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Stable Deterrence and Arms Control in a New Era

Keith B. Payne
Michaela Dodge



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**Stable Deterrence and
Arms Control in a New Era**

**Keith B. Payne
Michaela Dodge**

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Executive Summary

During the early years of the Cold War, American civilians developed a particular nuclear deterrence paradigm that was the basis for deterrence policies known popularly as a “stable balance of terror” or “mutual assured destruction” (MAD). The common ingredient of this paradigm was the expectation that a reliable condition of U.S.-Soviet mutual societal vulnerability to nuclear retaliation would ensure “stable” mutual deterrence. The assumed measure of strategic nuclear force adequacy for stable deterrence was the capability to threaten large-scale societal destruction, i.e., mutual threats to population and industry. This assumption answered the critical question “how much is enough?” for deterrence. For rational U.S. and Soviet leaders, *mutual U.S.-Soviet societal vulnerability to nuclear retaliation* was expected to ensure an overpowering disincentive to either’s nuclear provocation or to large-scale conventional attacks that could escalate to nuclear war; the potential cost of employing nuclear weapons first or taking highly provocative actions would be too high.

The Cold War stable deterrence paradigm presumed that U.S. and Soviet leaderships shared this understanding of what constitutes rational deterrence-related thought, force requirements and behavior. The apolitical “mirror-imaging” presumption underlying this reasoning was obvious: U.S. and Soviet leaders were expected to calculate and act according to a common set of reasonable goals, norms and values, i.e., those prominent in the United States. It was assumed, for example, that for any rational leader an

The authors would like to thank David Trachtenberg, Jonathan Trexel and Matthew Costlow for their helpful comments on early drafts of this *Occasional Paper*. It draws from Keith B. Payne, *Shadows on the Wall: Deterrence and Disarmament* (National Institute Press, 2020); *Redefining “Stability” for the New Post-Cold War Era*, *Occasional Paper* (National Institute Press, 2021); and *Deterrence in the Second Nuclear Age* (University Press of Kentucky, 1996).

action that might threaten to escalate to nuclear war, and thus risk mutual societal destruction, was “unthinkable.”

On the basis of this mirror imaging, the functioning of deterrence was thought to be predictable in such fine detail that different types of strategic forces could be categorized as necessary or unnecessary for deterrence or as having a predictably stabilizing or destabilizing effect on mutual deterrence. For example, strategic defenses, such as missile defense and passive civil defenses (e.g., sheltering and evacuation) that might mitigate mutual nuclear threats to population and industry were labeled *destabilizing*. Similarly, offensive capabilities with the combination of characteristics such as explosive power (yield), accuracy, and speed that might enable them to target an opponent's strategic force assets on the ground, and thus reduce their potential to threaten society, were also considered *destabilizing*.

Establishing and sustaining deterrence stability based on mutual, large-scale threats to society became the priority criterion for categorizing various capabilities and the purpose of U.S. strategic arms control efforts. To wit, the purpose of arms control was to codify a stable balance of terror by limiting or precluding those strategic forces so defined as unrelated to that type of deterrent threat or destabilizing, particularly including strategic missile defense and ICBMs armed with multiple, accurate, independently-targeted warheads.

The United States typically was deemed the initiator of “action-reaction” arms race cycles by deploying “destabilizing” systems or those unnecessary for the deterrent threat to Soviet society. These destabilizing or unnecessary U.S. forces, it was presumed, would compel the Soviet Union to react by increasing its forces—thus driving the arms race. This belief about the U.S.-led action-reaction origin of the arms race had enormous policy implications. It meant that it was within U.S. power, and

indeed a U.S. responsibility, to refrain from deploying unnecessary or “destabilizing” force deployments, and thus enable arms control to flourish. Precisely the same familiar argument, of course, is heard repeatedly today.

Given this Cold War measure of the requirements for mutual deterrence and beliefs about the dynamics of the arms race, the pursuit of “stability” meant that the United States should forego strategic weapon programs unrelated to a large-scale threat to Soviet society or that might undermine the Soviet retaliatory deterrent threat to U.S. society. U.S. restraint in this regard would allow the Soviet Union to rest at its existing capabilities to threaten the United States with large-scale societal destruction, i.e., the Soviet Union would not be compelled to react to U.S. actions in a new cycle of the arms race. Such U.S. restraint, it was said, would lead to an “inaction-inaction” cycle that would end the arms race; arms control could advance this happy outcome by limiting or prohibiting destabilizing systems and thereby slow down, if not stop, the purported action-reaction cycle.

Following the Cold War there was a paucity of new American thinking devoted to the subject of deterrence stability and strategic arms control. While that lack of attention has finally come to an end, much of today’s public commentary on deterrence and arms control continues to be rooted in the Cold War stability paradigm that now so misses contemporary geopolitical realities that it is as likely to misinform as it is to enlighten, including its measure of force adequacy (i.e., mutual large-scale threats to population and industry) and categorization of forces as “stabilizing” or “destabilizing.” With diverse and unfamiliar nuclear-armed states interested in upsetting the international order, including via threats of limited nuclear first use, the measure of force adequacy for deterrence and categorization of forces must now take into account the variety of factors that drive opponents’ decision making,

and particularly how they calculate risk vs. gain and believe their nuclear arsenals advance their particular national goals.

Given the diversity of contemporary opponents, their expressed nuclear threats and the inherent uncertainties involved in their perceptions, calculations and decision making, mirror imaging is a dangerous basis for anticipating opponents' calculations and behavior. The Cold War "balance of terror" threat simply may be incredible as a deterrent, in addition to a gross violation of the Just War Doctrine. Correspondingly, a broader and more diverse range of U.S. threat options than the Cold War paradigm's narrow threat of massive societal destruction may be necessary to enable the United States to "tailor" the deterrence of diverse contemporary opponents in wide-ranging contexts. This U.S. nuclear force posture flexibility now important for deterrence is deemed inconsistent with the Cold War paradigm's adequacy measure of mutual large-scale threats to society. Yet, it is hardly far-fetched to conclude, as U.S. policy has for decades, that a scalable, limited response, may be the only type of threatened response that is *sufficiently credible to deter opponents' limited nuclear first-use threats*.

The diverse players involved and goals they pursue must shape the conditions and types of U.S. forces that may be considered adequate for deterrence and stabilizing. In sharp contrast to the thinking underlying the dominant Cold War stability paradigm, there is no single objective, apolitical approach to stable deterrence and there is no objective, universal definition of the requirements for stable deterrence. The same types of nuclear weapons may be highly destabilizing or stabilizing depending on the specific context, the players involved and their goals. This reality demolishes the apolitical mirror-imaging-derived Cold War understanding of what constitutes an adequate, stabilizing nuclear force posture. This reality also correspondingly

upends the notion that arms control should be about eliminating those systems that are so defined as unnecessary for stable deterrence or as “destabilizing” by the aged Cold War paradigm.

The U.S. approach to arms control must adapt to these realities of the geopolitical environment. The implications of this conclusion for U.S. arms control efforts are profound. As diverse threats to the United States and allies mature, the United States will have to adapt its deterrence force structure, which could include, for example, increasing the diversity of its nuclear options by designing systems with new capabilities and missions or deploying different nuclear delivery systems than permitted under an earlier treaty. Arms control must help preserve and advance the flexible policies and adaptable, scalable force posture needed for the United States to deter multiple destabilizing expansionist drives, especially those backed by opponents’ coercive nuclear first-use threats. It should favor the flexible, scalable U.S. force posture best suited for effective deterrence. Arms control steps that so strengthen deterrence ought to be recognized as stabilizing, even though they might not fit the Cold War approach to stability and arms control—an approach that generally presumed the enduring continuity of basic geopolitical conditions and the continuing value of the Cold War paradigm’s measure of force adequacy and categorization of forces as stabilizing or destabilizing. Arms control now may, in principle, help to advance stable deterrence, but not by adhering to the Cold War understanding of stability, its measure of force adequacy and categorizations. In addition, the United States should consider the following general guidelines for its arms control efforts.

Posture for success and set realistic expectations. The United States will be hopelessly disadvantaged in negotiations if it does not have capabilities that the opponent is interested in limiting. The opponent will “give”

nothing unless it “gets” something. This point is at the heart of Herman Kahn’s decades-old admonition that the United States ought to focus on “looking so invulnerable to blackmail and aggressive tactics” that opponents “will feel it is worthwhile to make agreements and foolish not to. We must look much more dangerous as an opponent than as a collaborator, even an uneasy collaborator.”¹ Emphasizing U.S. self-restraint in the expectation of opponents’ reciprocity or expecting opponents obligingly to conform to U.S. favored norms has manifestly failed.

Acknowledge the value of strategic defenses. The 1972 ABM Treaty’s presumption against U.S. strategic missile defenses continues today with various commentators continuing to reflexively label them “destabilizing” based on Cold War notions of strategic stability. However, U.S. arms control planning must recognize that the Cold War stability paradigm is no longer the relevant tool by which to judge U.S. strategic defenses. Because there are inherent and irreducible uncertainties regarding the functioning of deterrence, the United States should pursue deterrence as the first priority but also prepare, to the extent feasible, to reduce damage to U.S. and allied societies in the event of deterrence failure. Defensive capabilities can also help neutralize the potential coercive leverage of opponents’ limited nuclear first-use threats and discourage their related expectation of freedom to move militarily regionally. U.S. and allied missile defense systems that help preclude that expectation can contribute to effective deterrence and ought to be acknowledged as stabilizing regardless of their categorization by the Cold War stability paradigm.

Avoid grand bargains that would likely undermine U.S. security: Limited nuclear first-use threats. A priority U.S. goal in this new geopolitical environment must be to

¹ Herman Kahn, *The Nature and Feasibility of War and Deterrence*, P-1888-RC (Santa Monica, CA: The RAND Corporation, January 20, 1960), p. 42, available at <https://www.rand.org/pubs/papers/P1888.html>.

help address opponents' limited nuclear first-use threats and capabilities. This goal must include a focus on opponents' non-strategic nuclear forces (NSNF) that are at the heart of that threat. Unfortunately, the U.S. capacity now to succeed in this goal via arms control is likely very limited. During the Cold War, the United States deployed thousands of NSNF, including on ships and submarines.² However, deep U.S. NSNF reductions and Russia's lack of reciprocity has resulted in a massive disparity in the numbers of U.S. and Russian NSNF. With such a large asymmetry in Russia's favor, the United States has little apparent negotiating capital with which to seek a serious reduction in these forces.

Some commentators have suggested that the United States agree to limit ("top-off") its strategic missile defense capabilities to "minimal" levels in exchange for asymmetric Russian NSNF reductions. Yet, if U.S. society is to be protected against the "rogue state" missile threat, U.S. strategic defenses must be free to advance to keep pace with that threat—reducing Russian NSNF will do nothing to help in this regard. A U.S. approach to NSNF arms control informed by the new realities of the post-Cold War threat environment may, in this case, be limited to avoiding such "grand bargains" that could do dramatic harm to U.S. security in one area in pursuit of arms control success in another. Given past U.S. deep NSNF reductions and the lack of opponent reciprocity, regional nuclear first-use NSNF threats confronting the United States and allies are unlikely to be amenable to an arms control solution. A need, instead, in any arms control endeavor will be to preserve those U.S. capabilities and options that now are likely to help protect society and deter nuclear first-use threats.

² Amy Woolf, *Nonstrategic Nuclear Weapons*, Congressional Research Service RL32572, July 15, 2021, p. 11.

Limit the duration of arms control treaties and preserve flexibility. The approach to arms control derived from the Cold War stability paradigm envisioned fixed, long-term or unlimited duration agreements. But arms control agreements must not take on the aura of holy writ. They can make sense only so long as the conditions that recommended them continue to hold—and those conditions may change rapidly. In this highly-dynamic international threat environment, the United States should seek to preserve its ability to respond to rapidly changing conditions. Consequently, arms control treaties generally ought to be of limited duration and/or contain easily-implemented provisions that allow adaptation to shifting threat conditions as necessary to preserve stable deterrence.

Recognize the nuclear production complex as a critical instrument of stability and arms control. The “significantly atrophied” state of the U.S. nuclear production complex³ is inversely related to the potential U.S. capability to adapt to changing circumstances in a timely way and to opponents’ likely willingness to accept serious restraints in negotiations with the United States. This is a dramatic change from the arms control conditions of the Cold War when the United States maintained a capable and active nuclear warhead production complex. The United States must now recognize the invaluable role that a modernized U.S. nuclear production complex would play not only in the pursuit of deterrence stability but also in support of useful arms control negotiations.

³ As described by the Chairwoman of the U.S. Nuclear Weapons Council, Stacey A. Cummings. Quoted in, Colin Demarest, “The Nuclear Weapons Council is Worried About Biden’s Spending. So Are Activists,” *Aiken Standard*, July 31, 2021, available at <https://news.yahoo.com/amphtml/nuclear-weapons-council-worried-bidens-035900855.html>.

Leverage potential areas of common interest. Future arms control and diplomacy efforts ought to focus on areas of potential mutual interest. Doing so may not look like traditional arms control, but inasmuch as the other states may share the desire to “not run unacceptably high risks of unauthorized or irresponsible behavior,” the United States ought to explore whether such a mutual interest offers an area for mutual agreement.

Develop a competitive mindset, take time to prepare, and be prepared to walk away. It is now well understood that deterrence strategies should be tailored to the specific opponent and context in question; U.S. negotiating efforts should similarly be tailored. In preparation for arms control negotiations, the United States would do well to heed Herman Kahn’s advice: “...we must do our homework. We must know what we are trying to achieve, the kinds of concessions that we can afford to give, and the kinds of concessions that we insist on getting... All of this will require, among other things, much higher quality preparations for negotiations than have been customary.”⁴ The priority arms control goal is not simply reaching an agreement, but promoting greater U.S. and allied safety and security.

Red team verification provisions. The United States should conduct a serious “Red Team” review of arms control agreements that consciously compares the assumptions driving the terms of an agreement with the realities of the threat environment and the interplay of verification measures and opponents’ possible noncompliance. To foster independence, the assessment ought to be performed by an entity akin to a non-partisan, senior advisory board that would not be a part of the executive branch but would be given access to the

⁴ Herman Kahn, *On Thermonuclear War* (New Brunswick, NJ: Transaction Publishers, 2007), p. 576.

negotiating record and all documents relevant to a treaty or an agreement.

In summary, the deterrence requirement for flexibility, i.e., a spectrum of options, including some outside the Cold War paradigm's definition of adequacy, is not new — *but it is magnified greatly by the uncertainties of the post-Cold War environment and the multiplication of opponents and nuclear threats, including coercive nuclear first-use threats.* Resilient and flexible policies and capabilities are now needed to support the tailoring of deterrence across the growing and diverse range of strategic threats to us and our allies. The post-Cold War U.S. approach to arms control must help preserve and advance the policies and force posture needed to ensure, to the extent possible, stable deterrence and peace in a dangerous and dynamic geopolitical environment. The needed reconsideration of what constitutes stable deterrence, and the conditions and forces that contribute to stable deterrence, demands a comparable reconsideration of U.S. strategic arms control goals and modes. Understanding the problems with the archaic Cold War stability paradigm, and with conducting arms control as a function of that paradigm, is an imperative given the dramatic changes since the end of the Cold War.

