

TEN PROPOSITIONS REGARDING NUCLEAR WEAPONS AND DETERRENCE

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All progress toward a more peaceful, nuclear-free world made both during and since the Cold War seems to be receding. The United States is returning to a strategic situation not seen since the 1950s, and yet one that is also far more complex. The need to understand nuclear weapons and their deterrent value has never been higher. Given this era of unbalanced nuclear multipolarity, ten propositions can help guide leaders, strategists, and planners as they establish and execute policy overseeing the most important deterrent effort of humankind, that of nuclear war.

In March 2023, the UN announced the threat of nuclear weapons use was higher than it had been at any time since the Cold War.¹ This announcement came after increasing nuclear rhetoric and moves by the Russian Federation. Since the beginning of Russia's war in Ukraine in 2022, Moscow has made frequent and extreme nuclear threats.² In June 2023, Russian President Vladimir Putin announced the country would be deploying tactical nuclear weapons to Belarus.³ Concurrently, nuclear arms treaties between the United States and Russia have been unraveling.⁴ All progress toward a more peaceful, nuclear-free world made both during and since the Cold War seems

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1. "Risk of Nuclear Weapons Use Higher Than at Any Time Since Cold War, Disarmament Affairs Chief Warns Security Council," United Nations, March 31, 2023, <https://press.un.org/>.

2. Lauren Sukin, "Rattling the Nuclear Saber: What Russia's Nuclear Threats Really Mean," Carnegie Endowment for International Peace, May 4, 2023, <https://carnegieendowment.org/>.

3. Guy Faulconbridge, "Putin Says Tactical Nuclear Weapons to Be Deployed in Belarus in July," Reuters, June 9, 2023, <https://www.reuters.com/>.

4. "Putin: Russia Suspends Participation in Last Remaining Nuclear Treaty with U.S.," Reuters, February 21, 2023, <https://www.reuters.com/>.

to be slipping away. The United States is returning to a strategic situation not seen since the 1950s, and yet one that is also far more complex. The need to understand nuclear weapons and their deterrent value has never been higher. For nearly 50 years, nuclear deterrence was the central tenet of national defense for the United States and the Soviet Union. Its logic was brutally simple: to avert war, be prepared to destroy each other.⁵ Since the end of the Cold War, neither side has had a security policy so intense or dangerous as those in place during that period.

In fact, when the Cold War ended and the proximate security threats to the United States shifted to rogue nations, nonstate actors, and terrorist groups, nuclear weapons and their place in international security increasingly came into question. Accordingly, their role in the national defense strategy was downplayed or overlooked.⁶ By September 11, 2001, those who continued to tout the value of nuclear weapons were considered legacy thinkers. This is no longer the case today.

The United States has entered a period of unbalanced, nuclear multipolarity, where three or more great powers compete for power and security every day.⁷ This raises two immediate issues for the United States. First, the country has never been here before. The Cold War was a bipolar arrangement. With only two players in the game, it was easier to understand and less difficult to play. Of note, theoretical conceptions of three-player deterrence are rare.⁸

Second, due to the passing of time, negligence, or both, the term deterrence has taken on new meanings. Once synonymous with avoiding nuclear war, deterrence now comes in many forms. Strategic deterrence, integrated deterrence, extended deterrence, conventional deterrence, cyber deterrence, space deterrence, and cross-domain deterrence all compete for attention.⁹ But it is important to be clear: nothing possesses a higher imperative than deterring a nuclear war. It remains the original, existential threat, and its avoidance is, or should be, what deterrence is all about. Given the stakes, this article offers the following propositions for leaders, strategists, and planners to consider as the United States prepares to fight the next war.

5. Thomas Schelling, *Arms and Influence*, 2008 ed. (New Haven, CT: Yale University Press, 2008); Bernard Brodie, *Strategy in the Missile Age* (Princeton: Princeton University Press, 1965); Herman Kahn, *On Escalation: Metaphors and Scenarios*, 1st ed. (New Brunswick, NJ: Routledge, 2009); and Herman Kahn and Evan Jones, *On Thermonuclear War*, 1st ed. (New Brunswick, NJ: Routledge, 2007).

6. See, for example, Donald H. Rumsfeld, *Quadrennial Defense Review Report* (Washington, DC: DoD, September 2001); and Rumsfeld, *The National Defense Strategy of the United States of America* (Washington, DC: DoD, March 2005).

7. Kenneth N. Waltz, *Theory of International Politics*, 1st ed. (Longrove, IL: Waveland Press, 2010).

8. Melvin Deaile, "The Problem with Three: Great Power Competition Deterrence," Wild Blue Yonder, April 13, 2021, <https://www.airuniversity.af.edu/>.

