Russia’s invasion of Ukraine has raised anew difficult questions of escalation management between nuclear powers.¹ During the last three decades, leaders in Washington and Brussels believed that these complex strategic challenges had been relegated to history, at least in Europe. Russia’s invasion shattered that belief and 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 a member of the North Atlantic Treaty Organization (NATO) and not a formal ally of the United States. It is much more difficult to make commitments to an informal ally credible; there is significantly less uncertainty about the credibility of a commitment when a treaty obligation exists. In the months preceding the invasion, Washington extended deterrence to Ukraine. It warned Russia repeatedly not to attack Ukraine and threatened grave consequences should it do so. Deterrence nevertheless failed.² After it failed, the United States immediately confronted the challenges of escalation management. 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 he was simultaneously committed to helping Ukraine defend itself and repel Russian aggression.

History does not repeat itself, but it can rhyme. In the early decades of the Cold War, the United States extended deterrence to West Berlin, deep within the territory of the German Democratic Republic.³ Washington’s commitment to the defense of West Berlin was a constant irritant, if not a provocation, to leaders of the Soviet Union.⁴ The analogy is, of course, not exact since Ukraine borders Russia, but there are interesting parallels. The United States sought to make its commitment to defend West Berlin credible while avoiding any direct confrontation with the nuclear-armed Soviet Union. Had deterrence nevertheless failed and had the U.S., British, and French military divisions stationed in West Berlin been destroyed by a Soviet attack, American planners could see no alternative but to strike back with nuclear weapons.⁵ Escalation to nuclear war could have followed.
The strategic dilemmas that leaders confronted over six decades ago foreshadowed those that the United States and NATO allies face today in the wake of Russia’s invasion of Ukraine. 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,” an unknown level of strategic preparedness. 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.

In this essay, I build a layered argument to understand the risks of escalation and the strategies that leaders use to manage these challenges. I begin with theoretical arguments that address 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 a nuclear war that would destroy the state that issues the threat as well as the state that is threatened. The threat to use these weapons is therefore irrational; the likely benefits cannot exceed the costs. That it is irrational makes the threat to use nuclear weapons very difficult to believe. Thomas Schelling did seminal work on managing escalation by manipulating risk through “the threat that leaves something to chance,” a strategy that Russia has weakly approximated to deter the United States and NATO from increasing their direct and indirect military support of Ukraine. This strategy is directly relevant to the fierce policy debates swirling today about optimal levels of assistance to Ukraine. My analysis suggests, moreover, that Russia’s strategy of manipulating risk has thus far failed to deter Washington from expanding its military assistance to Ukraine.

I move next to the second layer of analysis, a close look at contemporary Russian strategic doctrine that provides at least some rough guidelines about the kinds of advice leaders are likely to receive from senior military officials. Russia’s strategic doctrine reduces uncertainty by signaling a limited number of conditions that might lead to escalation. Analysts in NATO countries have paid particular attention to the thresholds that Russian strategic doctrine establishes for the use of nuclear weapons and to Moscow’s purported strategy of “escalate to deescalate.” That strategy of escalate to deescalate, which I will argue has been mischaracterized by some Western analysts, is captured in part by Schelling’s concept of the “threat that leaves something to chance,” which he recommended to president John F. Kennedy. In some respects, but only in some, Russian doctrine today echoes earlier American strategic doctrine.

Analysts generally expect strategic doctrine to set some boundaries that shape strategies of coercion. Evidence from historical cases does not support that expectation. Strategic decisions often depart from doctrine in ways that decision-makers themselves cannot foresee until they are confronted with difficult choices. I find, unexpectedly, that strategic doctrine played an important role in structuring issues between Russia and the United States and helped to reduce uncertainty. Military leaders in Washington and Moscow used doctrine as a signal and as a framework to manage escalation at a moment of some tension in October 2022. My analysis also suggests that critical ambiguities remain in Russia’s specification of thresholds for escalation. These ambiguities arise from the way the description of different kinds of war interacts with specific conditions that could trigger the reclassification of war from one kind to another.

Building on the analysis of the interaction between strategies that manipulate uncertainty to manage escalation and of strategic doctrine that helps to reduce uncertainty, I turn then to the third layer of the
argument, an examination of strategies designed to reduce uncertainty. The United States used what I call a pragmatic, incremental “learning by doing” strategy to respond to Russia’s strategy of a “threat that leaves something to chance.” I examine how they have coped with uncertainty and managed escalation by setting boundaries, signaling restraint, and then constantly testing and updating to push right up against the boundaries that they 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 for a reaction. If there is none, leaders take the next step and wait again to see if they are approaching a critical threshold. Within the constraints set by Biden, this strategy of escalation management has so far succeeded in preventing both horizontal escalation beyond Ukraine and vertical escalation to chemical or nuclear weapons, in part because the administration combined deterrence with a publicly announced strategy of assurance and restraint.

