



# ESCALATION MANAGEMENT IN UKRAINE: “LEARNING BY DOING” IN RESPONSE TO THE “THREAT THAT LEAVES SOMETHING TO CHANCE”

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The article analyses a process of escalation management over time between nuclear states under conditions of radical uncertainty. After Russia invaded Ukraine, President Vladimir Putin manipulated uncertainty to manage escalation and to deter NATO support of Ukraine. President Joe Biden was determined to avoid a war between NATO and Russian forces that he feared could escalate and was simultaneously committed to helping Ukraine repel Russian aggression and defend itself. These two objectives, often in tension with one another, defined the boundaries of the strategy of escalation management that the United States developed to reduce uncertainty. This contest between a strategy to manipulate uncertainty and a strategy to reduce uncertainty frames the analysis of escalation management and raises important issues of theory and policy. The article finds that the U.S. strategy of “learning by doing” has succeeded thus far in managing escalation but concludes with four challenges that could jeopardize future success.

Russia’s invasion of Ukraine has pushed the difficult question of escalation management between nuclear powers back to the top of the agenda.<sup>1</sup> For the last three decades, leaders in Washington and Brussels have believed that the complex strategic challenges of managing nuclear escalation had been relegated to history, at least in Europe. Russia’s brutal attack on Ukraine destroyed that belief. It also shattered the norms and rules that had governed the relationship between Washington and Moscow for the last five decades. The United States made clear its support

for Ukraine’s sovereignty and independence, even though Ukraine is not an American ally. It is difficult to make commitments to a partner credible, but in the months preceding Russia’s invasion, Washington extended deterrence to Ukraine. It warned Russia repeatedly not to attack and threatened grave consequences should it do so. Deterrence nevertheless failed.<sup>2</sup> After it failed, the United States immediately confronted the challenges of escalation management.

It is no coincidence that the day before the invasion, Russian President Vladimir Putin issued a vague order to move to a “special regime of combat duty,”

1 Escalation management has different conceptual meanings. It can be conceived as practices designed to put circuit breakers into a mechanical, at times inadvertent and at times accidental, process that arises from friction in war time. Or it can be conceived of as a deliberate actor-driven strategy to limit escalation either horizontally or vertically. During wartime, strategies of escalation management have been analysed as threat-based strategies of deterrence, or “intra-war deterrence.” See Forrest E. Morgan, Karl P. Mueller, Evan S. Medeiros, Kevin L. Pollpeter, and Roger Cliff, *Dangerous Thresholds: Managing Escalation in the 21st Century* (Santa Monica, California: RAND Corporation, 2008), <https://apps.dtic.mil/sti/pdfs/ADA486310.pdf>.

2 The Biden administration proposed a summit in Geneva in June 2021 in an effort to reduce the tension. As Jake Sullivan, the U.S. national security adviser, explained, “Part of the motivating impulse for making the proposal for the summit in Geneva [in June 2021] was to try to create an alternative path that would involve Russia deescalating around Ukraine. . . .” Quoted in Erin Banco, Garrett M. Graff, Lara Seligman, Nahal Toosi, and Alexander Ward, “Something Was Badly Wrong: When Washington Realized Russia was Actually Invading Ukraine,” *Politico*, February 24, 2023, 6, <https://www.politico.com/news/magazine/2023/02/24/russia-ukraine-war-oral-history-00083757>. The president then sent William Burns, the CIA director, to Moscow in November. Burns warned his counterpart of the serious consequences: “The trip the president asked me to take to Moscow at the beginning of November was to lay out in an unusual amount of detail exactly why we were concerned that Putin was preparing for a major new invasion, and then to be very clear about what the consequences would be should Putin choose to execute that plan.” Quoted in Banco, Graff, Seligman, Toosi, and Ward, “Something Was Badly Wrong,” 19 (emphasis added). Daleep Singh, the deputy national security adviser for international economics on the National Security Council, added that “. . . by signalling as clearly as we could that these [the sanctions that would follow an attack] were going to be the most severe sanctions ever on a large economy, perhaps we can deter Putin.” Quoted in Banco, Graff, Seligman, Toosi, and Ward, “Something Was Badly Wrong,” 38. As the intelligence about Russia’s intention to invade became conclusive, the Biden administration made a final series of efforts to reassure as well as deter. Secretary of State Antony Blinken met with Russia’s Foreign Minister Sergei Lavrov in Geneva on Jan. 21, 2022, to explore whether the United States could alleviate some of Russia’s security concerns: “I asked him [Lavrov], ‘Tell me, what are you trying to do? What is actually going on here? Is this really about your purported security concerns? Or is this something theological, which is Putin’s conviction that Ukraine is not an independent state . . . If it’s the former . . . if this is genuinely from your perspective about security concerns that Russia has, well we owe it to try to talk about those and our own profound security concerns about what Russia is doing, because we need to avert a war.’” Quoted in Banco, Graff, Seligman, Toosi, and Ward, “Something Was Badly Wrong,” 50.

an unknown level of strategic preparedness.<sup>3</sup> A week before the attack, Russia also conducted previously planned exercises of its nuclear launch systems. Finally, as the invasion began, Putin warned that any outside country standing in Russia's way would face "consequences such as they have never seen in their history," a thinly veiled nuclear threat.<sup>4</sup> Putin manipulated uncertainty to deter NATO engagement on behalf of Ukraine. President Joe Biden was determined to avoid a war between NATO and Russian forces — a war he feared could escalate to World War III — and was simultaneously committed to helping Ukraine defend itself and repel Russian aggression. These two objectives, often in tension with one another, defined the boundaries of the strategy of escalation management that the United States developed to reduce uncertainty. This contest between a strategy to *manipulate* uncertainty and a strategy to *reduce* uncertainty sets the framework for an analysis of escalation management and raises important issues of theory and policy.

In this essay, I examine the challenges of escalation management over time and under conditions of radical uncertainty, when one or more of the parties has a second-strike nuclear capability.<sup>5</sup> The contest between a Russian strategy that manipulates uncertainty and a U.S. strategy that reduces uncertainty frames the analysis of escalation management and raises important issues of theory and policy. The article finds that the U.S. strategy of "learning by doing" has succeeded thus far in managing escalation but concludes with four challenges that could jeopardize future success.

I begin by discussing theoretical arguments that speak to the widely recognized difficulty that states face when they try to make their threats to

use nuclear weapons credible. Credibility is extraordinarily difficult to establish, because the use of even a limited number of nuclear weapons could escalate to nuclear war, which would destroy the state that issues the threat as well as the state that is threatened. To threaten to use these weapons is therefore irrational because the likely benefits cannot possibly exceed the costs. The threat to use nuclear weapons consequently becomes very difficult to believe. Thomas Schelling addressed this dilemma in his seminal work on managing escalation through a "threat that leaves something to chance," a strategy that Russia has weakly approximated to deter the United States and NATO from increasing direct and indirect military support to Ukraine. This strategy is relevant to the fierce policy debates that are ongoing about the optimal level of assistance to Ukraine.<sup>6</sup> My analysis suggests that Russia's strategy of manipulating uncertainty has thus far failed to deter Washington from expanding its military assistance to Ukraine, but that it has constrained the scope and pace of delivery.<sup>7</sup>

A second set of theoretical arguments highlights three additional dimensions that make responding to a strategy that manipulates uncertainty even more challenging. Uncertainty deepens when states break norms and rules, when dynamic environments increase the instability of preferences, and when leaders do not know their preferences and only discover them when they take action.

Managing escalation becomes more difficult, both in theory and in practice, when adversaries break rules and norms, as Russia did when it invaded Ukraine. Under these conditions, uncertainty deepens as constraints on choice loosen. Leaders then have even less than usual anchoring information,

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3 Sergei Shoigu, Russia's minister of defense, explained the meaning of the phrase a few days later: It involved increased staffing of strategic nuclear force units. See Olga Oliker, "Putin's Nuclear Bluff: How the West Can Make Sure Russia's Threats Stay Hollow," *Foreign Affairs*, March 11, 2022, <https://www.foreignaffairs.com/articles/ukraine/022-03-11/putins-nuclear-bluff>. See also Olga Oliker, "Moscow's Nuclear Enigma: What Is Russia's Arsenal Really For?" *Foreign Affairs*, October 15, 2018, <https://www.foreignaffairs.com/articles/russian-federation/2018-10-15/moscows-nuclear-enigma>.

4 Oliker, "Putin's Nuclear Bluff."

5 Uncertainty and risk are often conflated but are distinct. Decision-making under risk occurs when probability distributions are available to estimate the likelihoods of consequences of known outcomes. In international politics, in many cases the requirements for probability distributions — reliable data and large numbers of trials — are not present. Decision-making under uncertainty occurs either when the consequences of options are known, but there are no relevant probability distributions to estimate their likelihood — unknown knowns — or neither the consequences of options nor their likelihoods are known — unknown unknowns, a condition of radical uncertainty. People find uncertainty very uncomfortable psychologically and therefore transform uncertainty into risk by making subjective estimates of likelihood even when there are no underlying probability distributions to draw on.

6 Schelling, along with others, emphasized the importance of strategic stability between the two superpowers in the nuclear age. He is best known, however, for the development of strategic concepts that he translated into policy advice during the dangerous years from 1958 to 1962. See Thomas Schelling, *The Strategy of Conflict* (Cambridge, MA: Harvard University Press, 1960), chapter 8; and Thomas Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1966). For an examination of the scope for choice that decision-makers acting on behalf of nuclear-armed states have even after an adversary initiates a threat that leaves something to chance, see Reid B. C. Pauly and Rose McDermott, "The Psychology of Nuclear Brinkmanship," *International Security*, 47 (Winter 2022–2023): 9–51, [https://doi.org/10.1162/isec\\_a\\_00451](https://doi.org/10.1162/isec_a_00451). Pauly and McDermott explore the scope conditions for choice in the context of chance and examine the psychological factors that can inform decision-making and increase the effects of chance.

7 This argument necessarily relies on counterfactual reasoning. We cannot know what weapons Washington would have sent to Kyiv if Russia had not manipulated uncertainty. To make this inference, I draw on conversations with officials who emphasized, given that Russia is a large nuclear power, the importance of restraint in the kinds of weapons they could supply to Ukraine.

and it becomes more challenging to estimate the scope and intensity of an adversary’s preferences.<sup>8</sup>

Related to the deepened uncertainty when norms and rules break down is the instability of preferences over time. Escalation management is a dynamic and interactive process that stretches *over* time. Throughout this process, leaders must estimate changes in their adversary’s preferences. Their preferences may not be stable and may change partly in response to actions that alter the underlying conditions. These changes in preferences can be opaque to an observer, even one who is watching closely.<sup>9</sup> Dynamic environments increase the instability of preferences, which in turn deepens uncertainty.<sup>10</sup>

A third dimension can also deepen uncertainty in a process of escalation management. There is good evidence that leaders not only do not know the preferences of their adversary as conditions change, at times they may also not know their *own* preferences. They only discover them when they take action. Economists and political psychologists have demonstrated that, at times, people discover their preferences by making a choice and then inferring their preferences from their behavior.<sup>11</sup> Individuals come to “know” their own attitudes, emotions, and preferences by making inferences from their own behavior or the circumstances in which their behavior occurs.<sup>12</sup> Here, preferences do not dictate strategy. Rather, strategy shapes preferences.

All three of these dimensions have been in play in escalation management since the war in Ukraine began. In a nuclear context, leaders have to manage not only the irrationality of nuclear threats but also these deep uncertainties inherent in managing a dynamic and interactive process over time. After the invasion, Russia sought to deter the United States and its allies from intervening on behalf of Ukraine but ran up against the difficulties of making nuclear threats credible. Moscow therefore resorted to the manipulation of uncertainty through

“threats that leave something to chance.” And the United States and NATO tried to prevent escalation while, at the same time, supporting Ukraine to the fullest extent possible. To do that, they tried to reduce uncertainty.

One way of reducing uncertainty is to closely examine an adversary’s strategic doctrine. This kind of analysis can provide a leader with at least some rough guidelines about the range of advice an adversary is likely to receive from the military. This advice could then inform an adversary’s preferences and strategy. However, strategic decisions often depart from doctrine in ways that decision-makers themselves cannot foresee until they are confronted with difficult choices.<sup>13</sup>

Russia’s strategic doctrine does signal a limited number of conditions that might lead to a use of nuclear weapons. Analysts in NATO countries have paid particular attention to these thresholds and to Moscow’s purported strategy of “escalate to deescalate.” That strategy, which I will argue has been mischaracterized by some Western analysts, is partly captured by Schelling’s concept of a “threat that leaves something to chance.” In some respects — but only in some — Russian doctrine today echoes earlier American strategic doctrine. Critical ambiguities remain, however, about where exactly the thresholds for escalation lie. These ambiguities arise from the interaction between Russia’s description of different kinds of war and the specific conditions that could trigger reclassifying a war from one type to another.

Building on the analyses of strategies that manipulate uncertainty to manage escalation and strategic doctrine which can help to reduce uncertainty, I turn to what I call the pragmatic, incremental “learning by doing” strategies that U.S. leaders used to respond to Russia’s strategy of a “threat that leaves something to chance.”<sup>14</sup> I examine how Washington reduced uncertainty and managed escalation by setting boundaries, signaling restraint, and then

8 The difficulty of estimating an adversary’s preferences has long been recognized by scholars. See Robert Jervis, *Perception and Misperception in International Politics* (Princeton, NJ: Princeton University Press, 2017, revised edition).