9. See John Mearsheimer, *Conventional Deterrence* (Ithaca, NY: Cornell University Press, 1983); and Chairman of the Joint Chiefs of Staff (CJCS), *Joint Operations*, Joint Publication 3-0 (Washington, DC: CJCS, 2018).

1. The power to punish deters.

During the Cold War, the power to punish was universally recognized and well understood, and nuclear weapons epitomize this power.¹⁰ In what remains one of the most quoted statements in the field of security studies, Bernard Brodie made the main objective of the US military clear at the close of World War II: “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 no other useful purpose.”¹¹

As a rationalist and RAND analyst, Brodie would develop a deep-seated understanding of nuclear weapons and their destructive potentialities. The examples here focus on strategic or high-yield nuclear weapons. This logic is likely to hold for tactical nuclear weapons as well, for two reasons. First, there is a widely understood distinction between conventional and nuclear warfare creating a threshold over which it would be difficult to cross without significantly altering the status quo.¹² Second, the risk of introducing tactical nuclear weapons and not having the conflict spiral into a strategic exchange is non-negligible, as the incentive for each side to strike first strategically increases exponentially in magnitude.

For illustrative purposes, the destructive power of nuclear weapons cannot be overstated: one 300-kiloton weapon is more than enough to destroy a city the size of Washington, DC.¹³ If a bomb of that size were detonated above the National Mall, approximately 335,540 people would die, and 587,800 casualties would be sustained. Nearly everything within a three-mile radius would be destroyed, with burn victims as far away as American University. The same bomb detonated above Midtown Manhattan in New York City would kill nearly 1.2 million people and produce more than 1.9 million casualties. Damage would extend as far away as Queens.¹⁴

An equally great danger is the targeting of a state’s nuclear arsenal, the loss of which would inhibit the ability of that state to deter further attack by threatening to respond in kind. Yet even if one were to assume the worst, a bolt from the blue in which a state lost 50 percent of its nuclear capability to a first strike, a relatively small force of even 100 weapons would allow that state to strike back over 50 times before it had to negotiate.¹⁵ The existence of survivable nuclear forces, such as nuclear submarines, allows

10. James J. Wirtz, “How Does Nuclear Deterrence Differ from Conventional Deterrence?” *Strategic Studies Quarterly* 12, no. 4 (2018).

11. Bernard Brodie, *The Absolute Weapon: Atomic Power and World Order* (New York: Harcourt, Brace and Company, 1946), 76.

12. Schelling, *Arms and Influence*.

13. Hans M. Kristensen and Matt Korda, “United States Nuclear Weapons, 2023,” *Bulletin of the Atomic Scientists* 79, no. 1 (January 2, 2023), <https://doi.org/>; and Hans Kristensen, Matt Korda, and Eliana Reynolds, “Russian Nuclear Weapons, 2023,” *Bulletin of the Atomic Scientists* 79, no. 3 (May 4, 2023), <https://doi.org/>.

14. Figures calculated using “NUKEMAP by Alex Wellerstein,” accessed June 14, 2023, <https://nuclearsecrecy.com/>.

15. See also Matthew Kroenig, *The Logic of American Nuclear Strategy: Why Strategic Superiority Matters* (Oxford, UK: Oxford University Press, 2018), ch. 2.

states to hold adversaries at risk from the destruction wrought by nuclear retaliation, even in the event of a bolt from the blue.

This cuts to the heart of the matter: nuclear weapons deter. They raise the costs of war so high and so fast that few states, if any, can afford to run the risks of a nuclear confrontation. This does not mean nuclear deterrence cannot fail. Indeed, it might. But if it does, it will not be because leaders are insensitive to the punishments they face should they choose to use a nuclear weapon.¹⁶ If this were true, deterrence would not work at all.

It is important to note here that, related to deterrence resulting from punishment, nuclear weapons also provide nuclear states with a certain level of impunity when it comes to taking actions against nonnuclear states. Russia's actions with regard to Ukraine in 2022 are an excellent example, as many took Russia's nuclear threats as a warning to NATO to stay out of the conflict. Yet nuclear threats also serve as critical communication in identifying issues of great importance to nuclear states.

Such freedom, however, has its limits. In November 2022, when a "Russian-made" missile landed in Poland, killing two people, NATO leaders were quick to convene, taking time out from the G20 summit in order to determine how to respond, ultimately deciding to wait for verification of the most likely provocation. Russia, meanwhile, vehemently denied the strike, claiming its missiles came no closer than 22 miles from the Polish border.¹⁷ Regardless of what Russia was doing in Ukraine, it is clear neither Russia nor NATO wanted to engage one another.

