

ON FUTURE WAR

MAY 2022

THE COMING STORM

Insights from Ukraine about Escalation in Modern War

Benjamin Jensen and Adrian Bogart

IN THE FUTURE...

- There will be more crises like Ukraine that pull in great powers, spark escalation risks based on fear and uncertainty, and test the viability of integrated deterrence.
- The longer a conflict such as Ukraine lasts, the less likely it will be confined to one state.
- The national security community will need to develop tools and techniques for assessing competition, escalation tendencies, and risk attitudes among foreign leaders that combine old concepts from political psychology with new capabilities afforded by data science and natural language processing.

Based on three crisis simulations held in late March 2022 with think tank fellows, military planners, and congressional staffers, The North Atlantic Treaty Organization (NATO) will likely struggle to address escalation vectors almost certain to push the current war in Ukraine beyond the country's borders. This paper captures key insights from across these simulations based on two triggering events: (1) a Russian surgical strike on a NATO logistics hub used to provide weapons to Ukraine in southeast Poland, and (2) Russian use of chemical weapons along the Polish border while simultaneously mobilizing to threaten the Baltics. As the conflict crossed a key threshold and risked becoming a regional war, most participants found a natural pull to escalate in each scenario despite limited expectations of achieving a position of competitive advantage. Analyzing how individuals and teams approached decisionmaking provides insights on rethinking escalation models in the twenty-first century and taking advantage of new concepts and capabilities to better support signaling during a crisis.

This paper introduces the *On Future War* series. This series uses a combination of traditional strategic studies methods and data science—including survey and natural experiments—alongside crisis simulations and wargames to anticipate how strategic competition is evolving. Each installment will review the results of a wargame or crisis simulation and provide additional statistical insights into how players approached decisionmaking consistent with modern military operations and strategy.

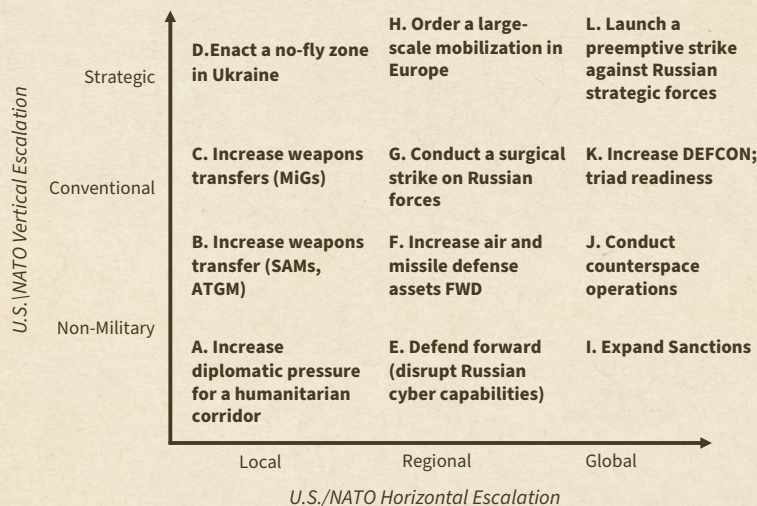
BACKGROUND

The war in Ukraine is not confined to the country's borders. The Kremlin has stated its war aims involve limiting Kyiv from becoming part of a larger transatlantic economic and security block.¹ Russian major general Rustam Minnekaev indicated that the second phase of Russia's "special military operation" is to establish a land corridor from the Donbas to the pro-Russian breakaway region of Transdnistria in Moldova.² Moscow pursues these objectives with military force in Ukraine, nuclear blackmail, and economic coercion.³ The West continues to send weapons and intelligence to halt the Russian invasion.⁴ In this manner, the conflict is an acute episode in the larger rivalry between the United States/NATO and Russia, creating escalation risks beyond the sovereign borders of Ukraine.