These strategies, however, have not yet faced their critical test. That test will most likely come if and when Russia faces the prospect of a major defeat on the battlefield. Further deepening uncertainty, how Russian leaders understand losing or strategic defeat remains undefined except at the hard edges. Russian doctrine makes clear that any attack on nuclear forces or space-based command and control infrastructure, as well as a large-scale conventional attack, would be considered an existential threat. Short of that, would a defeat of Russia’s forces and a retreat to the lines before their invasion of Ukraine constitute a strategic defeat? Would a successful Ukrainian attack on Crimea constitute that kind of defeat? 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? A strategy of restraint may not be enough to prevent escalation if conditions develop in nonlinear ways and if Russia’s leaders conclude that they are facing what they consider to be defeat.

Russia’s strategic doctrine would be of limited use under these conditions largely because of the ambiguities built into the classifications of types of war and the fuzzy meaning of what constitutes an “existential threat.”

“When there are no rules, leaders cannot know when what seems to be a small step will cross a fuzzy threshold.”

Incremental learning, a pragmatic strategy of uncertainty reduction, seems to offer some promise. At first glance, it seems to be prudent because each step is small and calibrated. I argue that this promise of prudence may be exaggerated because leaders may overlearn from prior successes. When early steps do not provoke escalation, leaders could become overconfident that they can keep taking small steps. 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 when battlefields can shift, thresholds can move, and leaders cannot predict what they themselves will do when conditions change and they face defeat.

Thomas Schelling and “The Threat That Leaves Something to Chance”

After the United States dropped atomic bombs on Hiroshima and Nagasaki in August 1945, 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 on military strategy. Thomas Schelling, among others, quickly concluded that nuclear weapons were not usable in war. 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 theorizing of nuclear weapons as signals of resolve and as transmitters of risk to an adversary in the face of the incredibility of a response with nuclear weapons. The point of nuclear weapons, he argued, was not to win the battle, but to “pose a higher level of risk to the enemy.” Nuclear weapons carried with them latent power and bargaining leverage that could be activated through the threat of their use.

The problem that U.S. policymakers faced in conveying to Soviet leaders both resolve and a credible threat to use nuclear weapons, challenging as it was in a world where each could destroy the other, became infinitely more difficult once the United States extended deterrence, and its nuclear umbrella, to its allies. The United States was geographically more distant from its allies in Europe than was the Soviet Union, and the Soviet Union’s 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 in a timely enough way to resist Soviet forces if a European ally were attacked. The asymmetry in conventional forces was one of the principal reasons that the United States has long refused to make a pledge of “no first use” of nuclear weapons.

Charles de Gaulle, when he was the president of France, was famously skeptical that any president of the United States would, as he put it, risk New York to save Paris if Soviet forces attacked France. It was not credible, he insisted, that the United States would use nuclear weapons against attacking Soviet conventional forces because, once attacked, Soviet leaders would fire back with nuclear weapons and destroy an American city. De Gaulle found his own solution to this credibility gap: France developed its own small but independent nuclear deterrent. For the United States, as Francis Gavin argues, nuclear proliferation was an unacceptable solution to the credibility gap that was built into extended deterrence.

To ameliorate the commitment problem and close this built-in credibility gap, Schelling developed strategies to signal resolve and to manipulate risk through what he called “the threat that leaves something to chance.” Schelling wrote a confidential memo in 1959 for the RAND Corporation that was released only in 2021. As Schelling made clear, “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.’” The final decision is left to “chance.”

The threat that leaves something to chance is the preferred strategy for the side that is in danger of losing the war. When leaders think they are likely to lose, they are more likely to fall back on the deliberate manipulation of shared risk. 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 risk through a story of two mountaineers who are tied together standing at the edge of a cliff, but the dynamics are even clearer when Schelling drew an analogy between a game of chicken and a confrontation between two nuclear powers.

Herman Kahn writing on escalation at almost the same
parties die. As Kahn acknowledges, if both try the same strategy at more or less the same time, both parties die. A simultaneous manipulation of risk, which no party can prevent, leads to the destruction of both.

There is another danger. When the first driver throws her steering wheel out of the car to signal commitment by self-binding, she loses all control of her car. Even before the other driver swerves, the first driver can no longer control her car and could go off the road and crash. In manipulating risk 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.

These early strategies to manipulate risk were superseded by generations of strategists who tried to escape the intractable dilemmas of what Robert Jervis called the “nuclear revolution.”23 As second-strike capabilities developed, theories of mutually assured destruction reduced the vulnerabilities that had made preemptive first strikes the least bad of a terrible set of choices. Mutually assured destruction enabled, but did not ensure, strategic stability. It also enabled what analysts called the stability-instability paradox: mutually assured destruction made war between the superpowers less likely but helped to make the world safer for proxy conventional wars, as long as neither superpower escalated and used nuclear weapons.24 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 matters.25

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 European allies but could not match Soviet

Threats that leave something to chance build in some danger by design. It is the danger inherent in giving up some control that conveys the commitment to an adversary. To establish commitment through a process of self-binding, the driver first signals that she is out of control by demonstrating that she is drunk and cannot see well. In so doing, she shares the risk by transferring the decision to the other driver to swerve off the road. If the other driver does not swerve, then the first driver escalates to deescalate, or forces capitulation by throwing her steering wheel out of the car. She visibly can no longer control her car 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 manipulating risk through “the threat that leaves something to chance” succeeds, and the first driver prevails.