9 Rationalist accounts that draw on information economics explain changing preferences as a consequence of continuous updating in response to new information. See Bradley Efron, “Bayes Theorem in the 21st Century,” *Science* 340 (2013): 1177–1178, <https://www.science.org/doi/10.1126/science.1236536>. Depending on the quality of the information that leaders receive, updating can also be an uncertain process.

10 I am indebted to James Davis for making these arguments explicit.

11 Paul A. Samuelson, “Consumption Theory in Terms of Revealed Preference,” *Economica*, 175, no. 60 (1948): 243–253, <https://www.jstor.org/stable/2549561>.

12 Daryl J. Bem, “Self-Perception Theory,” *Advances in Experimental Social Psychology* 6 (1972): 1–62, [https://scholar.google.com/scholar?hl=en&as\\_sdt=0%2C5&q=daryl+bem+self+perception+theory&dq=Daryl+Bem](https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=daryl+bem+self+perception+theory&dq=Daryl+Bem).

13 For the argument that Cold War nuclear policymaking departed significantly from strategic precepts, see Francis Gavin, *Nuclear Statecraft: History and Strategy in America’s Atomic Age* (Ithaca, NY: Cornell University Press, 2012): 57–74.

14 Janice Gross Stein, “Political Learning by Doing: Gorbachev as Uncommitted Thinker and Motivated Learner,” *International Organization* 48, no. 2 (1994): 155–183, <https://www.cambridge.org/core/journals/international-organization/article/abs/political-learning-by-doing-gorbachev-as-uncommitted-thinker-and-motivated-learner/D2C748D82B83EC3DC044D34C64611788>. For a related argument with a different focus, see Peter J. Katzenstein and Lucia A. Seybert, “Protean Power and Uncertainty: Exploring the Unexpected in World Politics,” *International Studies Quarterly* 62, no. 1 (2018): 80–93, <https://academic.oup.com/isq/article/62/1/80/4946303>.



constantly testing and updating their estimates of Russia's likely response to push right up against the limits that they themselves had set. When there are few, if any, rules and the uncertainties are large, a pragmatic decision-making process of "learning by doing" proceeds in small incremental steps and then waits. If there is no reaction, leaders take the next step and wait again to see if they are approaching a critical threshold. Since the Biden administration put this strategy of escalation management in place and combined deterrence with a publicly announced strategy of assurance and restraint, there has been no horizontal escalation beyond the battlefield in Ukraine and no vertical escalation to the use of chemical or nuclear weapons.

These strategies, however, have not yet faced their critical challenge. That will most likely come if and when Russia faces the prospect of a strategic defeat on the battlefield. Further deepening uncertainty, how Russian leaders understand "losing" or "strategic defeat" remains undefined except at the hard edges. Defeat could vary both by scope and by target. Russian doctrine makes clear that any attack on nuclear forces or its space-based command-and-control infrastructure, as well as a large-scale conventional attack, would be considered an "existential" threat. That constitutes the outer boundary of loss. Short of that, would a defeat of Russia's forces and a retreat to the lines before the invasion of Ukraine constitute a "strategic defeat"? Would a successful Ukrainian attack on Crimea constitute that kind of defeat? Russian leaders have threatened that any attack on Crimea would "ignite judgment day," and some Russian experts have speculated that a Ukrainian military operation that pushed Russia's forces out of Crimea would trigger the use of unconventional weapons.<sup>15</sup> Would a military defeat on the battlefield that provoked a serious domestic threat to the survival of the regime be more likely to trigger escalation? American officials have said that Putin might use unconventional weapons if he felt his regime were threatened, if he felt that NATO forces were preparing to intervene directly in the fighting, or if the Russian army were to face a sudden prospect of defeat or collapse.<sup>16</sup>

Under these conditions, Russia's strategic doctrine would be of limited use in reducing uncertainty,

largely because of the ambiguities built into its classifications of types of war, the fuzzy meaning of what constitutes an existential threat, and the silence about the conditions that would trigger the use of tactical nuclear weapons. Incremental learning, a strategy that reduces uncertainty, seems to offer more promise. At first glance, the strategy seems prudent because each step is small and calibrated. However, I argue that this promise of prudence may be exaggerated because leaders could overlearn from prior successes. When early actions do not provoke escalation, leaders could become overconfident that they can keep taking small steps.<sup>17</sup> When there are no rules, leaders cannot know when what seems to be a small step will cross a fuzzy threshold. These challenges are built into crafting strategies in conflicts where battlefields can shift, thresholds can move, and leaders cannot predict what they themselves will do should conditions change and they think that they face defeat.

In the conclusion, I grapple with the difficult questions raised by this analysis of the contest between Russia's manipulation of uncertainty and a pragmatic and incremental strategy by the United States and NATO to manage escalation by reducing uncertainty. I explore four challenges that examine the risks of this kind of pragmatic strategy in a dynamic environment, the costs of an incremental strategy, the responses that might best manage escalation should any of the versions of a Russian defeat occur, and the impact of the poor performance of Russia's conventional forces on escalation management over time. These questions are difficult because of the radical uncertainties that frame escalation management between nuclear powers when one of them breaks all the rules.

### **Schelling: The "Threat that Leaves Something to Chance"**

In August 1945, the United States dropped atomic bombs on Hiroshima and Nagasaki. The Soviet Union tested a nuclear weapon just a few years later. The nuclear age had arrived. A small group of strategic theorists in the United States began to grapple with the revolutionary impact of nuclear weapons

15 Cited by Jeremy Shapiro, "We Are on a Path to Nuclear War," *War on the Rocks*, October 12, 2022, <https://warontherocks.com/2022/10/the-end-of-the-world-is-nigh>; See also author interview with Andrei Baklitskiy, January 12, 2023.

16 See David Sanger and William J. Broad, "Putin's Threats Highlight the Dangers of a New, Riskier Nuclear Era," *New York Times*, June 1, 2022, <https://www.nytimes.com/2022/06/01/us/politics/nuclear-arms-treaties.html>.

17 Baruch Fischhoff, Paul Slovic, and Sarah Lichtenstein, "Knowing With Certainty: The Appropriateness of Extreme Confidence," *Journal of Experimental Psychology: Human Perception and Performance* 3, no. 4 (1977): 552–564; [https://www.researchgate.net/profile/Baruch-Fischhoff/publication/230726569\\_Knowing\\_with\\_Certainty\\_The\\_Appropriateness\\_of\\_Extreme\\_Confidence/links/00b4952b854b29281c000000/Knowing-with-Certainty-The-Appropriateness-of-Extreme-Confidence.pdf](https://www.researchgate.net/profile/Baruch-Fischhoff/publication/230726569_Knowing_with_Certainty_The_Appropriateness_of_Extreme_Confidence/links/00b4952b854b29281c000000/Knowing-with-Certainty-The-Appropriateness-of-Extreme-Confidence.pdf); Dominic D. P. Johnson, *Overconfidence and War: The Havoc and Glory of Positive Illusions* (Cambridge, MA: Harvard University Press, 2004); and Dominic D. P. Johnson and James H. Fowler, "The Evolution of Overconfidence," *Nature* 477 (2011): 317–320, <https://doi.org/10.1038/nature10384>.

on military strategy. Schelling, among others, quickly concluded that nuclear weapons were not usable in war.<sup>18</sup> In a fundamental shift from earlier strategic thinking, he argued that these weapons were useful not for military but rather for *political* purposes — to prevent war with the only other nuclear power at that time. Critical to persuading the Soviet Union not to initiate war would be the belief by Soviet leaders that the United States would respond with the full force of its capabilities to any Soviet attack. At the core of deterrence was the capacity to signal credibility: credible capacity, credible commitment, and credible resolve to respond. Schelling stood out in his argument that the threat to use nuclear weapons could be effective as a signal of resolve and as a transmitter of uncertainty to an adversary, even when it was irrational to use nuclear weapons because of the devastating consequences that would follow. The point of nuclear weapons, he argued, was not to win the battle, but to deepen an adversary’s uncertainty. Nuclear weapons carried latent power and bargaining leverage that could be activated through the *threat* of their use.

It was challenging to make a threat to use nuclear weapons credible when nuclear powers could destroy one another. Once the United States extended deterrence to its allies, making a threat to use nuclear weapons credible to the Soviet Union became infinitely more difficult. The United States was geographically more distant from its NATO allies in Europe than the Soviet Union was from its fellow members of the Warsaw Pact. And Soviet conventional military superiority made extended deterrence even more problematic. American and allied militaries were not confident that U.S. forces would be deployed in sufficient numbers and quickly enough to resist Soviet forces, were a European ally to be attacked. The asymmetry in conventional forces was one of the principal reasons that the United States long refused to pledge “no

first use” of nuclear weapons.

To ameliorate the commitment problem and close this built-in credibility gap, Schelling developed strategies to manipulate uncertainty through what he called “the threat that leaves something to chance.”<sup>19</sup> Schelling wrote a confidential memo in 1959 for the RAND Corporation that was only released in 2021.<sup>20</sup> He made clear that the key to “these threats is that, although one may or may not carry them out if the threatened party fails to comply, *the final decision is not altogether under the threatener’s control*. The threat ... has an element of, ‘I may or I may not, and even I can’t be altogether sure.’”<sup>21</sup> The final decision is left to “chance.”<sup>22</sup> The threat that leaves something to chance is the preferred strategy for the side in danger of “losing” the war. When leaders think they are likely to lose, they are more likely to fall back upon the deliberate manipulation of uncertainty. The strategy has clear implications for Russian decision-makers, should they fear they are losing the war in Ukraine.

Schelling illustrated the strategy of manipulation of uncertainty through a story of two mountaineers tied together and standing at the edge of a cliff, although the dynamics are much clearer when he compares it to a game of chicken.<sup>23</sup> Herman Kahn, writing on escalation at almost the same time as Schelling, provides a vivid description of the dynamics of commitment and the challenges of manipulating uncertainty in a deadly game of chicken between two cars at opposite ends of a single lane road:

The “skillful” player may get into the car quite drunk, throwing whiskey bottles out the window to make it clear to everybody just how drunk he is. He wears very dark glasses so that it is obvious that he cannot see much, if anything. As soon as the car reaches high speed, he takes the steering wheel and throws it out the window. If his

18 For seminal work, see Bernard Brodie, ed., *The Absolute Weapon: Atomic Power and World Order* (New York, NY: Harcourt and Brace, 1946); Albert Wohlstetter, *The Delicate Balance of Terror* (Santa Monica, CA: RAND Corporation, December 1958); Herman Kahn, *On Thermonuclear War* (Princeton, NJ: Princeton University Press, 1960); Herman Kahn, *On Escalation: Metaphors and Scenarios* (Baltimore, MD: Penguin Books, 1965); Schelling, *Arms and Influence*; and Robert Jervis, *The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon* (Ithaca, NY: Cornell University Press, 1989).

19 Schelling converted uncertainty to risk when he described his strategy to make a threat to use nuclear weapons credible as “manipulation of risk” rather than more accurately as “manipulation of uncertainty.” Throughout this paper, I use the term “manipulation of uncertainty” to capture the unknowns that leaders are trying to manage and reserve “manipulation of risk” to describe problems that analysts or leaders structure to make calculation possible.

20 Thomas Schelling, *The Threat That Leaves Something to Chance*, RAND Historical Document HD-A1631-1, [https://www.rand.org/pubs/historical\\_documents/HDA1631-1.html](https://www.rand.org/pubs/historical_documents/HDA1631-1.html).

21 Schelling, *The Threat That Leaves Something to Chance*, 2 (emphasis in original).

22 It is interesting, Francis Gavin observes, that “it [Schelling’s advice] to decision makers wasn’t dismissed out of hand, both because no policymaker wants to give up control, efforts to look like you are giving up control don’t look especially credible, and because by doing limited things, you may be signaling that is all you will do, in fact, signaling you won’t consciously escalate. This came up when Dwight David Eisenhower and even Bundy dismissed the deterrent effects of conventional mobilization.” Personal communication, February 19, 2023.

23 Personal conversation with Schelling in Zurich in June 2012, where he talked at length about the game of chicken and the analogy to competition between the two superpowers during the Cold War.



opponent is watching, he has won. If his opponent is not watching, he has a problem; likewise, if both players try this strategy.<sup>24</sup>

Schelling does acknowledge how dangerous this kind of strategy can be when he writes that “irreversibly initiating certain disaster, if one shares it, is no good.”<sup>25</sup>

Threats that leave something to chance build in some danger by design. It is the danger inherent in giving up some control that conveys commitment to an adversary. To establish commitment through a process of tying one’s own hands, the driver first signals that she is out of control by demonstrating that she is drunk and cannot see well. She transfers the decision to the other driver to swerve off the road. If the other driver does not swerve, the first driver “escalates to deescalate,” or forces capitulation by throwing her steering wheel out of the car. She visibly has lost control of her vehicle and has forfeited the possibility that she can capitulate by steering her car off the road. Kahn — and Schelling — argue that if the other driver is watching, then that driver has no choice but to swerve to avoid a deadly crash. The strategy of making a threat that leaves something to chance succeeds and the first driver prevails.