What are the escalation risks in a protracted Ukrainian conflict and how should U.S. policymakers navigate them? Building on previous crisis simulations that evaluated emergent risks in contemporary great power competition, this paper explores how the current conflict could expand.⁵

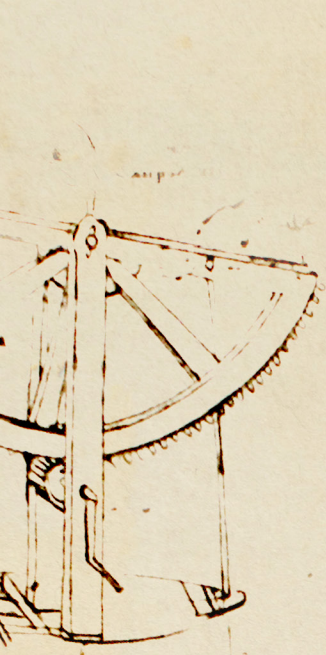
There is still a distinct possibility of escalation in Ukraine. Of the 44 rungs in Herman Kahn's foundational escalation ladder, the first 20 are nonnuclear and range from sub-crisis maneuvering (e.g., political warfare and gray zone activity) to a spasm or insensate war involving full nuclear exchange.⁶ In the early stages, which include conventional proxy conflict, parties engage in competitive risk taking, or what Schelling called "the threat that leaves something to chance," as they use a mix of diplomacy and military force to get the other side to back down.⁷

Figure 1: Escalation Options



Source: CSIS/original graphic created by Benjamin Jensen.

These threats involve threatening or taking actions that increase the risk geographically (i.e., horizontal escalation) or in terms of intensity (i.e., vertical escalation). The resulting responses need to produce bargaining power to be effective.⁸ This dynamic means policymakers need to model and assess escalation risks as they aid Ukraine relative to whether response options increase their competitive bargaining position compared to the underlying risk. In other words, Ukraine is the first test of the Biden administration's integrated deterrence strategy.



GAME DESIGN

Three crisis simulations held in late March 2022 put over 60 players, each with at least 10 years of national security experience, in the position of making political-military decisions in response to further escalation in Ukraine.⁹ The simulation began with assuming a stalemate along the front in eastern Ukraine and had each side—a U.S.-led NATO coalition and Russia—exploring alternatives to achieve a competitive advantage. Players had imperfect information about the intentions of the other side but retained a comparable menu of flexible deterrent and response options, complete with a mix of vertical and horizontal escalation actions (see Figure 1). In U.S. military planning, flexible deterrent options are preplanned crisis responses that provide the ability to scale (i.e., escalate or de-escalate) based on a mix of friendly objectives, the issue at stake, and likely adversary actions.¹⁰ By designing the game around these options, the researchers created a mechanism to measure how escalation dynamics evolve over the course of a conflict such as Ukraine.

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Each simulation had three rounds designed to assess preferences for flexible deterrent and response options during planning as well as how preferences shifted given possible contingencies. In each round, players selected their preferred option from the menu depicted in Figure 1 and assessed its expected utility (i.e., bargaining advantage) and underlying escalation risk. In this way, the crisis simulation captured the idea of competitive risk, which is at the core of deterrence literature. To produce a competitive advantage, each side selected a flexible deterrent option whose expected utility (i.e., net bargaining benefit) matches or outweighs the risk of further escalation.¹¹

In the initial planning round, U.S./NATO players selected the flexible deterrent option most likely to contain the crisis to Ukraine, and Russian players selected the option most likely to compel Western nations to stop supplying weapons to Ukraine. From the menu of options in Figure 1, teams selected their preferred responses in relation to the underlying escalation mechanism: vertical or horizontal. They also ranked each option in terms of the expected utility from 1 (low expected benefit) to 10 (high expected benefit and competitive advantage) and in terms of underlying escalation risk from 1 (low risk) to 10 (high risk of escalation).

