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Deterrence is Integrated in Theory, but not in Practice: The Problem and (Partial) Solution

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Introduction

Deterring a strategic attack on the United States or its allies in the atomic age has always been a defense-wide mission, meaning that U.S. officials issued such deterrence threats knowing that crises could escalate into conventional conflicts, and conventional conflicts could escalate into nuclear war.¹ Deterrence, therefore, involved a wide range of military capabilities for each circumstance. Nuclear-armed states cannot completely separate conventional deterrence from nuclear deterrence conceptually because conventional deterrence may or may not function based on the adversary's willingness to submit to nuclear deterrence. Indeed, as the scholar of strategy Colin Gray wrote, "There is an essential unity to military posture. If we choose to emphasize one element of the posture, particularly at the lower level of potential conflict, we virtually invite adversary escalation to a level where *he* has an advantage."² Deterrence is integrated in theory, in this sense, because conflict is a continuum; the United States seeks credible deterrence threats, and the military forces that support those threats, to function at each point of a potential conflict.

In practice, however, scholars and practitioners of deterrence have created a host of distinctions that have often served to confuse as much as they clarify: conventional versus nuclear deterrence; deterrence by punishment versus deterrence by denial; offensive weapons versus defensive weapons. These distinctions, whatever their merit in other circumstances,



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have contributed however unintentionally to a degraded understanding of how and why deterrence functions as a unified whole. The U.S. government practice of issuing separate policy documents largely based on these distinctions (i.e., the *National Defense Strategy*, *Nuclear Posture Review*, and *Missile Defense Review*) only serves to promote the idea that these are separable areas of policy with only minimal reference to, much less substantive strategic dependence on, each other.

While the practice of separating the topics of nuclear versus non-nuclear forces or deterrence threats of denial versus deterrence threats of punishment may be defensible in some circumstances, it often results in real world costs: wargames with conventional forces that do not incorporate nuclear employment when such employment could be quite likely;³ combatant commands that develop conventional war plans with little concern for nuclear escalation (“that is U.S. Strategic Command’s problem”);⁴ and a U.S. tendency to believe (or worse, plan that) adversaries will practice deterrence in a similar way and with similar distinctions as the United States.⁵

This *Information Series* seeks to refocus attention on the interrelated nature of deterrence threats utilizing military means against strategic attacks, and how an excess focus on the individual parts of such a deterrence threat (e.g., conventional force threats, nuclear employment as cost imposition, missile defense as denial) damages the defense strategy the deterrence threats support. This article, then, begins by expounding on why deterrence threats against strategic attack are interrelated, or mutually supporting, and the implications for the overall defense strategy. Following that, this article examines some potential reasons why U.S. nuclear forces, conventional forces, and homeland missile defenses came to be gradually siloed conceptually in U.S. strategic thought. Finally, it concludes by providing recommendations for policymakers to consider that, if implemented, may improve understanding about deterrence throughout the Department of Defense and ultimately improve the practice of deterrence.

Deterrence and the Limits of Shorthand

To understand why deterrence threats against strategic attacks involve more than just the sum of their parts, it is helpful to recall two Cold War scholars of strategy that framed the relevant questions succinctly. First, French scholar Raymond Aron believed that the question of deterrence could usefully be explained as, “... the eternal question of who can deter whom, from what? In what circumstances? And how?”⁶ Summarizing and expanding on Aron, the American scholar Herman Kahn thought of deterrence as fundamentally a question of “... who deters whom, from what acts, in the face of what threats (themselves facing what counterthreats), in what context, for what purposes?”⁷ So, when scholars and practitioners say, “The United States will deter its adversaries,” that is shorthand that does not typically expound on each of the elements listed by Aron and Kahn. This shorthand is useful for brevity, but when deterrence in reality incorporates each of the questions that Aron and Kahn cite, then the repeated use of shorthand makes deterrence appear simplistic, both in theory and in practice.