There are, however, dangers beyond those deliberately designed into the strategy of manipulating uncertainty to convey commitment. It is not only when the other side is “not watching” — is not paying attention or misperceives the signal — that both parties die. If both parties try the strategy at the same time, both will also die. And when the first driver throws her steering wheel out of the car to signal commitment, she has, in the process, given up *all* control of her car. Even before the other

driver swerves, her car could crash and she could die. In manipulating uncertainty through threats that leave something to chance, success depends on sequenced, rather than simultaneous, moves and on retaining at least enough control to avoid unilateral disaster. Uncertainty and control are in uneasy tension with one another.

These early strategies to manipulate uncertainty were superseded by generations of strategists who tried to escape the intractable dilemmas of what Robert Jervis called the “nuclear revolution.”<sup>26</sup> As second-strike capabilities developed, theories of mutually assured destruction reduced the vulnerabilities that had made pre-emptive first strikes the least bad of a terrible set of choices. Mutually assured destruction enabled — but did not ensure — strategic stability. It also enabled the stability-instability paradox: Mutually assured destruction made war between the superpowers less likely, but helped to make the world safer for conventional proxy wars, as long as neither superpower escalated and used nuclear weapons.<sup>27</sup> There is empirical support for the paradox, but, as a senior defense official recently observed, war beneath the threshold of nuclear conflict is never safe because it can spiral and escalate. Therefore, he concluded, restraint always matters between nuclear powers.<sup>28</sup>

Explicitly promising in advance not to be the first to use nuclear weapons, a strategy of escalation management that the Soviet Union adopted for a time, was a particularly challenging problem for the United States. Washington had extended deterrence to its European allies but could not match Soviet conventional forces in Europe. The United States never made a commitment to no first use, nor did it do so in its most recent *Nuclear Posture Review* released in 2022.<sup>29</sup> Strategists tried

24 Kahn, *On Escalation*, 11.

25 Schelling, *The Threat That Leaves Something to Chance*, 12.

26 Jervis, *The Meaning of the Nuclear Revolution*; Robert Jervis, *The Illogic of American Nuclear Strategy* (Ithaca, NY: Cornell University Press, 1984); and Robert Jervis, “Why Nuclear Superiority Doesn’t Matter,” *Political Science Quarterly* 94, no. 4 (1979): 617–633, <https://www.jstor.org/stable/2149629>. Jervis was deeply critical of theories of “escalation dominance.” The ability to prevail at every level of military conflict below that of all-out war is, as he put it, “neither necessary nor sufficient” to achieve objectives. See Jervis, “Why Nuclear Superiority Doesn’t Matter,” 618. These arguments remain contentious and continue to provoke vigorous debate. See, for example, Brendan Rittenhouse Green, *The Revolution That Failed: Nuclear Competition, Arms Control, and the Cold War* (Cambridge: Cambridge University Press, 2020); Austin Long and Brendan Rittenhouse Green, “Stalking the Secure Second Strike: Intelligence, Counterforce, and Nuclear Strategy,” *Journal of Strategic Studies* 38, nos. 1–2 (2015): 38–73, <https://doi.org/10.1080/01402390.2014.958150>; Matthew Kroenig, “Nuclear Superiority and the Balance of Resolve: Explaining Nuclear Crisis Outcomes,” *International Organization* 67, no. 1 (2013): 141–71, <http://www.jstor.org/stable/43282155>; and especially Keir A. Lieber and Daryl G. Press, *The Myth of the Nuclear Revolution: Power Politics in the Atomic Age* (Ithaca, NY: Cornell University Press, 2020).

27 Glenn Snyder first articulated the concept. See Glenn Snyder, *The Balance of Power and the Balance of Terror* (New York, NY: Chandler, 1965); and Jervis, “Why Nuclear Superiority Doesn’t Matter.” Francis Gavin analyses the tension between these two objectives. Francis Gavin, *Schelling and Strategic Stability*, unpublished paper.

28 Robert Rauchhaus finds support for the stability-instability paradox. See Robert Rauchhaus, “Evaluating the Nuclear Peace Hypothesis – A Quantitative Approach,” *Journal of Conflict Resolution* 53, 2 (2009): 258–277, [https://www.belfercenter.org/sites/default/files/legacy/files/uploads/Rauchhaus\\_Evaluating\\_the\\_Nuclear\\_Peace.pdf](https://www.belfercenter.org/sites/default/files/legacy/files/uploads/Rauchhaus_Evaluating_the_Nuclear_Peace.pdf); and author interview with a senior defense official, February 16, 2023.

29 U. S. Department of Defense, “2022 Nuclear Posture Review,” in *2022 National Defense Strategy of the United States of America* (Washington, DC: The Office of the Secretary of Defense, 2022), 9, <https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF>. The Department of Defense explained that doing so “would result in an unacceptable level of risk” in light of the range of non-nuclear capabilities that competitors have that could “inflict strategic-level damage” or “produce devastating effects” on U.S. allies and partners. Extended deterrence remains at the core of the dilemma.

to work through these dilemmas by developing more finely grained concepts such as “escalation dominance,” but they were no more successful. The concern only receded as tacit agreement on norms and rules began to develop after the scare of the Cuban Missile Crisis in 1962. Arms control agreements put some insulation into concepts of strategic stability, and the two superpowers observed an implicit set of rules when they competed in proxy wars.

It was only when the Soviet Union fractured and a much-weakened Russia emerged that worries about extended deterrence receded into the background. The hard problems — that strategic stability made conventional proxy wars safer below the nuclear threshold but only as long as the parties managed escalation, and that extended deterrence in Europe lacked credibility as long as the United States faced an unfavorable balance of conventional forces in Europe — were never solved. Instead, they faded away as the Soviet Union dissolved.

These problems came roaring back after Russia invaded Ukraine. Russia has local conventional superiority in its war against Ukraine, but only if it mobilizes enough forces and uses them professionally. It is indisputable that Russian conventional forces are now inferior to those of NATO and that Russia’s military leaders and analysts are well aware of their inferiority. The balance of forces and the balance of interests are now directly reversed from what they were during the Cold War.<sup>30</sup> It is Russia that feels that its interests are far more directly engaged in Ukraine than those of the United States and NATO. It is Russia, not the United States, that faces an unfavorable conventional military balance in Europe and is trying to deter NATO from increasing its support to Ukraine. It is Russian strategic analysts who are experimenting with strategies that threaten the use of nuclear weapons to signal commitment and resolve to manage escalation and to manipulate uncertainty in order to deter the United States and NATO from increasing their support to Ukraine.

Putin played with a threat that leaves something to chance when, just before the invasion of Ukraine on Feb. 24, 2022, he ordered an unknown level of alert that proved to be no more than increased staffing of strategic command centers and issued a veiled nuclear threat should NATO intervene.

A threat that leaves something to chance, as Schelling developed the concept, derives its leverage principally from what leaders do and how much control they give up, not from what they say. Putin did not order the removal of any nuclear weapons from storage. Nor did he give up any control. Instead, he used ambiguous language about Russia’s nuclear infrastructure to weakly approximate, through fuzziness, a threat that left something to chance. It is as though, in a changed strategic context, some elements of Schelling’s strategic thinking have found new life in Moscow.

### **Examining Strategic Doctrine to Reduce Uncertainty**

Strategic doctrine stands in sharp contrast to the uncertainty of the nuclear age that Schelling wanted to manipulate. Uncertainty is the solution for Schelling and the problem that strategic doctrine seeks to manage. Military thinkers and planners work to put some structure and form around complex problems to gain strategic advantage in part by reducing uncertainty. Before turning to the analysis of Russia’s strategic doctrine, I look at the changes in U.S. strategic doctrine that provide the context for the evolution of Russian thinking in the last decade.

#### **The Context: U.S. Strategic Doctrine**

Russian strategic doctrine developed mainly in response to relative changes in the balance of capabilities but also, in part, to evolving changes in U.S. nuclear posture and strategies of integrated deterrence. The most recent U.S. strategic documents, which were released after Russia attacked Ukraine, elevate Russia to a secondary but acute threat and emphasize the strategy of integrated deterrence.<sup>31</sup> Integrated deterrence, according to the Biden administration’s 2022 *National Security Strategy*, is “the seamless combination of capabilities to convince potential adversaries that the costs of their hostile activities outweigh their benefits.”<sup>32</sup> The strategy ranges across domains and focuses on means — information, intelligence, economic, and diplomatic tools as well as conventional and nuclear weapons — which are

30 Richard Betts, “Thinking About the Unthinkable in Ukraine: What Happens If Putin Goes Nuclear?” *Foreign Affairs*, July 4, 2022, <https://www.foreignaffairs.com/articles/russian-federation/2022-07-04/thinking-about-unthinkable-ukraine>.

31 U.S. Department of Defense, *2022 National Defense Strategy of the United States*, 5.

32 White House, *2022 National Security Strategy*, October 2022, 22, <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>.





used in coordination to increase the costs to an adversary.<sup>33</sup> Integrated deterrence can work through strategies of denial, resilience — especially in the domains of cyber and space — and punishment.

## THIS STRONG AND UNEQUIVOCAL SIGNAL OF THE CONSEQUENCES OF ESCALATING BY THREATENING OR USING NUCLEAR WEAPONS TO ACHIEVE POLITICAL OBJECTIVES IS AIMED PRINCIPALLY, ALTHOUGH NOT EXCLUSIVELY, AT RUSSIA.

The emphasis on coordinating means across domains is not new, in theory or in practice. As doctrine, it developed out of a reactive process between Washington and Moscow, fueled partly by mirroring the other's practices and doctrines. In U.S. strategy, integrated deterrence became more prominent over the last two decades, partly in response to Russia's use of information to interfere in American domestic political processes and shape the battle space, and partly in response to Moscow's use of hybrid warfare. Russia's concept of "strategic deterrence" also seeks to integrate nonnuclear, informational, and nuclear weapons to counteract what Russian strategists describe as the threat of Western hybrid warfare.<sup>34</sup>

The 2022 *National Defense Strategy* restates an older argument that remains relevant to the strategic challenges of extended deterrence in the context of Russia's ongoing war against Ukraine. In 2018, America's *Nuclear Posture Review* explicitly addressed the challenge of what had come to be understood as Russia's doctrine of "escalate to deescalate": "Russian strategy and doctrine

emphasize the potential coercive and military uses of nuclear weapons. It mistakenly assesses that the threat of nuclear escalation or actual first use of nuclear weapons would serve to 'de-escalate' a conflict on terms favorable to Russia."<sup>35</sup>

Four years later, that interpretation of Russia's strategic doctrine remains unchanged in American doctrine. The use of any nuclear weapon, regardless of its launch location or blast intensity, the 2022 *National Defense Strategy* asserts, "would fundamentally alter the nature of a conflict," creating potential for uncontrollable escalation crises.<sup>36</sup> The 2022 *Nuclear Posture Review* is even more explicit:

Russia presents the most acute example of this problem today given its significantly larger stockpile of regional nuclear systems and the possibility it would use these forces to try to win a war on its periphery or avoid defeat if it was in danger of losing a conventional war.<sup>37</sup>

This strong and unequivocal signal of the consequences of escalating by threatening or using nuclear weapons to achieve political objectives is aimed principally, although not exclusively, at Russia. It reflects Washington's estimate that Moscow is prepared to escalate with nuclear weapons to deter U.S. support for allies or to force the de-escalation of an ongoing conflict.

Despite the increased complexities of cross-domain and tailored deterrence, the classic recurring nightmare of extended deterrence in the nuclear age

33 Jon R. Lindsay and Erik Gartzke, eds., *Cross-Domain Deterrence in an Era of Complexity* (New York, NY: Oxford University Press, 2019). The terms integrated deterrence, cross-domain deterrence, and tailored deterrence all have slightly different meanings, but these differences are not relevant to the arguments that I am making here. The 2018 *Nuclear Posture Review* defines tailored deterrence as, "There is no 'one size fits all' for deterrence. . . . the United States will apply a tailored and flexible approach to effectively deter across a spectrum of adversaries, threats, and contexts." U.S. Department of Defense, *2018 Nuclear Posture Review* (Washington, DC: Office of the Secretary of Defense, 2018), 26, <https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF>. Lindsay and Gartzke define cross-domain deterrence as "the use of threats of one type, or some combination of different types, to dissuade a target from taking actions of another type to attempt to change the status quo. More simply, CDD [cross-domain deterrence] is the use of unlike technological means for the political ends of deterrence." See Lindsay and Gartzke, eds., *Cross-Domain Deterrence in an Era of Complexity*, 4. Analysis of cross-domain deterrence focuses on *means*, unlike early work on deterrence theory that was preoccupied by the challenge of *credibility* in the shadow of nuclear annihilation. As Gartzke and Lindsay argue, however, different domains are specialized for different goals and therefore integrated deterrence becomes problematic in principle. See Erik Gartzke and Jon R. Lindsay, *Integrating Deterrence: Hard Political Choices About New Military Domains* (Oxford: Oxford University Press, forthcoming).

34 Lindsay and Gartzke correctly note that "Western analysts sometimes misinterpret Russian concepts that describe the admixture of covert action and conventional warfare by Western states as a description of Russian doctrine." See Lindsay and Gartzke, eds., *Cross-Domain Deterrence in an Era of Complexity*, 3 (emphasis in original). See also Kristin Ven Bruusgaard, "Russian Strategic Deterrence," *Survival* 58, no. 4 (2016): 7–26, <https://doi.org/10.1080/00396338.2016.1207945>; Dmitry (Dima) Adamsky, "From Moscow With Coercion: Russian Deterrence Theory and Strategic Culture," *Journal of Strategic Studies* 41, nos. 1–2 (2018): 33–60; <https://doi.org/10.1080/01402390.2017.1347872>.