Introduction

During the early years of the Cold War, American civilians developed a particular nuclear deterrence paradigm that was the basis for deterrence policies known popularly as a “stable balance of terror” or “mutual assured destruction” (MAD). Despite these different labels, the common ingredient of this paradigm was the expectation that a reliable condition of U.S.-Soviet mutual societal vulnerability to nuclear retaliation would ensure “stable” mutual deterrence. The assumed measure of strategic nuclear force adequacy for stable deterrence was the capability to threaten large-scale societal destruction, i.e., large-scale mutual threats to population and industry. This assumption answered the critical question “how much is enough?” for deterrence.⁵ Generally, a stable condition was defined as one in which mutual deterrence would function reliably because, for rational U.S. and Soviet leaders, no goal short of an imminent threat to national existence could be worth the risk of taking an action that could trigger the opponent’s possible nuclear retaliation. *Mutual U.S.-Soviet societal vulnerability to nuclear retaliation* was expected to ensure an overpowering disincentive to either’s nuclear provocation or to large-scale conventional attacks that could escalate to nuclear war; the potential cost of

⁵ Presidential Science Advisor and later Provost at the Massachusetts Institute of Technology, Jerome Wiesner, described the U.S. deterrent in 1970 as follows: “The strategic analysts have a fairly sophisticated view of a deterrent wrapped in a concept called assured destruction which requires the clear cut ability — on paper — to kill a large fraction of the Soviet population, say 40 or 50 percent, and destroy most of its industrial enterprise after the most sophisticated Soviet attacks have occurred on our forces...” Testimony in, United States Senate, Committee on Foreign Relations, Subcommittee on Arms Control, International Law and Organization, 91st Congress, 2nd Session (Washington, U.S. Government Printing Office, 1970), p. 402.

employing nuclear weapons first or taking highly provocative actions would be too high.

While in office in the 1960s, Secretary of Defense McNamara defined the U.S. side of this balance of terror as being based on an “assured destruction” threat to Soviet population and industry.⁶ As Nobel Laureate and renowned deterrence scholar Thomas Schelling emphasized, this deterrence paradigm mandated that, “Human and economic resources were hostages to be left unprotected.”⁷ Deterrence was expected to be stable when both sides were so mutually vulnerable.⁸

The “mirror-imaging” presumption underlying this reasoning was obvious: U.S. and Soviet leaders were expected to calculate and act according to a particular set of reasonable goals, norms and values, i.e., those prominent in the United States. The Cold War stable deterrence paradigm presumed this shared U.S. and Soviet understanding of what constitutes rational deterrence thought, force requirements, and behavior. As Herbert York, former Director of Defense Research and Engineering in the Eisenhower and Kennedy Administrations said during the 1970 SALT I hearings, “We imagine them trying to deter us as we try to deter them.”⁹

This ethnocentric mirror imaging was the basis for the Cold War stability paradigm—it was assumed that for any

⁶ See, Alain C. Enthoven and K. Wayne Smith, *How Much Is Enough?* (New York: Harper & Row Publishers, 1971), p. 175.

⁷ Thomas Schelling, “What Went Wrong With Arms Control?,” *Foreign Affairs*, Vol. 64, No. 2 (Winter 1985/86), p. 222.

⁸ For an excellent discussion of the development of the Cold War stability paradigm see, Kurt Guthe, “Crisis Stability: Orthodox Theory and Historical Experience,” Hudson Institute-3651-P4/RR, unpublished manuscript, 1984.

⁹ See York’s testimony in, U.S. Senate, Committee on Foreign Relations, Subcommittee on Arms Control, *ABM, MIRV, SALT, and the Nuclear Arms Race*, Hearings, 91st Congress, 2nd Session (Washington, D.C.: USGPO, 1970), p. 64.

rational leader, an action that might threaten to escalate to nuclear war, and thus mutual societal destruction, was comparably “unthinkable.” Schelling pointed to this presumption of shared goals with his 1991 observation that the fundamental deterrence assumption was “that NATO and the Warsaw Pact, in the event of war in Europe, would do everything possible to keep nuclear weapons out of that war.”¹⁰ This expectation that both sides would “do everything possible” to avoid nuclear use was fundamental; it reflected the belief that neither could rationally risk the use of nuclear weapons to advance its geopolitical or military goals. When considering the functioning of deterrence, that presumption eases the deterrence challenge considerably.

This mirror imaging was critical to the stable deterrence paradigm and its application to U.S. arms control policy. The functioning of deterrence was considered predictable precisely because U.S. and Soviet perceptions and decision making pertinent to deterrence were assumed to be similarly cautious and well understood—and *thus predictable*. The functioning of deterrence was thought to be predictable in such fine detail that different types of strategic forces could be categorized as being unnecessary for deterrence or as having a stabilizing or destabilizing effect on mutual deterrence. Armed with this supposed precise knowledge of how deterrence would function, and whether particular forces were stabilizing or destabilizing, the former could be embraced and the latter eliminated or subjected to limits via arms control—the goal being to codify a stable balance of terror. So understood, establishing and sustaining deterrence stability based on mutual, large-scale threats to society became the priority criterion for judging the effect of various capabilities on deterrence stability and the purpose of U.S. strategic arms

¹⁰ Thomas Schelling, “The Thirtieth Year,” *Daedalus*, Vol. 120, No. 1 (Winter 1991), p. 30.

control efforts. Schelling observed in his 1991 retrospective on arms control that “the purpose of arms control was to help make certain that deterrence worked.”¹¹ And, the paradigm so informing how deterrence was expected to “work” and this related purpose of U.S. strategic arms control was a stable balance of terror.¹² This linkage between the Cold War stability paradigm and U.S. strategic arms control goals was not limited to academic theory. As American diplomat Amb. Alexander Vershbow has observed with regard to the purposes of Cold War strategic arms control agreements: “Those agreements and subsequent accords codified mutual deterrence based on the assumption of mutual vulnerability and acceptance of an assured second-strike capability on both sides.”¹³

Specifically, U.S. nuclear policies or programs necessary to support mutual societal vulnerability were said to be stabilizing, while those U.S. forces that might degrade the Soviet nuclear retaliatory threat to U.S. society were judged unrelated to deterrence and likely destabilizing. Because this measure of deterrence stability requires mutual societal vulnerability, strategic defensive forces such as missile defense that might intercept an opponent’s forces enroute to their societal targets, and passive civil defenses such as sheltering and evacuation that might help mitigate an opponent’s threat to population and industry, were labeled *destabilizing*.¹⁴ Similarly, offensive capabilities with the

¹¹ Ibid., p. 24.

¹² Ibid., pp. 24-25.

¹³ Alexander Vershbow, “Reflections on NATO Deterrence in the 21st Century,” *Texas National Security Review*, Vol. 4, Issue 3 (August 23, 2021), available at <https://tnsr.org/roundtable/policy-roundtable-the-future-of-trans-atlantic-nuclear-deterrence/>.

¹⁴ See, for example, Statement of Paul Warnke in, U.S. Senate, Committee on Banking, Housing and Urban Affairs, Civil Defense, Hearings, 95th Congress, 2nd Session (Washington, D.C.: USGPO, 1979), p. 4; Thomas J. Kerr, *Civil Defense in the U.S.: Bandaid for a Holocaust?* (Boulder, CO: Westview Press, 1983), pp. 187-219; and, Henry S.

combination of characteristics such as explosive power (yield), accuracy, and speed that might enable them to target an opponent's strategic force assets on the ground, and thus reduce their potential to threaten society, were also considered *destabilizing*.¹⁵

The U.S. development and deployment of so defined unnecessary or destabilizing forces also was thought to be the prime cause of the arms race. The logic behind this latter thought—derived from the stability paradigm—was simple: because the Soviet Union was presumed to adhere, at least roughly, to balance of terror norms, U.S. “destabilizing” moves that might threaten to degrade the Soviet nuclear deterrent threat would compel Moscow to react by increasing its own capabilities so as to sustain its side of the stable balance of terror,¹⁶ thus extending the arms race.

To risk understatement, following the Cold War there was a paucity of new American thinking, military or

Rowen, “Formulating Strategic Doctrine,” Commission on the Organization of the Government for the Conduct of Foreign Policy, Volume 4, Appendix K, Adequacy of Current Organization: Defense and Arms Control (Washington, D.C.: USGPO, June 1975), p. 228. More recently see, Department of Defense, *Ballistic Missile Defense Review Report* (February 2010), pp. 12-13.

¹⁵ See, for example, Jerome Kahan, *Security in the Nuclear Age: Developing U.S. Strategic Arms Policy* (Washington, D.C.: Brookings Institution, 1975), pp. 272-273.

¹⁶ *Remarks by Secretary of Defense Robert S. McNamara Before United Press International Editors and Publishers*, September 18, 1967, p. 28, available at https://books.google.com/books?id=AYAAAAAMBAJ&pg=PA26&lp g=PA26&dq=Remarks+by+Secretary+of+Defense+Robert+S.+McNamar a+Before+United+Press+International+Editors+and+Publishers&source=bl&ots=Rxq5cPQTYn&sig=ACfU3U1wwSHoM4s9shoL_dj29PXyRDhXxw&hl=en&sa=X&ved=2ahUKEwjI7qzboIDxAhVLAp0JHXhLDx0Q6AEwBH0ECBEQAw#v=onepage&q&f=false. See also, Jerome B. Wiesner, “The Cold War Is Dead, But the Arms Race Rumbles On,” *Bulletin of the Atomic Scientists*, Vol. 23, No. 6 (June 1, 1967), pp. 5-9, available at <https://doi.org/10.1080/00963402.1967.11455084>.

civilian, about deterrence stability – the priority of nuclear deterrence appeared to end with the conclusion of the Cold War and the rise of the terrorist threat.¹⁷ That lack of attention has finally come to an end. Nevertheless, much of today's commentary on U.S. nuclear policy and programs continues to be rooted in this Cold War stability paradigm, a paradigm that now so misses contemporary geopolitical realities that it is as likely to misinform as it is to enlighten, including its standard of force adequacy and categorization of forces as “stabilizing” or “destabilizing.”¹⁸

The Stable Deterrence Paradigm and Mirror Imaging: Explaining the Arms Race

The stable deterrence paradigm and mirror imaging provided the basis for the “action-reaction” explanation of the arms race. The United States typically was deemed the initiator of “action-reaction” arms race cycles. Said to be driven by U.S. “overreactions and technological excesses,” and “patriotic zeal, exaggerated prudence, and a sort of

¹⁷ As a 2008 DoD report stated, “...the lack of interest in and attention to the nuclear mission and nuclear deterrence...have been widespread throughout DoD and contributed to the decline of attention in the Air Force.” See, Department of Defense, *Report of the Secretary of Defense on DoD Nuclear Weapons Management. Phase II: Review of the DoD Nuclear Mission*, December 2008, p. iii, available at <https://archive.defense.gov/pubs/pdfs/PhaseIIReportFinal.pdf>.

For a useful discussion of the drive to reinvigorate the examination of nuclear deterrence in professional military education see, Amy Nelson and Paul Bernstein, “Toward Nuclear and WMD Fluency in Professional Military Education,” *RealClearDefense*, June 26, 2021, available at https://www.realcleardefense.com/articles/2021/06/26/toward_nuclear_and_wmd_fluency_in_professional_military_education_783078.html.

¹⁸ See, for example, Kingston Reif, “Biden’s First Budget Should Reduce Nuclear Excess,” *Defense News Online*, March 4, 2021, available at <https://www.defensenews.com/opinion/commentary/2021/03/04/bidens-first-budget-should-reduce-nuclear-excess/>.

religious faith in technology,”¹⁹ the United States deployed “destabilizing” systems or those unnecessary for stable deterrence as defined by the Cold War paradigm. These U.S. forces deemed destabilizing or unnecessary, it was presumed, would compel the Soviet Union to react by increasing its forces—thus driving the arms race. Consequently, who was said to be responsible for threats to deterrence stability and the arms race? It was the U.S. governing establishment: “The guilty men and organizations are to be found at all levels of government and in all segments of [U.S.] society.”²⁰ This interpretation of the arms race dynamic fit a popular 1960s saying: “we have met the enemy, and they are us.”

In contrast, in public commentary the Soviet Union often was cast as the otherwise defensive responder to prior U.S. unnecessary or “destabilizing” actions in this supposed U.S.-led “action-reaction” arms race cycle.²¹ This claim regarding the action-reaction origin of the arms race was a key part of the related arms control narrative—it meant that it was within U.S. power, and indeed a U.S. responsibility, to refrain from deploying so defined unnecessary or “destabilizing” forces, and thus enable arms control to flourish. Precisely the same familiar argument, of course, is heard repeatedly today.²²

¹⁹ Herbert York, *Race to Oblivion: A Participant's View of the Arms Race* (New York: Simon and Schuster, 1970), p. 234.

²⁰ Ibid.

²¹ See, for example, Theodore Sorensen, “The ABM and Western Europe,” in Abram Chayes, Jerome Wiesner, eds., *ABM: An Evaluation of the Decision to Deploy an Antiballistic Missile System*, Signet Broadside #7 (New York: New American Library, January 1, 1969), p. 181; and, Bernard Feld, “ABM and Arms Control, in *ABM: An Evaluation of the Decision to Deploy an Antiballistic Missile System*,” in Ibid., p. 190.

²² See, Jeffrey Lewis: “We’re stumbling into an arms race that is largely driven by U.S. investments and missile defense,” quoted in Joby Warrick, “Signs that China is busy building silos for ICBMs,” *Washington Post*, July 1, 2021, p. A1. See also, John Tierney and Joe

The late George Rathjens, a professor at MIT, summed up this dynamic as follows: “The action-reaction phenomenon, with the reaction often premature and/or exaggerated, has clearly been a major stimulant of the strategic arms race.”²³ Secretary of Defense Robert McNamara argued: “Whatever be their intentions, whatever be our intentions, actions—or even realistically possible actions—on either side relating to the buildup of nuclear forces, be they either offensive or defensive forces, necessarily trigger reactions on the other side. It is precisely this action-reaction phenomenon that fuels the arms race.”²⁴

This elegant argument regarding the fundamental cause of the arms race followed from the basic mirror-imaging presumption of the stable deterrence paradigm and became the basis for much U.S. arms control policy.²⁵ To wit, the purpose of arms control was to codify the balance of terror by limiting or precluding forces deemed unnecessary for that purpose or destabilizing, and thereby stop the action-reaction arms race cycle; U.S. arms control policy came to be geared to that end.²⁶ The pursuit of “stability” meant that

Cirincione, “How Biden Can Leverage Missile Defense in his Summit with Putin: Putting it on the Table Would put the United States in the Driver’s Seat in Strategic Stability Talks,” *DefenseOne.com*, June 15, 2021, available at <https://www.defenseone.com/ideas/2021/06/how-biden-can-leverage-missile-defense-his-summit-putin/174715/>. For an extensive critique of the “action-reaction” narrative see, David Trachtenberg, Michaela Dodge and Keith Payne, *The “Action-Reaction” Arms Race Narrative vs. Historical Realities*, *Occasional Paper*, National Institute for Public Policy, Vol. 1, No. 6 (June 2021).