In the subsequent rounds, as discussed below, players again selected their preferred flexible deterrent and response option from the menu and assigned it a score in terms of its expected utility and underlying escalation risk. In this manner, the researchers could assess the difference between the expected bargaining advantage and escalation risk across each round. Furthermore, it allowed for a comparison of flexible deterrent option preferences before and

after a crisis, capturing the adage that no plan survives first contact.¹²

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Game Insights

In the initial planning round, 29 percent of U.S./NATO teams opted to increase weapons transfers to Ukraine, while 20 percent opted to increase air and missile defense along NATO's eastern and Baltic flank. On average, U.S./NATO teams expected low utility from their

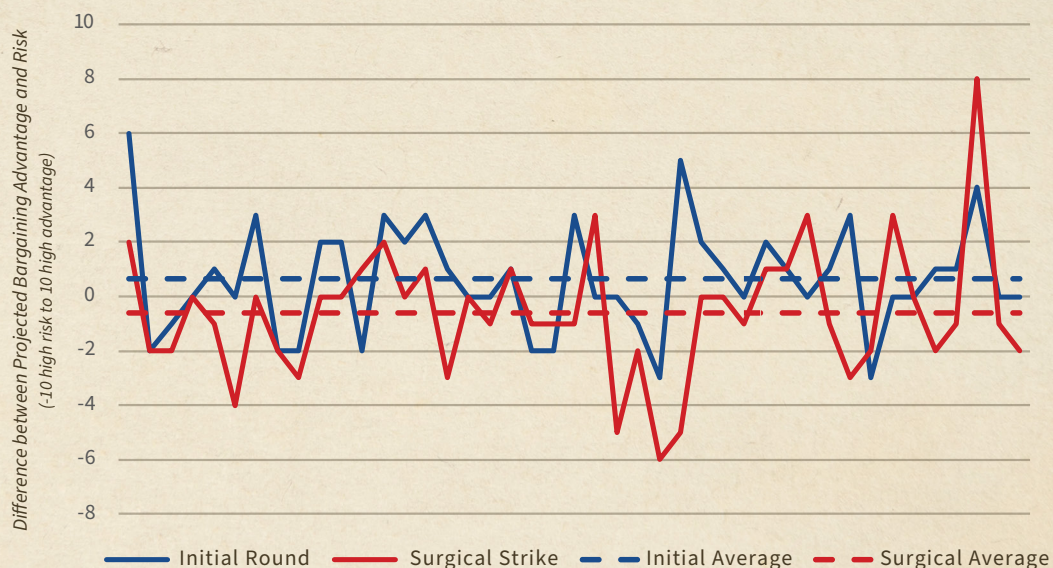
CRISIS VIGNETTE: SURGICAL STRIKE

A surgical strike consisting of ten cruise missiles originating from Belarus hits a NATO logistics hub in Poland. Despite the larger number of NATO combat air patrols (CAPs) and air defenses in the area, the missiles emerged undetected due to jamming and cyber disruptions that occurred during the suspected Russian strike. The cruise missiles appear to have been fired from Belarus but given recent equipment transfers, intelligence cannot confirm it was fired by a Russian platform with high confidence. The strikes hit a warehouse with NATO member state supplies being staged to ship across the border with Ukraine. There has been no other changes in the Russian military posture in Ukraine or its military districts. The Kremlin is not acknowledging the attack but is stating publicly that aiding the transfer of weapons to Ukraine is an act of war against Russia.

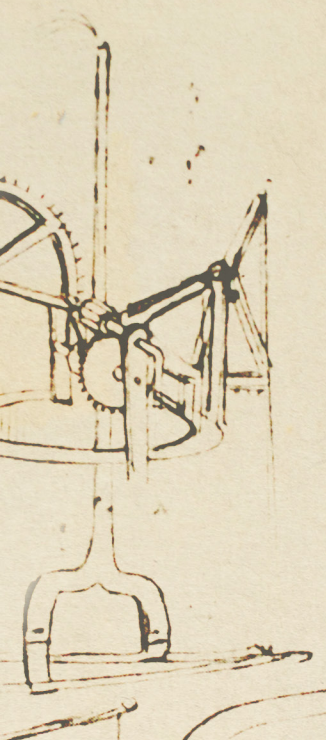
deterrent options (4.8 out of 10), but it was higher than the projected risk (4.1 out of 10), producing a favorable bargaining position. The Russian side favored expanding attacks in western Ukraine (50 percent) and conducting cyber operations to target NATO member states actively supporting Ukraine (25 percent).¹³