2. The spread of nuclear weapons is neither universal nor universally threatening.

There are 195 states in the world; fewer than 10 have nuclear weapons. This number is far below that predicted during the height of the Cold War.¹⁸ Why? A sensible answer begins with the exigencies of security and the pursuit of power.

The world is made of rich, poor, strong, and weak states. Strong states, with robust economies and generally capable militaries, can presumably do more than weak ones, but this comes with a price. They must deal with one another all the time and as a result, tend to fight more wars than most.¹⁹ Strong states acquire nuclear weapons because the

16. Michael D. Cohen, *When Proliferation Causes Peace: The Psychology of Nuclear Crises* (Washington, DC: Georgetown University Press, 2017).

17. Sukin, "Rattling the Nuclear Saber"; Tim Lister et al., "World Leaders Hold Emergency Meeting as 'Russian-Made' Missile Kills Two in Poland," CNN, November 15, 2022, <https://www.cnn.com/>; "Russia Says Missile Strike in Poland Caused by Ukrainian Air Defence," Reuters, November 16, 2022, <https://www.reuters.com/>; and Phil Mattingly et al., "Poland, NATO Say Missile That Killed Two Likely Fired by Ukraine Defending against Russian Attack," CNN, November 16, 2022, <https://www.cnn.com/>.

18. Schelling, *Arms and Influence*.

19. Kenneth N. Waltz, *Theory of International Politics*; and John J. Mearsheimer, *The Tragedy of Great Power Politics*, updated ed. (New York: W. W. Norton & Company, 2014).

threats they face from other nuclear powers are existential. The same is the case with weak states.

Since nothing exists to protect weak states from the harmful intentions of others, they must either attempt to ally themselves with a nuclear protector or undertake severe costs to acquire a nuclear arsenal. Those that live in tough nuclear neighborhoods, such as Pakistan or Iran, are hard pressed to find a nuclear patron and so are likely to pursue an independent nuclear weapons capability to ensure their own survival.

Extending this logic further, one can deduce that states, regardless of their internal composition, wealth, or desires, acquire nuclear weapons because their security, however defined, demands it. Should their security not demand it, they never pursue nuclear weapons, abandon their attempts to pursue them, or give them up altogether, as in the case of Argentina, Brazil, and South Africa.

Further, nuclear weapons can be stabilizing, particularly during periods of power transition. Across history, such transitions have often involved a clash between great powers. The rise of Athenian power in ancient Greece and the fear it aroused in Sparta are said to have caused the Peloponnesian War. Similarly, in the summer of 1914, a rising Germany created uncertainty and fear within Britain prefacing World War I.²⁰ As China rises, the United States may be witnessing a power transition between itself and China that could result in war. While war may not be inevitable, power transitions are tricky things if not downright dangerous. The exception, of course, was 1989, when the Cold War ended peacefully.

Certainly, Soviet Union leader Mikhail Gorbachev and US President Ronald Reagan receive some of the credit for the peaceful culmination of the Cold War. Their extraordinary relationship softened positions on both sides of the Atlantic and ushered in the end of the Cold War. Crushing defense expenditures inside Russia also contributed. Put simply, the Soviet Union could not afford to pay for the rising costs of security, and this accelerated its demise.

But one should not overlook the role played by nuclear weapons. Nuclear weapons were the guarantor of last resort. They stabilized the system as one great power fell and another became paramount. Even in such an unequal world, Russian security was underwritten by its thermonuclear stockpile. From this, one can deduce that nuclear weapons can certainly threaten some states, but they can have a stabilizing effect as well. As Kenneth Waltz notes, nuclear weapons have a maturing effect on the gaining country.²¹ Yet this maturing takes place over time.²² As discussed in proposition five below, nuclear weapons socialize leaders into behaving more cautiously regardless of their relative power position.

20. See A. F. K. Organski, *World Politics*, 2nd (rev.) ed. (New York: Alfred A. Knopf, 1968).

21. Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: An Enduring Debate* (New York: W. W. Norton & Company, 2013).