²³George Rathjens, “The Dynamics of the Arms Race,” *Scientific American*, Vol. 220, No. 4 (April 1969), p. 19.

²⁴ *Remarks by Secretary of Defense Robert S. McNamara Before United Press International Editors and Publishers*, op. cit., p. 28.

²⁵ William R. Van Cleave, “The US Strategic Triad,” in Ray Bonds, ed., *The US War Machine* (New York, NY: Crown Publishers, 1978), p. 60.

²⁶ *Draft Presidential Memorandum*, Secretary of Defense [Clark M. Clifford] to the President [Lyndon B. Johnson], Subj: Strategic Offensive and Defensive Forces, January 9, 1969, p. 6 (Originally classified;

the United States should avoid weapons unrelated to a large-scale threat to Soviet society or that might undermine the Soviet retaliatory deterrent threat to U.S. society. U.S. restraint in this regard would allow the Soviet Union to rest at its existing capabilities to threaten the United States with large-scale societal destruction, i.e., the Soviet Union would not be compelled to react to U.S. actions in a new cycle of the arms race. Such U.S. restraint would instead lead to an “inaction-inaction” cycle that would end the arms race and possibly initiate a “peace race.”²⁷ Arms control could advance this happy outcome by limiting or prohibiting destabilizing systems and thereby slow down, if not stop, the purported action-reaction cycle.

According to some politically active physical scientists, the “chief virtue” of the Cold War stability paradigm “may be that it removes the need to race—there is no reward for getting ahead.”²⁸ It led to arms control efforts being about codifying “strategic stability” by attempting to control technical parameters of weapon systems and their (largely) quantitative restrictions.²⁹ As one commentator observed, “Stability became an essential metric for evaluating nuclear

sanitized and declassified on January 5, 1983). This and other Draft Presidential Memoranda can be found online at the Master OFOI Reading Room, Department of Defense, available at <https://www.esd.whs.mil/FOID/Reading-Room/>.

²⁷ See Jerome Wiesner in, U.S. Senate, Committee on Foreign Affairs, *ABM, MIRV, SALT, and the Nuclear Arms Race: Hearings before the Subcommittee on Arms Control, International Law and Organization of the Committee on Foreign Relations United States, 91st Congress, 2nd Session* (Washington D.C.: USGPO, 1970), p. 404, available at [https://babel.hathitrust.org/cgi/pt?id=uc1.\\$b643705&view=1up&seq=7](https://babel.hathitrust.org/cgi/pt?id=uc1.$b643705&view=1up&seq=7).

²⁸ Richard L. Garwin and Hans A. Bethe, “Anti-Ballistic-Missile Systems,” *Scientific American*, Vol. 218, No. 3, March 1968), pp. 21–31.

²⁹ *Draft Presidential Memorandum*, Secretary of Defense [Clark M. Clifford] to the President [Lyndon B. Johnson], Subj: Strategic Offensive and Defensive Forces, January 9, 1969, op. cit., p. 6.

forces, particularly regarding the wisdom of new nuclear capabilities and deployment options. Equally important, stability became the new rationale for US-Soviet nuclear arms control.”³⁰

This basic premise about the cause of the arms race and the proper goal of arms control policy led to U.S. efforts focused on limiting those technical and quantitative parameters of systems inconsistent with the Cold War stability paradigm. The Arms Control and Disarmament Agency, for example, described the Cold War’s Strategic Arms Reduction Talks (START) and the Intermediate-Range Nuclear Forces (INF) negotiations in precisely these terms. They were to reach, “significant reductions by both sides in the most destabilizing systems, ballistic missiles and, in particular, ground-based ballistic missiles of intercontinental and intermediate-range.”³¹

In short, U.S. strategic capabilities deemed inconsistent with or unnecessary to backstop the Cold War stability paradigm were thought to undermine deterrence and to be the underlying cause of the arms race.³² In order to stop the arms race, some commentators and political leaders argued against the development and deployment of supposedly destabilizing U.S. strategic capabilities, particularly missile defenses and ICBMs armed with Multiple Independently Targetable Reentry Vehicles (MIRVs).³³ The thought was

³⁰ Michael Gerson, “The Origins of Strategic Stability: The United States and the Threat of Surprise Attack,” in, Elbridge Colby and Michael Gerson, eds., *Strategic Stability: Contending Interpretations* (Carlisle Barracks, PA: U.S. Army War College Press, 2013), p. 34.

³¹ Arms Control and Disarmament Agency, *1983 Annual Report* (Washington, D.C.: U.S. Government Printing Office, 1984), p. 3.

³² Marshall Shulman, “The Effect of ABM on U.S.-Soviet Relations,” in Chayes and Weisner, eds., *ABM: An Evaluation of the Decision to Deploy an Antiballistic Missile System*, op. cit., p. 153; and Rathjens, “The Dynamics of the Arms Race,” op. cit., p. 19..

³³ Herbert F. York, “Military Technology and National Security,” *Scientific American*, Vol. 221, No. 2 (August 1969), p. 29.

that limitation or elimination of such “destabilizing” U.S. activities would codify deterrence stability and allow the Soviet Union to stop its nuclear modernization efforts—which were meant only to preserve its deterrent in the face of U.S. actions—thus putting an end to the arms race.

U.S. arms control policy came to be driven by this belief that systems considered “destabilizing” or unnecessary under the typology of the Cold War stability paradigm should be the target of arms control efforts. This included, in particular, missile defense, increased missile accuracy, and MIRVed ICBMs. Secretary of Defense Caspar Weinberger summarized this dynamic as follows: “The primary U.S. goal in negotiations was to enshrine forever the strategic doctrine of mutual vulnerability. By putting caps on each side’s strategic nuclear arsenals and foregoing the deployment of all but the most limited anti-ballistic missile systems, strategic stability was to be enhanced.”³⁴ Indeed, Schelling observed that because the 1972 ABM Treaty was thought to have essentially codified a balance of terror by precluding meaningful U.S. and Soviet strategic missile defense, it was, “not merely the high point but the end point of successful arms control.”³⁵

In sum, the Cold War stability paradigm became the governing basis for U.S. strategic arms control goals and policy, and for arms control-related limits on and criticism of U.S. nuclear and missile defense programs.³⁶ This

³⁴ Caspar Weinberger, “Strategic Defense Initiative Opponents Show Reluctance for Self-Defense,” *ROA National Security Report*, No. 4 (November 1986), p. 2.

³⁵ Schelling, “What Went Wrong With Arms Control?,” *op. cit.*, pp. 221-223.

³⁶ A prominent analyst noted at the time of the Cold War: “Originally only one of several analytical tests to aid judgment on the adequacy of forces, assured destruction became the principal criterion, then the dominant strategic concept of the American defense community, and finally a philosophical base for theories of mutual deterrence, strategic

Occasional Paper examines this particular understanding of deterrence stability and how it has informed the U.S. arms control process. It suggests that a new understanding of stable deterrence is warranted, a new basis for characterizing strategic forces, and, correspondingly, a revised U.S. approach to arms control.

Arms Control and the Cold War Stability Paradigm During the Cold War

The Cold War stability paradigm was based on a reductionist, mechanistic understanding of U.S.-Soviet Cold War interactions, and offers a correspondingly reductionist, mechanistic concept of deterrence stability and arms control interactions. It distinguished between “stabilizing” and “destabilizing” weapons systems and mandated limiting or excluding the latter: “In order to establish a mutual stability policy, it is necessary to classify strategic systems as either stabilizing or destabilizing and to avoid the latter.”³⁷ As noted above, the purpose of arms control then was to limit or eliminate weapon systems defined by the Cold War paradigm as “destabilizing” or unnecessary for deterrence in favor of those that were “stabilizing.”³⁸

stability, and strategic arms limitation.” See, Van Cleave, “The US Strategic Triad,” in Bonds, ed., *The US War Machine*, op. cit., p. 60.

³⁷ Kahan, *Security in the Nuclear Age: Developing U.S. Strategic Arms Policy*, op. cit., p. 272.

³⁸ House of Representatives, Committee on Foreign Affairs, U.S. Senate, Committee on Foreign Relations, Joint Committee Print, *Fiscal Year 1979 Arms Control Impact Statements, Statements Submitted to the Congress by the President Pursuant to Section 36 of the Arms Control and Disarmament Act* (Washington, D.C.: U.S. Government Printing Office, June 1978), p. 25, available at <https://babel.hathitrust.org/cgi/pt?id=ien.35559007701679&view=1up&seq=7>.

The Cold War stability paradigm's connection to U.S. strategic arms control became so prominent that, "...no serious consideration has been given to possible alternatives to a MAD posture" in preparatory work for the late-1960s through early-1970s Strategic Arms Limitation Talks (SALT) negotiations.³⁹ The purpose of SALT was to create a, "break in the pattern of action and reaction under which each side reacts to what the other is doing, or may do, in an open ended situation," according to President Nixon's Secretary of State William Rogers.⁴⁰ He also stated that, "This cycle until now has been a major factor in driving the strategic arms race."⁴¹ As a member of the original U.S. SALT delegation, the late professor William Van Cleave observed that this U.S. approach to arms control led to an evaluation of SALT agreements, "by the narrow, shortsighted, and subminimal criterion of whether they leave us with an assured destruction capability. We are, in other words, using what was originally intended to be one analytical tool to use in evaluating forces as the sole strategic objective."⁴²

³⁹ Donald Brennan, Testimony before the United States Senate, Committee on Foreign Relations, *Strategic Arms Limitation Agreements*, 92nd Congress, 2nd Session (Washington, D.C.: U.S. Government Printing Office, 1972), p. 188, available at https://books.google.com/books?id=DrWOinXxhcUC&pg=PA317&lp g=PA317&dq=Donald+Brennan,+Testimony+before+the+United+State s+Congress+Senate,+Committee+on+Foreign+Relations,+Strategic+Ar ms+Limitation+Agreements&source=bl&ots=KHm9K2v8EU&sig=ACf U3U3YPAo9hVMsOjQpb7puquDkb_Egew&hl=en&sa=X&ved=2ahUK Ewjqgluq0rLxAhVbVc0KHVj9AHMQ6AEwAHoECAIQAw#v=onepag e&q=no%20serious%20consideration&f=false.

⁴⁰ William Rogers, Testimony before the United States Senate, Committee on Foreign Relations, *Strategic Arms Limitation Agreements*, in *Ibid.*, p. 5.

⁴¹ *Ibid.*

⁴² William Van Cleave, Testimony before the United States Senate, Committee on Armed Services, *Military Implications of the Treaty on the Limitations of Anti-Ballistic Missile Systems and the Interim Agreement on*

The U.S. drive to limit its own “destabilizing” systems—as defined by the paradigm’s force typology—was particularly apparent during Congressional hearings on SALT. For example, Senator Edward Kennedy advocated unilateral restraint such as a moratorium on underground testing, limits on anti-submarine warfare development, and limits on MIRVed ICBMs⁴³—restraint that was expected to advance arms control and deterrence stability by breaking the purportedly U.S.-led action-reaction cycle.⁴⁴

Real Limits on U.S. Missile Defense Programs

The use of the Cold War stability paradigm to guide U.S. arms control policy resulted in significant arms control restrictions on U.S. strategic defense programs and on U.S. nuclear weapon programs considered “destabilizing.” The U.S. approach to missile defense programs, and damage-limitation programs in general, best illustrates this dynamic. For example, a noted academic commentator observed that U.S. strategic defensive capabilities threatened to destabilize deterrence and escalate the arms race: “To the extent that one accepts the action-reaction view of the arms race, one is forced to conclude that virtually anything we might attempt to do in order to reduce damage to ourselves in the event of war is likely to provoke an escalation in the arms race. Moreover, many of

Limitation of Strategic Offensive Arms: Hearing, 92nd Congress, 2nd Session (Washington, D.C.: U.S. Government Printing Office, 1972), p. 580.

⁴³ Edward Kennedy, Testimony before the United States Senate, Committee on Foreign Relations, *Strategic Arms Limitation Agreements*, op. cit., p. 253.

⁴⁴ For a critique of this approach see, Kenneth L. Adelman, “Arms Control with and without Agreements,” *Foreign Affairs*, Vol. 63, No. 2 (Winter 1984), pp. 240–263, available at <https://doi.org/10.2307/20042181>.

the choices we might make with damage-limitation in mind are likely to make preemptive attack more attractive and war therefore more probable.”⁴⁵ These claims equating U.S. missile defense with deterrence instability and the arms race, derived from the stability paradigm, became the enduring and politically powerful policy arguments against U.S. missile defense programs.

In the 1960s, the United States planned for nationwide ballistic missile defense programs, including the Johnson Administration’s Sentinel system. Based on the expected action-reaction dynamic, however, Secretary McNamara argued that, “Were we to deploy a heavy ABM system throughout the United States, the Soviets would clearly be strongly motivated to so increase their offensive capability as to cancel out our defensive advantage.”⁴⁶ He stated that U.S. missile defense could be overcome by the Soviet Union relatively easily, but that Moscow would, nevertheless, “view it as a threat to their Assured Destruction capability,”⁴⁷ and this could destabilize deterrence. It was

⁴⁵ Rathjens, “The Dynamics of the Arms Race,” op. cit., p. 22.

⁴⁶ *Remarks by Secretary of Defense Robert S. McNamara Before United Press International Editors and Publishers*, op. cit., p. 30.

⁴⁷ Testimony of Secretary of Defense Robert McNamara before the House of Representatives, Committee on Armed Services, *Hearings on Military Posture and H.R. 13456 to Authorize Appropriations during the Fiscal Year 1967 for Procurement of Aircraft, Missiles, Naval Vessels, and Tracked Compact Vehicles, and Research, Development, Test, and Evaluation for the Armed Forces, and to Maintain Parity between military and Civilian Pay, and for Other Purposes*, 89th Congress, 2nd Session (Washington, D.C.: U.S. Government Printing Office, 1966), p. 7341, available at <https://books.google.com/books?id=tfvUOmTUFFQC&pg=PA7341&lp=PA7341&dq=mcnamara+Assured+Destruction+capability,+the+extra+cost+to+them+would+appear+to+be+substantially+less+than+the+extra+cost+to+us&source=bl&ots=XGPkULuFjG&sig=ACfU3U2esEX4j50R1nNB1D7j0X7y3f7XLg&hl=en&sa=X&ved=2ahUKewi57pjSs6rqAhU0kHIEHainAwQQ6AEwA3oECAgQAQ#v=onepage&q=mcnamara%20Assured%20Destruction%20capability%2C%20the%20extra%20cost%20>

never clear how missile defense could simultaneously be ineffective and also destabilize deterrence in this way, but this dual-pronged policy critique has endured.

In 1967, the U.S. scaled down the planned missile defense system to protect against a third party (i.e., China's) missile threat and accidental launches.⁴⁸ President Nixon's Secretary of Defense Melvin Laird later argued that even this scaled down system, "could also have been construed as a system designed to protect our cities from surviving Soviet missiles after a surprise attack by the United States," that it was "potentially provocative," and that, "it appeared to us [the Nixon Administration] to be a step toward, rather than away from, an escalation of the arms race."⁴⁹ On that count, the Nixon Administration further limited the primary goal of a revised missile defense system to protect U.S. intercontinental-range ballistic missile (ICBM) fields and forego the protection of U.S. cities, limitations considered stabilizing according to the Cold War stability paradigm. President Nixon observed that, "The only way that I have concluded that we can save lives, which is the primary purpose of our defense system, is to prevent war; and that is why the emphasis of this system is on protecting our deterrent, which is the best preventive for war."⁵⁰ He

to%20them%20would%20appear%20to%20be%20substantially%20less%20than%20the%20extra%20cost%20to%20us&f=false.