There are, however, dangers beyond the danger that is deliberately designed into the strategy of manipulating risk to convey commitment. It is not only when the other side “is not watching,” is not paying attention to the signal, or misreads it—that both
conventional forces in Europe. The United States never made that commitment to no first use and did not do so in its most recent Nuclear Posture Review released in 2022.  

Strategists tried 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 competed in proxy wars where they observed a tacit set of rules.

It was only when the Soviet Union fractured and a much-weakened Russia emerged as the successor state that worries about extended deterrence receded into the background. The hard problems—that strategic stability made proxy conventional 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. Rather, they faded away as the Soviet Union dissolved.

These problems came roaring back after Russia invaded Ukraine. Arguably, Russia has local conventional superiority in its war against Ukraine, but only if it mobilizes a large enough number of forces and uses them professionally. What is indisputable is that Russian conventional forces are now inferior to those of NATO and that Russia’s military leaders and thinkers are well aware of their inferiority. The balance of forces and the balance of interests are now directly reversed from those of the Cold War. 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 thinkers who are experimenting with strategies that use nuclear weapons to signal commitment and resolve, to manage escalation, and to manipulate risk to deter the United States and NATO from increasing its support to Ukraine.

“Rather, he used ambiguous language about Russia’s nuclear infrastructure to weakly approximate, through fuzziness, a “threat that left something to chance.””

Putin played with a “threat that leaves something to chance” when, just before the invasion of Ukraine on February 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. “The threat that leaves something to chance,” as Schelling developed the concept, derives its leverage from its materiality. It is not what leaders say but what they do, and how much control they give up, that matters. Putin did not order the mating of any warheads to missiles. Nor did he give up any control when he subsequently announced that tactical nuclear weapons would be deployed to Belarus; these weapons will remain under the sole authority of Russia. Rather, 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 of the elements of Schelling’s strategic thinking have found new life in Moscow.

Strategic doctrine stands in sharp counterpoint to the uncertainty in the nuclear age that Schelling wanted to manipulate. Uncertainty is the solution for Schelling and the problem that strategic doctrine seeks to manage.
Russian Strategic Doctrine

Military thinkers and planners work to put some structure and form around complex problems to gain strategic advantage by reducing uncertainty. I turn now to developments in Russian strategic thinking in the last decade. These changes reflect improvements in Russia’s conventional capabilities and are set against the context of evolving U.S. strategic doctrine.

The Context of U.S. Strategic Doctrine

Russian strategic doctrine developed largely 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’s invasion of Ukraine, elevate Russia to a secondary but acute threat and emphasize the concept of “integrated deterrence.” Integrated deterrence is “the seamless combination of capabilities to convince potential adversaries that the costs of their hostile activities outweigh their benefits.” The strategy ranges across domains and focuses on means that include information, intelligence, economic, and diplomatic tools as well as conventional and nuclear weapons as means in a coordinated strategy to increase the costs to an adversary. Integrated deterrence includes strategies of deterrence by denial, by resilience (especially in the domains of cyber and space), and by punishment.

The emphasis on the coordination of means across domains is not new, in practice or in theory. As doctrine, it developed as a reactive process between Washington and Moscow, fueled in part by mirror images of 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 as a tool to interfere in American domestic political processes and to shape the battlespace 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.”

Finally, the National Defense Strategy restates an older argument that clearly remains relevant to the strategic challenges that grow out of extended deterrence in the context of Russia’s ongoing war against Ukraine. In 2018, the U.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.”

“Washington’s estimate that Russia is prepared to escalate with nuclear weapons in order to deter U.S. support for allies or to force deescalation of an ongoing conflict.”

That interpretation of Russia’s strategic doctrine remains unchanged four years later 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. 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
This strong and unequivocal signal of the consequences of escalation through the threat or use of nuclear weapons to achieve political objectives is aimed principally although not exclusively at Russia. It reflects Washington’s estimate that Russia is prepared to escalate with nuclear weapons in order to deter U.S. support for allies or to force deescalation 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 is only partly attenuated, in theory if not in practice. It is certainly more difficult to extend deterrence to an ally outside of formal treaty commitments to collective defense. Ukraine is not a member of NATO. The credibility of that kind of commitment, already challenging in a nuclear context, is inherently more difficult to achieve; the uncertainties are even greater. Once the United States has extended deterrence, however, and then it fails and a nuclear power attacks that ally with conventional forces, the story risks unhappy endings 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 Russian strategic doctrine in U.S. strategy is not so much incorrect as it ignores some of the movement in Russian strategic thinking over the last decade as Moscow improved its conventional military capabilities. From 1991 until 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 conventional military modernization, other tools were added to the toolbox and threshold conditions became higher, even if some of these conditions are ill-defined. Much remains ambiguous in Russian nuclear doctrine, but the shift in direction is clear.

Contemporary Russian deterrence strategies are an “integrated whole of non-nuclear, information and nuclear” tools. Russian and American strategic thinking in the last decade moved in a broadly similar way to unified cross-domain programs. I look first at the evidence of the Russian shift, then explore the possible reasons for the change, and conclude with an examination of the several important ambiguities in Russian doctrine that create uncertainties for U.S. and NATO decision-makers who are struggling to manage escalation in the context of the ongoing war in Ukraine.