35 U.S. Department of Defense, *2018 Nuclear Posture Review*.

36 U.S. Department of Defense, *2022 National Defense Strategy*, 1, 9–10.

37 U.S. Department of Defense, "2022 Nuclear Posture Review," in *2022 National Defense Strategy of the United States of America*, 5.

is only partly attenuated, in theory if not in practice.<sup>38</sup> It is certainly more difficult to extend deterrence to a partner outside of formal treaty commitments to collective defense. Although it has asked to be admitted, Ukraine is not a formal member of NATO. The credibility of that kind of commitment to a partner, already challenging in a nuclear context, is inherently more difficult to achieve, and the uncertainties are even greater. If the United States extends deterrence to an ally but deterrence fails and a nuclear power attacks that ally with conventional forces, the story could have an unhappy ending at both ends of the spectrum. At one end, the conflict could escalate to a nuclear exchange. At the other, the United States could exercise restraint to manage escalation and severely limit the support it provides to an ally under attack.

### Russian Strategic Doctrine

This static interpretation of Russia’s strategic doctrine in U.S. strategy is not so much incorrect as it ignores some of the changes in Russian strategic thinking over the last decade as Moscow has improved its conventional military capabilities. From 1991 to 2010, a period of political disorganization and conventional military weakness, Russian strategic doctrine emphasized the role of nuclear weapons to deter conventional aggression. Analysis of Russian documents shows that, since 2010, Russia has moved *away* from rather than *toward* deterrence strategies that rely on nuclear weapons. It is not so much that the option does not figure in Russian strategic thinking — it does. But in the context of Russia’s modernization of its conventional

military forces, other tools were added to the toolbox, and the threshold conditions for the use of nuclear weapons became higher, even if some of these conditions are ill defined. Much remains ambiguous in Russian nuclear doctrine, deepening uncertainties for U.S. and NATO decision-makers, but the shift in direction is clear. Contemporary Russian deterrence strategies are an “integrated whole of non-nuclear, information and nuclear” tools.<sup>39</sup>

Russia released its most recent statement on nuclear deterrence on June 2, 2020.<sup>40</sup> It makes clear the conditions under which Russia would use nuclear weapons:

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

The statement then goes on to a more finely grained evaluation of these conditions. All these conditions, except the last, pertain to a nuclear attack against Russia and its allies or its command-and-control infrastructure.<sup>41</sup> This language is much more restrained than Russia’s more “open-ended” doctrine from 2002, which allowed for the use of nuclear weapons “in situations that are critical to the national security of the Russian Federation.”<sup>42</sup> As early as 2014, the language of Russia’s *Military Doctrine* had changed to the more restrictive “when the very existence of the state is under threat.”<sup>43</sup>

38 The 2022 *Nuclear Posture Review* reiterates the commitment made in the *National Defense Strategy* to increase the resilience of the U.S. military when it conducts conventional military operations in the midst of limited nuclear attacks. See 2022 *National Defense Strategy of the United States of America*, 9–10. Here it does differ in the means it prioritizes from the 2018 *Nuclear Posture Review*, which committed to expanding low-yield options to discourage escalation to deescalate options by adversaries that used nuclear weapons. That shift in means, clearly an important one, grows out of the attention paid to integrated and cross-domain deterrence. I return to this shift when I look at U.S. policy and practice toward Russia in the wake of its attack against Ukraine.

39 Adamsky, “From Moscow With Coercion,” 40.

40 See President of the Russian Federation, “Executive Order on Basic Principles of State Policy of the Russian Federation in the Sphere of Nuclear Deterrence,” Russian Ministry of Foreign Affairs, June 2, 2020. See an English translation at Hans de Vreij, “Executive Order on Basic Principles of State Policy of the Russian Federation in the Sphere of Nuclear Deterrence,” March 6, 2022, <https://hansdevreij.com/2022/03/06/basic-principles-of-state-policy-of-the-russian-federation-on-nuclear-deterrence> (emphasis added).

41 See President of the Russian Federation, “Executive Order on Basic Principles of State Policy.” These conditions are: a) “arrival of reliable data on a launch of ballistic missiles attacking the territory of the Russian Federation and/or its allies”; b) “use of nuclear weapons or other types of weapons of mass destruction by an adversary against the Russian Federation and/or its allies”; c) “attack by an adversary against critical governmental or military sites of the Russian Federation, disruption of which would undermine nuclear forces response actions”; and d) “aggression against the Russian Federation with the use of conventional weapons when the very existence of the state is in jeopardy.”

42 Kristen Ven Bruusgaard, “The Myth of Russia’s Lowered Nuclear Threshold,” *War on the Rocks*, September 22, 2022, <https://warontherocks.com/2017/09/the-myth-of-russias-lowered-nuclear-threshold>. See also Kristen Ven Bruusgaard, “Understanding Putin’s Nuclear Decision-Making,” *War on the Rocks*, March 22, 2022, <https://warontherocks.com/2022/03/understanding-putins-nuclear-decision-making>; and The Kremlin, “Military Doctrine of the Russian Federation,” April 21, 2000 (updated in 2002).

43 Bruusgaard, “The Myth of Russia’s Lowered Nuclear Threshold.” Adamsky observes that the main innovation in 2014 was the emphasis on non-nuclear components of deterrence and compellence based on military, political, diplomatic, technical, and economic means, with information struggle as the principal component. See Adamsky, “From Moscow with Coercion,” 52; and Dmitri (Dima) Adamsky, “Cross-Domain Coercion: The Current Russian Art of Strategy,” *Proliferation Papers*, no. 54 (2015), <https://www.ifri.org/sites/default/files/atoms/files/pp54adamsky.pdf>. See also The Kremlin, 2014 *Military Doctrine*, <http://static.kremlin.ru/media/events/files/41d527556bec8deb3530.pdf>.

Russian doctrine also distinguishes different types of war. The first is a local war, or a limited conflict between two states that does not involve nuclear weapons. The conflict between Russia and Ukraine could be described as: “a war pursuing *limited military-political objectives* when military actions take place within the borders of the warring states and affecting mainly the interests ... of these states.”<sup>44</sup> However, Moscow’s description of the war in Ukraine at times seems more like that of a regional war, when Russian leaders talk of NATO fighting a proxy war to impose a strategic defeat on Russia. That understanding of the war is difficult to reconcile with the concept of limited objectives as the defining characteristic of a local war. A regional war involves allies and larger coalitions. Some analysts suggest that additional conditions of a regional war would be the possibility of a conventional air strike that could threaten Russia’s nuclear retaliatory capability and direct engagement of foreign militaries.<sup>45</sup> Although this is not formally specified in Russian doctrine, either could be construed as an “existential” threat. The third type is a large-scale war between coalitions and great powers that has escalated horizontally to multiple theaters and regions. The last is a nuclear war that has escalated vertically and horizontally.<sup>46</sup> Russian doctrine does specify that Russia could use nuclear weapons in regional or large-scale wars, but only if

it were forced to do so by exigent circumstances. What has changed over the last two decades, as Russia’s conventional capabilities have improved, is Moscow’s preference to use conventional weapons in the earlier stages of conflict.

Analysis of the latest Russian doctrine suggests that, although the nuclear threshold has been raised, the critical conditions that merit the designation of an existential threat are subjective and open to interpretation. Does a proxy war with NATO that is increasing the supply of more advanced equipment to Ukraine constitute an existential threat, or is direct engagement of NATO forces necessary?<sup>47</sup> Is the only enabling condition an imminent strike against Russia’s command-and-control structures? The answers to these questions are opaque and debated among Russian strategists themselves.<sup>48</sup>

Russian doctrine is also largely silent about the role of tactical nuclear weapons in its evolving concept of integrated deterrence.<sup>49</sup> These non-strategic nuclear weapons, the principal concern of many analysts in the United States and Europe who focus on escalation, have no defined mission nor is their role in regional conflict clear.<sup>50</sup> As Dima Adamsky observes with concern: “Russia’s NSNW [non-strategic nuclear weapons] have no meaningfully defined mission and no deterrence framework. Contrary to expectations, nuclear reality in Russia is a constellation of contradictory trends and narratives unlinked

44 Bruusgaard, “Understanding Putin’s Nuclear Decision-Making” (emphasis added).

45 Kristin Ven Bruusgaard, “Russian Nuclear Strategy and Conventional Inferiority,” *Journal of Strategic Studies* 44, no.1 (2021): 3–35; author interview with Andrey Baklitskiy, January 12, 2023. In 2018, Putin provided the most restrictive definition: “We are prepared . . . to use nuclear weapons only when we know, for certain, that some potential aggressor is attacking Russia, our territory. Our concept is based on a reciprocal counter strike.” What remains ambiguous in the current context is his definition of “Russia, our territory,” after his annexation of four Ukrainian provinces in the Donbas and the south. See President of the Russian Federation, “Meeting of the Valdai International Discussion Club,” October 18, 2018, <http://www.en.kremlin.ru/events/president/news/58848>.

46 Michael Kofman and Anya Loukianova Fink, “Escalation Management in Russian Military Strategy,” *War on the Rocks*, September 19, 2022, <https://warontherocks.com/2022/09/escalation-management-and-nuclear-employment-in-russian-military-strategy-2>.

47 Andrey Baklitskiy suggested that Russia recognizes as a meaningful threshold *direct* engagement of NATO forces in the war. Author interview with Andrey Baklitskiy, January 12, 2023. Lavrov told state media: “NATO, in essence, is engaged in a war with Russia through a proxy and is arming that proxy. War means war.” See Helen Livingstone, “Russia Accuses NATO of ‘Proxy War’ in Ukraine as US Hosts Crucial Defence Summit,” *The Guardian*, April 26, 2022, <https://www.theguardian.com/world/2022/apr/26/russia-accuses-nato-of-proxy-war-in-ukraine-as-us-hosts-crucial-defence-summit>.

48 Author interview with Sergey Radchenko, January 10, 2023; author interview with Andrey Baklitskiy, January 12, 2023; and author interview with Pavel Podvig, January 18, 2023. Dara Massicot claims that “There is nothing that *Ukraine* can do to Russia that would trip Russia’s official, on the books, nuclear tripwires that they have in their doctrine. It’s just not possible.” She argues that Russia’s strategic doctrine includes as a threshold for using nuclear weapons only a mass conventional attack that threatens the survivability of the state, an attack on Russia’s nuclear triad, or on their space-based architecture. See Ravi Agrawal, “Is Ukraine’s Spring Offensive Already Underway? Military Analyst Dara Massicot on How to Follow the Next Phase of Russia’s War in Ukraine,” *Foreign Policy*, May 16, 2023 (emphasis added), <https://foreignpolicy.com/2023/05/16/ukraine-spring-offensive-russia-war-putin/>.

49 Russia’s tactical nuclear weapons would have to be mounted on air, sea, and land-based platforms before use. They are currently held in central storage sites by the civilian Ministry of Defence’s Twelfth Directorate and would have to be moved. See Kristen Ven Bruusgaard, “How Russia Decides to Go Nuclear: Deciphering the Way Moscow Handles Its Ultimate Weapon,” *Foreign Affairs*, February 6, 2023, <https://www.foreignaffairs.com/ukraine/how-russia-decides-go-nuclear>. Western intelligence agencies can monitor any movement.

50 Olikier, “Moscow’s Nuclear Enigma”; and Dmitri (Dima) Adamsky, “Nuclear Incoherence: Deterrence Theory and Non-Strategic Nuclear Weapons in Russia,” *Journal of Strategic Studies* 37, no. 1 (2014): 91–115, <https://doi.org/10.1080/01402390.2013.798583>. Adamsky makes the consequences for operational planning clear: “Russian nuclear doctrine was supposed to develop a scheme for using nuclear weapons to deter or deescalate.’ Such a scheme was never provided. In contrast to the US nuclear posture reviews and national security strategies, Russia’s fragmented nuclear doctrinal declarations and documents are useless as a guide for planners. They do not spell out the causal mechanism of ‘nuclear deterrence’ and are ambiguous in defining key terms of nuclear posture. . . . Russian nuclear deterrence posture is not a doctrine, but a generic notion, short of providing a clear guidance for operational planning” (p. 115). Adamsky comes to the same conclusion about Cold War NATO theater nuclear doctrine. See Dmitri Adamsky, *Russia Nuclear Orthodoxy: Religion, Politics, and Strategy* (Stanford, CA: Stanford University Press, 2019).

by either unifying logic or official policy.”<sup>51</sup>

Nuclear signaling, through choreographed chatter or veiled threats, is distinct from an alert or the movement of weapons. Russia’s nuclear signaling since it invaded Ukraine was likely designed to deter NATO from increasing its support to Kyiv and to prevent a local war from escalating to a regional war where nuclear weapons could be used should Russia’s leaders judge the threat to be existential.<sup>52</sup>

What explains Russia’s shift away from a reliance on nuclear weapons to deter and toward a more integrated concept of deterrence? Moscow’s most open-ended allowance for the use of nuclear weapons was in the early 2000s, at the height of Russia’s conventional military inferiority compared to NATO’s military capabilities. As Putin consolidated power and invested in the modernization of Russia’s military, particularly in the capacity for precision strikes and enhanced air and missile defense, the language of Russia’s strategic doctrine became progressively more restrictive.<sup>53</sup> As early as 2014, Russia’s concept of strategic deterrence integrated nuclear, conventional, and non-military capabilities. This trend toward integrated deterrence has continued to deepen with an emphasis on conventional capabilities as an essential element of deterrence. These improved conventional capabilities give Russian decision-makers additional options before they would have to consider using a nuclear weapon. The nuclear deterrence doctrine that Russia released in 2020 describes nuclear weapons as weapons of last resort.<sup>54</sup>

Nevertheless, Russian strategists still worry about their conventional capabilities in a large-scale or regional conflict with NATO forces. They have not taken the use of nuclear threats off the

table should conditions develop where “Russia had exhausted available conventional escalation tools and was unwilling to back down, even at the risk of nuclear conflict.”<sup>55</sup> The Russian debate over when Moscow would use nuclear weapons focuses not on limited or local wars, but on regional wars. Analysis of Russia’s strategic doctrine over time suggests that the threshold of an existential threat to Russia is, as I have noted, high but also fuzzy.<sup>56</sup>

These classifications and distinctions have never been challenged in practice. Russia’s invasion of Ukraine and NATO’s supply of military equipment and real-time intelligence to Kyiv are providing the first test.<sup>57</sup> Leaders in Moscow, Kyiv, Brussels, and Washington are all in uncharted waters.