⁴⁸ "Text of McNamara Speech on Anti-China Missile Defense and U.S. Nuclear Strategy," *The New York Times*, September 19, 1967, p. 18, available at <https://www.nytimes.com/1967/09/19/archives/text-of-mcnamara-speech-on-antichina-missile-defense-and-us-nuclear.html>.

⁴⁹ United States Senate, Committee on Foreign Relations, Subcommittee on International Organization and Disarmament Affairs, *Strategic and Foreign Policy Implications of ABM Systems: Hearings Before the United States Senate Committee on Foreign Relations, Subcommittee on International Organization and Disarmament Affairs*, 91st Congress, 1st Session (Washington, D.C.: U.S. Government Printing Office, 1969), p. 169, available at <https://books.google.com/books?id=UAo4ugEACAAJ>.

⁵⁰ "The President's News Conference of March 14, 1969," Richard Nixon Library, *Public Papers of President Richard Nixon*, Research Center Book,

also argued that should the United States deploy a missile defense system around U.S. cities, the Soviet Union might consider it a provocation, "which might deter arms talks."⁵¹ The integration of the Cold War stability paradigm and U.S. strategic arms control policy was complete.

In 1972, the Nixon Administration formally codified that stability paradigm via the Anti-Ballistic Missile (ABM) Treaty, which limited the United States and the Soviet Union to two missile defense sites with no more than 100 interceptor launchers each.⁵² Shortly thereafter the treaty was modified to permit each country a single site with 100 interceptor launchers. President Nixon touted the treaty as a major contribution to curtailing an arms race by ensuring a balance of "mutual terror": "The ABM Treaty stopped what inevitably would have become a defensive arms race, with untold billions of dollars spent on each side for more and more ABM coverage. The other major effect of the ABM Treaty was to make permanent the concept of deterrence through 'mutual terror': by giving up defenses, each side therefore had an ultimate interest in preventing a war that could only be mutually destructive."⁵³ The ABM treaty also imposed other qualitative and quantitative restrictions on missile defense research and development that remained in place for 30 years. In fact, charges that U.S. ballistic missile

March 14, 1969, p. 216, available at <https://www.govinfo.gov/content/pkg/PPP-1969-book1/pdf/PPP-1969-book1.pdf>.

⁵¹ Ibid.

⁵² This would consist of one site around the National Capital Region and one site around a land-based missile site. In 1974, the ABM Treaty was amended to permit only one missile site each for the United States and the Soviet Union.

⁵³ Richard Nixon, *The Memoirs of Richard Nixon* (New York: Grosset & Dunlap, 1979), pp. 617-618.

defense programs are destabilizing remain a staple of contemporary U.S. missile defense criticism.⁵⁴

Limits on U.S. Nuclear Programs

U.S. public commentary often included arms control-related criticism of U.S. forces deemed “destabilizing,” particularly MIRVed ICBMs. This type of arms control commentary was very much a reflection of the Cold War stability paradigm—the goal again being to preclude or limit destabilizing weapons as defined by that paradigm’s typology of forces. As Adm. Stansfield Turner, President Carter’s head of the Central Intelligence Agency observed, “The key objective of arms control is not control of the number of weapons but a lessening of the likelihood of anyone starting a nuclear war...The critical step toward that goal is a reduction of the number of weapons that put people on edge by posing the threat of a surprise attack—and those weapons, by and large, are the ICBMs.”⁵⁵ Under the Cold War stability paradigm, MIRVs were considered particularly destabilizing and thus a proper target for arms control limitation, “because of the threat they pose to the survivability of an adversary’s land-based missiles.”⁵⁶ This oft-repeated view follows logically from the belief that the goal of arms control is to preserve the deterrence stability

⁵⁴ Ankit Panda, “A New U.S. Missile Defense Test May Have Increased the Risk of Nuclear War,” *Carnegie Endowment for International Peace Commentary*, November 19, 2020, available at <https://carnegieendowment.org/2020/11/19/new-u.s.-missile-defense-test-may-have-increased-risk-of-nuclear-war-pub-83273>.

⁵⁵ Stansfield Turner, “The ‘Folly’ of the MX Missile,” *The New York Times Magazine*, March 13, 1983, p. 94.

⁵⁶ William Potter, “Coping with MIRV in a MAD World,” *The Journal of Conflict Resolution*, Vol. 22, No. 4 (December 1978), p. 601, available at <http://www.jstor.org/stable/173693>.

supposedly ensured via the condition of mutual vulnerability to nuclear retaliation.

Even criticism of the SALT I agreement reflected this perspective regarding the purpose of arms control, as is illustrated in the 1984 commentary by William Van Cleave: "Following the signing of SALT I, the U.S.S.R. developed and deployed precisely the capabilities that were to have been precluded by strategic arms limitations and a stable regime of mutual deterrence. The reality is that Soviet arms programs have been in direct contradiction of American arms control objectives which have sought to stabilize strategic force levels at parity."⁵⁷

Even as the Soviet Union continued to expand and advance its land-based missiles, President Carter's Secretary of State Cyrus Vance argued that the United States must "first and foremost [...] preserve a stable military balance with the Soviet Union."⁵⁸ The emphasis on "stability" was apparent in SALT II negotiations with Moscow, which sought to limit the number of MIRVed

⁵⁷ "Prepared Statement of Dr. William R. Van Cleave, Director, Defense and Strategic Studies Program, University of Southern California," before the Senate Defense Appropriations Subcommittee, March 28, 1984, printed in *SALT II Violations: Hearing Before a Subcommittee of the Committee on Appropriations*, United States Senate, 98th Congress, 2nd Session (Washington, D.C.: U.S. Government Printing Office, 1984), pp. 84-85, available at https://books.google.com/books?id=BRsQpEC1lcUC&pg=PA1&lpg=PA1&dq=william+r+van+cleave+salt+2+testimony&source=bl&ots=XvD6L0_h3H&sig=ACfU3U0jiHVdYsJ1pz7DjeEMtZ0S_5E09w&hl=en&sa=X&ved=2ahUKEwiD34zVmQTyAhUoGFkFHD97AYgQ6AF6BAGXEAM#v=onepage&q=william%20r%20van%20cleave%20salt%202%20testimony&f=false.

⁵⁸ Testimony of Secretary of State Cyrus Vance before the United States Senate, Committee on Foreign Relations, *The SALT II Treaty*, 96th Congress, 1st Session (Washington, D.C.: U.S. Government Printing Office, 1979), p. 88, available at <https://www.govinfo.gov/content/pkg/CHRG-96shrg48230Op1/pdf/CHRG-96shrg48230Op1.pdf>.

ICBMs so as to preserve a strategic balance consistent with the Cold War stability paradigm.⁵⁹ A noted commentator observed, "It was not MIRV as a hedge against ABM deployment or MIRV as an efficient and effective countervalue weapon [i.e., against societal targets] that attracted criticism. It was, rather, MIRV as an effective counterforce weapon that could either threaten or be perceived as threatening the destruction of Soviet land-based missiles. Without the accuracy improvements of the past and the expectation of future improvements, MIRV systems could not have been seen as destabilizing forces for the strategic balance."⁶⁰

The Arms Control and Disarmament Agency's *Arms Control Impact Statements (ACIS)* of the 1970s and 1980s provide further evidence of the institutionalization of the stability-based, action-reaction logic in U.S. arms control goals and practices. These assessments were supposed to evaluate the likelihood that U.S. weapons programs would impact arms control in a "destabilizing" manner: "The goal [of the Arms Control Impact Statements] was to force decision-makers in both the Executive Branch and Congress to consider carefully, before plunging ahead with a weapon program, whether that program might provoke deployment of a counterweapon by the Soviet Union, leaving both sides feeling less secure than when they started."⁶¹ And that is just what the *ACIS* attempted to do with respect to major U.S. nuclear modernization programs, including the Minuteman III modernization, the MX Peacekeeper ICBM, and the Trident submarine, among

⁵⁹ *Ibid.*, p. 93.

⁶⁰ Ted Greenwood, *Making the MIRV: A Study of Defense Decision Making* (Lanham, MD: University Press of America, 1988), p. 116.

⁶¹ Philip Boffey, "Arms Control Impact Statements Again Have Little Impact," *Science*, Vol. 196, No. 4295 (June 10, 1977), p. 1181, available at <https://doi.org/10.1126/science.196.4295.1181>.

others.⁶² As the 1978 ACIS observed, “The United States believes that it is desirable for both the United States and the U.S.S.R. mutually to avoid weapon deployments which may cause the opposing side to become concerned as to the future viability of its own strategic forces, prompting it to step up its own weapon deployments.”⁶³ This single statement—despite the bureaucratic language—captures the Cold War understanding of deterrence stability, i.e., mutual vulnerability to nuclear retaliation, and a derived primary purpose of U.S. arms control policy, i.e., the limitation or elimination of supposedly destabilizing weapon systems thought to drive an action-reaction arms race cycle.

The Enduring Power of the Cold War Stability Paradigm

The Cold War stability paradigm has continued to have enormous influence on U.S. arms control policy since the end of the Cold War. Indeed, a prominent former U.S. negotiator recently observed that, “nuclear arms control is the only way” to “attain *stable*” deployments of “these most

⁶² Critics of the MX Peacekeeper ICBM, for example, claimed that it “meets perfectly the definition of a destabilizing weapons systems.” See, Noel Gayler, Testimony before the United States Senate, Committee on Armed Services, *MX Missile Basing System and Related Issues: Hearing*, 98th Congress, 1st Session (Washington, D.C.: U.S. Government Printing Office, 1983), p. 432, available at <https://books.google.com/books?id=uNAQAAAAIAAJ&printsec=copyright#v=onepage&q&f=false>.

⁶³ House of Representatives, Committee on Foreign Affairs, U.S. Senate, Committee on Foreign Relations, Joint Committee Print, *Fiscal Year 1979 Arms Control Impact Statements, Statements Submitted to the Congress by the President Pursuant to Section 36 of the Arms Control and Disarmament Act*, op. cit., p. 16.

fearsome weapons.”⁶⁴ The 1991 *National Security Strategy* of the United States argued that the Strategic Arms Reduction Treaty (START) reduced the risk of nuclear war by “stabilizing the balance of strategic forces at lower levels.”⁶⁵ The Clinton Administration continued to see the ABM Treaty as the “cornerstone of strategic stability.”⁶⁶ The 2009 final report of the Strategic Posture Commission (the Perry-Schlesinger Commission) observed that, “The sizing of U.S. forces remains overwhelmingly driven by the requirements of essential equivalence and strategic stability with Russia.”⁶⁷ The 2010 *Nuclear Posture Review* (NPR) repeatedly referred to the goal of stability, usually in the context of describing nuclear policies or forces,⁶⁸ including “deMIRVing” U.S. ICBM warheads (i.e., deploying each Minuteman III ICBM with a single warhead), in order to

⁶⁴ Rose Gottemoeller, “U.S.-Russian Nuclear Arms Control Negotiations – A Short History,” *The Foreign Service Journal*, May 2020, p. 26, available at <http://www.afsa.org/sites/default/files/may2020fsj.pdf>. (Emphasis added).

⁶⁵ Office of the White House, U.S. National Security Strategy,” 1991, p. 14, available at <https://history.defense.gov/Portals/70/Documents/nss/nss1991.pdf?ver=3slpLiQwmknO-RplyPeAHw%3d%3d>.

⁶⁶ See, for example, the statement in, John Holum, Under Secretary of State for International Security and Arms Control, Interview with Jacquelyn Porth, Washington File, Office of International Information Programs, Department of State, October 30, 2000 (transcript); cited in, Keith Payne, *The Great American Gamble: Deterrence Theory and Practice from the Cold War to the Twenty-First Century* (Fairfax, VA: National Institute Press, 2008), p. 165.

⁶⁷ William Perry and James Schlesinger, et al., *America’s Strategic Posture* (Washington, D.C.: United States Institute of Peace Press, 2009), p. xvii.

⁶⁸ See, for example, Department of Defense, *Nuclear Posture Review Report* (April 2010), pp. iii, iv, available at https://dod.defense.gov/Portals/1/features/defenseReviews/NPR/2010_Nuclear_Posture_Review_Report.pdf.

"increase stability."⁶⁹ A senior DoD official in the Obama Administration, Brad Roberts, has observed, "The 2010 Nuclear Posture Review (NPR) report catalogued a number of decisions explicitly taken in pursuit of strategic stability."⁷⁰ This homage to the language of the stability paradigm continued in the Trump Administration's 2017 U.S. *National Security Strategy*, which explicitly stated that the U.S. nuclear policy goal was to "Maintain Stable Deterrence," and that arms control would be considered if it contributed to "strategic stability."⁷¹ Most recently, senior DoD officials have explained that the Biden Administration's forthcoming review of nuclear forces "will include a renewed focus on strategic stability, including risk reduction and arms control."⁷²

Nevertheless, for deterrence purposes, the Obama and Trump Administrations sought to recapitalize the U.S. nuclear triad and infrastructure supporting it. President Obama stated in his famous 2009 Prague speech, "As long as these weapons exist, the United States will maintain a safe, secure and effective arsenal to deter any adversary, and guarantee that defense to our allies."⁷³ To that end, the

⁶⁹ Ibid., p. ix.

⁷⁰ Brad Roberts, "Strategic Stability Under Obama and Trump," *Survival*, Vol. 59, No. 4 (August-September 2017), p. 48.

⁷¹ White House, *The National Security Strategy of the United States of America*, Washington, D.C., December 2017, pp. 30-31. See also, James Anderson, "China's Arms Buildup Threatens the Nuclear Balance," *The New York Times*, July 29, 2020, available at <https://nyti.ms/3f6A4NH>.

⁷² C. Todd Lopez, "Nuclear Deterrence Remains Department's Highest Priority Mission," *DOD News*, May 13, 2021, available at <https://www.defense.gov/Explore/News/Article/Article/2606446/nuclear-deterrence-remains-departments-highest-priority-mission/#:~:text=Nuclear%20Deterrence%20Remains%20Department's%20Highest%20Priority%20Mission>.

⁷³ "Remarks By President Barack Obama In Prague As Delivered," *Whitehouse.gov*, April 5, 2009, available at

Obama Administration initiated a comprehensive nuclear recapitalization and modernization program that was sustained by the Trump Administration.⁷⁴ Most of the considerable criticism against this deterrent rebuilding program continues to use the long-familiar deterrence stability and arms control arguments derived from the Cold War paradigm.⁷⁵ This criticism shows no apparent appreciation of the inadequacy of that antiquated paradigm as the guide for contemporary U.S. deterrence and arms control policies.

The mirror-imaging presumption underlying the Cold War understanding of stability was highly questionable during the Cold War.⁷⁶ It is far more so in a post-Cold War

<https://obamawhitehouse.archives.gov/the-press-office/remarks-president-barack-obama-prague-delivered>.