Russia released its most recent statement on nuclear deterrence on June 2, 2020. It makes clear the demanding 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. Every one of these conditions, except the last, pertains to a nuclear attack against Russia and its allies or its command and control infrastructure. Contemporary language is much more restrained than that of the more “open-
ended” doctrine in 2000, which allowed the use of nuclear weapons “in situations that are critical to the national security of the Russian Federation.” As early as 2014, the language of the Military Doctrine of the Russian Federation changed to the more restrictive “when the very existence of the state is under threat.”

Russian doctrine also distinguishes among different types of war. The first is a local war, or a limited conflict between two states that does not involve the use of nuclear weapons. The conflict between Russia and Ukraine would be conventionally described that way: “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.” At times, Moscow’s description of the war in Ukraine approaches 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 limited objectives as the defining characteristic of a local war. A regional war is one that involves allies and larger coalitions. Some analysts suggest that an additional condition 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.

Although this is not formally specified in Russian doctrine, either of these could be construed as an “existential” threat. The third type of conflict is a large-scale war between coalitions and great powers that has escalated horizontally to multiple theaters and regions. And the last is a nuclear war that has escalated vertically as well as horizontally. Russian doctrine does specify that nuclear weapons could be used in regional or large-scale wars, but only if Russia 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 would merit the designation of an existential threat are subjective and open to interpretation. Does a proxy war with NATO that is escalating the supply of advanced equipment to Ukraine constitute an existential threat, or is direct engagement of NATO forces necessary? 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.

Russian doctrine is largely silent about the role of tactical nuclear weapons in its evolving concept of integrated deterrence, the principal concern of many Western analysts who focus on escalation. These nonstrategic nuclear weapons have no defined mission nor is there clarity about their role in regional conflict. As Dima Adamsky observes with some concern, “Russia’s NSNW [nonstrategic 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 by either unifying logic or official policy.”

Nuclear signaling, through choreographed chatter or veiled threats, is distinct from an alert or the movement of weapons. The frequent nuclear signaling by Russia since it invaded Ukraine was likely designed to deter the United States and NATO from increasing their support to Ukraine and to prevent a local war from escalating to the next level of a regional war. At that level, nuclear weapons could be used should Russian leaders judge the threat to be existential.
What explains Russia’s shift away from 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 modernizing Russia’s military, particularly by improving its capacity for precision strikes and enhanced air and missile defense, the language of strategic doctrine became progressively more restrictive.51 As early as 2014, Russia’s concept of strategic deterrence integrated nuclear, conventional, and nonmilitary capabilities. This trend toward integrated deterrence has continued to deepen with an emphasis on conventional capabilities as an important part of deterrence. These improved conventional capabilities give Russian decision-makers additional options before they would have to consider the use of a nuclear weapon. The nuclear deterrence doctrine that Russia released in 2020 describes nuclear weapons as weapons of last resort.52

Nevertheless, Russian strategists still worry about conventional capabilities in a large-scale or regional conflict with NATO forces. They have not taken off the table the use of nuclear threats “... if Russia had exhausted available conventional escalation tools and was unwilling to back down, even at the risk of nuclear conflict.” 53 The Russian debate 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.54

These classifications and distinctions have never been challenged in practice. Russia’s invasion of Ukraine and NATO’s supply of military equipment as well as real-time intelligence to Kyiv are providing the first real-time test.55 Leaders in Moscow, Kyiv, and Washington are now all in uncharted waters.

The U.S. Strategy of “Learning by Doing”

Doctrine puts some structure around options, but in wartime, leaders frequently make decisions that depart from doctrine. 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 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 Russian decision-makers only if, as U.S. Director of National Intelligence Avril Haines testified in May 2022, “he [Putin] perceives that he is losing the war in Ukraine and that NATO in effect is either intervening or about to intervene.” 56

Only if Russian 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 models of choice—preferences shaping choice—may not apply.57 People do not always know their preferences; only after they make a choice do 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].” 58 It may well be that Putin is not a reliable predictor of what he will do because he does not know himself how he will
feel should he face any of these contingencies.

NATO’s leaders had no alternative but to try to manage escalation in the context of these large uncertainties. As U.S. leaders became increasingly convinced in the late fall of 2021 that Russia intended to invade Ukraine, they recognized that an attack of the scale Russia was planning would break all the norms and rules. As early as that October, Biden set three priorities: “Support Ukraine—nothing about Ukraine without Ukraine, bolster NATO, and avoid a war with Russia.” As the intelligence became more precise and the administration consulted widely with allies from October on, Biden expanded these to five boundary conditions to reduce some of the most important uncertainties.

First, the president made clear, “We do not seek a war between NATO and Russia.” Second, Biden 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.” Third, Biden made clear that, despite his revulsion at Russia’s unjust attack, “the United States will not try to bring about his [Putin’s] ouster in Moscow.” 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.” 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 any 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.” 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.

