

OCTOBER 2018

Rising Nuclear Dangers: Diverging Views of Strategic Stability

SUMMARY

As U.S. and Russian officials consider talks on strategic stability in the aftermath of the July 2018 Helsinki Summit, it remains unclear whether Moscow and Washington operate with the same understanding of strategic stability and the factors that influence it. Results from an NTI survey of U.S., Russian, and European experts confirm a divergence in views in some critical areas and reveal opportunities for engagement in others. Acknowledging this divergence is a critical step in addressing the most serious crisis facing Russia and the West since the end of the Cold War.

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Introduction

Relations between Russia and the West remain dangerously frayed. Tensions have been exacerbated by evidence of continuing Russian interference in Western democratic elections, Russia's aggressive behavior in Ukraine and Syria, malicious cyber activities by Russian-backed hackers, and continued Russian concerns about Western military power and NATO expansion. All have contributed to a toxic deficit of trust and an increased risk of direct military confrontation between Russia and the West. We have entered a new era, in which a fateful error—triggered by an accident, miscalculation, or blunder—could lead to a nuclear catastrophe.

In the wake of the July 2018 Helsinki Summit between U.S. President Donald Trump and Russian President Vladimir Putin, Russian officials have reportedly encouraged their American counterparts to resume a bilateral dialogue on strategic stability.¹ Although previous attempts to sustain strategic stability talks have suffered repeated setbacks and near-term breakthroughs are unlikely, such talks remain a critically important channel for communication to avoid further deterioration of the U.S.–Russian relationship, and they must continue. To succeed, they must address fundamental differences in perceptions of strategic stability between Russia and the West.

Many definitions of strategic stability have been used in scholarship, military doctrine, and defense planning since the concept first gained currency in the 1950s.² While there is no single definition, strategic stability is generally understood both by Western and Russian scholars and by national security professionals to refer to a state of relations between nuclear powers that includes three key conditions. First, it minimizes incentives for one side to initiate nuclear use (first strike stability). Second, it reduces incentives for competition in the development and deployment of nuclear forces (arms race stability). Third, it provides a degree of predictability and transparency during periods of heightened tension (crisis stability).³

Although there is a fair amount of convergence on the core concepts, U.S., European, and Russian policymakers operate with different or competing threat perceptions and different views on what is destabilizing or escalatory. This has led to some disagreement over which factors most negatively affect strategic stability—and who is responsible for them. An increasingly tense regional security environment and the emergence of new technologies have sharpened these differences, driven changes in nuclear force postures, and complicated the ways in which states seek stable relationships. This situation carries considerable risks. Left unaddressed, the perceived or actual erosion of strategic stability between Russia and the West will increase the risks of miscalculation and escalation—with potentially catastrophic results.

We have entered a new era, in which a fateful error—triggered by an accident, miscalculation, or blunder—could lead to a nuclear catastrophe.

¹ “U.S. Yet to Respond to Russia’s Proposal on Strategic Stability Dialogue—Ambassador,” *Tass Russian News Agency*, September 14, 2018, www.tass.com/politics/1021557.

² For a comprehensive look at the evolution of the strategic stability concept, see Elbridge A. Colby and Michael S. Gerson, eds., *Strategic Stability: Contending Interpretations*, Strategic Studies Institute and U.S. Army War College Press, February 2013, especially the opening chapter by Michael S. Gerson, “The Origins of Strategic Stability: The United States and the Threat of Surprise Attack,” 1–46.

³ This core set of conditions for strategic stability—or variations on it—was widely cited by nearly all the individuals NTI surveyed for this paper.

As part of its Rising Nuclear Dangers project, focused on reducing risks in the Euro-Atlantic region, the Nuclear Threat Initiative (NTI) conducted an informal survey of leading security experts from the United States, Russia, and Europe to assess their views on strategic stability and the factors that affect it. A list of NTI survey questions is included in Appendix 1.

The survey responses led to the following conclusions:

1. **Russia's interpretation of strategic stability remains broader than that of the United States and Europe.** This helps explain differences between Russian and Western views of the role of nuclear weapons in defense and foreign policy.
2. **Emerging technologies are complicating strategic stability calculations.** Advances in non-nuclear capabilities and technologies offer new avenues for competition and are changing the way countries perceive and respond to threats to both conventional and nuclear systems.
3. **There is an emerging debate in some corners of Moscow and Washington about whether limited use of nuclear weapons may be viewed by leaders as feasible and less catastrophic, more controllable, and more credible than the threat of massive retaliation.** Such perceptions are rooted in competing views of conflict escalation and are reflected in nuclear modernization and force posture decisions.
4. **Left unaddressed, differences in interpretations of what impacts stability and what triggers escalation bear heavily on the risk of miscalculation or accident between Russian and Western forces.** Dialogue is essential to understanding each other's positions and bridging significant differences.

