



Great Power Escalation Dynamics: Political Communication and Deterrence from Competition to Nuclear Crisis

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GREAT POWER ESCALATION DYNAMICS: POLITICAL COMMUNICATION AND DETERRENCE FROM COMPETITION TO NUCLEAR CRISIS

This paper analyzes the theory and practice of deterrence between nuclear-armed powers, examining how states attempt to prevent aggression through threats while managing the inherent risks of escalation to nuclear war. Deterrence involves persuading adversaries that the costs of aggressive action outweigh potential benefits, either by denying them military success or threatening punishment in retaliation. However, the credibility of deterrent threats remains fundamentally problematic, particularly with nuclear weapons whose use carries such extreme consequences that adversaries may doubt they would ever actually be employed. Nuclear-armed states, therefore, in some circumstances use a strategy of brinkmanship. This means taking actions, such as mobilizing forces, issuing threats, or curtailing negotiations, that increase the risk a crisis might escalate uncontrollably to nuclear war, and betting that the opponent will retreat rather than accept that risk. This paper demonstrates that escalation is imperfectly controllable and identifies multiple pathways through which miscalculation and psychological processes can lead to unintended war, highlighting significant implications favoring cautious policy approaches.

Keywords: theory of victory, flexible response, deterrence, Russia, NATO, nuclear strategy

EXECUTIVE SUMMARY

This paper examines the challenges of deterrence and crisis management between nuclear-armed powers, particularly focusing on NATO's strategic environment. Deterrence fundamentally involves persuading adversaries that the costs of aggressive action outweigh potential benefits through threats of denial or punishment. However, making such threats credible proves difficult, requiring costly signals like forward-deployed forces or mobilization to demonstrate resolve. The credibility problem intensifies with nuclear weapons, as their destructive power creates massive potential costs. Threats to use them against nuclear-armed adversaries, especially for limited aims against a peer adversary, are not always credible due to the likelihood of retaliation.

Three main factors determine deterrence success or failure. First, the level of aggressor motivation affects deterrability, with highly motivated revisionist states potentially impossible to deter. Second, clarity about what is being protected and what consequences will follow affects adversary calculations, with ambiguity creating room for deterrence failure. Third, adversaries must believe that threats will actually be carried out. States attempt to enhance credibility through costly signalling, such as tying hands by engaging national prestige or sinking costs through mobilization and deployment. Escalation involves increasing conflict intensity or scope by crossing thresholds considered significant by participants. It can be deliberate, undertaken instrumentally to signal resolve, or inadvertent, as when actions are interpreted as escalatory despite lacking such intent.

Multiple psychological and strategic factors drive escalation risks. Misperception, particularly policymakers' inability to empathize with adversaries, may cause miscalculated escalation when states cross opponents' thresholds, expecting tolerance or capitulation. Leaders may experience sudden shifts to overconfident implemental mindsets when war seems imminent, making them less capable of the rational deliberation necessary for crisis resolution. Judgements about adversary preferences and thresholds remain inherently unstable as battlefield conditions change. Modern dual-use military systems create acute misperception risks when attacks on surveillance infrastructure, intended for conventional advantage, appear as preparation for nuclear strikes.

NATO faces challenges from grey zone activities that exploit ambiguity about collective defence thresholds, including sabotage, disinformation campaigns, and plausibly deniable proxy operations. These sub-threshold actions remain below reasonable military response thresholds while achieving cumulative strategic effects and potentially fragmenting alliance cohesion by targeting individual members.

To mitigate inadvertent escalation risks, NATO should enact the following:

- Prioritize the understanding of adversary preferences, intentions, and red lines
- Continually work towards developing Alliance

- consensus for accepting calculated escalation risks through strategic communication
 - Actively create and leverage de-escalatory mechanisms and off-ramps
 - Exploit adversaries' own escalation fears
- NATO should conduct these actions while demonstrating a willingness to accept risks in defence of its core interests and values.

Keywords: Deterrence, Signalling, Brinkmanship, Escalation

INTRODUCTION

The prospect of nuclear war concentrates the mind wonderfully. Preventing the outbreak of war between nuclear armed states has been an important task of NATO since it was created. After the Cold War, the international order went through a period where nuclear deterrence was not accorded the seriousness it deserves in the political consciousness of elites across the Alliance. During a debate between US President Barack Obama and candidate Mitt Romney in 2012, Obama rebuked Romney's warning about Russia by saying, "The 1980's are now calling to ask for their foreign policy back".¹ However, subsequent events have focused minds around the world on the questions of how to deter Russian aggression while at the same time preventing a war between states armed with nuclear weapons.