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To be clear, Aron and Kahn were among the most prominent Cold War scholars to note how threats and counterthreats, or attacks and defense, interacted with each other to present a more formidable deterrence threat, but they were certainly not the first scholars to note this dynamic. That piece of strategic wisdom has its roots in ancient texts and has found its way into the writings of some of the most famous military strategists. Sun-tzu, for example, wrote, “Thus one who excels at warfare first establishes himself in a position where he cannot be defeated while not losing [any opportunity] to defeat the enemy.”⁸ A strong defense against attack, in other words, serves as the springboard for gaining the initiative in a counterattack. Similarly, the Prussian strategist Carl von Clausewitz called defense “simply the more effective form of war,” and explained further:

Even when the only point of the war is to maintain the *status quo*, the fact remains that merely parrying a blow goes against the essential nature of war, which certainly does not consist merely in enduring. Once the defender has gained an important advantage, defense as such has done its work. While he is enjoying this advantage, he must strike back, or he will court destruction. Prudence bids him strike while the iron is hot and use the advantage to prevent a second onslaught... A sudden powerful transition to the offensive – the flashing sword of vengeance – is the greatest moment for the defense.⁹

In this way, discussions at the strategic military level about defense against attack are never only about “defense” alone; but in reality, (paraphrasing Aron and Kahn) the discussion is about defense against attack, enabling what counterattacks, in what context, and for what purpose?

Bringing this point up to date, it is of limited utility to ask, for example, what nuclear deterrence threats would the United States be willing to issue or carry out in defense of an ally – because deterrence considerations are far broader than that. Nuclear threats to deter what kind of attack? In what circumstance and for what purpose? In the face of what potential adversary responses and with what U.S. capabilities to defeat those responses? In short, the United States does not issue nuclear deterrence threats in a vacuum, without reference to the other parts of its military posture, because deterrence threats against strategic attack *by their nature* are multi-faceted. As Colin Gray noted in separate publications, “States deter or go to war *writ large*; they do not deter or go to war on land, at sea, in the air, or in space.”¹⁰ And, “Each part of the U.S. defense posture should be related in terms of complementarity of capability, credibility for threat or execution of escalation, and overall integrity, to every other part.”¹¹ If each part of the U.S. military posture should be related and complementary to every other part for the unity and credibility of a deterrence threat, how then did U.S. strategic discourse concerning deterrence threats grow to become so siloed?



The Breakdown between Theory and Practice

Certainly one of the most important factors in the gradual siloing of deterrence via conventional/non-nuclear threats from nuclear threats during the Cold War is the unparalleled speed and scale of destruction that nuclear weapons can inflict on command. This unprecedented capability so shocked most government and nongovernment officials alike when it was introduced that it became quite natural to view nuclear weapons as wholly “other” or set apart from non-nuclear options. In fact, Bernard Brodie went so far as to say that the existence of nuclear weapons should re-order the entire purpose of the military: “Thus far the chief purpose of our military establishment has been to win wars. From now on, its chief purpose must be to avert them. It can have almost no other useful purpose.”¹² In that light, it is unsurprising that among many analysts, nuclear strategy and non-nuclear strategy began to diverge as separate areas of study – despite, as established, their inherent linkages.¹³

Technological progress also contributed to the growing prevalence of distinctions within deterrence thought. The prospect of viable missile defenses in the 1960s and 1970s, though no different in fundamental purpose than existing anti-aircraft guns, catalyzed the distinction of deterrence through denial (simply stated, active defenses) and deterrence through cost imposition (offensive forces or attacks). The 1972 Anti-Ballistic Missile (ABM) Treaty in particular stunted U.S. strategic thinking about deterring strategic attacks because it essentially outlawed building significant active defenses against such attacks. Because the United States did not have the option of building significant active defenses against strategic attacks on its homeland, deterrence threats against strategic attacks naturally focused on ever more clever ways to impose cost, leaving little discussion on the importance of deterrence by denial. Ironically, it was the United States that sought to convince the Soviet Union of the purportedly destabilizing nature of homeland missile defenses, a belief that was wholly foreign to Soviet leaders at the time of the ABM Treaty who thought of missile defenses as natural complementary deterrence threats of denial that worked in conjunction with its nuclear forces as deterrence threats of cost imposition.¹⁴