NTI's survey results confirm what has become increasingly apparent in recent years: that all too often, what the West finds stabilizing, Russia finds destabilizing, and vice versa. Acknowledging this divergence is a critical step toward addressing the most serious crisis facing Russia and the West since the end of the Cold War.

This paper delves into each of these four conclusions, drawing on the results of the NTI survey as well as recent writings from Russian and Western sources. Appendix 2 includes sources that informed this report.

Findings

1. Russia's interpretation of strategic stability remains broader than that of the United States and Europe.

Russian, American, and European respondents revealed areas of both agreement and disagreement in their interpretations of strategic stability. All associated it with a state of relations that minimizes the risk of escalation and maximizes predictability, but they disagreed considerably on the breadth of factors that impact this balance and to what degree.

Russian respondents took the broadest view, placing strategic stability within the larger context of political, military, and economic relations between Russia and the West. For them, strategic stability describes a balanced relationship between nuclear-armed powers that reduces incentives for armed conflict. Respondents suggested that maintaining that relationship is dependent on Russia's ability to exercise its political will with respect to economic interactions, conventional force strength, and nuclear capabilities based upon its national and global interests. This view also adopts more traditional interpretations of strategic stability that focus on preserving the strategic balance between the United States and Russia in a way that reduces incentives to use nuclear weapons first or engage in an arms race. As a result, Russian respondents expressed concern over a broader range of technical and geopolitical factors that may impact strategic stability than did their European and American counterparts.

Russia's broad interpretation is rooted in an acute historical feeling of vulnerability that is expressed in contemporary Russian grievances over NATO expansion and military superiority and accentuated by perceptions that the United States intends to remain a hegemonic power, encircle Russia, and interfere in Russian interests. Geopolitical factors include political tensions that stem from perceptions of Western interference in Russia's sphere of influence and the imposition of economic sanctions to constrain Russia's actions or prevent it from acting in its capacity as a global and regional power. Russian respondents uniformly stated that Russia specifically views the continued expansion of NATO and the increasing independence of former Soviet republics as a principal threat to Russian national security and its foreign policy interests.

Technical factors of deep concern cited by Russian respondents, in addition to Russian interest in preserving the overall nuclear balance, included non-nuclear weapons such as conventional precision-guided systems, hypersonic missiles, and, especially, ballistic missile defense systems. Each of these capabilities was highlighted as having a real or potential impact on Russia's ability to launch a credible nuclear retaliatory strike.

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American and European survey respondents generally described strategic stability more narrowly than their Russian counterparts, focusing on military and technical factors with the potential to impact deterrence or lead to destabilizing changes in nuclear capabilities, doctrines, or postures. However, the specific military and technical factors they cited were similar to those referenced by the Russians. These included advances in technologies including in long-range precision strike, hypersonic systems, offensive cyber and counter-space capabilities. Western respondents acknowledged Russian concerns about the potential impact of ballistic missile defense technologies on strategic stability, though they tended to downplay its importance in the U.S.–Russian deterrence relationship, citing the regional focus of U.S. defenses and Russia’s existing ability to circumvent them. American respondents specifically emphasized the overall destabilizing impact of Russia’s continued focus on nuclear modernization.

Political and economic issues typically factored less into Western concepts of strategic stability. Nonetheless, Western respondents highlighted the negative security implications of Russia’s efforts to restore military and regional influence. They cited in particular the destabilizing impact of Russia’s actions in Ukraine and Syria and its interference in Western elections.

2. Emerging technologies are complicating strategic stability calculations.

There is broad agreement between U.S., Russian, and European experts that advances in military technologies complicate deterrence and strategic stability. New and disruptive technologies blur the lines of what constitutes a *strategic capability*—traditionally nuclear weapons—because non-nuclear weapons and technologies are increasingly capable of holding at-risk nuclear forces and other enabling capabilities, such as early warning and command and control systems and critical civilian infrastructure. Respondents from both Russia and the West argued that technological development has the potential to disrupt the strategic balance, including the ability of either side to retain confidence in its ability to respond to a nuclear attack with its own nuclear weapons.

