understand that U.S. military actions will be firmly contested whenever they run afoul of Russian interests.

Some Russian and foreign experts have asserted that non-nuclear deterrence using conventional long-range precision weapons can raise the nuclear threshold.³ This seems to be contradicted by the utility that Russia's political-military leadership assigns to conventional precision weapons, which appears to reduce constraint and open pathways to

conflict between nuclear powers.⁴ The negative effect, more scenarios in which nuclear weapons might be employed, seems to be amplified by Russia's doctrinal and operational approach blending two fundamentally different weapon types in a single mission. According to a Russian researcher on the psychological aspects of nuclear thresholds, this is risky. He hypothesizes that the connection between conventional precision (non-nuclear) weapons and nuclear weapons will actually *increase* the likelihood of opposing sides being drawn into nuclear war as "tactical decisions, each of which by itself is taken by the authorities as an adequate response to provocation, can lead to disaster."⁵ According to another Russian military expert, conventional precision weapons are seen not as a way to raise the nuclear threshold, but as a more credible deterrent in the early stages of conflict — because of their usability — without excluding the utility of nuclear weapons beyond the early stages.⁶ If regional conflict is the path to nuclear employment, lowering the threshold for regional conflict potentially lowers the threshold for nuclear employment.

Setting the Expectation for Nuclear Consequences for U.S. Actions

As a result of recent practice, Russia has effectively eliminated what might otherwise have been its first nuclear threshold: the making of making nuclear threats, either rhetorically or by exercises and other military shows of force. This has been the case since at least 2007, when President Putin re-instated out-of-area, long-range bomber patrols.⁷ Since then, Russia has deliberately altered the deterrence relationship with the United States and NATO. In the language of Patrick Morgan, Russia has shifted from a strategy of recessed general deterrence to one of immediate deterrence; that is, the nuclear threat is not in the background, casting a shadow, but is front and center, posing a clear and present danger.⁸ This has been achieved through a program of near-constant brandishing of nuclear threats, specific and general, by President Putin and an array of high-ranking government and military officials.⁹ In tandem with the nuclear rhetoric, Russia has implemented a program of ostentatious strategic bomber flights in proximity to NATO European and North American air space as well as in the Asia-Pacific region.¹⁰ Russian political and military leaders also regularly characterize strategic nuclear training, exercises, and missile test activities

as responses to perceived Western threats. This approach may have served well Moscow's agenda to re-establish deterrence. However, by wearing thin rhetorical threats and military shows of force, it sets an escalatory context for any regional crisis that might arise; the bidding in a future test of wills might have to start at the operational level.

Setting the Expectation that Direct Military Conflict Is Possible

It risks stating the obvious that the initiation of direct military conflict is a critical threshold toward nuclear employment. It is nevertheless worth re-stating for two reasons. First, as noted above, the "bolt from the blue" is the least likely scenario for nuclear conflict between Russia and the U.S. or NATO; regional conflict is the most likely pathway. A decision to initiate direct military conflict (kinetic operations) would cross a line that has been carefully respected since 1945, and more so since the late 1960s and early 1970s, when the Soviet Union achieved nuclear parity with the United States.

Additionally, in light of Russia's asymmetric and deliberately ambiguous approaches, the initiation of direct military conflict could result less from an intentional decision than from a sequence of seemingly restrained decisions that leads inadvertently to military conflict. Second, the opening of direct military conflict would represent the failure of Russia's primary theory of victory: to achieve its aims below the threshold for war. This would open operations in line with Russia's second theory of victory, which relies on calibrated damage and escalation control to compel adversary capitulation.

It is uncertain if the untested theory of non-nuclear deterrence, let alone of escalation control, would hold up under the stress of war. Then-Deputy Secretary of Defense Robert Work has said, "anyone who thinks they can control escalation through the use of nuclear weapons is literally playing with fire. Escalation is escalation, and nuclear use would be the ultimate escalation."¹¹ It should also be recalled that the calibrated approach to strategic deterrence outlined in current Russian military theory is at odds with the traditional and deeply-ingrained Russian perception of the decisiveness of the early phase of conflict and the criticality of seizing and maintaining strategic initiative. Given the primacy and forward profile that Russia's political-military leadership continues to assign to nuclear weapons in peacetime, there should

be no expectation that nuclear weapons will not come quickly to the forefront in time of war.

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Nuclear Thresholds: The Operational Perspective

As discussed in the preceding section on SODCIT, Russian military thinking envisions a range of possible strategic strike operations with increasingly ambitious goals and damaging results. See Figure 9 (pages 89 and 90).

A Demonstrative Nuclear Detonation

The mode of nuclear employment with potentially the lowest threshold is a demonstrative nuclear detonation. A detonation, as opposed to an actual strike, could be accomplished, for example, by an underground detonation at a nuclear weapons test site on Russian soil.¹ Such a detonation would be both detectable and locatable by seismic monitors operated under the aegis of the Comprehensive Test Ban Treaty (CTBT).

Russia could manipulate such a detonation in different ways, depending on the circumstances and desired effects. One option could be to openly invoke the CTBT Treaty's Article 9 on withdrawal, asserting that the re-initiation of nuclear testing was imperative for reasons of national security (although in a crisis, Moscow would be unlikely to meet the six-month advance notification requirement). For more dramatic effect, Moscow could choose to conduct an underground detonation without conforming to the six-month notification requirement for withdrawal from the treaty. Another possible approach would be to conduct the underground test, remain unresponsive to queries, and let its meaning remain ambiguous but implicitly threatening. While not an operational use per se, a nuclear detonation in contravention of a cornerstone treaty of international security could send a powerful signal without provoking a military response.