22. Cohen, *Proliferation*.

3. States need not demonstrate a capacity to win a nuclear war to prevent one.

A state does not have to demonstrate a capacity to win a nuclear war to prevent one, because the devastating consequences of nuclear war are clear. Reflecting on this, McGeorge Bundy, national security adviser under Presidents John F. Kennedy and Lyndon B. Johnson, commented, “A decision that would bring even one hydrogen bomb on one city of one’s own country would be recognized in advance as a catastrophic blunder; ten bombs on ten cities would be a disaster beyond history; and a hundred bombs on a hundred cities are unthinkable.”²³

Along these lines, Brodie observed that “few people were unexcited or unimpressed with the first atomic weapons. That something tremendously important had happened was immediately understood by almost everyone.”²⁴ Yet, just one year after using nuclear weapons in combat, the United States proposed to turn over its nuclear weapons to an international governing council under what became known as the Baruch Plan.²⁵ That the country would do so at a time when it enjoyed an unbroken monopoly of nuclear weaponry testifies to the collective realization that these weapons were, in today’s parlance, game changers. From the beginning, policies were meticulously devised on both sides of the Atlantic to prevent the outbreak of a nuclear war, not to win one.

Today, the variety of nuclear postures pursued by regional nuclear powers suggests some states, particularly those who lack an assured retaliation posture, use nuclear weapons to prevent invasion or other attack on their homeland.²⁶ Indeed, some scholars argue states pursue nuclear weapons for one of three reasons—security concerns, domestic politics, and prestige—and further assert that they work concurrently but nearly always in the presence of an overwhelming security concern.²⁷

4. Nuclear weapons—regardless of numbers—are strategic weapons.

It is generally recognized that throwing more forces and weapons into battle may increase the carnage but not necessarily procure victory. The same holds with nuclear numbers. This presupposes that government leaders are not sensitive to the actual number of nuclear weapons a state may possess; they are sensitive to whether other nations may dominate it militarily. As one strategist aptly puts it, American

23. McGeorge Bundy, “To Cap the Volcano,” *Foreign Affairs* 48, no. 1 (October 1969): 9–10.

24. Brodie, *Strategy*, 150.

25. “The Acheson-Lilienthal & Baruch Plans, 1946,” Office of the Historian, US Department of State, accessed December 4, 2023, <https://history.state.gov/>.

26. Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (Princeton, NJ: Princeton University Press, 2014).

27. Scott D. Sagan, “Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb,” *International Security* 21 (January 1, 1997), <https://cisac.fsi.stanford.edu/>; and Scott Curtice, *Why Do States Build Nuclear Weapons? Proliferation Models as Concurrent Pressures on a State* (Maxwell AFB, AL: Wright Flyer Papers, Air Command and Staff College, 2021), <https://media.defense.gov/>.

policymakers understand this logic, or “they would not be so worried when a state like North Korea or Iran makes a move to join the nuclear club.”²⁸

This begs the question, How many nuclear weapons do states need to achieve relative security? That is a big question for which there is, theoretically, a small solution: one an adversary can take out with a first strike and one it knows it cannot. Since deterrence holds because of a viable second-strike capability, the capability to deter need not be large.²⁹

But suppose a nuclear armed adversary were contemplating a first strike. What would the second question put to the leader be? Given that most secure second-strike capabilities take the form of mobile (road mobile missiles) or hidden (sea-launched ballistic missiles from submarines) nuclear weapons, the response would likely be, Which city of ours are we willing to give up in exchange? The example is illustrative for two reasons. First, strategy is not contingent upon just the first move but also the following ones. Second, in high-stakes games like nuclear war, second- or third-round moves are riddled with danger, so everything turns on preventing the first move, which makes the game relatively easy to understand and simpler to play.

As Thomas Schelling wrote, nuclear war has the ability to compress the fury of war into a few hours, divorcing it from the political process.³⁰ One can surmise that when a state possesses the ability to command, deliver, and survive a nuclear attack, it is able to practice deterrence commensurate with its desire to project power. In other words, nuclear weapons—regardless of numbers or yields—are strategic ones; there is nothing tactical about their use or threats of their use. The mere presence of nuclear weapons is enough to condition state behaviors. Take China, Russia, and the United States, for example.

China’s nuclear numbers remain relatively small at less than one-tenth the number possessed by either Russia or the United States. According to the Stockholm International Peace Research Institute (SIPRI), China possesses 490 nuclear weapons, the United States possesses 5,244, and Russia possesses 5,889.³¹ Yet, despite these large nuclear inequities, China has embarked on an ambitious nuclear modernization and expansion program.³² How does one explain this behavior?

China’s nuclear modernization is driven by a desire to use its nuclear weapons to prevent the United States from interfering with its security activities and expansionist agenda, potentially including backstopping Beijing’s action toward Taiwan.³³ There is

28. Stephen Walt, qtd. in James Wood Forsyth, B. Chance Saltzman, and Gary Schaub, “Minimum Deterrence and Its Critics,” *Strategic Studies Quarterly* 4, no. 4 (2010): 3, <https://www.airuniversity.af.edu/>.