These so-called *strategic non-nuclear* weapons and technologies—a term now used in both U.S. and Russian doctrine and policy documents—include offensive cyber capabilities, precision or long-range conventional and hypersonic weapons, missile defenses, and space and counter-space systems. These weapons and technologies have the potential to affect strategic stability by demonstrating the ability to strike an adversary’s nuclear forces or nuclear command, control, and communications systems, or to blunt an attack, without resorting to nuclear use. Other developments, such as improvements in remote sensing and increased application of automation and artificial intelligence in military systems, may pose new threats to otherwise survivable nuclear systems.

The proliferation of *dual-use systems* and technologies presents additional complications by blurring the lines between nuclear and conventional forces and the circumstances under which they may be used. Dual-use systems generally refer to weapons capable of delivering either conventional or nuclear payloads, or to those enabling capabilities and infrastructure that could support either nuclear or conventional command, control, communications, and intelligence operations. The implications of increased ambiguity are twofold. On one hand, it may raise the perceived consequences of an attack on such systems, potentially deterring an attacker. Alternatively, ambiguity about dual-use systems could lead to the mistaken targeting of a system

that is vital to a state's nuclear forces during a crisis, potentially inviting a nuclear response, when the attacker may have intended to target conventional weapons or enabling capabilities.⁴

Survey respondents on all sides expressed the view that emerging and disruptive technologies could undermine the U.S./NATO–Russian deterrence relationship by raising concerns in both Russia and the West that nuclear forces may be vulnerable to non-nuclear attacks. A perception that a state's nuclear arsenal is no longer capable of an assured second strike could prompt that state to change its force structure and force posture to offset perceived vulnerabilities. It also could prompt changes in a state's attitude toward or incentives for first use of nuclear weapons in a conflict.

The introduction of such technologies is potentially destabilizing and risks leading to the rapid escalation of a conflict—either deliberately or through miscalculation. These escalation dynamics are complicated by the increased number of actors with access to technologies that could influence strategic stability. Further, new operational concepts such as the increasing integration of offensive cyber capabilities into military operations make strategic relationships more complex and difficult to manage.

... Emerging and disruptive technologies could undermine the U.S./NATO–Russian deterrence relationship...

U.S. Perspectives

There was disagreement among U.S. respondents over the extent to which nuclear deterrence may be undermined by non-nuclear capabilities and what actions should be taken to preserve it. However, there was consensus that emerging and disruptive technologies exacerbate uncertainties about deterrence and make strategic stability more challenging to maintain.

This assessment is largely consistent with recent U.S. nuclear policy documents. The 2017 U.S. National Security Strategy states that “deterrence today is significantly more complex to achieve than during the Cold War” and argues that the proliferation of non-nuclear weapons and technologies may permit adversaries to attempt strategic attacks against the United States without resorting to nuclear weapons.⁵ Similarly, the 2018 Nuclear Posture Review Report (NPR) emphasizes the threat from strategic non-nuclear capabilities in an increasingly complex and competitive strategic environment.⁶

U.S. survey respondents noted that the introduction of disruptive non-nuclear technologies creates uncertainty about the future vulnerability of U.S. nuclear forces to non-nuclear weapons, including delivery systems and platforms, early-warning capabilities, and nuclear command, control, and communications. These technologies also introduce new uncertainties about when such capabilities might be used. The NPR assesses that this could lead U.S. adversaries to miscalculate the consequences of an attack perceived to be below the nuclear threshold. Survey respondents consistently articulated that a reduced understanding

⁴ For an excellent assessment of the risks of entanglement stemming from dual-use enabling capabilities, see James M. Acton, ed., “Entanglement: Russian and Chinese Perspectives on Non-Nuclear Weapons and Nuclear Risks,” Carnegie Endowment for International Peace, November 2017, www.carnegieendowment.org/files/Entanglement_interior_FNL.pdf.

⁵ White House, National Security Strategy of the United States of America, December 2017, 27, www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf.

⁶ U.S. Department of Defense, Office of the Secretary of Defense, Nuclear Posture Review, media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF.

on all sides of an adversary's nuclear and non-nuclear capabilities and thresholds for nuclear use could increase incentives to use capabilities that are potentially vulnerable to attack early in a conflict, leading to the potential for rapid and uncontrollable escalation.