The threshold for some variation of a demonstrative detonation at a test site could be very low, and might have been lowered by Russia's constant brandishing of nuclear threats. Russia has worn thin the threatening use of nuclear rhetoric, operations of nuclear-capable platforms, and exercises as described above. This kind of behaviour used to be available as an option in the early stages of a developing crisis but is now part of the "new normal" in Russian conduct. This leaves available for Moscow's deterrence messaging actions such as increasing the combat readiness of the strategic nuclear forces and dispersal of their mobile elements. President Putin, in keeping with long-standing Soviet and Russian practice, has been cautious about using such options in crises and might be reluctant to do so except in extreme circumstances.

Another option that has not lost deterrence messaging relevance due to over-use would be ostentatious displays (intentionally visible to satellites) of the movement of non-strategic nuclear warheads from their storage sites to operational bases in preparation for mating to their delivery systems. Moscow might assess that either of these options could have the opposite of the intended de-escalatory effect and might risk losing operational security concerning movement of nuclear forces.

Due to the overuse of other deterrence-signalling tools and the potential downsides of using operational forces for that purpose, Moscow might find utility in a demonstrative nuclear detonation in the latter phase of an escalating political crisis. Russian military literature does not speculate on this particular option, but violation of the Comprehensive Test Ban Treaty for instrumental purposes would not be out of line with the pattern of Russian behaviour since 2007, which has included suspension of compliance with the CFE Treaty, violation of Budapest Memorandum obligations, circumvention of Vienna Document obligations, and violation of the INF Treaty.²

Demonstrative Nuclear Strike

Demonstrative strikes are explicitly mentioned in Russian military writing on deterrence, normally in the context of the lowest-level means of nuclear weapons employment for deterrence signalling and de-escalation. Andrei Kokoshin has written that the nuclear warning shot in French nuclear doctrine "resonated" with the forming post-Cold War Russian nuclear doctrine.³

This option could take the form of a low-yield weapon detonated at sea or in desert spaces. The message could be given added weight by having the delivery missile overfly adversary territory on its way to its aim point. A variation on this use could be a demonstrative strike on a remotely situated facility instead of an empty space. As a show of force alone, this could match the parameters described above for a precision conventional weapon demonstrative strike: designed to inflict zero or minimal casualties, with minimal operational effect.

The revised Russian Federation Naval Doctrine published in July 2017 heavily emphasizes the role of the Navy's conventional precision and non-strategic nuclear capabilities in strategic deterrence. Of particular interest regarding an initial demonstrative strike, the Naval Doctrine states that, "in conditions of escalation of a military conflict, demonstration of readiness and determination to use force by employment of a non-strategic nuclear weapon is an efficient deterrence factor."⁴ The new doctrine also indicates as a measure of naval effectiveness, "the capability of the Navy to inflict not less than critical damage on the enemy fleet by use of non-strategic nuclear weapons."⁵ These tasks and missions, in conjunction with Russian determination to break up the enemy aerospace attack, in which naval platforms would play a major role, suggest the maritime domain as a candidate for early nuclear use for demonstrative or operational purposes.

The threshold for a demonstrative nuclear strike would likely be significantly higher than for a demonstrative detonation. On the basis of Russian military writings, this author has raised the question elsewhere about "whether such a detonation or strike would be a stand-alone event, punctuating the pre-nuclear phase of the conflict, or if it would come as part of an earlier, primarily conventional phase of the Strategic Operation for Destruction of Critically Important Targets (SODCIT)."⁶ This remains uncertain but the indications in Russian military writings imply that such an event could come late in the initial phase of armed conflict, after efforts to contain and de-escalate by use of precision conventional strikes up to and including grouped (limited strikes) and possibly as late as some phase of the SODCIT operation. However, given that this option appears to be intended primarily for intra-war deterrence, it could come at a stage in conflict substantially below the level of exhaustion of conventional and non-nuclear options. Russian military analysts recognize that adversary response to limited nuclear employment is

unpredictable. They speculate that employment of a single or limited nuclear strike might be sufficient in some circumstances to convince an adversary to halt combat operations, while in other circumstances the same adversary might choose to carry on, depending on psychological factors that would shift perceptions of unacceptable damage.⁷

On the one hand, Moscow could decide to forego a demonstrative strike altogether, perceiving a reasonable chance to achieve its objectives with continued conventional and non-nuclear operations, perhaps even withholding nuclear weapons at the outset of a SODCIT campaign. Moscow might, on the other hand, perceive that its position is eroding and assess a requirement for a maximum effort, including integrated nuclear strikes from the start of the SODCIT operation.

Russian military doctrine identifies factors that set the broad boundaries within which a political decision for strategic nuclear weapon employment might be taken. These factors include use or *anticipated* use of WMD, damage or the *threat* of damage to strategically important facilities, or *perceived* failure of general purpose forces capability to defend the state.⁸ The decision point would be determined on the basis of the circumstances. The key point is that a stage of kinetic conflict at which Moscow feels an operational need to expand and escalate its precision conventional strikes beyond single or limited strikes would be a milestone toward a threshold for nuclear weapon employment for intra-war deterrent effect.