After the initial planning round, the game used two sequential vignettes to assess escalation dynamics. During the first vignette (see “Surgical Strike” text box), U.S./NATO players responded to a surgical strike on a NATO logistics hub in Poland. In this round, 25 percent of U.S./NATO teams opted to increase air and missile defense along NATO’s eastern and Baltic flank while assessing NATO member states’ appetite for a follow-on attack that varied from counterattacking Russian assets in Ukraine to establishing a no-fly zone over western Ukraine. Alternatively, 16 percent opted for a surgical strike on Russian forces in Ukraine, as opposed to Belarus, to contain the conflict. On average, U.S./NATO teams expected low utility from their

Figure 2: Bargaining Advantage Declines in a Protracted Crisis



Source: CSIS.



deterrent options, consistent with the initial round (4.9 out of 10 compared to 4.8 in the initial round), but the projected risk increased (5.8 out of 10 compared to 4.1 in the initial round).

As seen in Figure 2, over time, U.S./NATO players assessed a decreased ability to establish a position of competitive advantage relative to Russia. The chart shows the difference between the expected utility and risk for each flexible deterrence option selected in the initial round (blue line) and after the surgical strike (red line).¹⁴ When the line is above 0, it indicates that participants assessed their flexible deterrent option as producing a net deterrent benefit (i.e., bargaining advantage) relative to the assessed level of risk. When the line is below 0, it indicates that participants assessed that they were assuming more risk than expected utility. The chart illustrates how even rational planners began to make suboptimal choices where their own assessments of risk outweighed their estimates of the bargaining advantage to be gained by employing flexible deterrent options. Calibrating a balanced deterrent response proved difficult.

In discussions, both the U.S./NATO and Russian teams assessed a need to respond with force, even though they knew it would likely trigger an escalation spiral. Both sides stated they wanted an “off ramp” and a means of pushing the conflict back into territorial Ukraine to avoid a broader, multifront war, although they were unwilling to signal it to the adversary. A major discussion point from both teams was how to keep the conflict geographically confined to Ukraine. Of note, the Russian players discussed finding ways to disrupt staging areas in Poland and lines of communication used to keep Kyiv in the fight. One Russian team said they would prefer sabotage—even using a commercial unmanned aerial vehicle to start a fire at a weapons depot in Poland—to avoid risking an Article V moment.

CRISIS VIGNETTE: CHEMICAL ATTACK

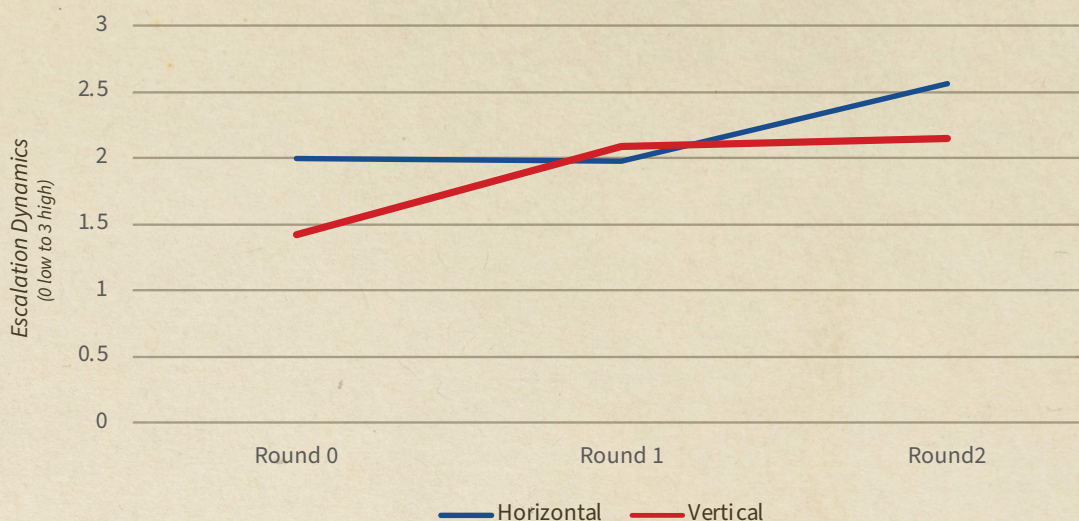
Russian forces launch a chemical attack on a city near the Ukrainian border. Prevailing winds blow some of the agent across the border, injuring 10 Polish service members and killing over 50 Ukrainians fleeing to Poland. The Kremlin releases a report blaming the chemical attack on Ukraine and claims Poland supported the effort, creating a need to defend Russians in the near abroad and create a buffer.