After the invasion began, despite these attempts at intrawar deterrence embedded within these boundary conditions, there were and are uncertainties about how much support the United States could provide to Ukraine without provoking either horizontal or vertical escalation by Russia. How has the Biden administration managed the challenges of escalation within these five parameters that structure the problem? The administration had to decide repeatedly, in the face of increasingly desperate requests from Ukrainian President Volodymyr Zelenskyy, 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 elsewhere called pragmatic “learning by doing,” a strategy that responds to a “threat that leaves something to chance.” This process of pragmatic decision-making tries to reduce rather than manipulate uncertainty through an incremental, inductive, and experimental approach that is particularly suited to the kind of ill-structured problems where appropriate options are either disputed or, at times, even unknown. Problems in international security are generally ill-structured, with multiple goals that are often vaguely defined, with several constraints that are loosely set, and with little information about solutions. Initially ill-structured problems become better structured as people learn...
through trial and error. In the context of the five parameters the Biden administration established, this is the kind of problem that officials faced in the aftermath of the Russian invasion.

“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 Zelenskyy, because he judged the risk of direct engagement between NATO and Russian pilots to be too high.”

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 Zelenskyy, 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. And then U.S. officials waited to assess the Russian reaction. The Russian reaction was limited to verbal warnings and veiled nuclear threats but no military escalation outside the battlefield in Ukraine. The absence of any horizontal escalation to NATO members or vertical escalation to unconventional weapons encouraged the Biden administration to take the next step 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 supply Kyiv with HIMARS multiple rocket launchers. 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 long-range rocket systems near its border 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 2022, followed by batteries of the Patriot air defense system. In January 2023, the United Kingdom (UK), the United States, and Germany decided to supply Challengers, Abrams, and Leopard 2 tanks and then Ground Launched Small Diameter Bombs, rocket-propelled guided bombs with a longer range. Even though Russia has threatened in the past that any attack on Crimea would “ignite judgment day,” in May 2023, the UK sent Storm Shadow missiles with a range long enough to reach Crimea.

The Biden administration, acceding to a long-standing Ukrainian request, also authorized the training of Ukrainian pilots on F-16 fighter jets and promised that the allies would deliver these aircraft to Ukraine in the next several months. Consistent with the parameter condition that NATO not enable Ukraine to attack beyond its borders, Ukrainian Defense Minister Oleksiy Reznikov confirmed again Ukraine’s agreement not to use Western long-range weapons to strike Russian territories.

What had been off limits in February 2022 was on its way or promised to Ukraine a year later as the United States and its partners tentatively experimented, paused, moved again when there was no material reaction from Moscow and when Ukraine followed the rules in the ways it used the equipment, and then paused again. More than a year after the invasion, U.S. policymakers and analysts are more confident that they understand better what kinds of support for Ukraine will prompt verbal outrage rather than risk “something more dangerous.”
As the United States experimented and did not provoke horizontal or vertical escalation outside the battlefield, the constraints Biden had set in March 2022 were gradually relaxed.  

As the United States experimented and 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 imperceptibly 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 in background discussions with journalists, they “...would not object to Ukraine’s striking back with its own weapons.”

Most concerning to Biden is the prospect that Putin might resort to the use of a 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 strategic defeat. Under these conditions, Russia might use a strategy akin to “a threat that leaves something to chance” that could bump up directly against Washington’s strategy of “learning by doing.” These two strategies could collide in unexpected and dangerous ways as pessimistic Russian leaders learn from the success of the U.S. strategy and recognize that they need 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—put strategic forces on high alert or move some tactical nuclear weapons out of storage—to increase the credibility of their threats and better manipulate risk.

Even before the invasion began and several times since, Putin and other Russian leaders have made veiled threats that they could use nuclear weapons. Central Intelligence Agency Director William Burns affirmed that the United States continues to take seriously Russia’s nuclear “saber rattling”: “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.” 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 October 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 senior military commanders. 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. Almost at the same time, Russian 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.” The vagueness of the threats along with an increase in their frequency 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, General Mark Milley, the chairman of the Joint Chiefs of Staff, and
General Valery Gerasimov, chief of the General Staff, discussed Russia’s doctrine that governed the use of nuclear weapons. Gerasimov made clear that Russia would use nuclear weapons only in the narrow set of enabling conditions made clear in Russia’s strategic doctrine. That shared understanding helped to reduce somewhat the uncertainty between the two most senior generals in Moscow and Washington. In this case, doctrine played a larger role in reducing uncertainty than strategic analysts expect.

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 conditions occur. At least at that time, although the Russian army was under pressure, Russia’s military leaders chose to focus on reducing uncertainty rather than on manipulating risk through a threat that left something to chance.

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. In addition to reassurance, Burns met in Turkey with his Russian counterpart, Sergei Naryshkin, the director of Russia’s foreign intelligence service, and reinforced intrawar deterrence by making “very clear the serious consequences of any use of tactical nuclear weapons.”

And German Chancellor Olaf Scholz, on a trip to Beijing in November, asked President 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 German chancellor.