⁷⁴ Office of the White House, *Fact Sheet: An Enduring Commitment to the U.S. Nuclear Deterrent*, November 17, 2010, available at <https://obamawhitehouse.archives.gov/the-press-office/2010/11/17/fact-sheet-enduring-commitment-us-nuclear-deterrent>.

⁷⁵ See, for example, Kingston Reif and Shannon Bugos, “Extend New START – The World Can’t Afford a U.S.-Russia Nuclear Arms Race Too,” *Just Security*, April 10, 2020, available at <https://www.justsecurity.org/69613/extend-new-start-the-world-cant-afford-a-u-s-russia-nuclear-arms-race-too/>; Adam Mount, *The Case Against New Nuclear Weapons* (Center for American Progress, May 4, 2017), available at <https://www.americanprogress.org/issues/security/reports/2017/05/04/431833/case-new-nuclear-weapons/>; and, “Senator Markey: Nuclear Modernization Is a Budget Boondoggle, U.S. Senator Ed Markey of Massachusetts,” *Press Release*, available at <https://www.markey.senate.gov/news/press-releases/senator-markey-nuclear-modernization-is-a-budget-boondoggle>.

⁷⁶ See, for example, Harold Brown in, *The Department of Defense Statement on Strategic Military Balance: Military Assessment*, before the U.S. Senate, Committee on Foreign Relations, Hearings, 96th Congress, 1st Session, July 11, 1979, p. 3. See also, Harold Brown, U.S. Senate, Committee on Armed Services, *MX Missile Basing System and Related Issues*, Hearings, 98th Congress, 1st Session (Washington, D.C.: USGPO, 1983); and Edward C. Keefer, *Harold Brown: Offsetting the Soviet Military*

international threat environment that is significantly more diverse and unpredictable.⁷⁷ Indeed, the presumptions underlying the Cold War stability paradigm are now so divorced from the realities of the international environment that the paradigm no longer can be considered a prudent basis for U.S. deterrence or arms control considerations.

Thomas Schelling, a brilliant originator of the Cold War stability paradigm, observed in 2013:

Now we are in a different world, a world so much more complex than the world of the East-West Cold War. It took 12 years to begin to comprehend the 'stability' issue after 1945, but once we got it we thought we understood it. Now the world is so much changed, so much more complicated, so multivariate, so unpredictable, involving so many nations and cultures and languages in nuclear relationships, many of them asymmetric, that it is even difficult to know how many meanings there are for 'strategic stability,' or how many different kinds of such stability there may be among so many different international relationships, or

Challenge 1977-1980, Vol. IX (Washington, D.C.: Historical Office, Office of the Secretary of Defense, 2017), pp. 139-145, 604-605. See also, the testimony by Secretary of Defense Harold Brown in, U.S. Senate, Committee on Foreign Relations, *Nuclear War Strategy*, Hearings, 96th Congress, 2nd Session (Washington, D.C.: USGPO, 1981), p. 10. (Top Secret hearing held on September 16, 1980; sanitized and printed on February 18, 1981). See, in the same Senate report, the "Administration's Responses to Questions Submitted Before the Hearing," pp. 10, 16, 25, 29-30. See also, William E. Odom, "The Origins and Design of Presidential Decision-59: A Memoir" in, Henry D. Sokolski, ed., *Getting MAD: Nuclear Mutual Assured Destruction, Its Origins, and Practice* (Carlisle, PA: Strategic Studies Institute, U.S. Army War College, November 2004), pp. 182-184.

⁷⁷ Colin S. Gray, *Defense Planning for National Security: Navigation Aids for the Mystery Tour* (Carlisle, PA: Strategic Studies Institute, U.S. Army War College, 2014), available at <http://publications.armywarcollege.edu/pubs/2264.pdf>.

what 'stable deterrence' is supposed to deter in a world of proliferated weapons.⁷⁸

As Schelling suggested, relatively new post-Cold War conditions require a new understanding of deterrence stability—an understanding different from that of the Cold War paradigm that has dominated U.S. arms control policies and most public commentary for decades—if not all actual U.S. nuclear policy.

The Strategic Stability Paradigm: Missing Post-Cold War Realities

The United States now confronts a multi-dimensional threat environment with a diverse set of nuclear threats. Most notably, it must contend with new adversaries armed with sophisticated missile and nuclear capabilities, revanchist powers willing to employ coercive nuclear first-use threats to achieve their revisionist geopolitical goals, and countries with worldviews fundamentally different from, and opposed to, those of the United States and its allies. These states see the United States as the impediment to their revisionist geopolitical goals. Some adversaries do not appear to share the U.S. interpretation of rationality, value system or decision-making process. In particular, they may not share U.S. perceptions of nuclear risk or consider U.S. balance of terror-style threats sufficiently credible to be deterred by them.⁷⁹

⁷⁸ Thomas Schelling, "Foreword," in Colby and Gerson, eds., *Strategic Stability: Contending Interpretations*, op. cit., p. vii-viii.

⁷⁹ Henry Kissinger dismissed the credibility of such U.S. nuclear threats for extended deterrence over four decades ago, saying, "...we much face the fact that it is absurd to base the strategy of the West on the credibility of the threat of mutual suicide...because if we execute, we risk the destruction of civilization." Henry Kissinger, "The Future of NATO," in Kenneth Myers, ed., *NATO, the Next Thirty Years* (Boulder, CO: Westview Press, 1979), p. 8.

Deterrence stability may exist between two or among several contending states, but in sharp contrast to the thinking underlying the dominant Cold War stability paradigm, there is no single, objective, universal definition of the requirements for stable deterrence and there are no universally stabilizing or destabilizing types of strategic forces. The variations among the diverse leaderships involved and goals they pursue must shape the conditions and types of forces that may be considered consistent with and adequate for stable deterrence.

In short, deterrence stability is a worthy goal, but there is no uniform approach or set of force/threat requirements for achieving it. Deterrence stability and its requirements can only be understood in the context of the unique players involved and their respective circumstances and purposes. This is why, for deterrence, diverse opponents must be understood individually, to the extent possible, and U.S. deterrence efforts tailored to that understanding. Generalizations about “the” force posture that is adequate for deterrence stability simply ignore this post-Cold War reality.

For deterrence purposes, the United States previously treated other nuclear powers as a “subset” of Russia.⁸⁰ Doing so during the Cold War was a convenient oversimplification that risked ignoring the variation among different opponents’ pertinent perceptions and calculations. In the new post-Cold War environment, such oversimplification risks making major mistakes in deterrence policy. Contemporary opponents are not just smaller versions of Russia, and an effective deterrence strategy vis-à-vis Russia cannot be assumed to equate to an effective strategy vis-à-vis other states armed with weapons of mass destruction. We must now determine how

⁸⁰ See the discussion in Keith Payne, *Redefining “Stability” for the New Post-Cold War Era*, *Occasional Paper*, National Institute for Public Policy, Vol. 1, Issue 1 (January 2021), pp. 43-44.

Moscow's leaders, and other leaderships, perceive the risks associated with their limited nuclear first-use threats or employment. And, what nuclear risks are these leaderships willing to accept in pursuit of their goals, including Moscow's goal of re-establishing its hegemony in much of Eurasia that Russian leaders believe the West unfairly wrested from Moscow? More to the point, how *credible against Russia's and others' limited nuclear first-use threats* (that may avoid U.S. territory entirely) is the old U.S. balance of terror-oriented deterrence threat of large-scale societal destruction when the consequence for the United States of executing such a strategy could be its own destruction? The same questions must be asked of China's leadership and its thinking about nuclear weapons use and risk—especially with regard to Taiwan.

China's definition of "deterrence," for example, includes the threat of nuclear weapons to coerce opponents to concede in a crisis and, "thus seize those interests or benefits that originally would have required conflict in order to obtain them."⁸¹ Former senior Defense Department official Mark Schneider describes China's nuclear intent in this way, "The objective would be to deter U.S. military support to the victim of Chinese aggression, and if necessary, defeat the U.S. and our allies with nuclear strikes."⁸² ADM Charles Richard, Commander of U.S. Strategic Command, reportedly has observed that China will match America's nuclear strength by 2030,⁸³ and that,

⁸¹ Dean Cheng, "Chinese Views on Deterrence," *Joint Forces Quarterly*, Issue 60 (1st Quarter, 2011), p. 93.

⁸² Mark B. Schneider, "The Massive Expansion of China's Strategic Nuclear Capability," *RealClearDefense*, July 20, 2021, available at https://www.realcleardefense.com/articles/2021/07/20/the_massive_expansion_of_chinas_strategic_nuclear_capability_786245.html.

⁸³ Amy McCullough, "Russia, China Push STRATCOM to Reconsider Strategic Deterrence," *Air Force Magazine Online*, October 21, 2021, available at [https://www.airforcemag.com/russia-china-push-stratcom-to-reconsider-strategic-deterrence/#:~:text=Russia%](https://www.airforcemag.com/russia-china-push-stratcom-to-reconsider-strategic-deterrence/#:~:text=Russia%20)

“China has correctly figured out that you can’t coerce a peer—in other words, us—from a minimum [nuclear] deterrent posture.” China is “building the capability to execute any plausible nuclear employment strategy—the last brick in the wall of a military capable of coercion.”⁸⁴ China’s apparent nuclear first-use threats to Japan should Tokyo join with the United States in response to a PRC invasion of Taiwan, illustrates this coercive use of nuclear first-use threats.⁸⁵

Mirror Imaging in a Diverse Threat Environment

“Mirror imaging” — the basic methodology of the Cold War stability paradigm — as the basis for anticipating opponents’ decision making and behavior may now be quite dangerous. Adversaries’ reasoning may not resemble that of U.S. leaders or what is expected by U.S. leaders. Indeed, adversary goals and decision making may drive behavior that recklessly threatens U.S. and allied security in ways deemed “unthinkable” per the Cold War stability paradigm. *This certainly is not to say that they are irrational*, but that their perceptions, norms, understanding of what constitutes reasonable behavior and their calculation of risk vs. gain can be fundamentally different from American

2C%20China%20Push%20STRATCOM%20to%20Reconsider%20Strategic%20Deterrence,Oct.&text=That%20shift%20in%20thinking%20is,into%20all%20Dout%20nuclear %20war.

⁸⁴ Aaron Mehta, “STRATCOM Chief Warns of Chinese ‘Strategic Breakout,’” *BreakingDefense.com*, August 12, 2021, available at <https://breakingdefense.com/2021/08/stratcom-chief-warns-of-chinese-strategic-breakout/>.

⁸⁵ See, John Feng, “China Officials Share Viral Video Calling for Atomic Bombing of Japan,” *Newsweek*, July 14, 2021, available at <https://www.newsweek.com/china-officials-share-viral-video-calling-atomic-bombing-japan-exception-theory-1609586?amp=1>.

norms and expectations. Indeed, opponents' contemporary use of nuclear first-use threats to advance revisionist geopolitical goals certainly reflects behavior that the Cold War deterrence paradigm simply dismisses as "unthinkable" for any rational leadership. A directly related concern expressed in a newly-released U.S. Navy strategy document, as reported, is that large-scale U.S. nuclear deterrent options—such as those envisaged in the Cold War "balance of terror" paradigm—may not be sufficiently credible to deter if Russia were to anticipate that, "some kind of initial targeted, yet crippling [Russian] first strike tactical nuclear attack could enable rapid take over [of] a disputed area, all while raising the risk level so high that the U.S. simply might choose not to respond to avoid global catastrophe."⁸⁶ Given this reported concern, "many prominent U.S. military leaders are clear that the Pentagon's ongoing efforts to engineer and deploy low-yield tactical nuclear weapons can actually strengthen deterrence...."⁸⁷

This apparent conclusion—that large-scale balance of terror-type nuclear deterrence threats may not be credible, and that other deterrence options may be necessary—simply recognizes that presuming opponents share U.S. interpretations of what constitutes prudent goals and acceptable risks may be quite dangerous. With diverse and opaque nuclear-armed states interested in upsetting the status quo of the international order, including via threats of limited nuclear first use, the judgment of whether U.S. nuclear forces are adequate for deterrence stability must now take into account; how multiple opponents uniquely perceive themselves and the world; the diverse factors that

⁸⁶ See the discussion in, Kris Osborn, "The U.S. Navy Is Worried Russia Could Wage a 'Limited' Nuclear War," *National Interest Online*, June 4, 2021, available at <https://nationalinterest.org/blog/buzz/us-navy-worried-russia-could-wage-limited-nuclear-war-186901>.

⁸⁷ *Ibid.*

drive their decision making; and, particularly, how they calculate risk vs. gain and believe their nuclear arsenals can advance their national goals.

A 2014 study by the National Research Council of the National Academy of Sciences emphasizes that a key to deterrence is recognizing that the United States needs to “tailor” its approach to an opponent’s unique “objectives, values and perceptions,” as well as an opponent’s potential decision-making factors, including its views of “nationalism, identity, religious convictions, honor, and self-respect.”⁸⁸ The need to tailor deterrence accordingly is antithetical to “mirror imaging,” and is increasingly necessary because of the diversity of threats and actors in the contemporary international environment. Given the great diversity of opponents, and the types of capabilities that may be necessary to deter them, the rigid Cold War categorization of forces derived from mirror imaging in a bipolar context no longer makes sense, if it ever did. Forces necessary for deterrence may vary greatly depending on opponent and context and our understanding of deterrence stability and its requirements must recognize this reality — thus the need to “tailor” deterrence.⁸⁹

This reality demolishes the mirror-imaging-derived Cold War definition of “how much is enough?” for deterrence and its categorization of systems as “stabilizing” or “destabilizing” and, correspondingly, the notion that arms control should be about eliminating or limiting those systems that are defined as unnecessary for deterrence or “destabilizing” by the aged Cold War paradigm.

⁸⁸ National Research Council, *U.S. Air Force Deterrence Analytic Capabilities* (Washington, D.C.: National Academies Press, 2014), pp. 2-11–2-12, 4-4–4-6.

⁸⁹ The need to “tailor” deterrence for this reason is presented in Keith B. Payne, *Deterrence in the Second Nuclear Age* (Lexington, KY: University Press of Kentucky, 1996), pp. 127-129.

In particular, technical characteristics alone cannot be the basis for declaring a weapon system or characteristic to be stabilizing or destabilizing—opponents' goals and perceptions also are key, particularly the purposes they envisage for their nuclear arsenals. Are those purposes essentially defensive, i.e., for the preservation of an existing order and boundaries? Or, are they essentially offensive, i.e., for the destruction of an existing order and boundaries? China's apparent nuclear first-use threat to Japan noted above (and found at an official Communist Party website) reportedly included the suggestion that, "China would seize the Japan-controlled Senkaku and Ryukyu islands in the process."⁹⁰ This is an unprecedented type of offensive and coercive nuclear first-use threat.⁹¹

The same types of nuclear weapons may be put into service for such an offensive, coercive purpose or a defensive, deterrence purpose and, correspondingly, the same types of weapons may contribute to or degrade deterrence stability depending on their intended purpose. This reality again upends the Cold War paradigm's supposedly objective understanding of what constitutes an adequate metric for deterrence and the apolitical, universal categorization of forces derived from that stability paradigm. As a commentator who typically is critical of the

⁹⁰ Feng, "China Officials Share Viral Video Calling for Atomic Bombing of Japan," *op. cit.*

⁹¹ While the exact authority behind this nuclear threat video is unclear, the point it makes is not. As Australian National University Professor Stephan Fruhling said, the potential for China's nuclear first use in this case is "very real." See, Jonathan Talbot, "CCP sanctioned video threatens China will nuke Japan in a 'full-scale war' China will destroy Japan with nuclear weapons if it interferes militarily in Taiwan, a new video circulated among Chinese Communist Party channels has warned," *Sky News* (Australia), July 19, 2021, available at <https://www.skynews.com.au/world-news/china/ccp-sanctioned-video-threatens-china-will-nuke-japan-in-a-fullscale-war/news-story/dd3ce2fdab6e83fa77025eb5c3d23803>.