The post-Cold War siloing of thinking concerning deterrence of strategic attack was also the (inadvertent) product of two other nuclear arms control agreements: the 1987 Intermediate-range Nuclear Forces Treaty (INF Treaty) and the 1991-1992 Presidential Nuclear Initiatives (PNIs). As critics at the time noted, the United States required significant forward deployed nuclear forces to support its policy of extended deterrence on behalf of its allies – a set of capabilities meant to deter overwhelming conventional attack and, if deterrence failed, defeat the conventional attacks and incentivize the Soviet Union to localize the conflict to the European theater and avoid U.S.-Soviet homeland-to-homeland strikes if possible.¹⁵ By eliminating all U.S. intermediate-range nuclear forces and almost all less-than intermediate-range nuclear forces as required by these agreements, however, the United States removed critical links in the chain for deterring strategic attack – leaving it almost wholly reliant on either conventional forces or strategic nuclear forces for the job.



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Now, over 30 years later, nuclear threats are worsening at a pace far faster than the U.S. industrial base can respond, and it is unclear if there is even enough bipartisan political support to restore the strategic links in the deterrence chain that once formed a unified U.S. approach to prevent strategic attacks on the homeland and against its allies. Once particular views about deterrence become orthodoxy, it is exceedingly difficult to alter the prevailing wisdom—especially when whole bureaucracies and institutions, both in and out of government, have been built on sustaining those legacy beliefs.

Practicing Deterrence as a Whole

There are no quick and easy solutions to the excessively siloed thinking that has become entrenched concerning how the United States deters strategic attacks. It took sustained leadership from President Reagan and his Strategic Defense Initiative and President George W. Bush's withdrawal from the ABM Treaty, an era that spanned nearly 30 years, to simply *begin* the process of bringing deterrence threats of denial via homeland missile defenses back into the strategic deterrence equation—a similar level of effort across more areas is likely now required in the emerging era of two nuclear peers with the United States: Russia and China.

Beginning with the uppermost rung of the metaphorical “escalation ladder,” U.S. strategic nuclear forces act as the ultimate backstop to an escalating conflict—a set of capabilities that adversaries should fear the most because engaging in general nuclear war with the United States appears in all circumstances to be the worst possible option available. If an adversary perceives U.S. strategic forces are insufficiently credible, whether in operational capability or in the U.S. willingness to employ them, then all other U.S. efforts are in vain.¹⁶ This is the reason why each Secretary of Defense from both Republican and Democratic administrations, dating back to at least President George W. Bush, has affirmed that nuclear modernization is the Department of Defense's top priority. Relatedly, it is the same reason that calls to reduce or eliminate particular U.S. strategic nuclear systems in favor of funding other purportedly more “usable” conventional capabilities fail as an argument.¹⁷ Conventional capabilities that can be trumped by escalation to ever higher levels, including the strategic nuclear level, will see their deterrent value neutered.

At the regional or non-strategic nuclear level, U.S. deterrence scholars and practitioners must recognize more clearly how these forces form a critical link in the U.S. defense strategy between conventional forces (and the respective credibility of their employment) and strategic nuclear forces (and the respective credibility of their employment). To illustrate, a U.S. president considering the commitment of U.S. conventional forces in support of an ally against an adversary with a significantly larger non-strategic nuclear force cannot simply hope the conventional conflict stays non-nuclear—he must consider also whether the United States has the non-strategic nuclear forces likely necessary to deter an adversary's nuclear attacks on U.S. conventional forces. Moreover, the U.S. president must decide whether, if nuclear war is forced upon the United States and its allies in the region, the United States has the non-strategic



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nuclear forces potentially necessary to restore deterrence and incentivize adversary restraint from conducting homeland-to-homeland strikes involving strategic forces.¹⁸