With a variety of Russian aggressions in Georgia and Ukraine, as well as myriad other disruptive activities elsewhere, NATO faces a complex and rapidly evolving situation. However, the conceptual and theoretical foundations of deterrence theory are essential for understanding the current and future challenges that NATO faces. These foundations, and how they inform escalation risks, are often missing from analyses focusing on the day-to-day.

This paper aims to provide a critical lens to analyse NATO's strategic communication and signalling in the context of great power competition from crisis to nuclear conflict. The paper first explores the logic of deterrence, providing definitions and unpacking a variety of essential concepts relevant

to political communication, including different types of deterrent threats, credibility, and costly signalling. These are then linked to coercive bargaining between nuclear states.

The second section focuses on escalation and brinkmanship as a means of making deterrent threats between nuclear-armed adversaries credible. It distinguishes between vertical and horizontal escalation and between deliberate and inadvertent escalation, then explains various metaphors used to understand the risks of escalation. The section then explains the risks of miscalculated escalation leading to the outbreak of war and how various common psychological processes can contribute to this. Finally, the section identifies the possibility of collusion between adversaries to de-escalate in a crisis.

The third section addresses two of the current challenges facing NATO and how they might affect escalation. First, sub-threshold or grey zone activities intentionally manipulate the ambiguity around what actions warrant a military response. Second, cyber operations appear to offer less escalatory potential than previously thought; they instead offer the possibility of de-escalatory 'accommodative signalling'.

These discussions inform generally applicable recommendations for avoiding inadvertent escalation while at the same time maintaining credible deterrence.

¹ Sharma, Versha. 2012. "Obama to Romney: 'the 1980's Are Now Calling to Ask for Their Foreign Policy Back.'" MSNBC.com. MSNBC. October 23, 2012. <https://www.msnbc.com/msnbc/obama-romney-the-1980s-are-now-calling-msna15158>.

THE LOGIC OF DETERRENCE

On 31 May 2022, US President Joseph R. Biden published a deterrent threat in the New York Times.² He declared that the US would support Ukraine in its defence against Russian aggression and that he did “not seek a war between NATO and Russia”. He also tried to deter the Russian use of nuclear weapons by stating: “Any use of nuclear weapons in this conflict on any scale would be completely unacceptable to us as well as the rest of the world and would entail severe consequences”

This type of threat is common in international politics, as in everyday life. People frequently use threats to try and prevent someone from taking an action they might otherwise have taken, that is, to deter them. “In its most general form, deterrence is simply the persuasion of one’s opponent that the costs and/or risks of a given course of action [they] might take outweigh its benefits”.³ They also use threats to try and make others do things they otherwise might not have done, that is, to compel them. The fundamental structure of a deterrent threat is, “Do not do X. If you do X, I will do Y”. These threats may be explicit or implicit. President Biden’s explicit threat was accompanied by other explicit threats from, for example, NATO Secretary General Jens Stoltenberg and EU High Representative Josep Borrell. These were in response to Russian President Vladimir Putin’s implicit threats to use nuclear weapons to defend the four partially occupied territories of Luhansk, Donetsk, Zaporizhzhia, and Kherson.⁴



Deterrence of an action can either be achieved by denial or punishment.⁵ Deterrence by denial means making it appear unlikely that the action will succeed. For example, building up your own military capabilities through acquisition of weapon systems makes it less likely that an aggressive attack on you will succeed. Similarly, obtaining a public mutual defence pact with another state, such as NATO’s Article 5, increases the military forces ranged against an invasion. Deterrence by punishment means making the expected costs of taking the action appear prohibitively high. For example, stating that if an adversary attacks you, you will retaliate by firing nuclear weapons at their cities or military assets.

How can you successfully deter an attack? Three main factors determine success or failure of

² Jr, Joseph R. Biden. 2022. “Opinion | President Biden: What America Will and Will Not Do in Ukraine.” *The New York Times*, May 31, 2022. <https://www.nytimes.com/2022/05/31/opinion/biden-ukraine-strategy.html>.

³ George, Alexander L., and Richard Smoke. *Deterrence in American Foreign Policy: Theory and Practice*. Columbia University Press, 1974, 11.

⁴ Arndt, Anna Clara, Liviu Horovitz, and Michal Onderco. ‘Russia’s Failed Nuclear Coercion Against Ukraine’. *The Washington Quarterly* 46, no. 3 (2023): 167–84.