### “Learning by Doing”

Doctrine helps to structure the options that are available to leaders. But leaders frequently make decisions that depart from doctrine in wartime. They are most likely to do so when they become pessimistic and begin to think that they are in danger of losing on the battlefield. There is no evidence that either Russia’s or Ukraine’s leaders — if Kyiv receives the military equipment that NATO members have committed to provide — have yet lost confidence that they can win strategically. Schelling’s strategy of the “threat that leaves something to chance” will become relevant to Russia’s decision-makers only if, as Avril Haines, the director of national intelligence, testified in May, “he [Putin] perceives that he is losing the war in Ukraine and that NATO in effect is either intervening or about to intervene.”<sup>58</sup>

51 Adamsky, “Nuclear Incoherence,” 92. See also Olga Olikier and Andrey Baklitskiy, “The Nuclear Review and Russian ‘De-Escalation’: A Dangerous Solution to a Non-Existent Problem,” *War on the Rocks*, February 20, 2018, <https://warontherocks.com/2018/02/nuclear-posture-review-russian-de-escalation-dangerous-solution-nonexistent-problem>; and Bruusgaard, “How Russia Decides to Go Nuclear.”

52 Bruusgaard, “Understanding Putin’s Nuclear Decision-Making.”

53 It is important to note that even as Russia shifted toward integrated defense and the overall numbers of Russian non-strategic nuclear weapons declined, the new sea, air, and land-based cruise and ballistic missile systems are dual capable. See Bruusgaard, “Russian Nuclear Strategy and Conventional Inferiority.”

54 Bruusgaard, “Russian Nuclear Strategy and Conventional Inferiority.”

55 Bruusgaard, “Russian Nuclear Strategy and Conventional Inferiority.” See also Michael Kofman, Anya Fink, and Jeffrey Edmonds, *Russian Strategy for Escalation Management: Evolution of Key Concepts* (Arlington, VA: Center for Naval Analyses, April 2020), <https://www.cna.org/reports/2020/04/russian-strategy-for-escalation-management-key-concepts>.

56 For an analysis of the role of “subjectivity,” see David C. Logan, “The Nuclear Balance Is What States Make of It,” *International Security* 46, no. 4 (2022): 172–215, <https://muse.jhu.edu/article/855435/pdf>. For an excellent analysis of the significant role of subjectivity in explaining the dynamics of escalation, see Daniel Post, “Investigating ‘Escalate to De-Escalate’ in Past War Games and Crisis Simulations,” Brown University, Doctoral Dissertation, 2023.

57 U.S. Deputy Assistant Secretary of Defense Kathleen Hicks described the intelligence that Washington shared with Kyiv as “vital” and “high end,” and the director of the U.S. Defense Intelligence Agency called the intelligence sharing with Ukraine “revolutionary.” The Department of Defense has said that the United States does not provide intelligence information on the location of senior leaders or participate in targeting decisions with Ukrainian forces. See Dara Massicot, “What Russia Got Wrong: Can Moscow Learn From Its Failures in Ukraine?” *Foreign Affairs*, February 8, 2023, <https://www.foreignaffairs.com/ukraine/what-russia-got-wrong-moscow-failures-in-ukraine-dara-massicot>.

58 David Sanger and William J. Broad, “Putin’s Threats Highlight the Dangers of a New, Riskier Nuclear Era,” *New York Times*, June 1, 2022, <https://www.nytimes.com/2022/06/01/us/politics/nuclear-arms-treaties.html>. In her testimony, Haines seems to imply that both conditions — losing the war and NATO intervention — are necessary conditions for escalation. Either condition alone might be sufficient to provoke escalation.



Only if Russia's leaders are persuaded that they are losing — however they define losing — are they likely to discover what their preferences are as they face difficult choices. Economists have long recognized that under conditions of high uncertainty, the usual sequence of preferences shaping choices may not apply.<sup>59</sup> People do not always know their preferences. It is only after they make a choice that they discover them by reasoning backward from their behavior. Wartime presidents are no exception. As one astute observer remarked, "Putin himself likely does not know what he would do then [if he were losing the war]."<sup>60</sup> It may well be that Putin is not a reliable predictor of what he will do because even he does not know how he will feel, should he face any of these contingencies.

The United States had no alternative but to try to manage escalation in the context of these deep uncertainties. As officials in the Biden administration became increasingly convinced in the late fall of 2021 that Russia intended to invade Ukraine, they recognized that an attack of the scope that Russia was planning would break all the norms and rules. As early as October, Biden set three priorities: "Support Ukraine — nothing about Ukraine without Ukraine, bolster NATO, and avoid a war with Russia."<sup>61</sup> As the intelligence became more precise and the administration consulted widely with allies, Biden laid out five boundary conditions to reduce some of the most important uncertainties.

First, the president made clear that "[w]e do not seek a war between NATO and Russia."<sup>62</sup> Second, he put down a marker both to deter a Russian attack against any member of NATO and to reassure Putin

that the United States and NATO had no intention of attacking Russia: "So long as the United States or our allies are not attacked, we will not be directly engaged in this conflict, either by sending American troops to fight in Ukraine or by attacking Russian forces."<sup>63</sup> Third, Biden clarified that, despite his revulsion at Russia's unjust attack, "the United States will not try to bring about his [Putin's] ouster in Moscow."<sup>64</sup> While the United States would support Ukraine to the fullest extent possible, Biden continued, "We are not encouraging or *enabling* Ukraine to strike beyond its borders."<sup>65</sup> These reassurances went beyond what Russian doctrine required to classify the war as local rather than regional.

Biden established a final parameter when he warned Russia explicitly against the use of nuclear weapons: "Any use of nuclear weapons on any scale would be completely unacceptable to the United States as well as to the rest of the world and would entail severe consequences."<sup>66</sup> Even though these parameters were set early on, Under Secretary of Defense for Policy Colin Kahl observed that escalation management ran through the creation and announcement of all these boundaries in the period before the invasion:

We didn't want to inadvertently speed up the Russian clock, incentivize Putin, or give him a pretext to make a decision he had not made. Us leaning too far forward could create dynamics either within the alliance or as we were trying to build world opinion against the Russians that made us look like we were the provocateurs.<sup>67</sup>

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59 Paul Samuelson argued as early as 1938 that people's preferences could more easily be estimated from their behavior than from concepts of utility that are abstract and difficult to calculate. Samuelson's model assumes rationality in the choice among options. Paul A. Samuelson, "A Note on the Pure Theory of Consumer's Behavior," *Economica* 5 (1938): 61–71, <https://doi.org/10.2307/2548836>; Samuelson, "Consumption Theory in Terms of Revealed Preference." Economists and political psychologists have demonstrated that people do not know their preferences at all times and often discover them by making a choice and then inferring their preferences from their behavior. For a discussion of "theory in action," see Chris Argyris and Donald A. Schon, *Organizational Learning* (Reading, MA: Addison-Wesley, 1978). For an analysis of action bias, see Thomas Peters and Robert H. Waterman, *In Search of Excellence* (New York, NY: Harper and Row, 1982).

60 Author interview with Pavel Podvig, January 18, 2023.

61 Emily Horne, Spokesperson, National Security Council, quoted in Banco, Graff, Seligman, Toosi, and Ward, "Something Was Badly Wrong," 8.

62 Joseph R. Biden Jr. "What America Will and Will Not Do in Ukraine," *New York Times*, May 31, 2022, <https://www.nytimes.com/2022/05/31/opinion/biden-ukraine-strategy.html>.

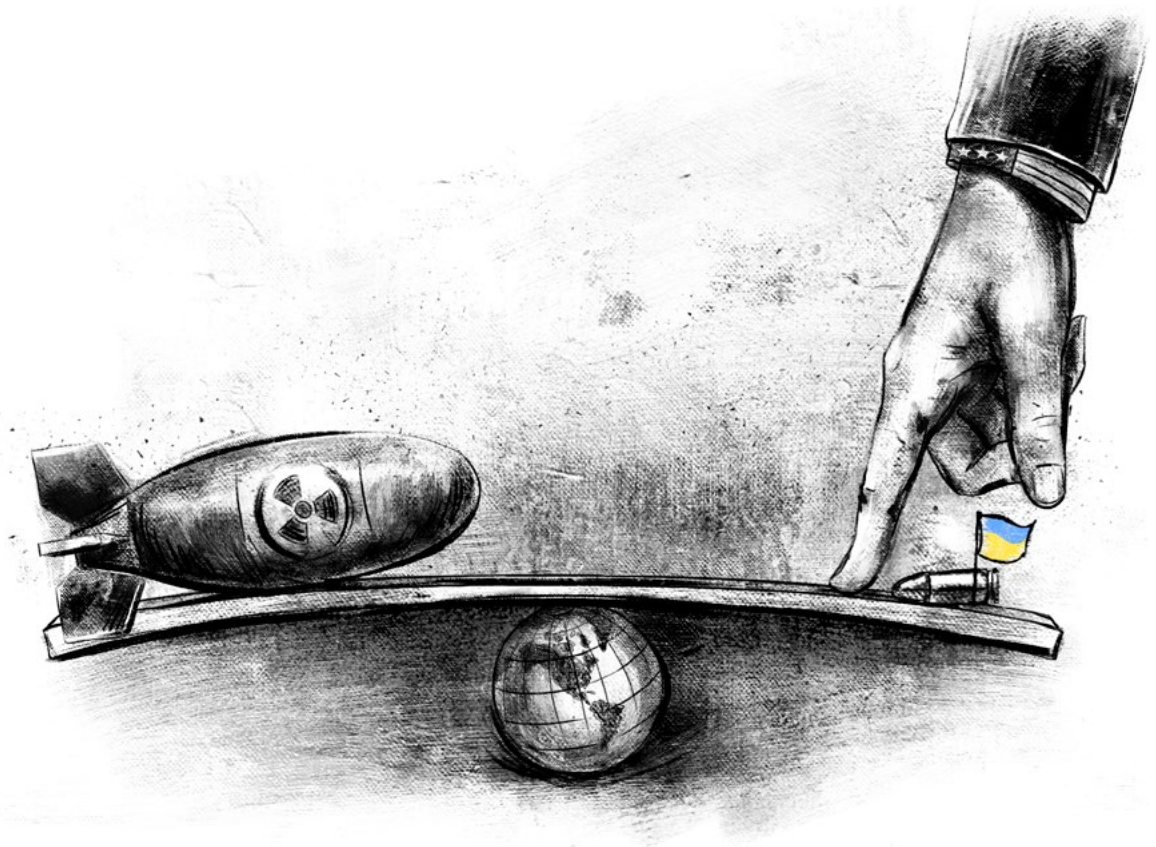
63 Biden, "What America Will and Will Not Do in Ukraine." Throughout January and into February of 2022, the United States was engaged in intensive discussions with its allies. "We were talking with our eastern flank allies to ensure that they understood that we regarded the Article Five commitment to their security as sacrosanct." Laura Cooper, Deputy Assistant Secretary of Defense for Russia, Ukraine, and Eurasia, quoted in Banco, Graff, Seligman, Toosi, and Ward, "Something Was Badly Wrong," 54.

64 Biden, "What America Will and Will Not Do in Ukraine." The president made this explicit in the aftermath of a comment by Secretary of Defense Lloyd Austin on April 24: "We want to see Russia weakened to the degree that it can't do the kinds of things it has done in Ukraine again." See Peter Baker and Emily Cochrane, "Biden Speeds up Military Aid to Ukraine, Drawing U.S. Deeper into War," *New York Times*, May 9, 2022, <https://www.nytimes.com/2022/05/09/us/politics/biden-lead-lease-ukraine-weapons-war.html>.

65 Biden, "What America Will and Will Not Do in Ukraine."

66 Biden, "What America Will and Will Not Do in Ukraine."

67 Kahl added: "Secretary Austin was very deliberate about setting all the conditions to enable a rapid deployment, but not actually to recommend moving a bunch of troops forward until we had unambiguous warning that this was going to happen, so that we didn't get into this trap where we actually set in motion a chain of events we were trying to prevent." Quoted in Banco, Graff, Seligman, Toosi, and Ward, "Something Was Badly Wrong," 30 and 43.