The renewed growth in Russian nuclear threats and the ongoing breakout of China's nuclear capabilities, when paired with their revisionist political agendas aimed at U.S. allies and partners, makes changes in the U.S. non-strategic nuclear posture all the more essential. As the 2023 bipartisan Strategic Posture Commission recommended, the U.S. theater nuclear posture should be "urgently modified" in a manner consistent with the broad-based nature of deterring strategic attacks, i.e., modifications to incentivize adversary restraint to remain below the nuclear threshold, to give up on conducting additional nuclear attacks should nuclear deterrence fail initially, and to provide reasons for a conflict of any type to remain localized to the theater of operations.¹⁹ Again, if the U.S. goal is to deter adversary escalation from a conventional conflict to a nuclear conflict, or to keep a limited nuclear war from escalating further, then it requires a significant set of theater-based nuclear capabilities to link the credibility of deterrence threats from the lower levels of violence in a conventional conflict to the highest levels of violence in a nuclear conflict. Dismissing this need for additional theater-based non-strategic nuclear options in favor of relying on conventional forces risks incentivizing adversary escalation to a level where *they* have the advantage, that is, at the theater-based non-strategic nuclear level.²⁰

At the conventional level, the 2023 Strategic Posture Commission again notes the connection between adequately resourcing U.S. conventional forces and the potential need to rely more on nuclear forces should U.S. officials chose not to adequately resource conventional forces: "In short, shifting to a necessary two-war construct requires increases in the size, type, and posture of U.S. and allied conventional forces. In the absence of such increases, the United States will likely have to increase its reliance on its nuclear deterrent."²¹ There are few public indications as to whether the incoming Trump Administration will adopt the Strategic Posture Commission's recommended two-war construct for sizing America's conventional forces, but clearly the growth in threats of Russian and Chinese aggression in their respective geographically-distant theaters indicates some major changes are necessary in the way the United States and its allies posture their conventional forces.

Finally, officials must consider one last element in the U.S. arsenal to deter strategic attacks: homeland integrated air and missile defense (IAMD). As stated earlier, deterrence threats of cost imposition cannot be fully evaluated for their effectiveness without reference to deterrence threats of denial – they are, in fact, mutually supportive. To illustrate, consider the case of U.S. extended nuclear deterrence. As Lawrence Freedman has written, "The nagging question remains: why should states base their international behavior on the presumption that they have the backing of a particular super-power, when the implications for the super-power are potentially suicidal?"²² That is, if an adversary conducts limited nuclear strikes on a U.S. ally, the ability or inability of the United States to defeat that same adversary's coercive strikes on the U.S. homeland might heavily influence the course of action U.S. officials decide to take in response. A U.S. president is going to clearly prefer military options that minimizes the risk of



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nuclear escalation the United States bears and reduces the potential damage to the U.S. homeland, while still providing an effective response in defense of allies.

Indeed, U.S. homeland IAMD can provide significant deterrent effects, depending on its capabilities, from the conventional level up to the strategic nuclear level. For instance, U.S. homeland IAMD acts as both a deterrent in and of itself as well as a deterrence enabler for U.S. conventional forces. Russia and China are developing the forces necessary to threaten U.S. power projection capabilities from the homeland, whether at or below the nuclear threshold.²³ The ability of U.S. homeland IAMD to protect those power projection capabilities against coercive attack presents both a deterrence threat of denial while also strengthening the credibility of the deterrence threats of cost imposition via power projection from the homeland to allies overseas. Or, for an example in the nuclear realm, consider how U.S. homeland IAMD in conjunction with a significant set of theater-based non-strategic nuclear options could help deter an adversary from expanding a regional conflict into a homeland-to-homeland conflict. A robust U.S. homeland IAMD system presents the adversary with the possibility that his attack might result in the worst of both worlds: a denial of the intended benefits *and* the imposition of unacceptable costs as a result of the U.S. response.

Given the inter-related nature of deterrence threats of denial and deterrence threats of cost imposition, and the growth of deterrence requirements increasingly being placed on U.S. conventional and nuclear forces, the incoming Trump Administration should consider announcing a new U.S. policy: that nuclear modernization *and* the expansion of U.S. homeland IAMD are now the twin priorities of the Department of Defense. As noted earlier, sustained presidential leadership is the essential prerequisite to enact major changes in the U.S. defense strategy, and the inclusion for the first time of a robust set of homeland IAMD capabilities as part of the mutually-supporting deterrence threats against growing nuclear and non-nuclear threats merits such attention.