⁵ Mueller, Karl P. ‘Conventional Deterrence Redux: Avoiding Great Power Conflict in the 21st Century’. *Strategic Studies Quarterly* 12, no. (2018): 76–93.

deterrence strategies.⁶ First, the level of aggressor motivation determines how hard it will be to deter them. Highly motivated states, such as those with an urgent belief in revising the status quo or facing regime collapse, may not be deterrable at all. Second, the amount of clarity about the object of deterrence and actions the defender will take affects the potential aggressor's calculations. The more ambiguous the demand is and the less the target understands what the consequences will be, the more room for deterrence failure. Third, a threat will only deter when the potential aggressor believes that the deterrent threat will be carried out. War, or the use of force, is costly. Rather than suffering the horrors of war, states prefer to influence rivals through threats and bargaining. However, this means actors are tempted to make some threats that they will, when it comes to it, not carry out. "Bluffers will try to get concessions on the cheap".⁷ If an adversary suspects that a threat is empty, however, they will not be deterred.

This basic dynamic motivates the practice of deterrence. This consists of trying to communicate to your adversary what you will do to them if they carry out an action and that you actually will do it. That is, making threats and making them credible. The process of political communication that constitutes the practice of deterrence is interactive in that it involves both what an actor does and also how other actors (adversaries or allies) perceive it and react. The most important aspect of deterrence is the perceptions of the potential aggressor. Making threats credible is hard. States use a variety of tools to try and increase the credibility of their threats.

Costly Signalling

One core idea is that costly signalling makes threats more credible.⁸ Some actions have a cost or run some risk such that only states who are actually resolved to carry out the threat would do them. Two types of costly signalling are "tying hands" and "sunk costs". Tying hands means taking an action that increases the future costs of backing down from carrying out the threat. Often this takes the form of engaging national prestige.

This is part of the rationale behind so-called "trip wire" forces. The credibility factor is especially important in the case of extended deterrence. This is where a stronger state tries to protect a weaker state, an ally or strategic partner, from a common adversary. Adversaries may doubt that you will actually come to your ally's aid. However, deploying forces on an ally's territory can help to increase the credibility of your pledge to defend them. If the US, UK, or Germany forward deploys a small force in, say, Estonia, and Russia attacks, this small force by itself is unlikely to make the critical difference on the battlefield. However, leaders and domestic publics in the US, UK, or Germany will be more likely to engage the full force of their state's capacity for war if their own soldiers are under threat. The deterrent threat, "I will defend Estonia against attack," is more credible if a leader who hesitates to defend Estonia will face an enraged domestic public.

By contrast, sinking costs means taking actions that have costs now. States who definitely will not carry out the deterrent threat, for example because they do not care enough about the issue at hand, will not be willing to pay these costs. This means that a state who is willing to pay those costs is more likely, although still not guaranteed, to be willing to carry out the deterrent threat. One example of sinking costs is the large-scale mobilization and deployment of troops or weapon systems.

Reputation

Another influential idea is that states can build a reputation for following through on their threats, which makes future threats more credible. However, recent scholarship has cast doubt on the idea that national reputation is a single quantity, like a bank account, whose overall value affects potential aggressors' calculations and is a dominant variable in determining deterrence outcomes.⁹ Leaders make situational, rather than dispositional, judgments about resolve. They ask whether a possible defender would fulfill a commitment in a specific case or context, rather than inferring general rules from a defender's overall track record. Reputational commitments

⁶ Mazarr, Michael J. *Understanding Deterrence*. Rand Corporation, 2018, 8-11. <https://www.rand.org/pubs/perspectives/PE295.html>.

⁷ Gartzke, Erik, and Jon R. Lindsay. *Elements of Deterrence: Strategy, Technology, and Complexity in Global Politics*. Oxford University Press, 2024, 17.

⁸ Fearon, James D. 'Signaling Foreign Policy Interests: Tying Hands versus Sinking Costs'. *The Journal of Conflict Resolution* 41, no. 1, (1997): 68-90.

⁹ Mercer, Jonathan. *Reputation and International Politics*. Cornell University Press, 2010.

are not interdependent. That is, a state's failure to respond in one case does not necessarily have any bearing on an adversary's belief that a state will respond to other issues.

Misperceptions

Communicating effectively with your adversary is complicated by the ever-present possibility of misperception.¹⁰ Deterrence is a psychological process. Convincing an opponent not to act aggressively based on what might happen in the future means painting a compelling mental picture of that future: "deterrence happens in the mind of the potential aggressor".¹¹ Misperceptions and failures of interpretation are therefore very likely. While easy to state succinctly, the implications of this point are significant and pervasive. You may intend to communicate something through your actions or even your words but that is no guarantee that others will understand exactly what you are trying to communicate. Similarly, when you see an opponent act or hear them speak, what you understand might be very different from what they intend.

The Transformative Effect of Nuclear Weapons

NATO's purpose throughout its existence has primarily involved deterrence against a nuclear-armed state, first with the Soviet Union and now with Russia. Nuclear weapons radically change the stakes of a confrontation. Their destructive power makes the prospect of their use perhaps uniquely fearsome. However, threats to use nuclear weapons may be less credible than other deterrent threats. Any use by a nuclear-armed state would violate the nuclear taboo¹² and run the risk of massive loss of both international and domestic support, making their use against a state without nuclear weapons highly problematic. Use against another nuclear-armed state runs the risk of nuclear retaliation. The threat to use nuclear weapons is therefore very difficult to believe because the costs would likely be intolerable.