After the invasion began, despite the attempts at intra-war deterrence embedded within these boundary conditions, there were — and still are — uncertainties about how much support the United States could provide to Ukraine without provoking either horizontal or vertical escalation. How has the Biden administration managed the challenges of escalation within these five parameters that structure the problem? The administration has had to decide repeatedly, in the face of increasingly desperate requests from President Volodymyr Zelensky, what level of military support and what kinds of equipment it would provide to Ukraine. The pattern of the Biden administration’s decision-making is consistent with what I have called pragmatic “learning by doing,” a strategy that responds to a “threat that leaves

something to chance.”<sup>68</sup> This process of pragmatic decision-making tries to *reduce* rather than *manipulate* uncertainty through an incremental, inductive, and experimental approach. This strategy is particularly suited to ill-structured problems where appropriate options are either disputed or, at times, even unknown.<sup>69</sup> Problems in international security are generally ill structured: They have multiple goals that are often vaguely defined, several constraints that are loosely set, and little information about possible solutions. Initially ill-structured problems become better structured as people learn through trial and error.<sup>70</sup> In the context of the five parameters that the Biden administration established, this is exactly the kind of problem officials faced in the aftermath of the Russian invasion.<sup>71</sup>

68 Stein, “Political Learning by Doing.”

69 Learning by doing draws upon the central tenets of pragmatism. A rich tradition that encompasses a wide range of approaches, pragmatism is defined broadly as a set of dispositions for making sense of the world and what works in the world. It treats the world as relational and contingent where people adjust their habits to the contingent. For applications of pragmatist theories to international politics, see Simon Frank Pratt, Sebastian Schmidt, Deborah Avant, Molly Cochran, Patrick Thaddeus Jackson, Henry Farrell, Jack Knight and Gunther Hellman, “Pragmatism in IR: The Prospects for Substantive Theorizing,” *International Studies Review* 23 (2021): 1933–1958, <https://academic.oup.com/isr/article-abstract/23/4/1933/6275420>; and Molly Cochran, “A Story of Closure and Opening,” *European Journal of Pragmatism and American Philosophy* 2 (2012), <https://doi.org/10.4000/ejapap.777>

70 See the classic account in Herbert A. Simon, “The Structure of Ill-Structured Problems,” *Artificial Intelligence* 4 (October 1973): 181–201, <https://www.sciencedirect.com/science/article/abs/pii/0004370273900118>; James F. Voss and Timothy A. Post, “On the Solving of Ill-structured Problems,” in Micheline H. Chi, Robert Glaser and Marshal J. Farr, eds., *The Nature of Expertise* (Hillsdale, NJ: Lawrence Erlbaum, 1988), 261–285.

71 A problem is well-structured when it has a well-established goal, known constraints, and identified possible solutions.



There has been a clear pattern of pragmatic decision-making in the first year of the war. Biden early on ruled out NATO enforcement of a no-fly zone over Ukraine — despite brutal Russian attacks on Ukraine’s civilian infrastructure and desperate pleas from Zelensky — because he judged the risk of direct engagement between NATO and Russian pilots to be too high. After that, the Biden administration began incrementally, and at times with considerable delays, to provide Ukraine with increasingly more advanced military equipment. Officials then waited to assess Russia’s reaction. The Russian response was limited to verbal warnings and veiled nuclear threats but no military escalation outside the battlefield in Ukraine. So far, Russia has not put any strategic weapons on high alert or moved tactical nuclear weapons out of storage, although it has moved tactical nuclear weapons to Belarus that, however, remain under Russian control. The absence of any horizontal escalation to NATO members or vertical escalation to unconventional weapons encouraged the administration to take the next steps in response to new requests from Ukraine.

Early decisions to supply defensive Javelins and Stingers were followed, after Ukrainian civilian infrastructure came under relentless attack, by the decision to provide Kyiv with High Mobility Artillery Rocket Systems. Even though their range was short enough so that they could not reach Russian territory, a pattern of probe and wait preceded the decision. Russia railed against the provision of these longer-range rocket systems but took no action against NATO members. Over time, the United States moved by increments, with some of its allies, to supply Bradley and Marder armored vehicles, then advanced surface-to-air missiles in November and December of 2022. They then pledged to send batteries of the Patriot air defense system that arrived in Ukraine the following April. In January 2023, the United Kingdom, the United

States, and Germany decided to supply Challenger, Abrams, and Leopard-2 tanks and then Ground Launched Small Diameter Bombs, rocket-propelled guided bombs with a more extended range. Even though Russia has threatened in the past that any attack on Crimea would “ignite judgment day,” in May 2023, the United Kingdom sent Storm Shadow missiles with a range long enough to reach Crimea.<sup>72</sup> That same month, the Biden administration, acceding to a longstanding Ukrainian request, also authorized the training of Ukrainian pilots on F-16 fighter jets and promised that its allies would deliver these aircraft to Ukraine in the next several months.<sup>73</sup> Consistent with the parameter condition that NATO not enable Ukraine to attack beyond its borders, Ukrainian Defense Minister Oleksiy Reznikov again confirmed Ukraine’s agreement not to use Western long-range weapons to strike Russian territories.<sup>74</sup>

What had been off limits in February 2022 was on its way or promised to Ukraine a year later. The United States and its partners had experimented, paused, and moved again when they found there was no material reaction from Moscow, and Ukraine made sure to follow the rules in the ways it used the equipment. Officials then waited again to assess Moscow’s reaction. A year after the invasion, U.S. policymakers and analysts were more confident that they understood better what kinds of support for Ukraine would prompt verbal outrage rather than risk “something more dangerous.”<sup>75</sup>

As the United States experimented and its actions did not provoke horizontal or vertical escalation outside the battlefield, the constraints Biden had set in March 2022 were gradually relaxed. The constraint that NATO would not encourage or enable Ukraine to attack beyond its borders, for example, was subtly modified. Kyiv did agree that it would not strike targets in Russia with military equipment that the United States and NATO had supplied. But American officials clarified on

72 Shapiro, “We are on a Path to Nuclear War.” A background discussion with U.S. officials suggested that the Biden administration had become convinced that Ukraine needed to retake Crimea. See Helene Cooper, Eric Schmitt, and Julian E. Barnes, “U.S. Warns to Helping Ukraine Target Crimea,” *New York Times*, January 18, 2023, <https://www.nytimes.com/2023/01/18/us/politics/ukraine-crimea-military.html>. The administration believed that “if the Ukrainian military can show Russia that its control of Crimea could be threatened, that would strengthen Kyiv’s position in any future negotiations.” In addition, fears that the Kremlin would retaliate using a tactical nuclear weapon have dimmed, U.S. officials said, although they cautioned that the risk remained. It is difficult to decode if this backgrounder was deliberate signaling to Moscow, since the same article concluded that Department of Defense officials did not believe that Ukraine had the military capability to recapture Crimea. Predictably, the article provoked a furious Russian response.

73 David Sanger et al, “In a Sharp Reversal, Biden Opens a Path for Ukraine to Get Fighter Jets,” *New York Times*, May 19, 2023, <https://www.nytimes.com/2023/05/19/world/europe/ukraine-f-16s-biden-russia.html>.

74 See Kateryna Stepanenko, Karolina Hird, Grace Mappes, George Barros, Layne Philipson, Nicole Wolkov, and Frederick W. Kagan, “Latest Russian Offensive Campaign Assessment,” *Institute for the Study of War*, February 6, 2023, <https://www.understandingwar.org/backgrounder/russian-offensive-campaign-assessment-february-6-2023>. The *Washington Post*, drawing on intelligence documents leaked on the Discord messaging platform, reported that Zelensky told his officials in private meetings that Ukraine needed long-range missiles to attack Russian forces inside Russia’s territory. John Hudson and Isabelle Khurshudyan, “Zelensky, in Private, Plots Bold Attacks Inside Russia, Leak Shows,” *Washington Post*, May 13, 2023, <https://www.washingtonpost.com/world/2023/05/13/zelensky-ukraine-war-leaked-documents/>.

75 See Julian Barnes and David E. Sanger, “Fears of Russia’s Use of Nuclear Weapons Diminished, But Could Re-Emerge,” *New York Times*, February 4, 2023, <https://www.nytimes.com/2023/02/03/us/politics/russia-nuclear-weapons.html>.

background that they “would not object to Ukraine’s striking back with its own weapons.”<sup>76</sup>

Most concerning to Biden is the prospect that Putin might use a tactical nuclear weapon if Russia’s leaders were to face what they consider a serious defeat. That Russia has not yet moved tactical nuclear weapons out of storage is no guarantee that Russia’s leaders would not do so if they feared a humiliating defeat.<sup>77</sup> Under these conditions, they might use a strategy akin to a “threat that leaves something to chance” that would bump up directly against Washington’s strategy of “learning by doing.” These two strategies could collide in unexpected and dangerous ways as a pessimistic Russian leadership learns from the success of the U.S. strategy and recognizes that Moscow needs to act as well as speak. Russia’s leaders could learn that they need to do more than issue verbal threats. They could then initiate some kind of material action — visibly putting strategic forces on high alert or moving some tactical nuclear weapons out of storage — to increase the credibility of their threats by more effectively manipulating uncertainty.

Before the invasion began and several times since, Putin and other Russian leaders have made veiled threats that they could use nuclear weapons. William Burns, the CIA director, affirmed that the United States continues to take Russia’s nuclear “saber rattling” seriously: “It is a risk that we cannot afford to take lightly; on the other hand, the purpose of the saber rattling is to intimidate us as well as our European allies and the Ukrainians themselves.”<sup>78</sup> Burns put the strategic dilemma of managing escalation directly. The United States, he said, has to “weigh ... those threats carefully but also not be intimidated by them.”

These threats intensified in the autumn of 2022 after Ukrainian troops broke through and pushed Russian forces back from Kharkiv in the northeast

and Kherson in the south. In Moscow, military bloggers openly criticized the abject performance of the Russian army and its military commanders.<sup>79</sup> As failures on the battlefield and domestic criticism intensified, U.S. intelligence overheard a conversation among senior Russian military commanders about when and how Moscow might use a tactical nuclear weapon in Ukraine. Putin was reportedly not part of these conversations. That intelligence was circulated inside the U.S. government in mid-October.<sup>80</sup> Almost at the same time, Russia’s Minister of Defense Sergei Shoigu, in one of his calls with Secretary of Defense Lloyd Austin, accused Ukraine of planning to use a dirty bomb.<sup>81</sup> The vagueness and increased frequency of these threats deepened concern that Russia could be manipulating risk in the face of a tactical defeat. The available evidence cannot establish whether Russian generals were deliberately manipulating risk, as Schelling would have recommended, but the effects were similar in many ways.

As tensions grew, the United States made multiple efforts to clarify and reduce the uncertainties directly with Moscow. In a long phone call, Gen. Mark Milley, the chairman of the Joint Chiefs of Staff, and Gen. Valery Gerasimov, chief of the General Staff, discussed Russia’s doctrine that governed the use of nuclear weapons. A shared understanding of the conditions under which Russia would use nuclear weapons that was consistent with the narrow set of enabling conditions in Russia’s strategic doctrine helped to reduce somewhat the uncertainty between the two most senior generals in Moscow and Washington.<sup>82</sup> Doctrine played a more significant role in reducing uncertainty than strategic analysts would have expected. Gerasimov’s willingness to put some boundaries around these conditions simultaneously reduced uncertainty and made a threat to use nuclear force more credible, should these

76 “With More Strikes in Russia, Ukraine Makes Calculation Moscow Has Reached Limit, Analysts Say,” *New York Times*, December 26, 2022, <https://www.nytimes.com/live/2022/12/26/world/russia-ukraine-news#:~:text=KYIV%2C%20Ukraine%20%E2%80%94%20Ukraine%20is%20striking%20more%20boldly,conventional%20capabilities%2C%20former%20military%20officials%20and%20analysts%20say>. The United States began to hedge even that requirement. In the aftermath of Ukrainian drone attacks on Moscow on May 30, 2023, the State Department and the National Security Council both issued statements saying that the United States does not support strikes inside Russia “as a general matter,” but noted that Russia had struck Kyiv 17 times in May. See Anatoly Kurmanaev, Ivan Nechepurenko, and Eric Nagourney, “Drone Strikes in Moscow Bring Ukraine Wear Home to Russians,” *New York Times*, May 30, 2023, [www.nytimes.com/2023/05/30/world/europe/moscow-drone-strike-russia-ukraine.html](https://www.nytimes.com/2023/05/30/world/europe/moscow-drone-strike-russia-ukraine.html).

77 Pauly and McDermott, “The Psychology of Nuclear Brinkmanship” explores the impact of humiliation.

78 Barnes and Sanger, “Fear of Russia’s Use of Nuclear Weapons Diminished, But Could Re-Emerge.”

79 Pjotr Sauer, “We Have Already Lost: Far-Right Russian Bloggers Slam Military Failures,” *The Guardian*, September 8, 2022, <https://www.theguardian.com/world/2022/sep/08/we-have-already-lost-far-right-russian-bloggers-slam-kremlin-over-army-response>.

80 Helene Cooper, Julian E. Barnes, and Eric Schmitt, “Russian Military Leaders Discussed Use of Nuclear Weapons, U.S. Officials Say,” *New York Times*, November 2, 2022, <https://www.nytimes.com/2022/11/02/us/politics/russia-ukraine-nuclear-weapons.html>. See also Barnes and Sanger, “Fears of Russia’s Use of Nuclear Weapons Diminished, But Could Re-Emerge.”