In the United States, concerns about controlling conflict escalation and maintaining a credible ability to respond proportionally across a range of scenarios have driven new calls by the Trump administration for more diverse, flexible, and tailored responses including both nuclear and non-nuclear options. The 2018 NPR specifically states that the United States may consider the use of nuclear weapons in response

to "significant non-nuclear strategic attacks" on "U.S., allied, or partner civilian populations or infrastructure, and attacks on U.S. or allied nuclear forces, their command and control, or warning and attack assessment capabilities." Some believe the threat to use nuclear weapons in response to non-nuclear attacks lowers the nuclear threshold and is destabilizing as well as incompatible with the goal of reducing reliance on nuclear weapons. Overall, U.S. survey respondents were split on the extent to which nuclear weapons should play a role in deterrence of non-nuclear attacks.

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Russia continues to diversify, modernize, and rely on its nuclear forces as central elements of its national security strategy and policy.

Russian Perspectives

Russia has long viewed U.S. and NATO technological superiority as a threat to its nuclear forces, and experts argue that new technologies drastically complicate the ways Russia and the West perceive the ability to control conflict escalation.⁷ Russian survey respondents consistently argued that U.S. ballistic missile defenses and the emergence of strategic non-nuclear weapons such as hypersonic or other long-range precision strike capabilities erode strategic stability because they threaten Russian nuclear forces and their ability to deter through assured retaliation. This view is reflected in Russian strategy documents and force posture decisions.

Russia has responded by augmenting and demonstrating its own nuclear and non-nuclear capabilities, including the development, deployment, and use of offensive cyber capabilities, counter-space capabilities, and long-range conventional strike weapons. To offset perceived U.S. strategic and conventional advantages, and in particular to counter U.S. missile defenses, Russia continues to diversify, modernize, and rely on its nuclear forces as central elements of its national security strategy and policy.

Russia's concerns over the impact of non-nuclear threats to its nuclear arsenal were evident in a March 2018 address by President Vladimir Putin to the Federal Assembly, in which he dedicated more than 30 minutes to describing new nuclear systems designed to circumvent U.S. ballistic missile defense capabilities. These systems included nuclear-armed hypersonic glide vehicles and cruise missiles and an underwater drone, all capable of maneuvering around defenses before striking their targets at up to intercontinental range.

⁷ See Nikolai N. Sokov, "Why Russia Calls a Limited Nuclear Strike 'De-escalation,'" *Bulletin of the Atomic Scientists*, March 13, 2014, thebulletin.org/why-russia-calls-limited-nuclear-strike-de-escalation; and Pavel Podvig, "Blurring the Line between Nuclear and Nonnuclear Weapons: Increasing the Risk of Accidental Nuclear War?" *Bulletin of the Atomic Scientists* 72, no. 3 (2016): 145-149, www.tandfonline.com/doi/full/10.1080/00963402.2016.1170363.

Putin also emphasized a new Russian intercontinental ballistic missile intended to overwhelm U.S. missile defenses with multiple independently-targetable warheads.⁸

It also has been reported that Russia is continuing to develop and deploy a wide range of dual-capable ground-, sea-, and air-launched weapons systems capable of delivering conventional or nuclear warheads—including at least one system that violates Russia's obligations under the Intermediate-Range Nuclear Forces (INF) Treaty. Some Russian survey respondents judged that such systems deliberately introduce ambiguity into Russia's regional nuclear force posture by blurring the line between nuclear and conventional capabilities.⁹

European Perspectives

Although European respondents did not uniformly define strategic stability, they, too, recognized the importance and potentially dangerous impact of technological advances on stability and conflict. Several aligned closely with the assessments by U.S. experts of the impact of emerging and disruptive technologies on deterrence. However, many European respondents cited emerging and disruptive technologies as just one part of a broader political and military threat to stability. For example, many expressed specific concerns about the role of offensive cyber capabilities in Russian information operations and pre-conflict battlefield preparations. Several respondents noted that Russia's offensive capabilities in cyberspace were advancing along with political and military strategies to further Russian foreign policy objectives. These capabilities enable such actions as fostering external support for populist movements in Europe deemed friendly to Russia and waging disinformation campaigns leading up to a military escalation. Europeans, therefore, view these capabilities as posing a broad and serious threat to democratic institutions in Europe and to Europe's ability to respond to military threats. Due to the inherent ambiguity in the scope, execution, and potential impact of cyberattacks, many European respondents assessed such technologies as inherently damaging to regional and strategic stability because of their potential to increase the risk of miscalculation in a crisis.