Grouped Nuclear Strikes as Part of SODCIT

The next significant nuclear threshold would be the decision to escalate to use of grouped nuclear strikes. Russian military experts appear to focus on an escalating regional conflict, high-intensity kinetic warfare, as circumstances in which Moscow might choose this option.⁹ Moscow might be motivated by an assessment that it was on the verge of suffering the collapse of a critical element of its defensive capability such as national command and control, a segment of its aerospace defense perimeter, or the absolute security of its nuclear bastions.¹⁰ Considerations such as these would fall within the range of potential triggers for a decision to employ nuclear weapons identified in Russian strategic guidance documents and related military writings:

- adversary employment of nuclear weapons or other weapons of mass destruction against Russia or her allies;¹¹

- aggression against Russia with conventional weapons that threatens the existence of the state;¹²
- the certain discovery of direct preparations by the adversary for nuclear weapon employment;
- use of conventional weapons against strategically important targets;
- the threat of a mass strike by precision weapons;
- the degradation of Russia's defense capacity to critical (unacceptable) levels during the non-nuclear phase of a conflict.¹³

It is at this level of conflict that various factors could drive down the threshold for escalated nuclear employment. This could include the deeply ingrained imperative in Russian military strategy to retain the strategic initiative. Operational setbacks, adversary resilience, or, for example, strategic impacts in the cyber or space domains could also weigh in a decision to escalate.¹⁴ A second and potentially decisive driving factor could be a perception by Moscow that it had failed to break NATO resolve or split North America from Europe. Russia's chances for victory against NATO depend on quickly terminating a conflict. A protracted war between Russia and the combined military, economic, and industrial might of the Alliance would be a losing proposition for Moscow.¹⁵ A situation like this, including a looming mass aerospace conflict, could drive Russian consideration of the pre-emptive measures described in military concepts for use of the strategic weapons set.

In light of these considerations, it is most likely that the option for grouped nuclear strikes would be integrated into the SODCIT operation. Likewise, Moscow would face a key decision, on the basis of the operational circumstances, on whether to integrate multiple nuclear strikes into the SODCIT campaign from the outset or at a later stage. As noted above, the single nuclear strike option would also seem most likely to be considered for use at some stage of the SODCIT operation, either at the outset or as an escalatory option at a later stage of the operation.

The hypothetical scenarios outlined above and the related considerations indicate the intensity of conflict at which Moscow might decide to cross the nuclear threshold. Somewhere between demonstrative

conventional precision strikes and grouped strikes, the line is crossed between non-nuclear intra-war deterrence and warfighting. The aim, up to this level of intensity of conflict, would be to achieve adversary capitulation before either side has crossed the nuclear threshold: Russia's secondary theory of victory.¹⁶ At the subsequent level of intensity of conflict, the aim would shift to achieving decisive results, such as disrupting an adversary's military command and control, fielded forces and follow-on forces, and supporting infrastructure, and inflicting a level of damage sufficient to convince the adversary to capitulate. Escalation through these levels of conflict would suggest the gradual failure of non-nuclear deterrence and strike operations and hence growing pressure to bring nuclear weapons to bear, either for intra-war deterrence and de-escalation purposes, or to achieve decisive operational results. At this level of conflict, Moscow would also be increasingly wary of potential nuclear use by the adversary, raising the potential for nuclear pre-emption by Russia.

The above analysis suggests that Moscow would make four critical decisions on nuclear thresholds near or within the level of conflict intensity at which the SODCIT operation would be prosecuted. The first decision would be whether to cross the nuclear threshold, either by a demonstrative nuclear detonation (which the author speculates on above but is not found in related Russian military writing or official pronouncements) or the actual use of a nuclear weapon. Second, Moscow would decide whether the political-military circumstances supported a decision for the more constrained first-use option of a single nuclear strike (for demonstration or effect) or required integration of multiple (grouped) nuclear strikes into the SODCIT operation. Third, Moscow would determine whether the first nuclear employment, single or multiple, would come at the outset of the SODCIT operation or at a later stage. In keeping with Russian preferences for the containment of regional conflicts, these three decisions would be taken at what the Russian military considers to be "in the early stages of a conflict."

A fourth critical decision at this level of conflict would be whether to expand use of nuclear weapons beyond the European theater to include their use against the U.S. homeland. The attention devoted by Russian military experts to U.S. homeland critical facilities and related concepts for employment of the strategic weapons set suggest that precision conventional weapons could be employed against the U.S. homeland at earlier stages of conflict for intra-war deterrence.

Grouped or massed employment of conventional precision weapons as part of a SODCIT operation to impede the flow of reinforcements to Europe would also fit Russian strategy. Obviously a key question is at what stage in the conflict Russia might cross the critical threshold of employing a nuclear weapon against the U.S. homeland. Russia would expect the United States to retaliate and could not be certain of the scale of the response, which would be a strong incentive to delay a strike against the United States.

Delaying nuclear employment against the U.S. homeland might also serve a Russian strategy to stress the U.S. extended nuclear deterrence commitments and separate Europe from North America. The Soviet Union tried similar approaches by political means through the Cold War.¹⁷ Some aspects of what can be extracted from Russian military writings about the use of the strategic weapon set at least implies that one Russian approach could be to try to confine initial nuclear exchanges to Europe as a bargaining tactic and divisive manoeuvre against the political solidarity of the Alliance.