This logic underlies the mutually assured destruction policy that promoted strategic stability during the Cold War and beyond. If both superpowers can retaliate against the other with nuclear weapons, neither has an incentive to use them. In this situation, neither state believes that it can gain a decisive advantage through a preemptive first strike. Both the United States and the Soviet Union pursued nuclear weapon delivery systems and command and control mechanisms that would, in the aggregate, not be vulnerable to a preemptive attack.¹³

An implication of the mutually assured destruction logic, however, is that if you are confident that the other side will not use nuclear weapons against you (because they fear you retaliating with nuclear weapons), then you can use non-nuclear means to coerce your adversary. "To the extent that the military balance is stable at the level of all-out nuclear war, it will become less stable at lower levels of violence".¹⁴

If no one has an incentive to use nuclear weapons, why are threats to use them, even implicitly, taken so seriously? It is because of the concept of inadvertent escalation to nuclear war. A leader can try to manipulate the adversary's uncertainty about whether a confrontation might break out into nuclear war, then use this to make the adversary back down. This is known as brinkmanship: a strategy of communicating resolve via the "threat that leaves something to chance".¹⁵ Leaders can take action that increases the risk that events will spiral or escalate out of control, resulting in a nuclear war. The risk comes from "a process that is not entirely foreseen, from reactions that are not fully predictable, from decisions that are not wholly deliberate, from events that are not fully under control".¹⁶ This process is the subject of the next section.

¹⁰ Jervis, Robert. 'Deterrence and Perception'. *International Security* 7, no. 3 (1982): 3-30.

¹¹ Mueller, Karl P. 'Conventional Deterrence Redux: Avoiding Great Power Conflict in the 21st Century'. *Strategic Studies Quarterly* 12, no. 4 (2018): 79.

¹² Tannenwald, Nina. *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons Since 1945*. Cambridge University Press, 2007.

¹³ Wallander, Celeste A. *Mutually Assured Stability: Establishing US-Russia Security Relations for a New Century*. Atlantic Council Brent Scowcroft Center on International Security, 2013.

¹⁴ Jervis, Robert. *The Illogic of American Nuclear Strategy*. Cornell University Press, 1984, 31.

¹⁵ Schelling, Thomas C. *Arms and Influence*. Yale University Press, 1966, 121.

¹⁶ Schelling, *Arms and Influence*, 94-5.

CRISIS AND ESCALATION

States can consciously plan for and then choose to go to war. However, the concern for NATO countries is how to deter an attack against them without inadvertently risking war. As threats to use nuclear weapons suffer from credibility problems, crisis bargaining between two nuclear-armed parties involves brinkmanship, or manipulating the adversary's uncertainty about whether the crisis will result in nuclear war.

One means of manipulating uncertainty is escalation: "an increase in the intensity or scope of conflict that crosses threshold(s) considered significant by one or more of the participants".¹⁷ Some scholars also distinguish between vertical escalation and horizontal escalation. Vertical escalation involves an increase in the intensity of armed conflict or confrontation, such as employing types of weapons not previously



¹⁷ Morgan, Forrest E., Karl P. Mueller, Evan S. Medeiros, Kevin L. Pollpeter, and Roger Cliff. *Dangerous Thresholds: Managing Escalation in the 21st Century*. 2008, 8. <https://www.rand.org/pubs/monographs/MG614.html>

used in the conflict or attacking new categories of targets. Horizontal escalation, by contrast, involves widening the scope of the conflict. This could be done geographically by taking action in another country or place, or it could be done across instruments of power, involving diplomatic, informational, military, and economic domains. However, the crucial element is the perceived transgression of a threshold, also known as a “red line”. By threatening to punish an adversary or deny it a military victory, or both, an escalatory attack affects an adversary’s expectations about the future course of the conflict. The effects on military operations are less important than these strategic effects on the adversary’s decision-making.¹⁸

Escalation can be deliberate or inadvertent. Deliberate escalation is carried out on purpose, for instrumental reasons. An actor tries to increase the intensity or scope of an operation to send a signal to their adversary that they are willing to escalate further if the adversary does not comply. By contrast, inadvertent escalation occurs when an actor takes an action that is not intended to be escalatory but is interpreted as escalatory by the adversary. The key to managing risks of inadvertent escalation lies in clarifying thresholds, that is, making clear the limits of what you are willing to tolerate, both externally to your adversary and internally throughout your command structure, including allies. Paradoxically, measures to deter an enemy from seeking military advantage through deliberate escalation may increase the chances that escalation-provoking accidents will occur. Conversely, confidence-building measures to prevent inadvertent escalation may encourage the adversary to engage in deliberate escalation by signalling a reluctance to risk fighting with higher levels of violence.¹⁹ As this paper shows, there is good reason to think that escalation is imperfectly controllable. This has significant policy implications in favor of creating robust measures of crisis control.