29. Schelling, *Arms and Influence*; and Brodie, *Strategy*.

30. Schelling, 20–21.

31. Stockholm International Peace Research Institute (SIPRI), *SIPRI Yearbook 2023: Armaments, Disarmament and International Security* (Oxford, UK: Oxford University Press, 2023), 248, <https://www.sipri.org/>.

32. DoD, *Military and Security Developments Involving the People’s Republic of China: Annual Report to Congress* (Washington, DC: DoD, 2022), <https://media.defense.gov/>.

33. Chris Buckley, “Fear and Ambition Propel Xi’s Nuclear Acceleration,” *New York Times*, February 4, 2024, <https://www.nytimes.com/>.

little that Russia or the United States can do militarily to prevent China from pursuing its armament programs or vice versa. The presence of even a small number of nuclear weapons makes talk of war reckless, so leaders on all sides try to avoid it. Nothing official has been declared, but all know the stakes are too high for any crisis that might lead to military conflict.³⁴

Still, why is China building up its nuclear arsenal if its small force already deters? China claims to maintain a “lean and efficient” nuclear arsenal, and that its modernization is being driven by the need for “nuclear capabilities at the minimum level required for maintaining its national security,” which some have surmised is a response to China’s perception of US actions as threats.³⁵ To that end, China’s modernization has focused on improving its secure second strike by building underground shelters for its nuclear weapons, solidifying its sea-based leg of its triad, and working to diversify its arsenal.

But there is more. China recognizes the political power of nuclear weapons. Quite simply, the possession of nuclear weapons, more so than any other weapon, serves as the great equalizer; these weapons put weaker nations on par with stronger ones in a moment’s notice. For example, China’s massive investment in its ICBM force, which includes the construction of three new fields with missiles capable of reaching the United States but out of reach of US conventional missiles, gives China’s leader increased bargaining power.³⁶ And if China recognizes this, others do, too, which is why the spread of nuclear weapons is likely to continue.

5. Nuclear weapons make leaders cautious in the face of grave danger.

Nuclear weapons socialize leaders to the dangers of adventurism and restrain them from behaving recklessly to provocation.³⁷ This is not to suggest nuclear weapons cannot embolden nuclear leaders. As Putin’s actions in Crimea and Ukraine illustrate, when faced with a nonnuclear opponent, they can. Yet when a nuclear leader is confronted by another nuclear leader, caution appears to be the order of the day. The Cuban Missile Crisis exemplifies this phenomenon.

During the Cuban Missile Crisis, President Kennedy and Soviet leader Nikita Khrushchev sought solutions short of war, despite their sharp political, cultural, and economic differences. Leftist revolutionary leader Fidel Castro did offer advice during the crisis, but the Kennedy and Khrushchev negotiations were the major drivers of

34. Barry R. Posen, *Inadvertent Escalation: Conventional War and Nuclear Risks*, repr. ed. (Ithaca, NY: Cornell University Press, 2014); and Cohen, *Proliferation*.

35. China Power Team, “How Is China Modernizing Its Nuclear Forces?,” ChinaPower, December 10, 2019, <https://chinapower.csis.org/>; and M. Taylor Fravel, Henrik Stålhane Hiim, and Magnus Langset Trøan, “China’s Misunderstood Nuclear Expansion,” *Foreign Affairs*, November 10, 2023, <https://www.foreignaffairs.com/>.

36. Buckley, “Fear and Ambition.”

37. See Sagan and Waltz, *Spread of Nuclear Weapons*, ch. 1.

action. That the Soviets might have underestimated how the United States would react when confronted with a relatively small number of missiles based off the coast of Florida is not as telling as how both leaders behaved when they realized what was at stake.