81 David Sanger, Julian E. Barnes, Eric Schmitt, and Helene Cooper, “Western Officials Warn Russia Could Use a Dirty Bomb as a Pretext,” *New York Times*, October 24, 2022, <https://www.nytimes.com/2022/10/24/us/politics/russia-dirty-bomb-west-ukraine.html>.

82 Barnes and Sanger, “Fear of Russia’s Use of Nuclear Weapons Diminished, But Could Re-Emerge.” Massicot’s understanding of the tripwires to the use of nuclear weapons in Russia’s strategic doctrine is consistent with that interpretation. See Agrawal, “Is Ukraine’s Spring Offensive Already Underway?”



conditions occur in the future. At least at that time, although the Russian army was under pressure, Russia's military leaders focused on reducing rather than manipulating uncertainty through a threat that left something to chance.<sup>83</sup>

There is also limited evidence that Russian generals believed that Ukraine was about to use a dirty bomb and that the Russian allegations were not, as many believed, a false flag operation. U.S. officials urged the International Atomic Energy Agency to push to send inspectors into Ukraine. Once they were on the ground, the inspectors found no evidence of a dirty bomb. That, too, helped to ease tensions. Complementing the strategy of reassurance, Burns met with his Russian counterpart, Sergei Naryshkin, the director of Russia's foreign intelligence service, and reinforced intra-war deterrence by making "very clear the serious consequences of any use of tactical nuclear weapons."<sup>84</sup> And German Chancellor Olaf Scholz visited Beijing in November and asked Chinese General Secretary Xi Jinping to join in an explicit warning to Putin of the grave consequences of any use of a nuclear weapon. "The Chinese government, the president and I were able to declare that no nuclear weapons should be used in this war," said the chancellor.<sup>85</sup>

Finally, in a major turn that reversed longstanding American strategic policy, U.S. officials signaled informally that, should Russia use a tactical nuclear weapon, the administration has no plans to retaliate with a nuclear weapon.<sup>86</sup> The U.S. response would be conventional, with grave consequences for Russia, to "signal immediate de-escalation," and

would then be followed by international condemnation. The widespread signaling that the use of a tactical nuclear weapon would be met with a severe conventional response was part of a U.S. strategy of escalation management designed to stop an escalatory spiral.<sup>87</sup> It was partly informed by the expectation that countries like India and China would join in vigorous international condemnation of Russia. Moscow would then be isolated.

This shift in strategy to a conventional response is a significant policy innovation. The combination of clarification, reassurance, and deterrence seems to have managed escalation, at least for the moment. In a speech on Oct. 27, 2022, following these calls, Putin denied that Moscow was preparing to use a nuclear weapon in Ukraine. "We see no need for that," he said. "There is no point in that, neither political nor military."<sup>88</sup> On June 15, 2023, Putin reiterated that Russia had no need to use nuclear weapons unless the territorial integrity and sovereignty of the state, the existence of the Russian Federation, were threatened.<sup>89</sup> A nuclear threat that leaves something to chance seems to be too risky for Putin as long as Russia is not facing a significant defeat on the battlefield. And, in a seminal change, the United States has broken from long-established strategic thinking about how to respond to the use of a nuclear weapon in order to manage escalation.

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83 There is no official readout of the conversation in Moscow. It is intriguing that as tensions rose, Gerasimov took the opportunity in a military-to-military conversation to reduce rather than manipulate uncertainty as Putin had been doing by issuing veiled nuclear threats. His willingness to do so takes on added weight because he is one of three who have a role in authorizing the use of any nuclear weapon. Putin and Shoigu are the other two. An order must go from Putin and one of the other two before nuclear weapons can be used. Any nuclear order must then be authenticated through a central nuclear command post of Russia's strategic nuclear forces that is under the direction of Gerasimov's general staff. See Bruusgaard, "How Russia Decides to Go Nuclear." Sergey Radchenko and Andrey Baklitskiy dismiss the significance of the second "nuclear briefcase" and consider that neither of the other two are likely to oppose Putin's orders. Author interview with Sergey Radchenko, January 10, 2023; and author interview with Andrey Baklitskiy, January 12, 2023.

84 See Barnes and Sanger, "Fear of Russia's Use of Nuclear Weapons Diminished, But Could Re-Emerge."

85 Barnes and Sanger, "Fear of Russia's Use of Nuclear Weapons Diminished, But Could Re-Emerge." China's readout of that meaning did not include a reference to that statement.

86 Pavel Podvig emphasized the importance of making public this commitment to respond to the use of a tactical nuclear weapon with conventional weapons. Author interview with Pavel Podvig, January 18, 2023.

87 Senior U.S. officials ran a top-secret table-top nuclear exercise in 2016 where an adversary used a tactical nuclear weapon. Senior officials in the Obama administration urged a nuclear response, but the deputies, including Avril Haines, currently the director of national intelligence, and Colin Kahl, currently the under secretary of defense for policy, advocated responding with conventional weapons. Their response was met at the time with resistance by those who worried about the consequences for extended deterrence. See Sanger and Broad, "Putin's Threats Highlight the Dangers of a New, Riskier Nuclear Era"; and Scott Sagan, "The World's Most Dangerous Man: Putin's Unconstrained Power Over Russia's Nuclear Arsenal," *Foreign Affairs*, March 16, 2022, <https://www.foreignaffairs.com/articles/russian-federation/2022-03-16/worlds-most-dangerous-man>. Sagan concludes that "The deputies had the better strategy, one that was firm but less likely to provoke thermonuclear catastrophe."

88 Cooper, Barnes, and Schmitt, "Russia's Military Leaders Discussed Use of Nuclear Weapons, U.S. Officials Say."

89 At the St. Petersburg International Economic Forum on June 16, 2023, Putin asserted that Ukraine stood "no chance" of winning the war and then said: "The use of nuclear weapons, of course, is possible, for Russia, it is possible if there is a threat to our territorial integrity, independence and sovereignty, the existence of the Russian state." He then added, "We don't have this need." Neil MacFarquhar, "Putin Asserts Ukraine's Counteroffensive Has 'No Chance' at Economic Forum," *New York Times*, June 16, 2023, <https://www.nytimes.com/2023/06/16/world/europe/putin-russia-ukraine-counteroffensive.html>.

## **Theories of Escalation Management: What the Evidence from Ukraine Says**

More than a year after Russia’s brutal invasion of Ukraine, both sides still believe they can prevail. Evidence about the theory and practice of escalation management is still partial and incomplete. Access to Putin and his circle of advisers is extraordinarily limited, even by other government leaders who would usually help to interpret his thinking. Drawing on what is in the public domain, the preliminary story of the strategies of escalation management that are being used by the United States and Russia provides some grounds for optimism, unless the battlefield turns in a significant way against Russia. Although this analysis draws on only the one case, it is suggestive of the likely dynamics among nuclear states as great-power competition intensifies.

A review of the evidence suggests a mixed record for strategies of deterrence. The evidence is clear that Washington tried both deterrence and reassurance to dissuade Putin from invading Ukraine, but these strategies failed. The results of the first year of escalation management by the United States and its allies are more encouraging. Washington’s strategy of restraint was in play even before Russia invaded, but once the war began, the United States warned repeatedly of the consequences of escalation, even as it reassured Moscow that Washington did not want war with Russia. Russia has not expanded the war beyond Ukraine’s borders or used an unconventional weapon. We cannot conclude with confidence that America’s strategy succeeded in deterring escalation since no direct evidence of Russia’s intentions is yet available. Nevertheless, it is striking, given Russia’s heavy and unexpected losses, that Moscow has not escalated.

Russia’s frequent manipulation of the risk of nuclear escalation failed, moreover, to deter the United States and NATO from gradually expanding their military assistance to Ukraine and their sanctions on Russia, all within the boundary conditions set by Biden. Within the five constraints set early on by the president, Washington has succeeded, through a calibrated strategy of pragmatic, incremental “learning by doing,” in significantly and repeatedly broadening the scope of the military assistance that Ukraine is receiving, without provoking an escalatory response from Russia outside of Ukraine. The United States managed uncertainty by signaling different kinds of restraint and then edging up to the line while monitoring and adjusting.

Within the framework of escalation management that the president created, intra-war deterrence by the United States of Russia seems to have worked, at least for now. In March 2022, few would have predicted this outcome. The iteration between threats that leave something to chance and restraint that gradually approaches the line has defined, for now, the outer limits of indirect military conflict between the two nuclear powers.

Finally, and somewhat surprisingly, strategic doctrine provided helpful language that made a conversation between the most senior generals on both sides easier at a moment when tensions were rising. That moment came when advancing Ukrainian troops forced Russia to pull some of its own forces back on the battlefield. Building a shared understanding of how Russia’s strategic doctrine framed the use of nuclear weapons contributed to reducing tensions when not only the United States but also Russia appeared to be worried about escalation to unconventional weapons.<sup>90</sup> Analysts have previously examined the role of strategic doctrine in solidifying support from domestic and allied audiences and in deterring or compelling adversaries. Strategic doctrine has also been used to foreshadow likely patterns of decision-making. The argument here is different. In this case, strategic doctrine was useful principally as a boundary-setting exercise to structure a conversation between adversaries that allowed clarification and reduction of uncertainty.

## **Designing Strategy Under Radical Uncertainty: Four Challenges**

NATO has supplied an unprecedented amount of weapons and intelligence to Kyiv without provoking major escalation by Russia. That is a significant accomplishment. Leaders crafted a pragmatic strategy focused on learning to manage the uncertainties that they could not calculate with any confidence. The alternatives proposed by critics of the Biden administration’s strategy are all grounded in assumptions that Putin’s intentions are fixed and knowable — that he would not use nuclear weapons unless the survival of the Russian state was at risk. There is little to no evidence to support these assumptions, given the limited access to Putin and the small circle of advisers around him. Assertions that Putin will do this or not do that unfortunately do not make it so. A pragmatic strategy of learning by doing is especially appropriate when

90 Anonymous sources confirmed that Russia seemed genuinely concerned, as astonishing as this may seem, that Ukraine was preparing a “dirty bomb.” Author interview with senior defense official, January 25, 2023.



uncertainties are many and deep, as they continue to be in the wake of Russia's invasion of Ukraine. In a radically uncertain environment, there is no recipe for improving this kind of strategy other than to do what skilled strategists do: continue to experiment, take incremental steps, do ongoing assessments, conduct thought experiments to prepare for the most dangerous contingencies, no matter how unlikely they seem to be, and remain open to learning and adjusting in order to refine boundaries.

No strategy, however, is without risks and costs. I examine four challenges that leaders in the United States and NATO who continue to use versions of a pragmatic and incremental strategy may confront as the war continues. The first is the danger that they may inadvertently cross a threshold of escalation. The second is the ongoing cost of maintaining a slower pace in supplying weapons to Ukraine to allow time to assess the consequences of each new step. The third is the consequences for escalation management should Russia's leaders conclude that they face strategic defeat. The fourth is the potential impact of the unexpectedly poor performance of Russia's conventional forces on Moscow's threshold for the use of nuclear weapons. That threshold has moved in the past in response to changes in the confidence Russia's leaders have in the capacity of their conventional forces. It could move again.

### **The Risks of a Pragmatic, Incremental Strategy in a Dynamic Environment**

Leaders who use an incremental strategy may cross an adversary's threshold of escalation without knowing that they are doing so. Their success in the past in pushing forward, pausing, and then pushing forward again when they meet no resistance tells them little about a threshold that they might encounter if conditions change. Leaders are at risk of overlearning from the past. Nikolai Sokov, a former Russian diplomat, made clear how difficult it is to know in advance what a tipping point will be

in the absence of very definitively drawn red lines. The trouble is that when you advance

in these small kinds of steps, most likely you will not know that you have crossed the red line. So that's the danger.<sup>91</sup>

The United States has devoted considerable effort in the first year of the war in Ukraine to understanding Russia's thresholds. But thresholds generally do not remain fixed. They are dynamic and develop as battlefield conditions change. And, as the evidence shows, preferences are not stable. Moreover, leaders may only discover where they have drawn the line anew after they have acted.<sup>92</sup> Past success, unfortunately, is not a good predictor of future success.

How can leaders mitigate this risk, which is rooted in the uncertainties and the dynamism of the challenge they face? Principally by continuing to remain open to new information, by challenging assumptions and advice that are not supported by evidence, and by engaging in continuous thought experiments that put options under the microscope. This is no easy feat. Nevertheless, the evidence shows that leaders who manage to do so, who remain open to new evidence and who challenge arguments, are far better forecasters than those who are confident that they know one thing very well.<sup>93</sup>

### **The Costs of a Pragmatic, Incremental Strategy of Restraint**

Pragmatic learning by doing has costs as well as benefits. Through this incremental strategy, the Biden administration combined restraint with deterrence and assurance to manage escalation. Escalation has not occurred, but there is an ongoing, heated debate about the costs of that strategy. Critics claim that restraint has imposed significant costs on Ukraine and insist that the delays in transferring weapons have impeded Ukraine's capacity to make gains on the battlefield. Some have argued that Putin never had any intention of using any kind of nuclear weapon, that the domestic consequences for the regime could be severe were he to do so, and that he would provoke an avalanche of criticism internationally, even from friendly countries.<sup>94</sup> Xi has spoken out against the

91 Cassandra Vinograd, "Ukraine Says That Recent Pledges Show That New Weapons Are No Longer Taboo for Its Allies," *New York Times*, January 6, 2023, <https://www.nytimes.com/2023/01/06/world/europe/ukraine-weapons-allies-vehicles.html>.