Across the board, European respondents suggested that nuclear deterrence and nuclear weapons as a component of strategic stability are well-understood by the United States, Russia, and Europe. However, they asserted that there seems to be a disaggregated understanding of the ways emerging and disruptive technologies would impact escalation during a crisis, leading to real concerns about miscalculation leading to conflict or nuclear use.

⁸ Vladimir Putin, "Presidential Address to the Federal Assembly," (Manezh Central Exhibition Hall, Moscow, March 1, 2018), en.kremlin.ru/events/president/transcripts/56957.

⁹ Podvig, "Blurring the Line."

3. There is an emerging debate in some corners of Moscow and Washington about whether limited use of nuclear weapons may be viewed by leaders as feasible and less catastrophic, more controllable, and more credible than the threat of massive retaliation.

Survey respondents indicated that the rules governing mutual deterrence of a large-scale nuclear exchange between the United States and Russia remain well-understood, intact, and largely stable. At the same time, many said the risk of nuclear use between the two nuclear superpowers is higher today than at any point since the end of the Cold War.

Such perceptions are rooted in concerns on each side about how the other views the role of nuclear weapons in conflict escalation, particularly in the context of regional conflicts, and about national decisions related to nuclear modernization and force posture. These perceptions are prominently featured in recent Russian, U.S., and NATO policy documents.¹⁰

Although respondents did not say they believe states are intentionally lowering the threshold for nuclear use, the introduction of more diversified nuclear and non-nuclear capabilities and a more ambiguous characterization of the role of nuclear weapons make it harder for either side to understand what may trigger a crisis with the potential for nuclear escalation. Some respondents observed that each side appears to believe it can control escalation through the increased diversification and flexibility of its nuclear forces, as evidenced by the wide range of nuclear weapons in the Russian arsenal and calls for new low-yield options in the United States. While some believe ambiguity based on more diverse and flexible nuclear capabilities can produce a tangible and potentially compelling deterrent effect, many respondents suggested that the potential benefits of ambiguity must be carefully and deliberately balanced with the increased risk of miscalculation.

Russia

Some Western experts perceive that Russia has implied it would consider nuclear use in a regional conflict in an attempt to convince the West that the costs of intervention in Russian political and military activities would far outweigh the benefits. Such rhetoric has been used with respect to the situation in Crimea and, to

¹⁰ The 2018 U.S. NPR asserts that Russian nuclear and military doctrine is dangerous, coercive, and destabilizing, and that flexible new U.S. nuclear capabilities should be developed to provide “tailored” deterrence options for a widening range of nuclear and non-nuclear threats. Russia’s 2014 military doctrine highlights the strategic non-nuclear capabilities of the United States, including ballistic missile defenses and long-range precision strike capabilities, and an expanding NATO among the principal threats to Russian security and regional stability. The 2016 NATO Warsaw Summit communiqué lists a range of security challenges and threats, specifically highlighting “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” as sources of regional instability and a fundamental challenge to the alliance. See U.S. Department of Defense, Nuclear Posture Review Report, February 2018; President of the Russian Federation, “The Military Doctrine of the Russian Federation, 2014,” press release and English translation via the Embassy of the Russian Federation to the United Kingdom of Great Britain and Northern Ireland, June 29, 2015, rusemb.org.uk/press/2029; and “Warsaw Summit Communiqué,” NATO, press release, July 9, 2016, paragraph 5, www.nato.int/cps/en/natohq/official_texts_133169.htm.

a lesser extent, in Syria.¹¹ Russian military exercises—some concluding with scenarios that feature nuclear use following a Western conventional attack—have caused some Western scholars to express concern about the role of nuclear weapons in Russia’s regional strategy.¹²

However, some of the Russian respondents took the view that Russia’s military doctrine does not lower the threshold of nuclear use but instead makes clear that Russia relies on a broader range of nuclear, non-nuclear, and non-military capabilities to deter conflict by demonstrating an ability to counter U.S. and NATO military advantages.¹³ Other Russian survey respondents acknowledged there had been an increased emphasis on nuclear weapons in prior Russian policy documents but suggested that neither the limited use of nuclear weapons nor an “escalate to de-escalate” strategy is part of current official Russian military doctrine. Instead, they argued that Russia’s nuclear capabilities and doctrine were specifically designed for deterrent purposes, with the intent of providing flexible options to the Russian president.¹⁴