U.S. nuclear posture rightly observes, if “a major competitor is so unhappy with the status quo that it is willing to run significant risks, the status quo and strategic stability will be endangered.”⁹² That there now exist such competitors is captured by a 2020 U.S. State Department study: “Russia seeks to restore its sphere of influence, both in the countries of its so-called ‘near-abroad’ (e.g., Ukraine and Georgia) and by acquiring client states farther afield (e.g., Syria) through the use of blatant military aggression, proxy forces, political and military subversion....The Kremlin is also notably risk-tolerant in its policy choices, not shying away from reckless gambles and extravagant provocations...”⁹³

Despite decades of easy and seemingly expert pronouncements based on the Cold War stability paradigm and its apolitical typology of forces, the U.S. requirements for stable deterrence and the characterization of nuclear forces as stabilizing or destabilizing *cannot be separated from opponents’ diverse goals and how they envisage the use of nuclear forces to serve those goals*. Virtually any type capability may be stabilizing or destabilizing, i.e., contribute to the preservation of peace or the incentives for nuclear employment, depending on the political context and how opponents envisage the use of nuclear capabilities, in threats or actual employment.

⁹² Michael Krepon, “Let’s Discuss Strategic Stability,” *Arms Control Wonk*, July 6, 2021, available at <https://www.armscontrolwonk.com/archive/1212358/lets-discuss-strategic-stability/>.

⁹³ U.S. Department of State, “Competitive Strategy vis-à-vis Russia and China,” *Arms Control and International Security Papers*, Vol. 1, No. 6 (May 2020), p. 3.

Political Goals as a Determinant of Stability: An Example from World War II

One may consider the 1940 Battle of Britain as an illustrative historical example of the importance of the point that political context can be decisive in the categorization of forces as stabilizing or destabilizing. The German *Luftwaffe* in 1940 was a highly destabilizing force; its offensive use against Great Britain was intended to precede the German invasion of Britain (*Unternehmen Seelöwe*). Germany saw air power as an opening act in a successful invasion of Britain. Britain's Royal Air Force, in this context, was a potentially stabilizing force; its desperate defensive employment in the Battle of Britain ultimately forced the indefinite postponement of *Unternehmen Seelöwe*. Had British leaders earlier rejected the expansion of British air power for fear that it would somehow destabilize relations with Germany, the likely German invasion of Britain and resultant tremendous escalation/expansion of the war seems nearly certain. In contrast, had the Royal Air Force and British air defenses been manifestly much more powerful, Hitler might have been deterred from *Unternehmen Seelöwe* as a hopeless military undertaking altogether.

Here we have a similar instrument—air power—being simultaneously stabilizing and destabilizing, depending on whether it was in British or German hands, respectively, and depending on the political context and its intended purpose. In short, in 1940, German air power was destabilizing; it facilitated/encouraged Germany's aggressive plans to expand and escalate the war. Yet, in this case, British air power was stabilizing; by denying German war aims, it helped to limit Germany's escalation and the further expansion of the war.

This historical case points to the importance of understanding opponents' goals and their envisaged use of forces as a key element in assessing how those forces may

contribute to or degrade deterrence stability—rather than simply defaulting to their apolitical technical characterization under the Cold War stability paradigm. Russia’s envisioned use of nuclear coercion or even employment in support of its revanchist, expansionist goals (and the possible parallels in Chinese expansionist policies) demonstrate the inadequacy of the Cold War paradigm’s definition of stabilizing and destabilizing forces. The geopolitical context and the national purpose behind nuclear capabilities must be part of any discussion of stability or the characterization of those capabilities as stabilizing or destabilizing. As noted, the Cold War stability paradigm conveniently avoided any such analysis; it bypassed such critical contextual factors in favor of the ease and comfort of apolitical mirror imaging.

A Key Challenge to Stability in the New Post-Cold War Threat Environment

The general characterization of “stability” may continue to be the condition in which the parties involved calculate that there exist decisive disincentives against the escalation to nuclear use and to the initiation of conflict likely to escalate to nuclear use. However, when now considering the standard of U.S. force adequacy for stable deterrence, and the categorization of forces as stabilizing or destabilizing, the many possible departures from the Cold War stability paradigm’s mirror-imaging presumptions must be taken into account, including the apparent geopolitical reality of Russian (Chinese, North Korean, and other) revanchism and the related purpose of nuclear first-use threats. The reported Russian use of limited nuclear first-use threats appears to be part of a “theory of victory” intended to

provide cover for expansionist moves.⁹⁴ Russian nuclear weapons in Europe apparently are designed to “work around” the U.S. extended deterrent and provide Moscow with a safer opportunity to expand forcefully if needed. If Russian nuclear capabilities contribute to Moscow’s confidence in its expansionist agenda and so encourage its aggressive behaviors, then they very likely will increase the risk of war in Europe, including Russian nuclear first use, and should be deemed destabilizing – again, regardless of how they fit into the Cold War stability typology of forces.

A new understanding of deterrence stability must take into account the great variability and diversity in adversaries’ beliefs, perceptions, and goals. While the Cold War stability paradigm assumed similarly reasonable Soviet decision makers with essentially defensive nuclear deterrence goals, that sanguine characterization now appears *not* to apply to multiple adversaries, and the United States may have only a modest understanding of the diverse decision-making processes and value systems in “key parts of the world.”⁹⁵

⁹⁴ See, for example, Brad Roberts, *On Theories of Victory, Red and Blue*, Livermore Papers of Global Security, No. 7 (June 2020), pp. 42-57; Brad Roberts, *The Case for U.S. Nuclear Weapons in the 21st Century* (Stanford, CA: Stanford University Press, 2016), pp. 35, 99, 103-104, 192-194, 260-262, 268-271; and, Mark Schneider, “Russian Nuclear ‘De-Escalation’ of Future War,” *Comparative Strategy*, Vol. 37, No. 5 (March 2019), p. 362. Noted Russian journalist Pavel Felgenhauer has concluded, “The reasons [for Russia] to use nuclear warheads are widespread and open to interpretation, effectively giving the Kremlin the legal right to ratchet up the [nuclear] threat whenever it pleases.” Pavel Felgenhauer, “Moscow Clarifies Its Nuclear Deterrence Policy,” *Eurasian Daily Monitor*, Vol. 17, No. 80 (June 4, 2020), available at <https://jamestown.org/program/moscow-clarifies-its-nuclear-deterrence-policy/>.

⁹⁵ See, for example, the discussion in, “US Intelligence Lacks Experts Unsure How to Reach ‘Equilibrium’ With Russia,” *Sputnik News*, September 13, 2016, available at

The corresponding need for credible deterrent options other than the massive society-destroying threats envisioned in the Cold War's stable balance of terror deterrence paradigm is obvious, but not new. Secretary of Defense James Schlesinger identified the need for greater flexibility in 1974,⁹⁶ and President Carter's Secretary of Defense, Harold Brown, observed in 1979: "Effective deterrence requires forces of sufficient size and flexibility to attack selectively *a range of military and other targets*, yet enable us to hold back a significant and enduring reserve. *The ability to provide measured retaliation is essential to credible deterrence.*"⁹⁷ The much greater diversity and complexity of the contemporary threat environment now makes flexible, tailored deterrent options even more critical for deterrence.

By the mid-1980s, the United States openly discarded its earlier declarations that its strategic deterrent was based on a threat to destroy Soviet society, i.e., population and industry.⁹⁸ As U.S. deterrence policy evolved on a bipartisan basis, such "countervalue" deterrent threats were rejected as insufficiently credible for deterrence purposes and immoral (i.e., the intentional threat to focus

<https://sputniknews.com/military/20160913/1045275501/us-intelligence-experts-equilibrium-russia.html>.

⁹⁶ In 1974, Secretary of Defense James Schlesinger emphasized the need for limited nuclear response options. He announced publicly that, because the credibility of large-scale U.S. response options to limited attacks was "close to zero," the United States would introduce limited nuclear options to provide greater credibility for the deterrence of limited threats. See, James Schlesinger's testimony, *US/USSR Strategic Policies*, U.S. Senate, Committee on Foreign Relations, 93rd Congress, 2nd Session, March 4, 1974, p. 9.

⁹⁷ Harold Brown in, *The Department of Defense Statement on Strategic Military Balance: Military Assessment*, op. cit., p. 3. (Emphasis added).

⁹⁸ Caspar Weinberger, "U.S. Defense Strategy," *Foreign Affairs*, Vol. 64, No. 4 (Spring 1986), p. 682.

enormous destruction on civilian targets).⁹⁹ Rather than threatening large-scale societal destruction, the United States would minimize “to the maximum extent collateral damage to population and civilian infrastructure.”¹⁰⁰ That important fact, however, often is dismissed or ignored in much popular Western commentary; the force typology based on the notion that stable deterrence should rest on large-scale threats to society continues to be a prominent and enduring feature in popular discourse – particularly as the basis of contemporary arguments to limit U.S. strategic capabilities per Cold War stability guidelines, either unilaterally or via negotiations.

The Stable Deterrence Requirement for Flexible and Graduated Options

Given the inherent uncertainties involved in opponents’ perceptions, calculations and decision making, nothing can “ensure” deterrence or render it reliably predictable. However, a broader and more diverse range of threat options beyond the Cold War stability paradigm’s narrow threat of massive societal destruction is likely necessary to enable the United States to “tailor” deterrence to diverse opponents. The Cold War’s large-scale deterrence threat may simply be incredible in the face of limited nuclear first-

⁹⁹ As Kissinger concluded in 1973, “To have the only option that of killing 80 million people is the height of immorality.” National Archives, Nixon Presidential Materials, NSC Institutional Files (H-Files), Box H-108, Minutes of Meetings, Verification Panel Minutes, Originals 3-15-72 to 6-4-74 [3 of 5]. Top Secret; Sensitive. The meeting took place in the White House Situation Room. Declassified and available in Department of State, Foreign Relations of the United States, 1969-1976, Vol. XXXV, National Security Policy, 1973-1976 (Washington, D.C.: USGPO, 2014), p. 105.

¹⁰⁰ ADM Richard Mies, “Strategic Deterrence in the 21st Century,” *Undersea Warfare* (Spring 2012), pp. 15-16.

use threats intended to support Russian, Chinese or North Korean regional expansionism, in addition to being a gross violation of the Just War Doctrine. Instead, a spectrum of deterrence threat options is only prudent in the post-Cold War threat environment given the diversity of opponents, the range of their expressed nuclear threats, and the potential variability of their decision making. As noted, despite the prominence of the Cold War stability paradigm in most public commentary, U.S. officials on a wholly bipartisan basis have long concluded that the narrow capabilities of the Cold War stability paradigm are immoral and inadequate to maintain credible deterrence. The deterrence requirement for flexibility, i.e., a spectrum of options, including some outside the Cold War paradigm's definition of adequacy, is not new — *but it is magnified greatly by the uncertainties of the post-Cold War environment, opponents' coercive nuclear first-use threats, and the multiplication of opponents and threats.* In short, resilient and flexible policies and capabilities are now needed to support the tailoring of deterrence across the growing and diverse range of strategic threats to us and our allies.

Yet, the presumption of the enduring Cold War stability paradigm, apparent in most public commentary for decades, is that the threat of large-scale nuclear retaliation provides stability and reliable deterrence, including against limited nuclear threats. Many commentators at the time were wedded to the Cold War paradigm and, accordingly, criticized Defense Secretaries James Schlesinger and Harold Brown for their respective calls for more flexible U.S. deterrence options.¹⁰¹ For these commentators, past and

¹⁰¹ See, for example, Herbert Scoville, "Flexible Madness?," *Foreign Policy*, Vol. XIV (Spring 1974), pp. 164-177; and, Seymour Melman, "Limits of Military Power," *The New York Times*, October 17, 1980. Two prominent commentators at the time criticized the Carter Administration's call for flexible deterrent options as being contrary to deterrence; they labeled this policy step away from the balance of terror paradigm "Nuclear Utilization Target Selection" or "NUTS." Spurgeon

present, the society-destroying threat envisioned in the Cold War's stable balance of terror deterrence paradigm is the essence of stable deterrence – it is the very definition of an adequate deterrent. Per this definition, flexible options, particularly alternative, more limited, discriminant deterrent threat options, are said to be “destabilizing” and for “war-fighting” purposes, not deterrence.¹⁰² To preserve deterrence stability, these capabilities supposedly must be eliminated or limited, including via arms control; indeed, U.S. development or deployment of scalable, graduated

M. Keeny and Wolfgang K. H. Panofsky, “Mad versus Nuts: Can Doctrine or Weaponry Remedy the Mutual Hostage Relationship of the Superpowers?” *Foreign Affairs*, Vol. 60, No. 2 (Winter 1981), p. 289, available at <https://doi.org/10.2307/20041081>.

¹⁰² See, for example, the discussion in, Amy Woolf, *A Low-Yield, Submarine-Launched, Nuclear Warhead: Overview of the Debate*, Congressional Research Service, Updated January 5, 2021, p. 1, available at <https://fas.org/sgp/crs/nuke/IF11143.pdf>; Kingston Reif, “Overkill: The Case Against a New Nuclear Air-Launched Cruise Missile,” *Arms Control Now*, Vol. 7, Issue 13 (October 19, 2015), available at <http://www.armscontrol.org/Issue-Briefs/2015-10-19/Overkill-The-Case-Against-a-New-Nuclear-Air-Launched-Cruise-Missile>; Kris Osborn, “Low-Yield Nuclear Missiles Are Here: But Is That a Good Thing? There are Many Arguments on Both Sides about These Deadly Weapons,” *National Interest Online*, December 31, 2020, available at <https://nationalinterest.org/blog/buzz/low-yield-nuclear-missiles-are-here-good-thing-175578>; Rebecca Hersman and Joseph Rogers, “U.S. Nuclear Warhead Modernization and ‘New’ Nuclear Weapons,” *CSIS Briefs*, December 10, 2020, available at <https://www.csis.org/analysis/us-nuclear-warhead-modernization-and-new-nuclear-weapons>; Andrew Facini, “The Low-Yield Nuclear Warhead: A Dangerous Weapon Based on Bad Strategic Thinking,” *Bulletin of the Atomic Scientists*, January 28, 2020, available at https://thebulletin.org/2020/01/the-low-yield-nuclear-warhead-a-dangerous-weapon-based-on-bad-strategic-thinking/?utm_source=Members&utm_campaign=700d6e5657-EMAIL_CAMPAIGN_2020_01_28_04_20&utm_medium=email&utm_term=0_e842221dc2-700d6e5657-147762833; and, Philip Coyle and James McKeon, “The Huge Risk of Small Nukes,” *Politico*, March 10, 2017, available at <http://www.politico.com/agenda/story/2017/huge-risk-small-nuclear-weapons-000350>.

capabilities continues to be touted as destabilizing and the dynamic of a new arms race. This type of commentary and criticism, derived from the outdated 1960s balance of terror paradigm, has continued for decades.