Then-Secretary of State Dean Rusk's comment that "We were eyeball to eyeball" is illustrative for several reasons.³⁸ First, the two sides were staring into the face of grave danger. Second, both grasped the importance of avoiding nuclear war. Lastly, even though the situation was riddled with ambiguity, the two sides recognized the outcome of the crisis depended as much on the moves of one side as it did the other. One quotation is representative of many others. In a meeting with the Joint Chiefs of Staff, Kennedy outlined what was on his mind:

If we attack Cuban missiles, in any way, it gives them a clear line to take Berlin, as they were able to do in Hungary under the Anglo war in Egypt. We would be regarded as the trigger-happy Americans who lost Berlin. We would have no support among our allies. We would affect the West Germans' attitude toward us. And people would believe that we let Berlin go because we didn't have the guts to endure Cuba. If we go in and take them out in an air strike . . . we increase the chance greatly, as I think—there's bound to be a reprisal from the Soviet Union, there always is—of their just going in and taking Berlin by force. Which leaves me one alternative, which is to fire nuclear weapons—which is a hell of an alternative—and begin a nuclear exchange, with all this happening.³⁹

During the entire crisis, the number of Soviet nuclear weapons on Cuban soil was not the focal point of US concern; in fact, the number of these weapons—strategic and tactical—was not known until many decades later.⁴⁰ The avoidance of nuclear war was the focal point: the threshold easily recognized, best not crossed, and worth avoiding. As early as 1962, the superpowers began to wonder out loud that they could race to the brink of war but no further, lest they run the risk of nuclear war, a risk that neither side would willingly take. Following the crisis, both sides took steps to reduce uncertainty and improve crisis stability, including the installation of a direct phone line between the White House and the Kremlin and negotiations that led to the test ban treaty, which planted the seeds for meaningful arms control.⁴¹

38. Dean Rusk, qtd. in Joseph S. Nye, "Cuban Missile Crisis at 50," *Korea Times*, October 15, 2012, <https://www.koreatimes.co.kr/>.

39. Ernest R. May and Philip D. Zelikow, eds., *The Kennedy Tapes: Inside the White House during the Cuban Missile Crisis*, concise ed. (New York: W. W. Norton & Company, 2002), 175–76.

40. Svetlana Savranskaya, "Cuba Almost Became a Nuclear Power in 1962," *Foreign Policy*, October 10, 2012, <https://foreignpolicy.com/>.

41. "Cuban Missile Crisis, October 1962," Office of the Historian, n.d., accessed December 4, 2023, <https://history.state.gov/>.

6. Nuclear guarantees might be the fate of the United States, but they should not be US policy.

Former Secretary of State and then-counselor to the Center for Strategic and International Studies Henry Kissinger made this clear when he advised European leaders not to keep asking “us to multiply strategic assurances that we cannot possibly mean or if we do mean, we should not want to execute, because if we execute, we risk the destruction of civilization.”⁴² In short, guarantees put guarantors in a tough spot. They raise the moral hazard and commit the United States to nuclear use even before there is an attack on the homeland.

As such, the United States is careful about who is allowed under the nuclear umbrella. Currently, NATO Allies, Japan, South Korea, and Australia are the only states considered to have guarantees of US nuclear protection.⁴³ That is not to say the United States never extends its nuclear guarantee. When Finland and Sweden applied for NATO accession, they were, in effect, applying for nuclear protection. The United States voted in favor of both countries’ membership.⁴⁴

The alternative to extended deterrence, of course, is selective proliferation—the idea of allowing and even assisting some states to safely acquire a capability of their own. Selective proliferation was the soft US policy prior to the late 1960s, and France and Britain gained nuclear weapons during this time.⁴⁵ And while seemingly risky, given proposition two, few states will seek a capability of their own because their security does not require it. Thus, decisions for and against nuclear weapons ought to rest on the prudential security needs of states and nothing else.

7. Nuclear deterrence may be difficult to integrate.

Integrated deterrence is defined as “the seamless combination of capabilities to convince potential adversaries that the costs of their hostile activities outweigh their benefits,” and nuclear deterrence has been called “foundational to integrated deterrence.”⁴⁶ In practical terms, what does it mean? In narrow terms, it might

42. Henry A. Kissinger, “The Future of NATO,” in *NATO The Next Thirty Years: The Changing Political, Economic, and Military Setting*, ed. Kenneth A. Myers (London: Routledge, 1980), 8.

43. “NATO’s Nuclear Deterrence Policy and Forces,” NATO (website), last updated November 30, 2023, <https://www.nato.int/>; “U.S.- Japan Joint Leaders’ Statement: ‘U.S. - JAPAN GLOBAL PARTNERSHIP FOR A NEW ERA,’” White House, April 17, 2021, <https://www.whitehouse.gov/>; “Washington Declaration,” White House, April 26, 2023, <https://www.whitehouse.gov/>; and Anna Hood and Monique Cormier, “The Role of AN-ZUS in Australia’s Reliance on US Extended Nuclear Deterrence,” Australian Institute of International Affairs, September 16, 2021, <https://www.internationalaffairs.org.au/>.

44. “Finland & Sweden Accession,” NATO Parliamentary Assembly, n.d., accessed June 14, 2023, <https://www.nato-pa.int/>.