Here again, various factors could trigger a decision to employ a nuclear weapon or multiple weapons on U.S. territory, including developments as the conflict intensifies, indications of failure to contain a regional conflict, impending attacks on Russian critical infrastructure, or perceptions of an impending U.S. or NATO nuclear attack. Intelligence assessments and long-standing doctrine to pre-empt critical threats would inform political decisions at this stage. As with the range of options it has for employment of its strategic weapons set in Europe, Russia would have flexible options for precision conventional and nuclear strikes against the United States.

Nuclear events at the level of conflict correlated with the SODCIT operation would be consistent with observed Russian exercise activity. It was in the ZAPAD 2009 exercise that what is now popularly referred to as Russia's "escalate to de-escalate" doctrine was first observed. During the ZAPAD 2017 exercise, SODCIT, precision strike, and strategic operations for defense against aerospace attack all featured prominently, including strikes by the dual-capable ISKANDER system. Russian forces at exercise ranges in the Western Military District and in Belarus also conducted substantial levels of chemical, biological, radiological, and nuclear (CBRN) activities, demonstrating the ability to operate in a CBRN environment. The Northern Fleet Joint Operational Command conducted a major exercise concurrently with ZAPAD

2017 activities. Despite portraying this as a separate exercise, Russia would not engage in a major regional conflict in the Western strategic direction such as that depicted in ZAPAD 2017 without participation by Northern Fleet assets. A holistic view of ZAPAD 2017, the concurrent Northern Fleet exercise, and concurrent exercise activity across Russia gives a more realistic picture of potential conflict in this region and the likely scale of a Russian response.¹⁸ The NATO Spokesperson has said of ZAPAD 2017, “in effect, these activities [across all Russian Military Districts] together constituted a single strategic exercise, involving the full spectrum of Russian and Belarusian military.”¹⁹ With regard to nuclear thresholds, it is particularly noteworthy that an intercontinental submarine-launched ballistic missile strike by a Northern Fleet SSBN took place as the *defensive* phase of ZAPAD 2017 culminated, at the mid-point of the one-week exercise.²⁰

The Impact of Nuclear Missile Defense

The A-135 missile defense system that defends Moscow and Russia’s central industrial region should be noted in connection to potential nuclear thresholds as the 53T6 (SH-08 ABM-3 GAZELLE) interceptors are equipped with nuclear warheads. The system is assigned the mission of intercepting nuclear ballistic missile attacks, and it is assessed to be capable of countering limited attacks. Employment of the system at earlier stages of conflict is unlikely (i.e., being used to cross the nuclear threshold). The GAZELLE’s short range and endo-atmospheric intercept profile indicate that significant self-inflicted collateral damage could be expected, implying its planned use in extremis and not at early stages of conflict as the system is currently configured.²¹