While stable deterrence is an enduring and overriding goal, its pursuit should no longer be driven by the Cold War notion of what constitutes strategic stability or its corresponding categorization of systems as stabilizing or destabilizing. The implications of this reality are profound because the entrenched “stabilizing” vs. “destabilizing” categorization of forces collapses, including as the guideline for arms control.

As during the Cold War, contemporary deterrence strategies and arms control policies must focus on preventing war. In a new threat environment, however, they also must recognize the value of flexible, scalable deterrence threat options that are categorized as “destabilizing” under the Cold War stability paradigm, but now may be critical for keeping the peace. Continuing to practice arms control as a function of the Cold War stability paradigm and its force typology risks: 1) assessing U.S. forces according to an outdated metric that excludes key considerations with regard to deterrence, the assurance of allies, and non-proliferation; 2) missing U.S. and allied deterrence needs that are driven by contemporary geopolitical realities much different from those of the Cold War; and, 3) expecting strategic stability to prevent attack when the basis for such a sanguine expectation may no longer exist and deterrence may be more fragile than expected.

A New Stability Metaphor for a New Post-Cold War Era

Policy metaphors can be extremely important for capturing the basic parameters of a situation and establishing

expectations about the future. The fundamental expectation established by the Cold War metaphor of a “stable balance of terror” is that deterrence stability follows reliably from rationality and a symmetry or “parity” of mutual societal threat capabilities. Yet, as discussed above, that expectation does not take into account the great variability in opponents or the national drives of multiple great power and rogue opponents to alter the existing geopolitical order via offensive nuclear coercion, and possibly even employment. Given widely divergent opponents and threat circumstances, a spectrum of counteracting weights or forces rather than the Cold War paradigm’s “balance of terror” may be needed to preserve deterrence stability. A more apt stability metaphor now is the blocking and channeling of rising torrents of water in diverse rivers and streams that will expand beyond their established banks where and when there is an opportunity and nothing to prevent flooding. The necessary system of resilient levees and dams must prevent flooding in the context of good weather and hurricanes.¹⁰³

This metaphor of blocking and channeling multiple rising torrents of water in wide-ranging conditions suggests very different deterrence requirements than the Cold War paradigm’s metaphor of a stable balance sustained reliably by strategic force “parity,” and the opponent’s comparable sensibilities, calculations and caution. That approach to stable deterrence does not recognize the significance of the uncertainty of where and how the torrents of water will move or the variety of different capabilities that may be

¹⁰³ Herman Kahn suggested the metaphor of building a structure that can stand, “under stress, under hurricane, earthquake, snow load, fire, flood, thieves, fools and vandals.... Deterrence is at least as important as a building, and we should have the same attitude toward our deterrent systems...there will be loads of unexpected or implausible severity.” Herman Kahn, *On Thermonuclear War* (Princeton, NJ: Princeton University Press, 1960), pp. 137-138.

necessary to block them. It is based on set and narrow expectations of opponents, contexts and instruments that do not comport with post-Cold War realities. To extend the metaphor of containing streaming flood waters, deterrence requirements can now vary and shift because weather and water flow can and will shift in unexpected ways. Consequently, stable deterrence now demands a substantial hedge against uncertainty and constant attention to sustaining policies and capabilities able to block multiple, diverse torrents of water. The convenient policies and force requirements mandated by the Cold War stability paradigm and suggested by the “balance of terror” metaphor are unlikely to encompass the range of actual requirements needed to backstop this deterrence stability. The old paradigm’s ethnocentric assumptions about opponent and context, and associated narrow boundaries for categorizing forces and policies, allow little room for the enormous variation and uncertainties in all of these matters in a diverse threat environment.

Cold War Stability Arguments in the New Post-Cold War Era

Despite the fact that the Cold War stability paradigm is now archaic, critics of the Obama and Trump Administrations’ nuclear programs continue to use it to portray those programs as destabilizing, and claim that they will provoke an “arms race” akin to the one the United States “saw in the ‘60s and ‘70s.”¹⁰⁴ Commentators continue to deride as contrary to deterrence the flexible, scalable U.S. nuclear capabilities and options introduced in the mid-1970s and

¹⁰⁴John Garamendi, “Garamendi Warns of New Nuclear Arms Race during Defense Authorization Amendments Hearing,” *Press Release*, April 30, 2015, available at <https://garamendi.house.gov/press-release/garamendi-warns-new-nuclear-arms-race-during-defense-authorization-amendments-hearing>.

endorsed by every subsequent Democratic and Republican administration as necessary for deterrence. This long-standing Democratic and Republican consensus on the deterrence need for flexible U.S. response options has endured in parallel with continuing appeals to “strategic stability” in official U.S. policy documents and criticism of flexibility, per the Cold War paradigm, in much public commentary.¹⁰⁵

Illustrative of this continuing dominance of 1960s thinking in most public commentary, a former senior DoD official recently criticized the flexible response options included in the Obama and Trump Administrations’ nuclear rebuilding program by observing that, “We don’t want our potential adversaries to think they could use a small nuclear weapon against us and only risk getting a small one in return.”¹⁰⁶ Such a departure from the Cold War paradigm’s mutual large-scale threats to society, i.e., such flexibility, is deemed inconsistent with stable deterrence. Yet, it is hardly far-fetched to conclude, as U.S. policy has for decades, that a scalable response, i.e., the deterrent threat option of “a small one in return,” may be the only type of threatened response that is *sufficiently credible to deter opponents’ limited nuclear threats*.

Critics of U.S. nuclear programs clearly continue to define forces as helpful for deterrence, stabilizing or destabilizing, according to the old paradigm. For example, former Secretary of Defense William Perry and former Vice Chairman of the Joint Chiefs of Staff James Cartwright rightly state tautologically that the United States need not deploy a capability for deterrence if it “is not needed to

¹⁰⁵ See, for example, Andrew C. Weber, “Here is the Nuclear Triad We Actually Need for Deterrence,” *The Hill Online*, May 20, 2021, available at <https://thehill.com/opinion/national-security/553914-here-is-the-nuclear-triad-we-actually-need-for-deterrence>.

¹⁰⁶ *Ibid.*

deter an intentional attack.”¹⁰⁷ By definition, the United States need not deploy a capability for deterrence if that capability is not needed for deterrence. The key question, however, is how one should judge whether a system “is not needed to deter an intentional attack”? For critics, that judgment typically is based on the Cold War stability paradigm, as evidenced by the claim that “...submarines alone give us an assured deterrence.”¹⁰⁸ What logic underlies the conclusion that submarine-launched missiles *alone* provide “assured deterrence”? The answer is a hallmark of 1960s thinking: “The U.S. has hundreds of nuclear warheads deployed on submarines at sea, and any one of those subs could destroy *the 50 largest Russian cities*.”¹⁰⁹ Another frequent critic of the U.S. nuclear posture observes similarly that for deterrence of nuclear threats, “Just a few hundred [U.S.] nuclear weapons” are adequate because that level of capability could “destroy” Russia and China, and “kill hundreds of millions of people.”¹¹⁰

This type of commentary regarding deterrence comes courtesy only of mirror imaging and the most basic and problematic presumptions of the Cold War stability paradigm: the functioning of deterrence is well understood and its force requirement is known to be a massive threat to

¹⁰⁷ William Perry and James Cartwright, “Spending less on nuclear weapons could actually make us safer,” *The Washington Post*, November 16, 2017, available at https://www.washingtonpost.com/opinions/spending-less-on-nuclear-weapons-could-actually-make-us-safer/2017/11/16/396ef0c6-ca56-11e7-aa96-54417592cf72_story.html.

¹⁰⁸ Ibid.

¹⁰⁹ William J. Perry and Tom Z. Collina, “ICBMs That Would Be Destroyed in the Ground? No, Thanks,” *DefenseOne.com*, April 21, 2021, available at <https://www.defenseone.com/ideas/2021/04/264b-icbms-would-be-destroyed-ground-no-thanks/173498/>. (Emphasis added).

¹¹⁰ Daryl Kimball, quoted in “Politico Morning Defense,” *Politico*, July 8, 2021, available at <https://www.politico.com/newsletters/morning-defense/2021/07/08/dod-set-to-kick-off-major-nuclear-scrub-796369>.

opponents' societies ("cities" and "people"). This type of Cold War stability argument often heard today is wholly dismissive of the range of uncertainties that can drive an opponent's decision making in unexpected directions, and the fact that actual U.S. deterrence policy has long concluded that a large-scale threat to "destroy" an opponent's cities must *not* be considered the measure of adequacy for deterrence stability.

The presumption that deterrence requirements and deterrent effect are so precisely predictable, now and for the future, is a delusion inherited from Cold War conditions and related mirror-image expectations about opponents and deterrence. Indeed, it is wholly reminiscent of the Cold War assertion by the Kennedy Administration's National Security Advisor, McGeorge Bundy, that, "In the real world of real political leaders—whether here or in the Soviet Union—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."¹¹¹ In fact, no one at that time or now can so knowingly predict with such confidence how foreign leaders will perceive risk and behave, particularly in crises; that uncertainty is even more pronounced in the post-Cold War era than it was in the past. Only mirror imaging and the archaic Cold War balance of terror formula give critics the license to believe that they understand opponents' perceptions and decision making, and thus the prospective functioning of deterrence, so well that they can specify with precision, now and for the future, the types and number of U.S. nuclear weapons that are adequate for deterrence, stabilizing or destabilizing.

That archaic Cold War basis for defining "how much is enough?" for deterrence must now be recognized for what

¹¹¹ McGeorge Bundy, "To Cap the Volcano," *Foreign Affairs*, Vol. 48, No. 1 (October 1969), p. 10.

it is—a comforting and convenient approach to deterrence that ignores contemporary realities and must be left in the past. It is comforting because it drives the conclusion that deterrence is known in detail, and that its force requirements demand much reduced effort on our part. It is convenient because its assumptions make unnecessary the hard work of understanding opponents' unique characteristics and tailoring deterrence according to the great variation possible in their perceptions and decision making.

Gen. Larry Welch, former Chief of Staff of the Air Force, Commander of the Strategic Air Command, and President of the Institute for Defense Analyses, has emphasized the reasoning underlying this point with care and precision:

...there are those who previously served in positions of authority and responsibility who are willing to assert their certainty that we no longer need to operate and sustain the three legs of the triad to sustain confidence in the effectiveness of the nuclear deterrent. They are, in effect, declaring they can see into the minds of potential adversaries.

Others of us who have been directly and personally responsible for operating and sustaining the nuclear forces find more intellectual humility serves us better in maintaining confidence in the effectiveness of the nuclear deterrent. We freely acknowledge our limited capacity to see into the minds of the changing leadership of involved sets of parties. Lacking that capability, 70-plus years of a successful strategy for nuclear deterrence and decades of building confidence in the U.S. nuclear umbrella support a level of confidence that the triad composed of Sea-Launched Ballistic Missiles (SLBMs), land-based

Intercontinental Ballistic Missiles (ICBMs), and the bomber force serves the deterrent needs in the face of inherent uncertainty.¹¹²

The Cold War Stability Paradigm and Arms Control

Commentators continue to repeat the aged action-reaction and “instability” arguments in line with the Cold War stability paradigm (which is said “not [to be] a theory or a philosophy” but a “reality”¹¹³). For example, the United States supposedly can now forego a new ICBM program because of “future arms control agreements” that “could result in the need for fewer ICBMs in the U.S. arsenal.”¹¹⁴ Perhaps, but the United States must avoid resuming an approach to arms control that is derived from an aged deterrence stability paradigm so disconnected from current realities, i.e., an approach to arms control predicated on the Cold War paradigm’s mirror imaging, its corresponding rigid and narrow definition of what is adequate for deterrence, and its apolitical categorization of stabilizing and destabilizing capabilities.¹¹⁵ Whereas arms control proponents frequently still focus on the codification of the

¹¹² “Conversations in National Security,” *Information Series*, No. 491 (June 3, 2021), p. 2, available at https://nipp.org/information_series/conversations-on-national-security-part-one-general-larry-d-welch-usaf-ret-no-491-june-3-2021/.

¹¹³ Thomas Countryman, “Why Nuclear Arms Control Matters Today,” *The Foreign Service Journal*, May 2020, available at <https://www.afsa.org/why-nuclear-arms-control-matters-today>.

¹¹⁴ Kingston Reif and Shannon Bugos, “Responses to Common Criticisms of Adjusting U.S. Nuclear Modernization Plans,” *Issue Briefs*, Arms Control Association, Vol. 13, Issue 3 (May 18, 2021), available at <https://www.armscontrol.org/issue-briefs/2021-05/responses-common-criticisms-adjusting-us-nuclear-modernization-plans>.

¹¹⁵ See Payne, *Redefining “Stability” for the New Post-Cold War Era*, *Occasional Paper*, op. cit., pp. 45-46.

Cold War paradigm's form of stability, an approach consistent with the post-Cold War threat environment should seek to advance the type of force posture and policy flexibility and resilience that may now be necessary for stable deterrence in a highly-dynamic and uncertain threat environment, i.e., for deterring multiple, diverse expansionist drives backed by nuclear first-use threats.

This point has immediate relevance. The United States and Russia are engaged in a much-heralded strategic stability dialogue "to lay the groundwork for future arms control."¹¹⁶ Establishing disincentives to nuclear war must, of course, remain the priority goal and, in principle, there is nothing amiss with U.S.-Russian "stability talks."¹¹⁷ However, prior to engaging in a "strategic stability dialogue" with Moscow, the United States ought first to have established a contemporary consensus understanding of what constitutes deterrence stability, and how U.S. deterrence policies and forces can contribute to that stability, i.e., the words ought to have an agreed, contemporary meaning—at least within the United States. That contemporary understanding most certainly does not exist.¹¹⁸ Until the United States establishes a revised

¹¹⁶ "Russia, US Bear special responsibility for Strategic Stability as Nuclear Powers—Putin," *Eurasia Diary* [Backu], June 17, 2021, available at <https://dialog.proquest.com/professional/docview/2541677409?accountid=155509>.

¹¹⁷ White House, *Presidential Joint Statement on Strategic Stability*, June 16, 2021, available at <https://www.whitehouse.gov/briefing-room/statements-releases/2021/06/16/u-s-russia-presidential-joint-statement-on-strategic-stability/>.

¹¹⁸ As a 2016 Report by the State Department's International Security Advisory Board rightly observes: "Even though future international discussions may be designed to improve strategic stability, the phrase itself has not proven useful because of widely varying understanding of what it means in the 21st century. Therefore discussions with other states should not use this specific phrase..." U.S. Department of State, International Security Advisory Board, *The Nature of Multilateral Strategic Stability*, April 27, 2016, p. 9.

understanding of what “strategic stability” means in light of contemporary geopolitical realities—and the implications of that meaning for deterrence policy and forces—it will have little basis other than transient political fashion for discussing its own or others’ policies, doctrines, or forces for deterrence or arms control purposes. The old Cold War formulation provides dubious useful guidance at this point, particularly now that Moscow (and others) seems to envisage limited nuclear first-use threats and employment as legitimate means for advancing Russia’s expansionist geopolitical goals—a notion wholly contrary to any form of deterrence “stability.”