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United States and NATO

About half of U.S. survey respondents expressed strong concerns that Russia believes it can control conflict escalation by using or threatening to use a limited number of nuclear strikes to rapidly de-escalate or terminate a conventional conflict. This divide reflects a split among Western opinions about the prominence of the “escalate to de-escalate” strategy in Russian thinking and whether it exists as a part of current Russian doctrine.¹⁵ Nearly all Western respondents, however, expressed concern about Russia’s continued reliance on nuclear weapons. They cited the extensive modernization of Russian strategic nuclear forces, as well as the development and deployment of a range of dual-capable non-strategic delivery systems.¹⁶

¹¹ Courtney Weaver, “Putin Was Ready to Put Nuclear Weapons on Alert in Crimea Crisis,” *Financial Times*, March 15, 2015, www.ft.com/intl/cms/s/0/41873ed2-cb60-11e4-8ad9-00144feab7de.html; Zachary Keck, “Russia Threatens Nuclear Strikes over Crimea,” *The Diplomat*, July 11, 2014, thediplomat.com/2014/07/russia-threatens-nuclear-strikes-over-crimea. See also, Jacek Durkalec, “Nuclear-Backed ‘Little Green Men’: Nuclear Messaging in the Ukraine Crisis,” Polish Institute of International Affairs, July 2015, www.pism.pl/files/?id_plik=20165; and Henry Meyer, “Russia, U.S. Near Brink in a Syrian Standoff with Nuclear Risks,” Bloomberg, April 13, 2018, www.bloomberg.com/news/articles/2018-04-13/russia-u-s-near-brink-in-a-syrian-standoff-with-nuclear-risks.

¹² Durkalec, “Nuclear-Backed ‘Little Green Men’: Nuclear Messaging in the Ukraine Crisis,” 9–15.

¹³ This is consistent with some recent analysis on the issue. See for example, Kristin Ven Bruusgaard, “Russian Strategic Deterrence,” *Survival* 58 no. 4 (2016): 7–26, and Olga Oliker, “Russia’s Nuclear Doctrine: What We Know, What We Don’t, and What That Means,” Center for Strategic and International Studies, May 2016, csis-prod.s3.amazonaws.com/s3fs-public/publication/160504_Oliker_RussiasNuclearDoctrine_Web.pdf.

¹⁴ The survey took place before President Putin’s March 2018 speech, at which he announced or promoted several Russian nuclear systems with much higher projected yields that were focused on circumventing U.S. missile defenses. However, the systems described in the speech were largely consistent with core themes identified in Russian responses. This point is frequently contested in U.S. debates.

¹⁵ The term “escalate to de-escalate” generally describes a suggested Russian strategic concept that envisions the limited use of nuclear weapons to create a pause in a conventional conflict and open a pathway for a negotiated settlement on Moscow’s terms. The term is hotly debated in policy circles, but variations of it have been adopted in recent U.S. nuclear policy documents, including the 2018 NPR (p. 8). Some scholars argue that, regardless of whether the concept is part of official strategy, Russia is developing and deploying some of the military elements that could implement such an option. See, for example, Katarzyna Zysk, “Escalation and Nuclear Weapons in Russia’s Military Strategy,” *The RUSI Journal*, 163 no. 2 (2018): 4–15.

¹⁶ Putin, “Presidential Address to the Federal Assembly.”

Many U.S. respondents also called attention to elements of U.S. nuclear posture suggesting that the United States is heading in a similar direction. The 2018 NPR, for example, promotes a more flexible and tailored nuclear deterrent. Proponents of new low-yield nuclear options mandated in the 2018 NPR say they will help close a gap in the ability of the United States to deter limited nuclear use by potential adversaries by matching their escalatory potential in a variety of limited-use scenarios. However, the justification provided for these new capabilities led other respondents to question whether they would, in fact, *lower* the threshold for nuclear use by providing seemingly more limited or proportional nuclear options to the president. This was an area of significant debate and division among U.S. survey respondents.

4. Left unaddressed, differences in interpretations of what impacts stability and what triggers escalation bear heavily on the risk of miscalculation or accident between Russian and Western forces.