Additionally, Congress should consider reinstating the requirement that the Secretary of Defense submit an annual report to Congress as the Secretary historically did from 1959-2005, or else mandate that the *National Defense Strategy* (which replaced the Secretary's annual report) be more comprehensive in substance. Secretary of Defense James Schlesinger's annual reports to Congress for FY1975 and FY1976 are excellent examples of how the U.S. understanding and practice of deterrence should be presented. In those reports Secretary Schlesinger justified why the strategic, non-strategic, conventional, and missile defense forces the Department of Defense was requesting in its budget were necessary to achieve national political goals through clearly articulated strategies.²⁴ Reinstating the requirement for an annual Secretary of Defense report to Congress would make the *Nuclear Posture Review* and *Missile Defense Review* reports either redundant and unnecessary, or else they could shift their focus away from explanation and towards implementation.

As part of the United States refocusing on thinking about and practicing deterrence as a unified effort, U.S. officials should encourage their NATO allies to continue their progress on conducting conventional-nuclear integration exercises while improving in the areas of nuclear planning and exercises.²⁵ While conventional support for nuclear operations (CSNO) is an



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important area for allies to expand their participation, annual nuclear exercises like “Steadfast Noon” should practice and publicly describe allied actions to restore deterrence to counter multiple rounds of adversary nuclear employment.²⁶ While such an exercise may run counter to France’s public nuclear policy, the more consequential concern is whether Russia perceives NATO capabilities and will as sufficient to deter and, if necessary, defeat its “dosing” strategy of coercive nuclear strikes.²⁷ Such exercises should incorporate ideally the full suite of military deterrence threats, both cost imposition and denial, because allied responses to the possibility or actuality of Russian nuclear employment would, in all likelihood, involve force posture changes in IAMD, conventional, and nuclear forces, among others. Again, some allies may be reluctant to participate in exercises their publics may perceive as “nuclear warfighting” (a perception Russia will work to promote in any case), but exercises must match the threat, lest Russia perceive NATO simply is not up to the task.

Indeed, if NATO is not willing, and seen as willing, to even *practice* countering Russian nuclear doctrine with all the means at its disposal, then it will signal a critical weakness: lack of will. NATO nuclear policy and strategy must not rely on an idealized perception of Russian President Vladimir Putin, as someone who is as equally frightened of nuclear escalation as NATO. Deterrence must work on the continuum of conflict, and the opportunistic and militaristic Vladimir Putin knows his area of advantage in both capabilities and perceived will is at the regional nuclear level of war.²⁸ Until NATO moves to alter his perception through undeniable changes in words and deeds, Putin will continue to press his advantage to the detriment of the alliance.

Conclusion

The prospect of strategic attacks against the United States or its allies is so enormously consequential to vital U.S. national interests that deterrence threats against that possibility must be at least as equally severe and broad-based. Deterring strategic attacks cannot be reduced down to a simple process of combining deterrence threats across multiple areas (conventional, nuclear, and missile defense forces) without reference to their interrelated and mutually supporting nature. Although changes in policy and technology have promoted an unhealthy focus on distinctions in deterrence types and forces in the post-Cold War period, U.S. officials can still, and should, encourage a shift back towards a more unified understanding of how deterrence functions and how it can be strengthened in practice to face the growing set of threats on the horizon.

¹ This *Information Series* is an expanded treatment of a presentation by the author at Lawrence Livermore National Laboratory, Center for Global Security Research event, December 11, 2024, “Deterrence in the 2025 National Defense Strategy Review.” The author wishes to thank Dr. Brad Roberts for the invitation and fruitful discussion.



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² Emphasis in original. Colin S. Gray, "Presidential Directive 59: Flawed but Useful," *Parameters*, Vol. 11, No. 1 (1981), p. 33.

³ See, for example, David A. Shlapak and Michael Johnson, *Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics* (Washington, D.C.: RAND Corporation, January 29, 2016), available at https://www.rand.org/pubs/research_reports/RR1253.html. For more on escalation during wargames and the general U.S. reluctance, see, Charles Richard and Robert Peters, *Escalation: A Tool to Be Considered, Not Dismissed* (Fairfax, VA: National Institute for Public Policy, October 2, 2024), available at <https://nipp.org/wp-content/uploads/2024/10/IS-600.pdf>.