45. Nicholas L. Miller, *Stopping the Bomb: The Sources and Effectiveness of US Nonproliferation Policy* (Ithaca, NY: Cornell University Press, 2018).

46. Joseph R. Biden Jr., *National Security Strategy* (Washington, DC: White House, October 2022), 21–22.

mean nuclear deterrence should be combined with something else, but what would that be exactly?

The 2022 *National Security Strategy* calls for integration across the spectrum of conflict, so nuclear weapons might be combined with conventional weapons. The *Strategy* also requires integration across the US government, so it might mean nuclear weapons should be synchronized with other instruments of power.⁴⁷ Often, when considering the integration of nuclear weapons, thought goes into how nuclear weapons might provide deterrence to nonnuclear operations, and such use seems noncredible. After all, threatening to drop a nuclear weapon in response to, for example, economic sanctions, is unlikely to fit within the United States' commitment to proportionality, and is therefore hardly a credible threat.⁴⁸

Yet nuclear weapons can indeed backstop nonnuclear goals. For example, in the conflict with Ukraine, Russia was likely deterred from attacking vulnerable supply lines, because they were in NATO territory.⁴⁹ While the United States cannot know Russia's internal calculations, NATO's nuclear posture probably played at least some role in Putin's calculus. The question that is yet to be answered is how can these ties be clearly and credibly communicated to adversaries?

An additional puzzle is how to integrate conventional weapons into nuclear deterrence aims. Deterrence options as varied as a kinetic attack on an adversary's non-nuclear command and control space assets, cyberattacks on adversary infrastructure, and deep conventional strikes in adversary territory might all be used to manage escalation toward nuclear conflict. Incidentally, cross-domain operations can have complicating effects on escalation control measures, in part because of how cyber or space may be viewed differently from nuclear weapons by decisionmakers.⁵⁰

In short, there are two main issues when considering integrated deterrence in the nuclear context: integrating nuclear weapons into a whole-of-government deterrence strategy and integrating conventional weapons into a nuclear deterrence strategy.⁵¹ Importantly, when it comes to integrating nuclear weapons into a larger nonnuclear deterrence strategy, the practicalities are difficult and must be further examined in order to make integrated deterrence universally recognized and well understood.

47. Biden.

48. Ron Lehman, "Simplicity and Complexity in the Nth Nuclear Era," in *Cross Domain Deterrence: Strategy in an Era of Complexity*, ed. Jon R. Lindsay and Erik Gartzke (Oxford, UK: Oxford University Press, 2019), 66–91.

49. Michael Crowley, "Would Putin Strike NATO Supply Lines to Ukraine? History Suggests No," *New York Times*, March 28, 2022, <https://www.nytimes.com/>.

50. Lehman, "Simplicity and Complexity."

51. See Stephen W. Preston, *Department of Defense Law of War Manual* (Washington, DC: Office of General Counsel, DoD, December 2016), <https://ogc.osd.mil/>.

8. Nuclear weapons have prevented major wars from occurring among nuclear powers.

Since the advent of nuclear weapons, there has never been a war the size and scope of World War I or World War II. Nuclear powers hesitate to engage in warfare with one another. That is not to say nuclear powers do not quarrel, threaten, or even fight proxy wars against one another—they do. But nuclear states rarely, if ever, fight wars against one another. Why? The costs of fighting a nuclear war are existential—they are tied directly to the survival of the state. And all conflicts, no matter how small, are subject to the risks of escalation.⁵²

These risks are why states such as China and India maintain strict ceasefire agreements along their contested border. Even when limited confrontations occur, as they did in the June 2020 Galwan Crisis, these states are very careful to avoid any hint of escalation.⁵³ Given their destructive power, nuclear weapons cannot credibly deter all actions that run contrary to one's national interest, and if the United States were to try to do so, it would undermine its credibility. In the final analysis, however, nuclear weapons prevent existential wars from occurring among nuclear powers. Thus, the long peace among nuclear powers should not be downplayed or overlooked.⁵⁴

9. As the deterrence landscape becomes more complex, the United States will need to pursue a more agile deterrence posture.

During the Cold War, the United States was able to posture its nuclear arsenal by matching force with the Soviet Union. Yet today, the United States is confronted with two nuclear great powers: Russia and China. The introduction of a third state to the deterrence landscape results in a more complex and unpredictable strategic environment.⁵⁵

In *On War*, Carl von Clausewitz wrote about the dynamic relationship between violent emotion, chance, and rational policy. He goes on to state that these “concern”

52. Kahn, *On Escalation*; and Posen, *Inadvertent Escalation*.

53. Kathryn M. G. Boehlefeld, “Sticks and Stones: Nuclear Deterrence and Conventional Conflict,” *Journal of Indo-Pacific Affairs* 3, no. 4 (Winter 2020).