Across the board, both Russian and Western respondents expressed concern that there is a considerable risk that a miscalculation or misinterpretation of signals and intent could lead to conflict. Survey respondents said the lack of mutual understanding regarding factors that could erode strategic stability contributes to the perception that conflict between Russia and the West, including the potential for nuclear use, is increasingly likely. Left unaddressed, these differences will continue to significantly impact relations between Russia and the West and increase the risk of miscalculation and escalation.

Respondents from all sides expressed concern about the potential collapse of bilateral U.S.–Russian nuclear arms control agreements.

Survey respondents identified several additional trends that could increase the potential for escalation. First, they noted that the erosion of regular U.S.–Russian diplomatic engagement and military-to-military contacts further raises the potential for miscalculation and escalation. They argued that downplaying dialogue and diplomacy, especially during periods of tension, destroys opportunities to build mutual strategic understanding.

Respondents from all sides expressed concern about the potential collapse of bilateral U.S.–Russian nuclear arms control agreements. They cited competing assertions of INF Treaty violations and the general deadlock across multiple channels of negotiations between Russia and the West as precursors to a future without the mutual regulation provided by arms control. This, they argued, would remove key vehicles for transparency, predictability, and communication, which have provided a foundation of stability since the Cold War.

Second, respondents expressed concern about the increasingly complex geopolitical environment, particularly at the regional level. Several respondents identified third parties in regional security dynamics, such as allies or other nuclear weapons states with particular interest in regional security outcomes, as core complicating (though not necessarily negative) factors for bilateral strategic stability and key contributors to differences between Russian and Western thinking. Several respondents argued that other states with nuclear weapons (e.g., China, North Korea) need to be taken into account when making strategic choices due to U.S. alliance commitments in Asia, as well as Europe. These commitments affect decisions for both nuclear and non-nuclear force postures. Russia has no similar alliance commitments—though it, too, faces security challenges from third-party nuclear powers and has partners in various regions.

The concern that complex and contentious regional dynamics could rapidly escalate and lead to a full-scale conflict was cited as perhaps the most worrisome element of today's global security environment. A majority of U.S., Russian, and European respondents suggested that such a conflict has the potential to cross the nuclear threshold. In the Euro-Atlantic regional security environment specifically, Western survey respondents highlighted the dangers associated with Russian activities below the threshold of military conflict, including Russia's use of local proxies, information operations including cyberattacks, and special operations forces. They noted that the close proximity of Russian and NATO forces along Europe's eastern borders presented a potential flashpoint that could lead to accidents, provocations, miscalculations, and, ultimately, armed conflict.

These regional dynamics also can influence force-posture changes. For example, U.S. enhancements to its missile defenses in response to North Korea and Iran's advancing ballistic missile programs have prompted Russia to enhance its strategic offensive capabilities to preserve a credible and survivable deterrent against the United States. Similarly, U.S. alliance commitments are a central factor for the United States' retention of large and diverse conventional military forces, sufficient nuclear forces, and the ability to project power. Alliance commitments have also led to calls for increased diversification of the U.S. nuclear arsenal and conventional military capabilities. However, these capabilities, especially long-range U.S. precision strike capabilities, have prompted Russia (and China) to address the survivability of its nuclear forces and command and control structure by developing new capabilities across multiple domains to offset U.S. advantages. These dynamics could lead to a further destabilizing arms race, heightened rhetoric, and increased tensions between states.

Ambiguities arising from an increased integration of nuclear and conventional systems could trigger rapid escalation.

A third concern expressed by many survey respondents was that the ambiguities arising from an increased integration of nuclear and conventional systems could trigger rapid escalation. As noted previously, nuclear weapons have become increasingly intertwined with non-nuclear technologies and new domains such as space and cyberspace. These risks are manifested in the proliferation of dual-use systems capable of delivering both nuclear and conventional weapons, in the proliferation of dual-use enabling capabilities with roles in both the conventional and nuclear missions (e.g., U.S. early warning and communication satellites that have functions for both nuclear and conventional missions), and in the blurring of capabilities with both offensive and defensive uses (e.g., U.S. and Russian cyber tools).

For example, some respondents noted that actions taken for conventional advantage by one nuclear-armed state during a limited conventional conflict with another nuclear-armed state easily could be misinterpreted as an attack on that country's nuclear capabilities. The integration and co-location of some conventional and nuclear-enabling capabilities on some U.S. satellites offers a good example of this dangerous dynamic. During a conventional conflict, there would be a strong incentive to disrupt the information advantage U.S. satellites provide to military commanders. However, some satellites are used for both intelligence gathering and missile warning, or to support both nuclear and conventional command and control. If these satellites were disrupted or destroyed for any purpose by a nuclear-armed state, the United States could not be sure that the attack was not intended to disrupt the U.S. nuclear, rather than conventional, deterrent, and leaders could be prompted to take a more severe, even a nuclear, response.