Finally, in an innovative 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. 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 serious conventional response was part of a U.S. strategy of escalation management designed to put a break in an escalatory spiral. It was informed in part 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 an important policy innovation. The combination of clarification, reassurance, and deterrence seems to have managed the risk, at least for the moment. In a speech on October 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.” A nuclear threat that left something to chance seems to have been too risky for Putin, at least as long as Russia was not facing a major defeat on the battlefield. And, in a seminal change, the United States broke from long-established strategic thinking about its response to the use of a nuclear weapon in order to manage escalation.

Should Russia Fear It Is Losing: Early Lessons of Escalation Management

There is no end in sight yet to the war in Ukraine. Both sides believe that they can prevail. The condition most likely to provoke escalation—an estimate by Russia’s leaders that they face strategic defeat—has not occurred. A year after Russia’s brutal invasion, evidence about escalation management is still partial and fragmentary. Access to Putin and his circle of
advocates is extraordinarily limited, even by other government leaders who would normally help to interpret his thinking. Drawing on what is in the public domain, the preliminary story of strategies of escalation management between the United States and Russia provides some grounds for optimism but is also fraught with warning should the battlefield turn in a significant way against Russia.

A review of strategies of deterrence, compellence, and restraint suggests a very mixed record. The record is clear that Washington tried both deterrence and reassurance to dissuade Putin from invading Ukraine, but the strategy failed. The results of the first year of escalation management by the United States are more encouraging. Restraint was in play even before Russia invaded, but once the attack began, the United States succeeded in deterring horizontal and vertical escalation by Russia. Russia has not expanded the war beyond Ukraine’s borders or used an unconventional weapon. Analysts cannot conclude with confidence that U.S. strategy succeeded in deterring escalation, since no direct evidence of Russia’s intentions is yet available, but it is striking, given Russia’s heavy and unexpected losses, that Moscow did not escalate.

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 as well as 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. The United States managed risk by signaling different kinds of restraint and then edging up to the line, all the while monitoring and adjusting. That process delayed the supply of the most advanced equipment to Ukraine, but shortages and training requirements for advanced weaponry would have in any event slowed the delivery of military equipment. Within the framework of escalation management that the president created, intrawar deterrence of Russia by the United States has worked, at least for now. In March 2022, few would have predicted this result. 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.

“Leaders who use an incremental strategy that pushes forward, pauses, and then pushes forward again when they meet with no resistance can overlearn from past successes.”

The absence of major escalation outside Ukraine is a significant accomplishment. That accomplishment should not blind analysts to the risks that could become apparent should Russia face serious setbacks on the battlefield. Leaders who use an incremental strategy that pushes forward, pauses, and then pushes forward again when they meet with no resistance can overlearn from past successes. These successes tell them very little about a threshold that they might encounter in the future when conditions change. Nikolai Sokov, a former Russian diplomat, made clear how difficult it is to identify a tipping point:

...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...

Second, the U.S. strategy of restraint has become the focus of considerable controversy as the war has continued. Although there has been no escalation outside Ukraine, Russia dramatically escalated its attacks against Ukraine’s civilian infrastructure. Critics
claim that restraint has come at terrible cost to Ukraine. That restraint has been in play is clear. Before the war began and before Putin manipulated the risk of the use of nuclear weapons, Biden ruled out any direct engagement by NATO forces with those of Russia. Before Putin issued any threats, Biden decided to set boundaries and preclude NATO forces from engaging directly in a war against Russia, the world’s largest nuclear power. It should not be surprising that the president did so. There was little that the United States did not know about Russian capabilities but much they did not know about their willingness and capacity to use them. Setting boundaries at times of high uncertainty when the costs could be great is a pragmatic strategy that allows for adaptation over time.

A second strand of criticism is different. It challenges not so much the strategy of restraint but its persistence months into the war. Critics argue that restraint may have been appropriate immediately after Russia invaded Ukraine but was no longer appropriate—and 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 traveling to Ukraine from the territory of NATO members or use a tactical nuclear weapon in the hope that it would break the back of Ukrainian resistance, restraint, these critics argue, was no longer necessary. That NATO’s refusal to supply the most advanced long-range weapons to Ukraine limited its battlefield options is clear. That it is an unnecessary precaution is not at all obvious. It is plausible that mutual deterrence is operating in part because the United States and its allies have exercised restraint along with deterrence with reassurance: Russia’s 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, signaled that NATO would not engage with Russian forces unless they were attacked. 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 here, a lot of people’s lives. Every move has to be consciously and deliberately thought through to its logical conclusion.

Third, and somewhat surprisingly, strategic doctrine provided helpful language for conversation between the most senior generals on both sides at a moment when tensions were rising. That moment came when advancing Ukrainian forces forced Russia to partially retreat on the battlefield. Building a shared understanding on how Russia’s strategic doctrine framed the use of nuclear weapons contributed to a reduction of tensions when not only the United States but also Russia appeared to be worried about escalation to unconventional weapons. Analysts have 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. Strategic doctrine was useful principally as a boundary-setting exercise to structure a conversation between adversaries that allowed clarification and reduction of uncertainty.

“Pragmatic strategies of incremental learning might miss a qualitative shift in Russia’s threshold if its leaders conclude that they face a humiliating strategic defeat.”