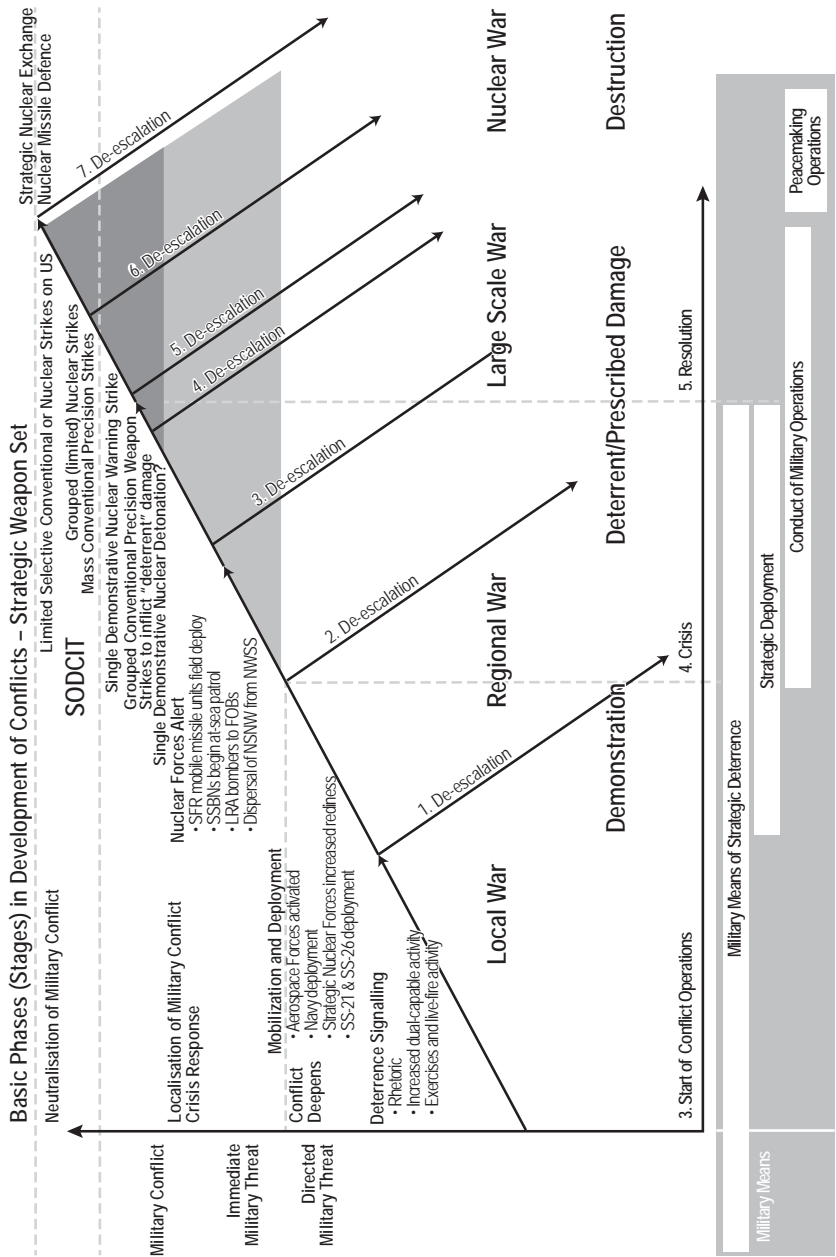


Figure 9a. Employment of the Strategic Weapon Set in a Developing Crisis.²²

Basic Phases (Stages) in Development of Conflicts – Forms of Use of the Strategic Weapon Set