92 For a critique of attaching importance to Russia's red lines as a form of self-deterrence, see Nigel Gould Davies, "Putin Has No Red Lines," *New York Times*, January 2, 2023, <https://www.nytimes.com/2023/01/01/opinion/putin-russia-ukraine-war-strategy.html>. That critique ignores the argument that in a war by proxy by one nuclear power against another, some constraints are necessary to avoid escalation. As Michael Kofman and Anya Loukianova Fink argue: "By imagining that the United States can have conventional-only wars with nuclear powers where the stakes for them are likely to become existential, there is an implicit assumption in U.S. defense strategy that Washington can somehow control escalation and dissuade nuclear use on the part of others, without any discernible plan for accomplishing this feat." See Kofman and Fink, "Escalation Management and Nuclear Employment in Russian Military Strategy."

93 Philip Tetlock, *Expert Political Judgment: How Good Is It and How Do We Know* (Princeton, NJ: Princeton University Press, 2005).

94 Olicker, "Russia's Nuclear Bluff."

use of a nuclear weapon, as have the leaders of India and Brazil. China especially matters to Russia in light of its ruptured relations with NATO and the punishing economic sanctions it faces. The damage Putin would do to his relationship with the leaders of China, India, and Brazil were he to detonate even the lowest-yield tactical nuclear weapon would be enormous. It would be irrational for him to do so and consequently, critics argue, the United States and NATO have been shadow boxing with themselves.<sup>95</sup>

## **It is plausible that mutual deterrence is operating in part because the United States and its allies have exercised restraint along with deterrence and reassurance.**

That a strategy of restraint has been in play is evident. Before the war began and before Putin issued a series of “threats that left something to chance,” Biden set boundaries and precluded NATO forces from engaging directly in a war against Russia, the world’s biggest nuclear power. It should not be surprising that the president did so. There was little that American leaders did not know about Russian capabilities but much they did not know about Russia’s willingness and capacity to use them. Setting boundaries at times of high uncertainty is a pragmatic strategy that allows for adaptation over time. The arguments against a strategy of restraint, as I suggested earlier, are based on unprovable assumptions that are unrelated to evidence. A strategy to manage escalation that is based on untested assertions carries with it significant danger, especially when the parties are the world’s largest nuclear powers.

A second strand of criticism is different. It challenges not so much the strategy of restraint but its persistence months into the war. The slow pace of the delivery of equipment to Ukraine and the pauses to evaluate its impact, critics allege, limited Kyiv’s capacity to fight back effectively when Russia dramatically escalated its attacks against Ukraine’s civilian infrastructure. These critics are especially scathing in their condemnation of the Biden administration for its current refusal to supply Ukraine with long-range missiles. Critics argue that restraint may have been appropriate

immediately after Russia invaded Ukraine but was no longer appropriate — and was damaging to Ukraine’s capacity to prevail on the battlefield — once the limits of indirect military conflict were roughly defined. When Russia did not attack supply convoys travelling to Ukraine from NATO members or escalate to the use of unconventional weapons in the hope that it would break the back of Ukrainian resistance, restraint, these critics argued, was no longer necessary.

NATO’s refusal to supply the most advanced long-range weapons to Ukraine clearly limits its battlefield options. The challenges to supply are partly the result of strategy but even more so of Ukraine’s rapid consumption of missiles and artillery on the battlefield, which requires an unantic-

ipated and unprecedented level of resupply by a depleted industrial infrastructure in a very short timeframe. Shortages and training requirements for advanced weaponry would have, in any event, slowed the delivery of military equipment.

However, shortages are not the cause of NATO’s refusal to supply long-range missiles that can reach across Russia’s borders. That refusal flows directly from the restraint that has defined the Biden administration’s strategy of escalation management. Critics claim that because Russia has not yet escalated, despite NATO’s supply of increasingly sophisticated weapons to Ukraine, restraint is an unnecessary precaution. That claim is not obvious. It is plausible that mutual deterrence is operating in part because the United States and its allies have exercised restraint along with deterrence and reassurance. Russian leaders are deterred from engaging the convoys that are resupplying Ukraine not only because they know that their forces are inferior, but also because the United States, from the outset, has signaled that NATO would not engage with Russian forces unless they were attacked.<sup>96</sup> Milley makes this point in stark language:

One thing that was — and still is — on my mind every day is escalation management. Russia is a nuclear-armed state. They have the capability to destroy humanity. That’s nothing to play with. We’re a big power. Russia is a big power. There’s a lot at stake

95 These are persuasive arguments, but analysts made similar arguments in January and February 2022 about the irrationality of a Russian decision to invade Ukraine and concluded that Putin was engaged in a strategy of coercive diplomacy to extract political concessions from Ukraine. Putin invaded.

96 Andrey Baklitskiy suggests that direct engagement of NATO forces would be a trigger for escalation. Author interview with Baklitskiy, January 12, 2023.



here, a lot of people's lives. Every move has to be consciously and deliberately thought through to its logical conclusion.<sup>97</sup>

### What if Russia Were to Face Defeat?

That defeat is an enabling condition of escalation is supported by theory as well as robust evidence. Prospect theory, developed in the laboratory but tested widely in real world conditions, finds that, when people face certain losses, they generally become more willing to take risks to avoid these losses.<sup>98</sup> Related arguments about sunk costs explain why people double down on a bad bet rather than walk away.<sup>99</sup> Putin did precisely that. When the Ukrainian army pushed back Russian forces in the fall of 2022, he doubled down and accepted the domestic risk to his regime of mobilizing 300,000 men. Humiliation, analytically separate from but closely linked to the experience of defeat, intensifies that experience and feeds the tendency to lash out.<sup>100</sup>

What can the United States and its NATO allies do to manage and mitigate the risk of escalation should Russian leaders face what they consider to be a severe defeat of their military forces or a serious challenge to the regime? What they should *not* do, and apparently have no intention of doing, is to constrain Ukraine's forces on the battlefield, especially if they are on the verge of breaking through Russian lines. On the contrary, U.S. officials have signaled repeatedly that a successful Ukrainian counter-offensive would help to level the playing field for any negotiations that might follow.

How then to manage escalation should a Russian defeat appear imminent? NATO leaders should identify the multiple ways that Russia's leaders are likely to understand and experience defeat. Milley and Gerasimov, as we saw, did exactly that at a moment of tension. Leaders can also do thought experiments about what they might offer Russia that could reduce the sting of a humiliating military defeat. Were the United States to send a credible signal of restraint and reinforce the earlier message that regime change was not part of NATO's agenda, the most

dangerous consequences of humiliation might be avoided. The United States ran a table-top exercise about how they might respond to Russia's use of a tactical nuclear weapon. That exercise surfaced disagreements among policymakers and helped shape the Biden administration's innovative response, which officials then informally made public. In an uncertain environment, these thought experiments and exercises work as virtual equivalents to learning by doing and can help to prepare leaders for the tough decisions that they may have to make.

### The Impact of Poor Performance on Russia's Nuclear Threshold

As the war continues, Russia's strategic doctrine will likely be of less help than it has been in the past in structuring the problem. It will be of less help because of the ambiguities built into the thresholds that distinguish one level of war from another and because of its silence about the conditions that would legitimate the use of tactical nuclear weapons. Russia's decision-makers could contemplate the use of a nuclear weapon if they were to determine that there is an existential threat to the Russian Federation. But the term "existential," as we have seen, remains undefined. Russia's leaders increasingly use the language of "strategic" threat to describe NATO's role as the war goes on.<sup>101</sup> The lines between these two categories, neither one precisely defined, seem close to blurring.

There is one additional factor that could reduce the relevance of Russia's current strategic doctrine. Moscow clearly did not anticipate the scope of NATO's response to the invasion of Ukraine. NATO's response and the poor performance of Russia's conventional military forces are likely to provoke adaptation in Russia's strategic thinking. In the last decade, Russia's move to integrated deterrence and away from an early use of nuclear weapons made escalation management easier. Russian leaders raised the threshold for the use of nuclear weapons because their large investment in the modernization of their conventional forces made them more

97 Quoted by Banco, Graff, Seligman, Toosi, and Ward, "Something Was Badly Wrong," 106.

98 This is the prediction that prospect theory makes. See Amos Tversky and Daniel Kahneman, "Advances in Prospect Theory: Cumulative Representation of Uncertainty," *Journal of Risk and Uncertainty*, 5 (1992): 297–323, <https://link.springer.com/article/10.1007/BF00122574>; and Janice Gross Stein, "The Micro-Foundations of International Relations Theory: Psychology and Behavioral Economics," *International Organization* 71, no. S1 (2017): S249–S263, <https://www.cambridge.org/core/journals/international-organization/article/abs/microfoundations-of-international-relations-theory-psychology-and-behavioral-economics/B7AFD006852FFA2C40CEA6BD63071EAC>.

99 Howard Garland, "Throwing Good Money After Bad: The Effect of Sunk Costs on the Decision to Escalate Commitment to an Ongoing Project," *Journal of Applied Psychology* 75 (1990): 728–731, <https://psycnet.apa.org/record/1991-11275-001>.

100 Pauly and McDermott, "The Psychology of Nuclear Brinkmanship."

101 Sergei Ryabakov, Russia's representative at the U.N. Conference on Disarmament in Geneva, accused the United States and its European allies on March 2, 2023, of trying to "strategically defeat" Russia and of aiding Ukraine in order "to attack Russian strategic sites" identified under the New START Treaty. See Edward Wong, "Blinken Presses Russia Over War and Arms Treaty," *New York Times*, March 3, 2023, <https://static01.nytimes.com/images/2023/03/03/nytfhomepage/scan.pdf>.

confident in their conventional military capabilities. This confidence cannot but be badly mauled.

Russian leaders are working in a much more uncertain environment now than they were a year ago. The flagship journal of the Russian General Staff has published an unusually large number of articles on deterrence and nuclear warfighting in this last year. They reflect concern about the devaluation of the credibility of Russia’s capacity to use nuclear threats to coerce another nuclear power when the two are directly or indirectly on opposite sides of a conventional war. Some military thinkers are calling for the movement of nuclear weapons out of storage to manipulate risk more effectively. The war has already “nuclearized” military doctrine and strategic thinking in Russia and created an easier path to escalation.<sup>102</sup> Even before the poor performance of Russia’s forces became glaringly obvious, senior decision-makers in the Biden administration did not entirely discount the possibility that, under some conditions, Russia could again threaten to use a nuclear weapon to manage escalation.<sup>103</sup> In light of the poor performance by Russian conventional forces, it would be folly to dismiss out of hand the possibility that, going forward, Russia’s leaders will again lower the threshold for the use of nuclear weapons. If this analysis is correct, deterrence coupled with restraint becomes more, not less, important in the future.

## Epilogue

Wars shift boundaries. Not only physical lines, but also psychological and doctrinal boundaries. Frameworks constructed at one stage in a war work and then suddenly they don’t, often because of a major shift on the battlefield. Escalation management is a dynamic process that has fuzzy boundaries at the edges. As long as the battlefield is more or less stale-mated, escalation is a background concern. That could change should the battlefield tilt against a nuclear power that believes it has vital interests at stake. Managing escalation in extended deterrence is hardest at the edges — both when allies are at risk and when they succeed beyond expectation.

There is no better description of how decision-makers will react in dynamic strategic environments than the one written in confidence for

American policymakers more than 60 years ago by Schelling. His analysis of how decision-makers cannot anticipate what they will do applies equally well to Putin and his small circle of advisers today:

We are not in effect making the enemy believe that our behavior is unpredictable only to the extent that we can deceive him; our response is unpredictable to him because it is unpredictable, in some significant degree, *even to us*. We are not threatening that we may surprise him because we can calculate his expectations better than he can calculate ours; we may surprise him for the same reason that we may surprise ourselves. He cannot expect to foretell our behavior *in contingencies so complex that we cannot ourselves exactly foretell our response to them*.<sup>104</sup>

There is no escape from the multiple dimensions of uncertainty when nuclear powers compete. Denying uncertainty introduces even greater danger into an already fraught environment. Leaders can only acknowledge the extraordinarily difficult trade-offs they face because the costs of getting it wrong are so high, discipline the uncertainties with careful thought experiments, and engage in pragmatic, incremental decision-making that builds in time to learn from feedback. And then do it all over again, and then again. 🇺🇸

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**Image:** Ministry of Defence of Ukraine (CC BY-SA 2.0)<sup>105</sup>

102 Dmitri Adamsky, “Russia’s New Nuclear Normal: How the Country Has Grown Dangerously Comfortable Brandishing Its Arsenal,” *Foreign Affairs*, May 19, 2023, <https://www.foreignaffairs.com/russian-federation/russias-new-nuclear-normal>.

103 Barnes and Sanger, “Fears of Russia’s Use of Nuclear Weapons Diminished, But Could Re-Emerge.”

104 Schelling, *The Threat That Leaves Something to Chance*, 26 (emphasis added).

105 For the image, see <https://www.flickr.com/photos/ministryofdefenceua/26739418592>. For the license see, <https://creativecommons.org/licenses/by-sa/2.0/>.