These preliminary findings are at best tentative because these strategies of escalation management have not yet been tested. They have not been tested because Russia has not yet faced the prospect of a
serious defeat. Should that happen, the policy lessons from this first year could be subject to revision. Pragmatic strategies of incremental learning might miss a qualitative shift in Russia’s threshold if its leaders conclude that they face a humiliating strategic defeat. It is under these conditions that they are most likely to take a large risk. An incremental strategy of escalation management could then bump up against a Russian “threat that leaves something to chance” in dangerous ways.

Restraint may also no longer work in a dynamic situation where Russian thresholds move in nonlinear ways in response to an evaluation that Moscow faces the prospect of a strategic defeat. The United States has devoted considerable effort since February 2022 to understanding Russia’s thresholds. But these lines generally do not remain fixed; they are dynamic and develop as battlefield conditions change. And as evidence shows, preferences are not stable. Leaders do not always know what they will do when they face unexpected or painful contingencies. They discover after they have acted where they have drawn these lines anew.

Russia’s strategic doctrine will then likely be of only limited help in structuring the problem, largely because of the ambiguities built into the thresholds that distinguish one level of war from another and the silence around the use of tactical nuclear weapons. Russian decision-makers could contemplate the use of a nuclear weapon if they determined that, as a result of a conventional attack during a regional or large-scale war, the existence of the Russian Federation was at stake. They have at time skirted very close to that language. The conditions for the determination of an existential threat are not precisely defined: certainly, any conventional attack against Russia’s nuclear command and control infrastructure would trigger a response.

Russia’s moves to integrated deterrence and away from an early use of nuclear weapons in response to a conventional attack are encouraging, but Russian leaders clearly did not anticipate the scope of NATO’s response to its war against Ukraine. NATO’s response and the poor performance of Russia’s conventional military forces have likely provoked adaptation in Russia’s strategic thinking in real time. The confidence that Russian leaders have in their conventional military —confidence that allowed them to raise the nuclear threshold—cannot but be badly mauled. In this sense, Russian leaders are likely working in a much more uncertain environment than they were a year ago. In an uncertain and dynamic environment, Russian leaders may not have anticipated the triggers that could arise on the battlefield. Analysts of Russian strategic doctrine and senior decision-makers in the Biden administration do not discount the possibility that, under some conditions, Russia’s leaders could again threaten to use a nuclear weapon to manage escalation as their confidence in their conventional capabilities dissipates.

Policymakers would face an unprecedented challenge if Russia were to face a strategic defeat on the battlefield. There are few parallels. The best approximations are the challenges that the two nuclear great powers faced during the Korean War and the period from 1958 to 1962 when the crises in Berlin and Cuba shaped their relationship. Then, as now, norms were disputed, and rules were nonexistent. Under these conditions, Russian leaders may not know their own preferences as the battlefield evolves suddenly in real time. They may not, in other words, be reliable and valid predictors of what they themselves may do.

There is no better description of the unpredictability of decision-makers in dynamic strategic environments than the one written by Schelling. Prepared in confidence for American policymakers more than sixty years ago, his analysis of how decision-makers cannot anticipate what they will do applies equally well to
Putin and his small circle of advisors 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*.95

Wars shift boundaries. Not only physical boundaries, but psychological and doctrinal boundaries as well. Frameworks that are constructed at one stage in a war work and then they don't, often when major battlefield shifts happen. Escalation management is a dynamic process that has fuzzy boundaries at the edges. As long as the battlefield is more or less stalemated, escalation is a background concern. That could change if the battlefield tilts against a nuclear power that believes that 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. When the rules have broken down and nuclear powers compete, there is no escape from the multiple dimensions of uncertainty.

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**About the Author**

Janice Gross Stein is the Belzberg Professor of Conflict Management, the founding director of the Munk School of Global Affairs and Public Policy, and University Professor at the University of Toronto. She is a senior scholar at the Kissinger Center at the School of Advanced International Studies at Johns Hopkins University.
1. Escalation management has different conceptual meanings. Escalation management 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 wartime. Or it can be conceived as a deliberate actor-driven strategy to limit escalation either horizontally or vertically. During wartime, strategies of escalation management have been analyzed as threat-based strategies of deterrence, or intrawar 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, CA: RAND Corporation, 2008), https://apps.dtic.mil/sti/pdfs/ADA486310.pdf.

2. The evidence is quite strong that the Biden administration made serious and repeated attempts to deter Russia from attacking Ukraine. Washington began to pay serious attention after an extensive Russian military exercise in March and April of 2021. The intelligence community correctly determined that it was an exercise, but the administration nevertheless proposed a summit in Geneva in June 2021 in an effort to reduce tensions. As National Security Adviser Jake Sullivan 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...” See 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. In the period leading into the summit and immediately after, Russia drew back some of its forces. In the fall, Russian forces grew larger again and, in response, the president sent Central Intelligence Agency Director William Burns to Moscow in November. Burns warned his counterpart in Moscow 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.” See 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, “...by signaling 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.” See 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 Russian Foreign Minister Sergei Lavrov in Geneva on January 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.” Banco, Graff, Seligman, Toosi, and Ward, “Something Was Badly Wrong,” 50.