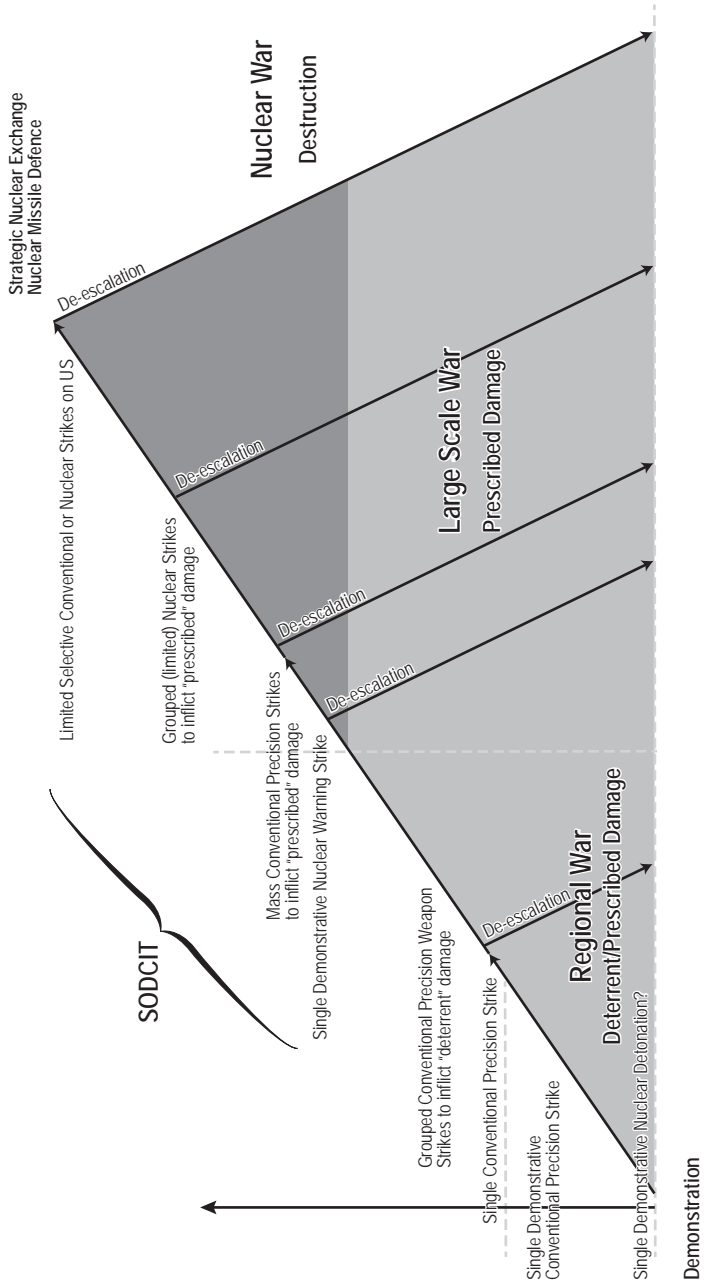


Figure 9b. Employment of the Strategic Weapon Set in a Developing Crisis.²³

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- 8 On such factors, see: O. Yu. Aksyonov, Yu. N. Tretyakov, E. N. Filin, Osnovnye Printsipy Sozdaniya Sistemy Otsenki Tekushchevo I Prognoznovo Yshcherba Vazheishim Ob'ektam Sistemy Strategichovo Sderzhivaniya, *Voennaya Mysl'*, No. 6, June 2015, p. 69. These researchers at the Scientific Research and Testing Centre of the Central Scientific Research Institute of the Air-Space Defense Forces, have identified the conditions supporting a decision on employment of strategic nuclear weapons as: the employment of weapons of mass destruction (WMD) by the adversary or reliable detection of immediate preparations for their employment; conventional weapon effects on strategically important facilities (the fact or immediate threat of a mass precision weapon strike); evidence in the non-nuclear phase of conflict of the infliction of critical (unacceptable) damage to national defense capability leading to the inability to provide for defense of the state.
- 9 See, for example, Skrypnik, O Vozmozhnom Podkhode k Opredeleyniyu i Mesta Oruzhiya Napravlennoi Elektromagnitnoi Energii, p. 47.
- 10 The nuclear bastions are the patrol areas of Russia's ballistic missile submarine (SSBN) fleet, which are secured by layered and echeloned aerospace defense, anti-surface, and anti-submarine capabilities. See A. A. Kokoshin, V. A. Veselov, A. V. Liss, O Kontseptsii Severnogo Strategicheskogo Bastiona, 8 December 2015, <http://viperson.ru/articles/o-kontseptsii-severnogo-strategicheskogo-bastiona>; Gjert Lage Dyndal, 50 years ago: The origins of NATO concerns about the threat of Russian strategic nuclear submarines, *NATO Review Magazine*, 24 March 2017, <https://www.nato.int/docu/review/2017/Also-in-2017/50-years-ago-nato-concerns-threat-russian-strategic-nuclear-submarines-soviet-bastion-high-north/EN/index.htm>; and John Andreas Olsen, ed., NATO and the North Atlantic: Revitalising Collective Defence, 6 March 2017, <https://rusi.org/publication/whitehall-papers/nato-and-north-atlantic-revitalising-collective-defence>.
- 11 *Voennaya Doktrina Rossiiskoi Federatsii* 2014, paragraph 27.
- 12 Ibidem.
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- 14 As one example of how adversary resilience could factor into escalation decisions, one military task associated with the integration of conventional precision and nuclear weapons into the strategic weapon set is "definition of the reserve of long-range PGM delivery platforms for achieving strike aims against enemy targets in strategic operations employing weapons of mass destruction." This suggests a minimum number of weapons has been identified as a reserve for use with nuclear weapons against critical targets and that expenditure of the precision weapon stockpile and attrition of their numbers through combat losses could create pressure for escalation if the number of weapons in reserve begins to reach that critical level while the adversary remains undefeated. A. A. Protasov, V. A. Sobolevskiy, V. V. Sukhorutchenko, Planirovaniye Primeneniya Strategicheskikh Vooruzhenii, p. 27.

15 Terms like protracted, quick, long, and short are relative terms. As one example of a Russian perception of a “short” war, Russian military strategists wrote in 2000, when Russia’s economic plight and military vulnerability were both deep, that “the requirement for conclusion of a war in as short a time as possible is particularly significant. A stake on a fast war does not, however, have anything in common with blitzkrieg. What is meant is that the war should either be finished in the course of several months, a maximum of 1-2 years, or cut short on a selected stage, preferably more favourable for the Russian forces.” V. A. Zolotarev, ed., *Istoriya Voennoi Strategii Rossii*, p. 539.

16 See Roberts, *The Case for US Nuclear Weapons in the 21st Century*, pp. 1-10 and 106-140 for his thoughts on red theories of victory. See Johnson, *Nuclear Weapons in Russia’s Approach to Conflict*, pp. 67-74, which builds on Roberts’ red theory of victory concept to elaborate the roles of nuclear weapons in Russia’s primary and secondary theories of victory.

17 Henry Kissinger wrote about a 1972 Soviet “Prevention of Nuclear War” proposal: “The proposed agreement did not preclude the use of nuclear weapons in a war involving NATO and the Warsaw Pact; however, their use would have to be confined to the territory of allies; employment against the territory of the United States and the Soviet Union was proscribed. . . It would have been difficult to draw up a more bald or cynical definition of condominium.” Henry A. Kissinger, *Years of Upheaval* (London, Weidenfeld and Nicolson and Michael Joseph, 1982), p. 277.

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22 This is a revision of an illustration that first appeared in Johnson, *Nuclear Weapons in Russia’s Approach to Conflict*, p. 70. It is drawn from the Russian military sources cited in that paper and in this paper with the revision drawing in particular on A. V. Skrypnik, O Vozmozhnom Podkhode k Opredeleniyu i Mesta Oruzhiya Napravlennoi Elektromagnitnoi Energii, Figure 2, p. 47.

23 This illustration is a magnified view of Figure 9, providing a closer view of escalating regional and large-scale wars.

Conclusions

Does Russia believe it has, or does it aim to acquire, an exploitable advantage in the nuclear capabilities it is developing?¹ This may be answered in both operational and political-strategic terms.

In operational terms, the question must be answered from Russia's perspective of the strategic weapons set, rather than from only a nuclear perspective. As outlined above, the Russian strategy is to be prepared to employ conventional precision strikes, with nuclear strikes operating in tandem, but preferably to withhold the nuclear capability as a deterrent element available for escalation dominance. The flexible array of dual-capable weapon systems is intended to enable the infliction of calibrated levels of damage for deterrence, intra-war deterrence, and warfighting. The non-nuclear leg of the strategic weapons set is viewed instrumentally and is available for operations at early stages of crisis and conflict. The aspiration is to be able to inflict deterrent, prescribed (for operational effect), and unacceptable levels of damage to force enemy capitulation — even without the use of nuclear weapons — but there are no technical or operational constraints on the integrated employment of conventional and nuclear weapons, providing a range of flexible options to the political leadership.

In political-strategic terms, Russia's approach integrates the strategic operational effect of conventional precision strike with the deterrent and coercive effect of nuclear capabilities. Russia can potentially aim to impose nuclear uncertainty on an adversary from the outset of any crisis or conflict, and force on the adversary the political and military risks of escalation, including to nuclear use. This manipulation of risk could be intended to gain advantages in the critical initial phase of conflict by impeding decision-making and then to force capitulation by stressing or fracturing alliances. As noted above, part of Russia's strategy is to prevail in local and regional conflicts through its demonstrated preparedness to fight a world war, including with nuclear weapons.