Escalation Metaphors

Classic works on escalation, especially those concerned with the outbreak and conduct of nuclear war,²⁰ tended to see escalation as a series of steps. States could go ‘up’ towards more serious, intense, and costly steps, or down to lower levels of conflict. Some saw escalation as relatively controllable, using a ladder metaphor. In this view, you could choose to take a step up or down the ladder to precisely signal resolve. Others raised the possibility that there were general pressures upwards, using an escalator metaphor.²¹ They warned that unless you made significant efforts to de-escalate, crises would automatically travel out of your control up to war. Another metaphor used is a “treacherous ravine face or mountainside”,²² where the challenge is to carefully use the available footholds and handholds to climb to the top without losing your grip and instantly falling to the bottom. Even more dramatically, Hersman raises the possibility of ‘wormhole’ escalation, defined as when states “inadvertently enter and suddenly traverse between sub-conventional and strategic levels of conflict in accelerated and decidedly non-linear ways”.²³

Pathways to War

Generally speaking, war can break out through two distinct pathways of escalation.²⁴ The first pathway is miscalculated escalation, which occurs when one adversary crosses the other’s threshold to war in the false expectation that the action will be tolerated or that the opponent will back down. This form of escalation involves consciously taking action at a ‘higher’ level of intensity, with the intention to moderate adversarial behavior but which instead provokes further escalation. A fundamental cause of miscalculated escalation is misperception, especially policymakers’ inability to empathize with their adversaries, leaving them blind to their opponents’ actual interests and the pressures shaping their decisions. The second pathway is loss of control, which leads to war

¹⁸ Richard Smoke, *War: Controlling Escalation* (Cambridge, Mass.: Harvard University Press, 1977), 274.

¹⁹ Morgan et al, *Dangerous Thresholds*, 28.

²⁰ Kahn, Herman. *On Escalation: Metaphors and Scenarios*. Praeger, 1965; Posen, Barry R. *Inadvertent Escalation: Conventional War and Nuclear Risks*. Cornell University Press, 1991.

²¹ Leng, Russell J. ‘Escalation: Competing Perspectives and Empirical Evidence’. *International Studies Review* 6, no. 4 (2004): 51–64.

²² Morgan et al, *Dangerous Thresholds*, 17-18.

²³ Hersman, Rebecca. ‘Wormhole Escalation in the New Nuclear Age’. *Texas National Security Review* 3, no. 3 (2020), 93. <https://tnsr.org/2020/07/wormhole-escalation-in-the-new-nuclear-age/>.

²⁴ Lebow, Richard Ned. *Nuclear Crisis Management: A Dangerous Illusion*. Cornell University Press, 1987.

through the actions of subordinates that leaders are either unaware of or unable to prevent. Both pathways are exacerbated by the inherent dilemma of crisis escalation: it raises the risk of war in hopes of preventing it. By demonstrating willingness to wage war, leaders attempt to convey resolve and encourage restraint, yet escalation simultaneously makes crises harder to resolve by increasing the political costs of backing down for both sides. When states define or clarify particular thresholds (conditions under which they will go to war), these boundaries can serve as effective deterrents if they are credible and clearly communicated.



Psychology and the Risks of Escalation

Many theorists of escalation to nuclear war have relied on Schelling's appeal to 'chance' or the idea that leaders might stumble into war by accident. However, this ignores the fact that at some point a choice to go to war must be made.²⁵ The risks of escalation in fact come from psychological processes engaged during crisis bargaining.

For example, Stein identifies three interconnected elements that significantly complicate efforts to respond to strategies of manipulating uncertainty.²⁶ First, when adversaries break established norms and rules, the resulting breakdown of constraints removes the anchoring information that leaders typically rely on to estimate their opponent's preferences and potential actions. Second, the dynamic nature of escalation management means that judgements of the preferences and thresholds of an adversary are inherently unstable over

time. Changing battlefield conditions and new implications of political strategic moves make accurate judgements even more difficult. Third, and perhaps most fundamental, leaders often do not know their own preferences in advance. They may discover them through the act of making decisions and observing their own reactions to the new situation. Together, these three dimensions create layers of uncertainty that make it extraordinarily difficult to predict thresholds, assess risks, or anticipate reactions in a nuclear context where the stakes of miscalculation are especially high.