During the second vignette (see “Chemical Attack” text box), U.S./NATO players responded to a Russian chemical attack on Ukrainian forces near the Polish border as well as indications and warnings of a wider Russian military mobilization. In this round, 54 percent of U.S./NATO players opted to execute an immediate large-scale conventional mobilization and expanded deployments to Poland and the Baltic states as a means of signaling Russia and ensuring alliance cohesion. Another 17 percent

opted for a surgical strike on Russian forces in Ukraine. Most Russian teams attempted for a second time to pull the conflict back to territorial Ukraine, using horizontal escalation as a bluff to limit NATO options in Ukraine. Russian teams discussed needing to deter U.S./NATO military support for Ukraine. They thought that this would buy them enough time to lay siege to Ukrainian cities and force a favorable concession.

The second vignette also illustrated a dangerous tendency toward unintended horizontal escalation over the course of a protracted conflict, even when participants stated they wanted to keep the conflict contained to one country. Despite players on each side stating in discussions that they wanted to keep great power conflict confined to an indirect struggle through Ukraine, each subsequent round revealed a preference for horizontal escalation.¹⁵ Figure 3 illustrates this trend. Each flexible response option for U.S./NATO players was coded in terms of whether it exerted more

Figure 3: U.S./NATO Horizontal Escalation Risks Drive Risk over Time



Source: CSIS.

vertical and horizontal escalation pressure. In the planning phase (Turn 1)—which started from the vantage point of Russia regrouping after its failed push on Kyiv— U.S./NATO players stated a preference for horizontal escalation options, such as increasing air and missile defense and troop deployments along Russia’s border away from Ukraine. U.S./NATO players used vertical escalation to respond to the strike in Poland (Turn 2) but returned to horizontal options so they could gain a bargaining advantage for a response to the chemical attack and the risk of a broader war (Turn 3). This tendency is already on display with a series of mysterious explosions and reports of possible false flag activity designed to help Russia open a new front in Transdnistria.¹⁶ Even if the Ukraine conflict ends in the near term, it will still likely pull NATO into an escalating series of crises with a weakened but emboldened Russia. One such crisis on the horizon is Russia’s response to Finland and Sweden seeking NATO membership, which Russian foreign minister Sergey Lavrov stated would entail a “military-technical” retaliation.¹⁷ Absent a dramatic turn—such as a diplomatic breakthrough or a palace intrigue in the Kremlin sufficient to curb Putin’s desperate campaign to rebuild the Russian Empire—Ukraine is likely the start, not the end, of a new acute phase of great power competition in Eurasia.

This new, protracted cycle of crises and conflict will be as much about human psychology as it is the balance of power and correlation of forces. As the crisis simulation advanced, players assessed that they had increasingly poor options and adopted more risk-acceptant behavior, a posture consistent with prospect theory. Prospect theory, a behavioral economics concept identified by Israeli psychologists Amos Tversky and Daniel Kahnemann, holds that individuals are not purely rational and tend to calculate cost and benefit from a reference point, rather than a net estimate of costs and benefits.¹⁸ People tend to anchor on the status quo as a reference point, becoming risk acceptant as they try to prevent losses and risk averse as they focus on preserving gains.

Applied to international relations and competition, there are reasons to believe that certain situations will produce risk-acceptant behavior, even as diplomats and leaders seek to pull back to the status quo in a conflict such as Ukraine.¹⁹ The promise of integrated deterrence—combining technology and partners—and even signs that the Kremlin wants to de-escalate may not be enough to overcome human psychology and fear of future losses. This finding reflects a different

kind of tragedy in power politics—one that resides in the first image and individual, as opposed to the structure of the international system, and should serve as a cautionary tale to leaders declaring victory in Ukraine. Even if the war ends, the fear remains and leaders from Moscow and Kyiv to Washington and Brussels will move into the next phase with a bias toward escalation.

POLICY IMPLICATIONS

Based on the insights and analysis from these crisis simulations, in the future . . .