54. John Lewis Gaddis, *Strategies of Containment: A Critical Appraisal of American National Security Policy during the Cold War*, 2nd ed. (Oxford, UK: Oxford University Press, 2005).

55. Deaile, “Problem with Three.”

the people, the commander, and the government, respectively.⁵⁶ In his explanation, Clausewitz argues “a theory [of war] that ignores any one of them or seeks to fix an arbitrary relationship between them would conflict with reality to such an extent that for this reason alone it would be totally useless.”⁵⁷ In his work, Clausewitz advocates for the need to develop a theory of the relationship between the three, which he likens to an object suspended between three magnets. The inherent chaos resulting from the attractive force between three entities is known as the three-body problem.⁵⁸

Modeling a relationship between three entities has long confounded scientists. Adding a third player to a relationship causes a jump in complexity and an inherent chaos; this applies to fields as diverse as astronomy, biology, and mathematics. When considering the application to the deterrence environment, one merely has to think about the changing dynamics in a family that moves from two children to three. With two children, one relationship exists. But when a third child is added, the number of relationship ties jumps to seven: each child has a one-on-one relationship with each of his/her siblings, there are two-on-one dynamics, and there is a whole group relationship.⁵⁹

Considering the family dynamic is particularly useful when thinking through the three-body problem in nuclear deterrence. Changes in any one-on-one relationship, for example, between the United States and China, have the potential to alter other one-on-one relationships, say between China and Russia, or the United States and Russia. Further, two-on-one dynamics must also be considered. The United States has considered the implications of an alliance or closing of ties between Russia and China, but it would be ill advised should it fail to consider how it might use its own two-on-one relationship with either state to create more favorable outcomes, such as treaties to limit an arms race. Every move made by the United States must now take each of those seven relationship ties into account.

The dynamic is more complex and more prone to deterrence failure, but as argued above, the solution is also more complex than simply building an arsenal that outweighs the sum total of China and Russia. Rather, the United States needs to pursue a more agile and responsive nuclear posture, one that has the ability to respond to the increased complexity of the strategic environment, quickly and precisely.⁶⁰

56. Carl von Clausewitz, *On War*, ed. and trans. Michael Eliot Howard and Peter Paret, indexed ed., rev. ed. (Princeton: Princeton University Press, 1989), 89.

57. Clausewitz.

58. Clausewitz; and Editors, “Three-Body Problem, Physics,” *Encyclopaedia Britannica*, Science and Tech (website), October 30, 2023, <https://www.britannica.com/>.

59. William J. Broad, “The Terror of Threes in the Heavens and on Earth,” *New York Times*, June 26, 2023, <https://www.nytimes.com/>.

60. Deaile, “Problem with Three.”

10. Reliance on nuclear weapons is a sensible strategy for some states, which is why it is likely to continue for some time.

From 1945 to 1990, the United States and the Soviet Union relied on nuclear weapons to prevent nuclear war. It was a precarious, even dangerous time filled with uncertainties. Yet, deterrence held. Why?

Deterrence held because nuclear weapons, more so than any other weapon, hold power at bay.⁶¹ Sensible strategists know this in advance, which is why relations among nuclear powers remain stable. Nuclear weapons are not perfect, but the lack of war among the nuclear powers should not be overlooked or downplayed. Until the time comes when all states decide to forgo nuclear weapons, some states will need to have them; most will not. And as tragic as it sounds, that might be as good as it gets. It can certainly get worse.

The United States uses nuclear weapons every day. Nuclear deterrence is, at its core, a game where two opponents are perpetually held in check by one another. For military leaders and policymakers who have spent the majority of their careers in a post-Cold War world, it is easy to overlook the criticality of these immense, destructive weapons precisely because they are frozen on the chessboard, postured and ready for employment, if ever needed. Yet, as the United States returns to an era of great power competition, nuclear weapons have again become salient and essential aspects of the US national defense strategy and day-to-day military posture and campaigning activities. As the United States plans for its future, it is important to recognize that twenty-first century strategic deterrence will be far more complex than Cold War deterrence, as it will need to interweave third-party influencers, global economies, and a perplexing and complex information environment. These ten propositions will help further the dialogue around nuclear deterrence and the role this deterrence will play in future conflicts.

61. Brodie, *Strategy*, 275.

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