Russia's evolving approach to nuclear weapons as a geopolitical instrument in conjunction with conventional precision strike integrates their warfighting capability into Russia's full-spectrum arsenal for psychological effect during conflicts short of war and for containment and escalation control during armed conflicts.²

In that vein, NATO's implementation of the Wales and Warsaw Summit decisions to ensure credible deterrence and defense, in particular enhanced Forward Presence (eFP) and tailored Forward Presence (tFP) and related reinforcement strategies, will be imperative. It was noted in an earlier age of deterrence that "as a basis for an alliance like NATO, a strategy of punishing a *fait accompli* is no substitute for a capability to resist territorial aggressions in the first place."³ This remains true; convincing NATO military presence and rapid reinforcement capability will be necessary to impose enough risk in the minds of Russian decision makers to reduce the likelihood of regional aggression and all its escalatory potential.

In connection with the issue of forward presence, NATO faces two related problems. The first is how to deny Russia the temporary local advantage that would enable a *fait accompli* and subsequent attempt to impose aggressive sanctuarization of territory gained by conquest. Failing that, the second and more dangerous problem would be how to deter Russia from escalating to nuclear use in the face of an Article 5 response to Russian aggression and the losing proposition of a protracted conventional conflict against NATO. The risks associated with this second problem are a powerful argument for ensuring success in addressing the first.

In such scenarios, it would be wrong and extremely dangerous to assume that Russia's nuclear threshold is "high." It would be equally wrong and dangerously constraining to assume that it is "low." Russia has opened a new era of contested security and contested domains and operational spaces. To contend with this when it is in their interests, the United States and its NATO allies will need to be prepared to operate in non-permissive environments when necessary, managing risks, imposing risks, and engaging in active deterrence during ongoing operations.

With this understanding of Russian thinking about deterrence, crisis management, and war termination, we can also predict the likely continued salience of nuclear weapons in Russia's approach to security and defense. Russian pronouncements about the decreased

role of nuclear weapons due to the development of conventional precision weapons should be interpreted in the context of the concepts and capabilities for the strategic weapon set, which ultimately rely on nuclear deterrence.⁴ They should not be misinterpreted as a glide path to the denuclearization of Russia's deterrence and defense posture. This potential direction of travel is belied by President Putin's deliberate increase of the centrality of nuclear weapons to Russia's security approach and the massive ongoing modernization of its nuclear forces. The nuclear forces modernization efforts undertaken in recent years are establishing a force structure with a service life to be measured in decades, and there is no indication of a significant re-ordering of force roles within that timeframe.

With regard to the role of conventional precision strike in deterrence, there is an ongoing public debate among Russian military experts on the efficacy of non-nuclear weapons for deterrence. The President of the Russian Academy of Military Sciences has re-asserted that nuclear weapons remain the fundamental factor preventing large-scale war and has questioned the efficacy of conventional precision weapons in their assigned role.⁵ Russian military experts have explicitly stated that "at the current time a substantiated decision by the highest levels of command for infliction of a nuclear missile strike only on the basis of the fact of aggression by conventional strike means is practically impossible."⁶ This inability to calculate Russia's own level of unacceptable damage that would trigger a potential nuclear response to a conventional attack calls into question the possibility of the Russian military calculating an adversary's level of unacceptable damage for purposes of non-nuclear deterrence or war termination.⁷ Other Russian military experts have strongly questioned the efficacy of conventional precision strike for strategic deterrence, finding it credible at most for regional deterrence. It is striking and significant that these arguments are made by serving military officers in direct contradiction of policy stated in Russia's Military Doctrine and by the Minister of Defense and the President. Additionally, despite significant technological progress, a gap remains between aspirations for conventional precision strike for deterrence and actual capabilities.⁸

All these signs point to the continued primacy of nuclear weapons for Russia's ultimate security and as the foremost element of its deterrence and intra-war deterrence approaches against other nuclear weapon states. Nevertheless, Russian deterrence concepts continue

to evolve, taking account of the strategic potential of conventional precision weapons and a host of emerging technologies. In this regard, President Putin has noted that the relative weight of the nuclear balance in deterrence will shift in relation to other technologies.⁹ Continued statements by President Putin and other senior Russian leaders indicating the enduring priority of nuclear force modernization and seemingly contradictory pronouncements affirming the increasing role of conventional precision strike can be reconciled in this context.

In other words, the nuclear dimension of the Russian challenge is here to stay. President Putin has been explicit in this regard when describing the evolving, inter-connected roles of conventional precision weapons, space, cyber, and nuclear weapons. In his words, “all this will allow, together with nuclear weapons, attainment of qualitatively new instruments for achieving political and strategic goals.”¹⁰

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Implications for NATO

NATO heads of state and government at the 2016 Warsaw summit adopted a package of measures to enhance alliance deterrence and defense in response to the changed and evolving security environment. “Russia’s aggressive actions, including provocative military activities in the periphery of NATO territory and its demonstrated willingness to attain political goals by the threat and use of force” were a major catalyst for these decisions and NATO’s subsequent actions.¹ The package of measures is intended to “ensure that NATO has the full range of capabilities necessary to deter and defend against potential adversaries and the full spectrum of threats that could confront the Alliance from any direction.”²