⁴ Franklin C. Miller, as quoted in, "Prospects for U.S. Nuclear Modernization," *Journal of Policy & Strategy*, Vol. 1, No. 1 (Fall 2021), p. 52, available at <https://nipp.org/wp-content/uploads/2021/10/Modernization-Proceedings-1.1R.pdf>. See also, Gregory Giles, "Conventional-Nuclear Integration: Avoiding Misconceptions and Mistakes," *War on the Rocks*, August 10, 2021, available at <https://warontherocks.com/2021/08/conventional-nuclear-integration-avoiding-misconceptions-and-mistakes/>.

⁵ For more on this false assumption, see, Fritz W. Ermarth, "Contrasts in American and Soviet Strategic Thought," *International Security*, Vol. 3, No. 2 (1978), pp. 138-155.; and, John Erickson, "The Soviet View of Deterrence: A General Survey," *Survival*, Vol. 24, No. 6 (1982), pp. 242-251.

⁶ Raymond Aron, *The Great Debate: Theories of Nuclear Strategy* (Garden City, NY: Doubleday & Company, 1965), p. 163.

⁷ Herman Kahn, *Thinking About the Unthinkable in the 1980s* (New York: Simon & Schuster, 1984), p. 120.

⁸ Sun-tzu, in chapter 4, "Military Disposition," translated by Ralph D. Sawyer, *The Art of War* (Boulder, CO: Westview Press, 1994), p. 184.

⁹ Carl von Clausewitz, author, Michael Howard and Peter Paret, eds., *On War* (New York: Alfred A. Knopf, 1993), p. 443.

¹⁰ Colin S. Gray, *War, Peace, and Victory: Strategy and Statecraft for the Next Century* (New York: Simon & Schuster, 1990) p. 95.

¹¹ Colin S. Gray, "Strategic Forces, General Purpose Forces, and Crisis Management," *The Annals of the American Academy of Political Science*, Vol. 457 (September 1981), p. 73.

¹² Bernard Brodie, *The Absolute Weapon* (New York: Harcourt Brace, 1946), p. 76.

¹³ As one example, see, John J. Mearsheimer, *Conventional Deterrence* (Ithaca, NY: Cornell University Press, 1985). Other analysts, however, kept the two areas of study together – some of the most notable being Herman Kahn and William Van Cleave. See, for instance, Herman Kahn, *On Thermonuclear War* (Princeton, NJ: Princeton University Press, 1960); and, William R. Van Cleave, "The Nuclear Weapons Debate," *Proceedings*, Vol. 92/5/759 (May 1966).

¹⁴ On Soviet views shortly before the signing of the ABM Treaty, see, Johan J. Holst, "Missile Defense, The Soviet Union, and the Arms Race," chapter in Johan H. Holst and William Schneider Jr., eds., *Why ABM? Policy Issues in the Missile Defense Controversy* (New York: Pergamon Press, 1969) pp. 145-161.

¹⁵ For a more in-depth discussion of these arms control agreements, see, Matthew R. Costlow, *The INF Treaty, Extended Deterrence, and Assurance: A Case Study in Unintended Consequences* (Fairfax, VA: National Institute for Public Policy, May 13, 2024), Information Series No. 586, available at <https://nipp.org/wp-content/uploads/2024/05/IS-586.pdf>; and, Matthew R. Costlow, "The 1991-1992 Presidential Nuclear Initiatives and the Cascading Effects on U.S. Alliances," chapter in, Keith B. Payne, Michaela Dodge, Matthew R. Costlow, and David J. Trachtenberg, *The Pernicious Effects of Arms Control Misconceptions on Extended Deterrence and Assurance* (Fairfax, VA: National Institute for Public Policy, September 2024), pp. 81-98, available at <https://nipp.org/wp-content/uploads/2024/09/Vol.-4-No.-9.pdf>.



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¹⁶ On this point, see especially Colin S. Gray, “Defense Planning and the Duration of War,” *Defense Analysis*, Vol. 1, No. 1 (1985), p. 34.