That deterrence was tried and failed is clear. Why it failed is not clear; only Russia’s leaders know. The threats may not have been credible, given NATO’s
failure to respond to Russia’s seizure of Crimea in 2014. And deterrence may have been more difficult because Ukraine was not a member of NATO; there were no formal obligations to come to its defense. Finally, Putin was likely overconfident about the prospect of military success. Burns recalls “his [Putin’s] cockiness about Russia’s ability to enforce its will on Ukraine.” Banco, Graff, Seligman, Toosi, and Ward, “Something Was Badly Wrong,” 20.

3. The German Democratic Republic was colloquially known as East Germany.


5. An attack on West Berlin would have most likely initiated US/NATO military action, as painful as that would have been. Decision-makers wrestled with what the response would be to a Soviet attack against Western forces in West Berlin and iterated their planning of Live Oak again and again in the crisis years. See Gavin, *Nuclear Statecraft*.


7. Oliker, “Putin’s Nuclear Bluff.”

8. 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 of the Berlin and Cuban Missile crises 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 Brinksmanship,” *International Security* 47, no. 3 (Winter 2022–2023), 9–51, 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.


10. For the argument that Cold War nuclear policymaking departed significantly from strategic precepts, see Gavin, *Nuclear Statecraft*.


15. Ibid.


19. “It is interesting,” Francis Gavin observed, “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.

20. Personal conversation with Thomas 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.


22. Schelling, The Threat That Leaves Something to Chance, 12. Schelling is more explicit about his willingness to manipulate the risk of escalation to nuclear war in the confidential memo than he is in The Strategy of Conflict, which was published a year later.


30. Jon R. Lindsay and Erik Gartzke, eds., *Cross-Domain Deterrence in an Era of Complexity* (New York: 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 meaning, “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, *Nuclear Posture Review* (Washington, DC: Office of the Secretary of Defense, 2018), 26, https://media.defense.gov/2018/Feb/02/2001872886/-1/-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 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).


35. The 2022 Nuclear Posture Review (7, 10) 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 U.S. Department of Defense, “2022 National Defense Strategy,” in *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 (10), which committed to expanding low-yield options to discourage escalate 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.

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


38. Ibid. 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.”


43. Kristin Ven Bruusgaard, “Russian Nuclear Strategy and Conventional Inferiority,” Journal of Strategic Studies 44, no. 1 (2021): 3–35, and 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,” President of the Russian Federation, October 18, 2018, http://www.en.kremlin.ru/events/president/news/58848.


45. Andrey Baklitskiy suggested that Russia recognizes as a meaningful threshold direct
engagement of NATO forces in the war. Author interview with Baklitskiy, January 12, 2023.

46. 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.

47. 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 Defense’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.


51. 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.”

52. Ibid.


55. 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 Pentagon 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


61. Ibid. Throughout January and into February 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.” See Deputy Assistant Secretary of Defense for Russia, Ukraine, and Eurasia Laura Cooper, in Banco, Graff, Seligman, Toosi, and Ward, “Something Was Badly Wrong,” 54.


64. Ibid.

65. 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.” See Banco, Graff, Seligman, Toosi, and Ward, “Something Was Badly Wrong,” 30, 43.


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

69. See 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. 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. Warms 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 can 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 Pentagon officials did not believe that Ukraine had the military capability to recapture Crimea. Predictably, the article provoked a furious Russian response.


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 War Home to Russians, *New York Times*, May 30, 2023, www.nytimes.com/2023/05/30/world/europe/moscow-drone-strike-russia-ukraine.html?smid=nytcore-ios-share&referringSource=articleShare

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


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

78. American officials have repeatedly said that Russia might use a nuclear weapon if Putin felt his regime was threatened, if he felt that NATO was about to enter the war directly, or if the Russian army faced a sudden prospect of defeat or collapse.

79. 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 clarify rather than manipulate risk 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 Minister of Defense Sergei 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 Ven 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.
80. Barnes and Sanger, “Fears of Russia's Use of Nuclear Weapons Diminished, But Could Re-Emerge.”

81. Ibid.

82. 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.

83. Senior U.S. officials ran a top-secret tabletop nuclear exercise in 2016 where an adversary used a tactical nuclear weapon. Senior officials in president Barack Obama’s administration urged a nuclear response, but the deputies, including Avril Haines, who is currently the director of national intelligence, and Colin Kahl, who is 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, “The deputies had the better strategy, one that was firm but less likely to provoke thermonuclear catastrophe.”


87. Baklitskiy suggests that direct engagement of NATO forces would be a trigger. Author interview, January 12, 2023.


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


91. 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. Barnes and Sanger, “Fears of Russia's Use of Nuclear Weapons Diminished, But Could Re-Emerge.” Some analysts insist that a Russian decision to use a nuclear weapon in Ukraine would be irrational. Some identify the domestic political consequences should radioactive fallout blow back to Russia. See Oliker, “Putin's Nuclear Bluff.” Others focus on the adverse international reaction from leaders who are currently important to Putin. 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.