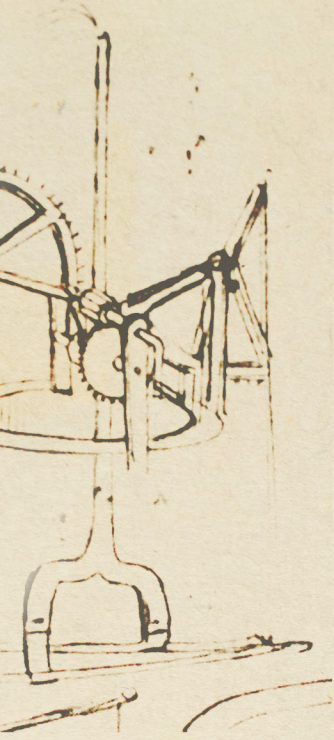
- Crises such as Ukraine could become more frequent and prone to horizontal escalation.
- NATO will need to ensure it has the capacity to support democracies against authoritarian states and invest in the interoperability across the alliance.
- Decisionmakers will need new competition and escalation models to evaluate flexible response and deterrent options.
- The national security community can add science to the art of strategic signaling by calibrating its response and testing how its messaging (i.e., signals) relates to prevailing themes and rhetoric using data science and natural language processing.

Crises such as Ukraine will become more acute and risk prone over time without investing time and resources into understanding competition and escalation for the twenty-first century. Strategy must start with problem framing and creating a clear description of the ends, ways, and means within the context of a crisis in a manner allows for clear-eyed assessments of how to achieve a competitive advantage. This process starts with reimagining competition, crises, and escalation in the twenty-first century.

First, the larger national security community needs new models and ways of thinking about deterrence, competition, and risk. Current defense planning and academic analytical frameworks are the legacy of Cold War dynamics that may not match a new era of competition. Unlike the Cold War, nuclear-armed states in a multipolar world will likely use nonnuclear weapons (e.g., cruise missiles, space capabilities, and cyber operations) to produce strategic effects.²⁰ Beyond capabilities, these studies should bring the individual back in and assess risk attitudes.

Alongside efforts to think about coercion and cross-domain aspects of deterrence, the national security community needs more policy-relevant research that brings individual decisionmaking and attitudes toward risk back into how it thinks about great power competition.²¹ In particular, strategic analysis needs more crisis simulations and wargames designed as survey experiments to capture how both individuals and groups respond in different scenarios prone to competitive pressure, fog, and friction.²² These survey experiments enable researchers to bridge the insights of Carl Von Clausewitz's on war, Thomas Schelling on deterrence, and Daniel Kahnmann on decisionmaking. These studies should put competition front and center and integrate new data and analytic techniques to understand competitive dynamics in a connected world.

For integrated deterrence to be more than a bumper sticker, the Department of Defense will need to initiate a new wave of research that evaluates if and how alternating capabilities—to include the emergence of Joint All-Domain Command and Control (JADC2)—and partner networks affect crisis decisionmaking. These studies will need to create alternative scenarios that reflect whether promised technological capabilities and advances in artificial intelligence and machine learning materialize, as well as the degree of partner political interests and interoperability. In other words, the national security community needs to revitalize strategic



studies for the twenty-first century and integrate best practices from social science, as opposed to relying on thin case studies and broader—and often untestable—generalizations about war.

Second, the national security community needs to expand how it plans and tests flexible deterrent options to increase self-awareness about changing risk attitudes and better calibrate response options in a crisis. If the findings of this initial wargame experiment are sound, decisionmakers are likely to find that the optimal bargaining position will decline over time relative to their menu of flexible response options. Since the crisis simulation involved a series of iterated vignettes, a degree of escalation is built into the game. And yet, the findings suggest that how individuals and groups approach crisis response creates more risk-acceptant behavior and a pull toward horizontal escalation.

Applied to Ukraine, this means ensuring open, direct engagement, even with the worst regimes; refining signals during a crisis; and preparing now for a much longer war.