Conclusion

Although there were areas of concurrence among NTI's survey respondents, including agreement that technological advancements have complicated the concepts of strategic stability and deterrence, NTI's study finds that Russia and the West have increasingly divergent interpretations of strategic stability and whose actions most undermine it.

At the same time, amid a variety of destabilizing developments, many respondents agreed that the risk of miscalculation continues to grow. It is only through a concerted dialogue that addresses the divergent interpretations of strategic stability that the danger may be reduced. To be successful, a renewed dialogue between the United States and Russia should start by identifying those developments or factors that each side finds to be destabilizing and then should address those issues through confidence-building measures or other means of engagement. Some recent efforts, such as a June 2018 meeting between General Joseph Dunford, Chairman of the U.S. Joint Chiefs of Staff, and General Valery Gerasimov, Chief of the Russian General Staff.¹⁷

Increased diplomatic, military-to-military, and expert dialogue is essential. Failure to come to a common understanding of strategic stability and to resolve uncertainties about nuclear policies and conflict escalation leaves Russia and the West dangerously at risk of miscalculation with potentially devastating consequences.

¹⁷ Doina Chiacu and Andrew Osborn, "First Trump-Putin Summit Has Cold War Backdrop, U.S. Allies Nervous," Reuters, June 28, 2018, www.reuters.com/article/us-usa-trump-putin/trump-putin-summit-to-be-held-in-helsinki-fox-news-idUSKBN1JO1A5.

Appendix 1

NTI Survey Questions

NTI distributed survey questions to nuclear policy experts from the United States, Russia, and Europe during the summer of 2017. The survey asked them to consider the following standard set of questions and requested a mix of open-ended and yes/no responses with the opportunity to comment.

1. How do you define strategic stability?
2. Has the concept of strategic stability changed since the Cold War? If yes, how?
3. Where do U.S., European, and Russian views on strategic stability align? Where do they diverge?
4. Taking into account today's security environment, what developments (political, technological) would you consider to be most destabilizing?
5. What could the United States, Europe, and Russia do in the near term—unilaterally, bilaterally, or multilaterally—to strengthen strategic stability?
6. Do you believe that the United States and Russia share a common understanding of strategic stability?
7. Does strategic stability exist today in the Euro-Atlantic region?
8. Is strategic stability still a useful concept?

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The positions and conclusion expressed in this report do not necessarily reflect those of the individual survey participants listed above, nor the institutions with which they are affiliated.

Appendix 2

Suggested Readings on Strategic Stability

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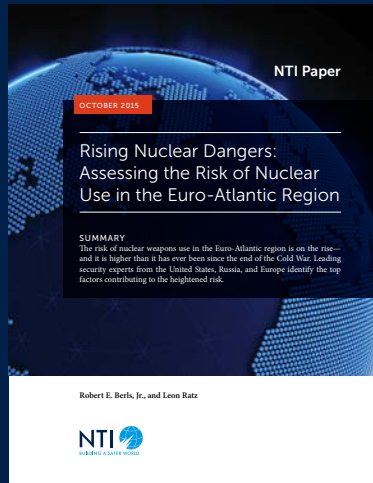
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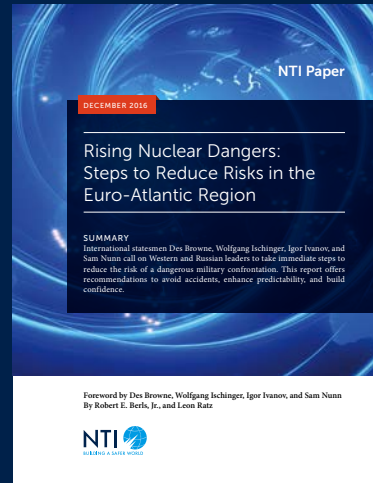
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This report offers recommendations to avoid accidents, enhance predictability, and build confidence between the West and Russia. In the Foreword, Des Browne, Wolfgang Ischinger, Igor Ivanov, and Sam Nunn call on Western and Russian leaders to take immediate steps to reduce the risk of a dangerous military confrontation. (2016)