The measures decided at Warsaw include establishment of an enhanced forward presence (eFP) in Estonia, Latvia, Lithuania and Poland “to unambiguously demonstrate, as part of our overall posture, Allies’ solidarity, determination, and ability to act by triggering an immediate Allied response to any aggression.”³ This decision and its subsequent implementation, including participation by troops of NATO’s three nuclear weapon states, send a powerful message.⁴ Allies reinforced that message by restating at Warsaw that the Alliance “has the capabilities and resolve to impose costs on an adversary that would be unacceptable and far outweigh the benefits that any adversary could hope to achieve.”⁵ Work to ensure the full effectiveness of NATO’s enhanced deterrence and defense posture includes efforts to deliver heavier and more high-end forces and capabilities and more forces at higher readiness, to make certain the NATO command structure remains robust and agile, to improve strategic anticipation through enhance Intelligence, Surveillance and Reconnaissance (ISR), an enhanced maritime posture and a range of related measures.⁶ These are important elements of NATO’s response to the Russian challenge.⁷

The Russian challenge will be an enduring one because Russia

is acting on what it perceives as its long-term interests. Russia will continue to adapt its strategy in order to achieve its aims, many of which are inimical to the security of NATO Allies. For this reason, it is imperative that NATO “continue to adapt its strategy in line with trends in the security environment – including with respect to capabilities and other measures required – to ensure that NATO’s overall deterrence and defense posture is capable of addressing potential adversaries’ doctrine and capabilities, and that it remains credible, flexible, resilient, and adaptable.”⁸

Russia can be expected to challenge the alliance on every point of its Warsaw adaptations. Of particular relevance to the issue of regional crises and escalation, NATO leaders asserted at Warsaw that the alliance “will not accept to be constrained by any potential adversary as regards the freedom of movement of Allied forces by land, air, or sea to and within any part of Alliance territory.”⁹ They also stated their intention “to enhance the Alliance’s role in projecting stability” and to retain the “ability to respond to crises beyond our borders.”¹⁰

Russia is challenging NATO on these principles and intentions along its entire eastern periphery, including by harassing NATO vessels in international waters of the Baltic and Black seas, by sustaining war and illegal occupations in partner countries, and by conducting military operations in the eastern Mediterranean in proximity to a NATO ally and contrary to the efforts of the U.S.-led coalition in Syria. In particular, Russia’s willingness to intervene in Syria in the presence of the U.S.-led coalition signals a level of boldness, quickly underscored by its surprise cruise missile strikes, a step beyond the daring which Russia displayed in Ukraine. As a corollary to this, the implications for NATO security of the end of permissive operational environments in the Euro-Atlantic region loom large, including the combination of instrumental conventional precision strike for warfighting with nuclear deterrence for aggressive sanctuarization. This is an example of how the implications of Russia’s integration of conventional precision strike and nuclear weapons for deterrence, intra-war deterrence, and nuclear thresholds will need to be factored into NATO’s ongoing adaptation. Efforts to address these challenges will also need to take into account the non-nuclear strategic triad of conventional precision strike, cyber, and space and their potential implications for deterrence, intra-war deterrence, and nuclear thresholds.

Moscow now perceives the alchemy of conventional precision

strike and nuclear weapons as a credible and effective tool to be used in combination with other means to push back against perceived encroachment by the United States and its NATO allies on Russian security interests. This all points to the potential for increasingly complex and highly volatile crisis scenarios. NATO is responding with measures that are defensive in nature, proportionate, consistent with its international obligations, and that demonstrate respect for the rules-based European security architecture.¹¹ Allies are working to ensure full and timely implementation of the strengthened deterrence and defense measures agreed at Wales and Warsaw which, along with allied commitment to meaningful dialogue and engagement with Russia, are the most effective way to ensure that the scenarios examined in this paper remain hypothetical.¹²

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“Much has been said about the Russian “Escalate to Deescalate” philosophy, ... as the West considered its response to the Russian invasion of Crimea, and later Donbass, this new emphasis became a central theme of fashioning our efforts to reply. At several points in the diplomatic exchange that followed the Russian aggression, both direct and indirect, the Russians spoke “loosely” of their use of nuclear weapons in an escalate-to-deescalate fashion. This further raised the tensions and rhetoric over the policy and clearly served to limit Western reply. Then, in Syria, Russia “upped the ante”, ... precise conventional strike from extended range highlighted the Russians’ scorched earth approach to early fighting. A new tool to augment Russia’s coercive arsenal, ... U.S. and Western debate on how to handle these new Russian tools and tactics are all over the map. Dave Johnson’s analysis could not be more on-target, nor more timely.”

General Philip Breedlove (retired)

Former Supreme Allied Commander Europe (SACEUR)

“When trying to understand the policies and postures of foreign powers, the most common mistake of analysts and decision-makers is to assume that potential adversaries operate under the same set of rules and principles as do we. This is misleading and potentially dangerous. Dave Johnson’s essay take us in the exact opposite direction. With his in-depth knowledge and understanding of the Russian military and nuclear debates, based inter alia upon a comprehensive assessment of Russian doctrinal material, his analysis is uniquely valuable to military experts and policy makers. This unprecedented work brings together an analysis of the concepts, doctrine, and capabilities related to both conventional precision strikes and the management of nuclear thresholds in order to understand how Russian thinking integrates the operational effects of conventional strikes with nuclear deterrence and coercion. Given the lasting nature of the Russian nuclear challenge, this small volume is a sobering read. It vividly illuminates the complexity of the challenge for the U.S. and its NATO allies. Filling a key analytical gap, this essay is a major building block for a clearer and better understanding of the Russian approach—which is the first and indispensable step to effectiveness in addressing this challenge.”

Camille Grand

Assistant Secretary General, NATO

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