Diplomacy and Signaling

- **Talk.** As politically unpopular as it might be, the United States—not just France—will need to directly engage Moscow. Talking does not mean reducing coercive pressure. Rather, it means clarifying red lines and expected behavior to better frame bargaining positions.
- **Test.** The government should use data science to test signals and rhetoric before making official statements. Leaders must choose their words more carefully and apply best practices from marketing that test how groups receive those words and make sense of them. Recent statements about regime change, alongside imposing costs on Russia in the long term, are counterproductive and would likely have been shown to be so if tested prior to signaling Russia. The fact is much of public signaling—which is central to crisis response—is left to speechwriters and principals, absent empirical testing and natural language processing that evaluates key themes, sentiment, and other vectors to help calibrate the message.

Prepare for Long-Term Competition Now

- **Prepare.** NATO cannot discount that Russia will move against Moldova or respond with brinksmanship and force to the north, especially with recent statements from Finland and Sweden that they will join NATO. The possibility of horizontal escalation by even a weakened Moscow should be factored into force posture, deployments, and weapons transfers with an eye toward scenarios beyond Ukraine.
- **Plan.** Longer term, this suggests a need to shift a defense budget likely to be hit with high costs due to inflation toward recapitalization and making the promise of integrated deterrence and JADC2 a reality. Recapitalizing stockpiles and buying interoperability should be prioritized over even nuclear modernization and service-specific initiatives such as the U.S. Marine Corps Force Design, U.S. Army Multi-Domain Task Force, and U.S. Navy's shipbuilding plan. While each has value, the opportunity cost does not prepare for a protracted crisis likely prone to horizontal escalation and more risk-acceptant behavior. The United States can minimize those risks by becoming a twenty-first-century arsenal of democracy and ensuring free nations can resist authoritarian gambles such as Russia's invasion of Ukraine. This can be achieved by prioritizing capacity over capability.
- **Play.** NATO needs to leverage the upcoming 2022 Madrid Summit to conduct intra-alliance crisis simulations. These simulations should explore conventional deterrent options under the integrated deterrence framework to help decisionmakers rethink the escalation ladder for the twenty-first century. The simulations should also focus on technical aspects

critical to alliance interoperability related to air and missile defense and on ensuring intelligence and targeting capabilities across partners.

Ukraine is the beginning, not the end, of a more acute phase of twenty-first-century great power crises. Analyzing the conflict and using it as a jumping-off point for thinking about the future of competition and how best to ensure strategic advantage is a central task of the national security community. ■

***Benjamin Jensen** is a senior fellow for future war, gaming, and strategy in the International Security Program at the Center for Strategic and International Studies (CSIS) in Washington, D.C. **Adrian Bogart** is an intern with the International Security Program at CSIS.*

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Leonardo da Vinci Sketches: wowinside/AdobeStock

ENDNOTES

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- 10 On the concept of flexible deterrent options, see Chairman of the Joint Chiefs of Staff, *Joint Publication 5-0: Joint Planning* (Arlington, VA: Joint Chiefs of Staff, December 1, 2020), E-1, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp5_0.pdf; and Matthew D. Morton, Keith Burkepile, and VeRonica Oswald-Hrutkay, eds., *Campaigning Planning Handbook, Academic Year 2021* (Carlisle Barracks, PA: United States Army War College, October 2020), <https://publications.armywarcollege.edu/pubs/3738.pdf>. On deterrence theory in general as it relates to defense planning, see United States Strategic Command, *Deterrence Operations*

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- 11 To capture bluffing and assuming more risk, the research team monitored player comments.
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- 14 The mean responses between the initial round and surgical strike (round 1) were different, and the difference was statistically significant using a t-test for unequal variance ($p < .01$). Initial round (Mean = 0.65, Variance = 4.18, Observations = 43); surgical strike (Mean = -0.6, Variance = 6.05, Observations = 43).
- 15 This finding is based on t-tests assuming equal variance comparing the rounds to each other using a variable measuring horizontal escalation preferences. The means were different and the difference is statistically significant ($p < .01$) between rounds 2 and 3. Initial round (Mean = 1.41, Variance = 0.41, Observations = 48); surgical strike (Mean = 1.97, Variance = 0.36, Observations = 48); chemical attack (Mean = 2.56, Variance = 0.352, Observations = 41).
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