Another potential danger is that leaders may experience a sudden and consequential shift in mentality when grappling with the possibility of war.²⁷ When leaders believe they have crossed a psychological 'Rubicon' and perceive war to be imminent, they switch from a 'deliberative' to an 'implemental' mindset. In a deliberative mindset, leaders are actively considering different options, weighing costs and benefits, and are open to new information, meaning they could still choose de-escalation. By contrast, leaders in an implemental mindset have committed to a course of action and focus on completing the task and achieving their goals. This change from thinking about 'whether to do it' to 'how to win', triggers a number of psychological biases, including a higher illusion of control and other elements of overconfidence. Overconfidence is widely considered a central cause of war.²⁸ This cognitive shift causes decision makers to overestimate the likelihood of victory, overestimate the benefits of war, underestimate its costs, believe they can control events, perceive negotiated solutions as less attractive or necessary, harden their demands, and take provocative steps that make war more probable. If actors believe that war is imminent when it is not in fact certain to occur, the switch to implemental mindsets can become a causal factor in the outbreak of war itself.

This phenomenon potentially complicates escalation management in nuclear crises because

²⁵ Pauly, Reid BC, and Rose McDermott. 'The Psychology of Nuclear Brinkmanship'. *International Security* 47, no. 3 (2022): 9–51.

²⁶ Stein, Janice Gross. 'Escalation Management in Ukraine: "Learning by Doing" in Response to the "Threat That Leaves Something to Chance"'. *Texas National Security Review* 6, no. 3 (2023): 29–50.

²⁷ Johnson, Dominic D.P., and Dominic Tierney. 'The Rubicon Theory of War: How the Path to Conflict Reaches the Point of No Return'. *International Security* 36, no. 1 (2011): 7–40.

²⁸ Dominic D. P. Johnson and James H. Fowler, 'The Evolution of Overconfidence', *Nature* 477, no. 7364 (2011): 317–20; Christopher Blattman, *Why We Fight: The Roots of War and the Paths to Peace* (Penguin, 2023); James D. Fearon, 'Rationalist Explanations for War', *International Organization* 49, no. 3 (1995): 379–414; Geoffrey Blainey, *Causes of War* (Simon and Schuster, 1988).

leaders may mentally cross the Rubicon before war is actually inevitable, perhaps misperceiving that nuclear conflict is imminent, which triggers the implemental mindset that makes them overconfident, closed-minded, and less capable of the rational deliberation or compromise necessary for crisis resolution.

Another potentially complicating factor is the possibility of misperception of the distinction between conventional and nuclear signalling. Hersman argues that this risk is becoming even more salient due to the erosion of conventional-nuclear firebreaks.²⁹ Modern military systems increasingly serve dual purposes, with the same platforms, sensors, and command-and-control infrastructure supporting both conventional and nuclear missions. When states attack surveillance or warning systems to gain conventional military advantage, adversaries may interpret these actions as preparation for nuclear strikes. This entanglement creates acute misperception risks, as attacks intended purely for conventional purposes could leave an adversary strategically blinded, potentially triggering nuclear escalation based on misinterpreted warnings.

De-escalatory Collusion

Even if they are both competing for advantage and do not want to capitulate, sometimes neither side has any interest in risking escalation. This is especially true when they foresee some hard-to-resist pressures for further escalation. These

pressures include domestic publics who might call for retaliation, or international alliance partners who might require assurance. One option is to provide the opportunity for an adversary to take action that satisfies pressures to take action, but that does not signal or represent escalatory intent. These are sometimes known as “off-ramps”. These can be accompanied by private or back-channel communication of de-escalatory intentions.

When covert action is involved, making it public could lead to a loss of control over escalation. Because of this, states can engage in ‘tacit collusion’ by concealing their activity from outside audiences in order to limit the risk of war. Carson gives the example of the Korean War, in which covert Soviet advisors and eventually air support as well as large-scale Chinese ‘volunteer’ units were tacitly colluded in by Western officials. This was so that they could wage limited war in support of their South Korean ally without suffering pressures to escalate to war against the Soviet Union or China.³⁰

Key Take Away: Deterrence between nuclear-armed powers requires taking action that increases the risk of nuclear war through escalation. However, escalation is imperfectly controllable, as there are many ways that misperception and psychological processes might lead decision-makers to cross adversaries’ thresholds, or red lines, for more escalation, war, or nuclear use without intending to do so.



²⁹ Hersman, *Wormhole Escalation*.

³⁰ Carson, Austin. ‘Facing Off and Saving Face: Covert Intervention and Escalation Management in the Korean War’. *International Organization* 70, no. 1 (2016): 103–31.