¹⁷ Matt Korda and Mackenzie Knight, “Saving Billions on the US Nuclear Deterrent,” *FAS.org*, December 4, 2024, available at <https://fas.org/publication/saving-billions-on-the-us-nuclear-deterrent/>.

¹⁸ For an extended discussion of adversary restraint at and below the nuclear threshold, see, Matthew R. Costlow, *Restraints at the Nuclear Brink: Factors in Keeping War Limited* (Fairfax, VA: National Institute for Public Policy, July 2023), available at <https://nipp.org/wp-content/uploads/2023/07/OP-Vol.-3-No.-7.pdf>.

¹⁹ Madelyn R. Creedon and Jon L. Kyl, Chair and Vice Chair, *America’s Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States* (Alexandria, VA: Institute for Defense Analyses, October 2023), pp. 48-49, available at <https://www.ida.org/-/media/feature/publications/a/am/americas-strategic-posture/strategic-posture-commission-report.ashx>.

²⁰ Echoing Colin Gray’s point cited earlier. Gray, “Presidential Directive 59: Flawed but Useful,” *op. cit.*, p. 33.

²¹ Creedon and Kyl, *America’s Strategic Posture*, *op. cit.*, p. 65.

²² Lawrence Freedman, *Strategic Defence in the Nuclear Age*, Adelphi Papers #224 (London: International Institute for Strategic Studies, Autumn 1987), p. 23.

²³ Glen D. VanHerck, *Statement of General Glen D. VanHerck, United States Air Force, Commander, United States Northern Command, and North American Aerospace Defense Command* (Washington, D.C.: United States Senate Armed Services Committee, March 24, 2022), p. 3, available at [https://www.armedservices.senate.gov/imo/media/doc/USNORTHCOM%20and%20NORAD%202022%20Posture%20Statement%20FINAL%20\(SASC\).pdf](https://www.armedservices.senate.gov/imo/media/doc/USNORTHCOM%20and%20NORAD%202022%20Posture%20Statement%20FINAL%20(SASC).pdf).

²⁴ Secretary Schlesinger’s, and all annual reports, are available at Historical Office, Office of the Secretary of Defense, “Secretary of Defense Annual Reports,” no date, available at <https://history.defense.gov/Historical-Sources/Secretary-of-Defense-Annual-Reports/>.

²⁵ For an excellent and more comprehensive treatment of this topic, see, William Alberque and Artur Kacprzyk, “More Pillars Needed: Ten Options for Europe to Improve NATO’s Nuclear Deterrence,” *Stimson Center*, October 2, 2024, available at <https://www.stimson.org/2024/more-pillars-needed-nato-nuclear-deterrence/>.

²⁶ For more on “Steadfast Noon,” see, NATO, “NATO holds Annual Nuclear Exercise: Steadfast Noon,” *NATO.int*, October 14, 2024, available at https://www.nato.int/cps/en/natohq/news_229447.htm?selectedLocale=en.

²⁷ On France’s approach, see, Emmanuel Macron, “Speech of the President of the Republic on the Defense and Deterrence Strategy,” *Élysée.fr*, February 7, 2020, available at <https://www.elysee.fr/en/emmanuel-macron/2020/02/07/speech-of-the-president-of-the-republic-on-the-defense-and-deterrence-strategy>; On Russia’s nuclear doctrine, see, Michael Kofman, Anya Fink, and Jeffrey Edmonds, *Russian Strategy for Escalation Management: Evolution of Key Concepts* (Arlington, VA: CNA, April 2020), pp. 21-22, available at <https://www.cna.org/reports/2020/04/DRM-2019-U-022455-1Rev.pdf>.

²⁸ Consider what Vladimir Putin said in June 2024: “Our tactical nuclear weapons are four times more powerful than the bombs the Americans used against Hiroshima and Nagasaki, by three to four times. We possess significantly more of them – both across the European continent and even if the Americans were to deploy theirs from the US – we still maintain a substantial advantage.” Vladimir Putin, “Plenary Session of the St Petersburg International Economic Forum,” *Kremlin.ru*, June 7, 2024, available at <http://en.kremlin.ru/events/president/news/74234>.

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