CURRENT CHALLENGES FOR NATO

NATO faces a variety of current challenges stemming from a rapidly evolving geopolitical and technological strategic environment. This section discusses some implications from two of these challenges: grey zone exploitation of ambiguity and the unique features of the escalatory potential of cyber operations.

Ambiguity of Red Lines

As established in the previous section, the main way states try to avoid escalation in crises is by creating clear limits, or red lines, that define the actions they will react to with escalatory behavior. Perhaps the clearest red line is the overt use of



force. Because of the significance of this red line, states can adopt ambiguous tactics that allow them to make gains where possible without outright crossing the line. One example is the 1948-1949 Berlin Blockade crisis, which illustrates how both parties attempted to stay below the threshold of the use of force. The US ran an airlift instead of a ground convoy to circumvent the Soviet blockade. From the American perspective: “trucks could be blocked, but planes could only be shot down”.³¹ This approach placed the burden of initial force employment on the Soviets, whereas a ground convoy would have required American forces to initiate violence. In response, rather than crossing the use of force red line, Soviet forces employed powerful searchlights directed at the American transport aircraft instead of anti-aircraft weapons. Through this deliberately ambiguous response, the Soviets mirrored the American approach of seeking to exert pressure and exploit opportunities for advantage while remaining below the threshold of intentional use of force.

Grey Zone Activities

An important means of engaging in coercive bargaining and strategic competition is through sub-threshold actions, also called hybrid threats or grey zone activities. These represent a challenge to NATO's collective defence architecture by exploiting the inherent ambiguity of when Article 5 can be invoked. They are designed to remain below any reasonable threshold for a military response. Adversaries, particularly Russia, have demonstrated sophisticated capabilities in calibrating aggression to remain below perceived red lines while achieving cumulative strategic effects. The Alliance is forced to determine whether sabotage of undersea cables, orchestrated migration crises, coordinated disinformation campaigns, and frequent airspace violations constitute attacks warranting collective response, in a ‘death by a thousand paper cuts’.³²

One common type of grey zone operation is the use of plausibly deniable actors. These

include proxy forces, ostensibly private military companies, or cyber operations routed through multiple jurisdictions. When it is unclear who exactly is doing these activities, it is hard to react appropriately. Finding out and then making it clear who is involved through attribution is one means of combating this dynamic. Grey zone approaches represent coercion under cover; stripping away the cover can help combat or punish the coercion.³³

Furthermore, as collective action is NATO's strength and purpose among its members, any attack from a nation is typically aimed at undermining its cohesion by exploiting geographic, economic, or political variation across the Alliance. When individual members are targeted by grey zone operations, it creates pressure for national responses rather than collective action, potentially fragmenting deterrence credibility. Establishing shared understandings of when grey zone activities cross thresholds warranting collective action is crucial for avoiding an ineffective piecemeal response. However, achieving consensus across 32 nations on what constitutes unacceptable grey zone activity that warrants escalatory action seems highly unlikely. Yet, as an aspirational goal to be aimed at, it can guide the creation of information-sharing events and processes. NATO member states should engage in continuous deliberation regarding the level of risk of escalation they are willing to accept in defence of collective interests.

Cyber Operations

Cyber attacks have become an ever-present feature of modern conflict. There have been serious concerns that cyber operations are especially prone to escalation risks. They suffer from attribution problems, poor command and control, and the absence of agreed or customary shared understandings of red lines. It has also been argued that cyber operations are prone to an offensive bias favoring preemptive attack and rapid escalation. However, Borghard and Lonergan identify various reasons why cyber operations have limited escalatory potential.³⁴ For example,

³¹ Altman, Dan. ‘Advancing without Attacking: The Strategic Game around the Use of Force’. *Security Studies* 27, no. 1 (2018): 21.

³² Ålander, Minna. *Carnegie Endowment for International Peace. ‘Death by a Thousand Paper Cuts: Lessons from the Nordic-Baltic Region on Countering Russian Gray Zone Aggression’*. Accessed 13 October 2025. <https://carnegieendowment.org/research/2024/11/russia-gray-zone-aggression-baltic-nordic?lang=en>

³³ Brands, Hal. 2016. “Paradoxes of the Gray Zone - Foreign Policy Research Institute.” <https://www.fpri.org/>. February 5, 2016. <https://www.fpri.org/article/2016/02/paradoxes-gray-zone/>.

³⁴ Borghard, Erica D., and Shawn W. Lonergan. ‘Cyber Operations as Imperfect Tools of Escalation’. *Strategic Studies Quarterly* 13, no. 3 (2019): 122–45.

retaliatory offensive cyber operations require extensive planning and resources and so may not be immediately available for escalatory action. They also do not reliably generate significant costs. Instead, cyber operations can potentially play the role of 'accommodative signals'.³⁵ As they generate limited effects relative to other capabilities, using cyber operations instead of force could demonstrate

to the adversary a willingness to avoid more costly actions that increase escalation risks. Cyber operations are also plausibly deniable. They thus allow states to placate nationalist constituencies' demands for action, such as by permitting proxy groups to conduct low-cost attacks, without openly challenging an adversary.



³⁵ Lonergan, Erica D., and Shawn W. Lonergan. 'Cyber Operations, Accommodative Signaling, and the De-Escalation of International Crises'. *Security Studies* 31, no. 1 (2022): 32–64.

RECOMMENDATIONS FOR NATO

In order to avoid the risk of inadvertent escalation, NATO needs to focus on (a) understanding adversaries' preferences, intentions, and red lines; (b) continually working towards developing Alliance consensus for accepting calculated escalation risks; and (c) actively creating de-escalatory opportunities and off-ramps. However, this does not mean automatically ceding the field. Recognizing that effective deterrence also requires demonstrating willingness to accept risks, impose costs, and credibly threaten escalation when core interests are threatened, NATO should also focus on (d) exploiting adversaries' own escalation fears through strategic communication.

(a) Understanding adversaries' preferences, intentions, and red lines. NATO should invest in enhanced intelligence capabilities and analytical frameworks to better assess adversary decision-making processes. This would include focusing on situational factors that might affect resolve in specific contexts rather than relying on general assumptions about reputation. It would also include understanding how adversaries perceive their own vulnerabilities and what conditions might trigger escalatory responses.

(b) Continually working towards developing Alliance consensus for accepting calculated escalation risks. NATO member states should engage in deliberation on the level of risk of escalation they are willing to accept in defence of collective interests. Appearing too risk-averse will invite an adversary's probing and exploitation. Best practices might include pre-negotiating political agreements on circumstances where the Alliance will escalate despite escalation risks; conducting regular exercises where political

leaders practice making decisions under crisis pressure with imperfect information; and building public support in member states for potential military confrontation with the adversary through strategic communication about threat severity and Alliance capabilities.

(c) Creating de-escalatory opportunities and off-ramps. NATO should proactively design opportunities for adversaries to satisfy domestic or alliance pressures without provoking escalatory responses, as well as establish back-channel communication pathways to convey de-escalatory intentions during crises. In support of this, one practical development could be creating "Off-Ramp Planning Templates" for use during crisis simulations and actual crises. These templates prompt heuristic questions, such as: What domestic pressures does the adversary face that require visible response? What symbolic actions could satisfy these without threatening our interests? What private messages through back channels could clarify our lack of escalatory intent? Who are appropriate interlocutors? Such templates would include pre-identified communication channels (e.g. specific ambassadors, intelligence liaisons, and retired officials with relationships).

(d) Exploiting adversaries' own escalation fears through strategic communication. For example, in the case of Russia, NATO should actively communicate to Russian leadership and publics the catastrophic consequences Russia would face from escalation, especially emphasizing NATO's conventional superiority. This could include: regularly publishing assessments of NATO's ability to defeat Russian conventional forces; conducting highly visible exercises

demonstrating rapid reinforcement capabilities; and having senior officials explicitly state that any Russian nuclear use would result in regime-ending

retaliation. By forcing Russia to confront their own vulnerability to escalation, NATO can leverage mutual fears to enhance deterrence.



CONCLUSION

This paper explains how the necessity for NATO to deter an attack on its member states leads to manipulation of the risk of escalation to nuclear war. The analysis provides theoretical foundations for understanding political communication and signalling from great power competition from nuclear crisis.

The paper demonstrates that deterrent threats and signalling face credibility and interpretation problems, particularly regarding the use of nuclear weapons. Addressing credibility means manipulating uncertainty about whether crises might spiral uncontrollably into nuclear war. Interpretation is prone to failure due to human psychology. In particular, failure to accurately judge another state's red lines can lead to inadvertent escalation. Escalation emerges as the primary mechanism for crisis bargaining between nuclear powers, yet it remains imperfectly controllable.

Multiple pathways can lead to unintended war through miscalculation: leaders' inability to empathize with adversaries leaves them blind to opponents' red lines; sudden shifts to overconfident implemental mindsets reduce capacity for rational crisis resolution; and judgments about adversary preferences remain inherently unstable. Modern dual-use military systems compound these risks by blurring conventional-nuclear distinctions.

The paper's main contribution lies in synthesizing deterrence theory with psychological research to illuminate escalation risks facing NATO. By examining greyzone activities and cyber operations, it demonstrates how contemporary challenges exploit ambiguity in collective defence thresholds while also revealing de-escalatory opportunities. Given escalation's inherent unpredictability, policy must balance the requirement for credible threats with robust mechanisms for crisis control.

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