It is important to recognize that Russia’s and China’s rhetorical commitments to the phrase “strategic stability” create images in Western minds of defensive, non-expansionist intentions—given the traditional meaning of those words in Western thinking and commentary. But a defensive, non-expansionist conception of “strategic stability” does not comport with Russia’s or China’s expressed geopolitical goals, doctrine or force deployments, particularly nuclear first-use threats. Their public lip service to the phrase appears to be hollow virtue-signaling designed to soothe Western audiences. Given the realities of the post-Cold War threat environment, and particularly opponents’ apparent permissive views regarding their offensive first use of nuclear weapons and threats, the still-prominent U.S. Cold War stability paradigm and its force typology of stabilizing vs. destabilizing forces offer little useful guidance for meeting today’s deterrence challenges or guiding U.S. arms control goals.

The Role of Arms Control in Future National Security Policy

Given the geopolitical realities of the new post-Cold War era, and the inadequacy of the Cold War understanding of

stability, what might be the role of arms control in U.S. national security? Obviously, comprehensively resolving fundamental international flash points and moving from hostile to amicable relations would eliminate the need to deter these threats, at least for some period of time. But the history of arms control since the 1920s demonstrates overwhelmingly that arms control negotiations are determined more by the character of the parties' political relations than they are a vehicle to change fundamentally those relations.¹¹⁹ A century of arms control demonstrates that negotiations reflect political power relations at the time; they do not have an innate capacity to produce profound international transformation. If an arms control process is expected to transform bilateral relations or the world political order, the outcome certainly will disappoint.

The great U.S. diplomat George F. Kennan made this point in 1954 when reflecting on the unmet U.S. arms control aspirations during the years leading up to World War II: "I know of no reason why, even in 1925, anyone should have supposed that there was any likelihood that general disarmament could be brought about by multilateral agreement among a group of European powers whose mutual political differences and suspicions had been by no means resolved. The realities underlying the maintenance of national armaments generally were at that time no more difficult to perceive than they are today."¹²⁰ Kennan emphasized that the damage caused by hopelessly optimistic expectations about arms control negotiations and international organizations was not limited to ultimate disappointment. Rather, "The evil of these utopian enthusiasms was not only, or even primarily, the wasted time, the misplaced emphasis, the encouragement of false

¹¹⁹ Colin S. Gray, "The Arms Race Is about Politics," *Foreign Policy*, Vol. 3, No. 9 (Winter 1972/1973), p. 118.

¹²⁰ George F. Kennan, *Realities of American Foreign Policy* (London: Oxford University Press, 1954), pp. 20-21.

hopes. The evil lay primarily in the fact that these enthusiasms distracted our gaze from the real things that were happening.”¹²¹ The “real things” happening at the time, of course, were the expansionist geopolitical and military aspirations of German National Socialism and Imperial Japan. Kennan’s comments appear pertinent to contemporary Russian, Chinese, and North Korean expansionist aspirations and related military threats.

Arms control negotiations should not be expected to transform international relations, but nevertheless could be helpful in principle. The classic arms control goals identified by Thomas Schelling are: “...reducing the likelihood of war, its scope and violence if it occurs, and the political and economic costs of being prepared for it.”¹²² Arms control also could, in principle, contribute to nuclear non-proliferation by helping to assure allies.¹²³ U.S. strategic forces that contribute to these goals should be deemed prudent and stabilizing, and thus facilitated rather than targeted for arms control elimination or limitation, regardless of how they once fit the force typology of the Cold War stability paradigm.

A key to realizing the first of these classic arms control goals—reducing the likelihood and scope of war—is the establishment, preservation, and codification, to the extent possible, of adaptable U.S. policies and flexible, scalable force posture options that contribute to the deterrence of diverse revanchist powers’ expansionist goals and nuclear first-use threats. The implications of this goal are profound for U.S. arms control efforts. In the contemporary post-Cold

¹²¹ Ibid., pp. 22-23.

¹²² Thomas Schelling and Morton Halperin, *Strategy and Arms Control* (New York: Twentieth Century Fund, 1961), p. 2.

¹²³ Keith Payne and John Foster, et al., *A New Nuclear Review for a New Age* (Fairfax, VA: National Institute for Public Policy, 2017), p. 207, available at <https://www.nipp.org/wp-content/uploads/2017/06/A-New-Nuclear-Review-final.pdf>.

War threat environment, arms control can help advance stable deterrence and peace by facilitating the policy and force *flexibility* that best supports U.S. deterrence and assurance goals in a threat environment that is more uncertain and complex than was the case during the Cold War.

Again, policies and force posture elements that advance these goals may now be judged “stabilizing” — regardless of whether they are deemed unnecessary or destabilizing under the Cold War stability paradigm.

In 1960, Herman Kahn endorsed arms control and diplomacy for their potential contribution to Western security. To do so, he argued that the United States:

...must appear extremely competent to the Soviet leaders. They must feel that we are putting adequate attention and resources into meeting our military, political, and economic problems. This is not a question of attempting to bargain from strength, but one of looking so invulnerable to blackmail that Soviet leaders will feel it is worthwhile to make agreements and foolish not to. We must look much more dangerous as an opponent than as a collaborator, even an uneasy collaborator....

In the precarious present and the even more precarious future it would be well to go to some trouble not only *to be* competent as an antagonist to the Russians, but *to look* competent... (Emphasis in original).

We must know what we are trying to achieve, the kinds of concessions that we can afford to give, and the kinds of concessions that we insist on getting from the Soviets. All of this will require, among other things, much-higher-quality

preparations for negotiations than have been customary.¹²⁴

Kahn emphasized that diplomacy backed by a force posture that leads opponents to much prefer cooperation with the United States rather than contention may ultimately help to moderate the international friction that can escalate to crises. Kahn's arms control guidance clearly comes from the Realist school of international relations.¹²⁵ It does not presume "mirror imaging," or that opponents will seriously limit their own capabilities in deference to an aged American stable deterrence paradigm, an enlightened commitment to a transcendent global good, or in benighted reciprocity for some limit the United States places on its capabilities. Rather, while countries can easily engage in vapid arms control virtue signaling, opponents are likely to accept real measures of limitation or reduction only when necessary to advance their relative national power position or avoid a net loss.

This understanding of what lies at the heart of international negotiations certainly appears to have value for today's challenging threat environment and explains most past Soviet, and now Russian, arms control behavior. Particularly pertinent is Kahn's admonition noted above that the United States ought to focus on, "looking so invulnerable to blackmail and aggressive tactics" that opponents, "will feel it is worthwhile to make agreements and foolish not to. We must look much more dangerous as an opponent than as a collaborator, even an uneasy collaborator."¹²⁶ The reality is that Russia and China are

¹²⁴ Herman Kahn, *The Nature and Feasibility of War and Deterrence* (Santa Monica, CA: The RAND Corporation, January 20, 1960) P-1888-RC, pp. 42-43, available at <https://www.rand.org/pubs/papers/P1888.html>.

¹²⁵ See, Keith Payne, *Shadows on the Wall: Deterrence and Disarmament* (Fairfax, VA: National Institute Press, 2020), pp. 96-146.

¹²⁶ Kahn, *The Nature and Feasibility of War and Deterrence*, op. cit., p. 42.

now many years into their respective, robust strategic nuclear armament programs, while the United States is beginning a modernization cycle of nuclear delivery platforms that have served decades beyond their original service lives. As ADM Richard reportedly observed, “the United States strategic nuclear capabilities haven’t done anything in 30 years except to get older and smaller...”¹²⁷ The aged state of the U.S. nuclear force posture and the “significantly atrophied” state of the U.S. nuclear production complex do not heed Kahn’s admonition.¹²⁸

Indeed, reflecting the validity of Herman Kahn’s emphasis on the motivation needed to inspire opponents’ interest in arms control, one senior Russian official has commented that Russia has little interest in further nuclear reductions given the advanced state of the Russian nuclear buildup compared to the lack of comparable U.S. efforts. In 2013, then-Deputy Prime Minister Sergei Ivanov stated, “When I hear our American partners say: ‘let’s reduce something else,’ I would like to say to them: ‘excuse me, but what we have is relatively new.’ They [the United States] have not conducted any upgrades for a long time. They still use Trident [missiles].”¹²⁹ Secretary of Defense Ashton Carter summarized the situation as follows: “We didn’t build anything new for the last 25 years, but others did – including Russia, North Korea, China, India, Pakistan, and,

¹²⁷ Remarks by the Commander of U.S. Strategic Command, ADM Charles Richard, at the Hudson Institute, Washington, D.C., August 26, 2021.

¹²⁸ As described by Stacey A. Cummings. Quoted in, Demarest, “The Nuclear Weapons Council is Worried About Biden’s Spending. So Are Activists,” *op. cit.*

¹²⁹ “Russia today is not interested in U.S.-proposed arms reduction – Sergei Ivanov,” *Interfax*, March 5, 2013, available at <http://search.proquest.com/professional/login>.

for a period of time, Iran—while our allies around the world—in Asia, the Middle East, and NATO—did not.”¹³⁰

The U.S. Cold War approach to arms control that sought to codify the Cold War paradigm’s definition of a stable deterrence is now archaic given the multitude of nuclear-armed adversaries with diverse goals, first-use nuclear threats, interpretations of what is reasonable behavior, and unpredictable decision-making processes, i.e., given the need to block and channel multiple rising torrents of water in wide-ranging conditions. Preserving the resilience, survivability, and diversity of U.S. nuclear systems for deterrence purposes means having a more adaptable approach to arms control.¹³¹ In the future, as diverse threats to the United States and allies mature, the United States may have to adapt its deterrence force posture, which could include, for example, increasing the diversity of its nuclear options by designing systems with new capabilities and missions or deploying different nuclear delivery systems than permitted under an earlier treaty. If these steps are judged to strengthen deterrence, they ought to be considered stabilizing even though they might not fit the Cold War approach to stability and arms control that generally presumed the enduring continuity of basic geopolitical conditions and the enduring value of the Cold War paradigm’s categorization of forces as stabilizing or destabilizing.

In summary, the U.S. approach to arms control must adapt to the reality of the geopolitical environment now

¹³⁰ Aaron Mehta, “Carter: Nuclear Triad ‘Bedrock of Our Security,’” *DefenseNews*, September 26, 2016, available at <https://www.defensenews.com/pentagon/2016/09/26/carter-nuclear-triad-bedrock-of-our-security/>.

¹³¹ Keith Payne, et al., *Planning the Future U.S. Nuclear Force Posture* (Fairfax, VA: National Institute Press, 2009), p. 17, available at https://www.nipp.org/wp-content/uploads/2014/12/Planning-the-Future-US-Nuclear-Force-I_txt.pdf.

confronting the West. It must help preserve and advance the flexible policies and adaptable, scalable force posture needed for the United States to deter multiple powers' destabilizing expansionist drives, especially those backed by opponents' coercive nuclear first-use threats. Such policies and force structure will be key to ensuring, to the extent possible, stable deterrence and peace in a dangerous and dynamic geopolitical environment. In addition to the general principle that U.S. arms control policy should work to favor the flexible, scalable U.S. force posture best suited for effective deterrence, the following are additional general suggestions—recognizing the need to work out specifics depending on the opponent and context.

Posture for success and set realistic expectations. The United States will be hopelessly disadvantaged in negotiations if it does not have capabilities that the opponent is interested in limiting. The opponent will “give” nothing unless it “gets” something. This point is at the heart of Herman Kahn's decades-old admonition noted above. The United States would be wise to heed his advice today; the alternative approaches, i.e., emphasizing U.S. self-restraint in the expectation of opponents' reciprocity or expecting opponents obligingly to conform to favored U.S. norms have manifestly failed. This is not to suggest the provocation of opponents, but recognition that opponents will exploit idealistic U.S. expectations of opponents' reciprocity or philanthropic self-restraint; such U.S. expectations will simply encourage opponents to anticipate U.S. further naivete. Being viewed as “useful idiots” (to use the old Soviet terms) is not the basis for useful agreements.

Acknowledge the value of strategic defenses. The 1972 ABM Treaty's presumption against U.S. strategic missile defenses continues today with various commentators continuing to reflexively label them “destabilizing” based

on Cold War notions of strategic stability.¹³² However, U.S. arms control planning must recognize that the Cold War stability paradigm is no longer the measure by which to judge U.S. strategic defenses given changes in the international environment since the end of the Cold War. The inherent uncertainties of deterrence, magnified by contemporary threat realities, have profound implications for U.S. missile defense capabilities. The decision whether opponents will be deterred from using a nuclear weapon against the U.S. homeland or allies lies not in Washington, D.C., but in their respective capitals; it cannot be predicted with full confidence.¹³³ Because there are inherent and irreducible uncertainties regarding the functioning of deterrence, the United States should pursue deterrence as the first priority, but also prepare, to the extent feasible, to reduce damage to U.S. and allied societies in the event of deterrence failure.¹³⁴ Doing so is one of the classic goals of arms control identified by Schelling. In the contemporary threat environment, allowing actors like Iran and North Korea to have an “easy” avenue to attack the U.S. homeland with ballistic missiles should be recognized as unacceptably imprudent and, indeed, contrary to the goals of arms control.

In addition, defensive capabilities can give the president the option of intercepting an incoming limited nuclear missile attack as opposed to engaging in a prompt

¹³² See, for example, Sharon Squassoni, “How the Biden Administration Can Secure Real Gains in Nuclear Arms Control,” *Bulletin of the Atomic Scientists*, March 30, 2021, available at <https://thebulletin.org/2021/03/how-the-biden-administration-can-secure-real-gains-in-nuclear-arms-control/>.

¹³³ See, for example, Therese Delpech, *Nuclear Deterrence In the 21st Century* (Santa Monica, CA: RAND Corp., 2012), pp. 5, 14, 18; and Keith Payne, *The Fallacies of Cold War Deterrence and a New Direction* (Lexington, KY: University Press of Kentucky, 2001), pp. 38-79.

¹³⁴ Payne, *Redefining “Stability” for the New Post-Cold War Era*, *Occasional Paper*, op. cit., p. 19.

retaliatory strike—potentially helping both to protect U.S. society and de-escalate a conflict. Correspondingly, missile defense can help to neutralize the potential coercive leverage of opponents’ limited nuclear first-use threats and discourage their related expectation of freedom to move militarily regionally. U.S. and allied missile defense systems that help preclude that expectation should contribute to stable deterrence and ought to be recognized as such. Given these considerations, a measure of strategic and theater missile defense capabilities should be considered both prudent and stabilizing—rather than dismissed reflexively as destabilizing folly.¹³⁵

In short, given changes in the international environment since the end of the Cold War, U.S. arms control efforts ought to help facilitate U.S. and allied defensive capabilities. Such an emphasis is now simply prudent—consistent with the government’s constitutional obligation “to provide for the common defense”—potentially stabilizing, and in line with the goals of arms control and the international legal and Just War principles of protecting the innocent.

Avoid grand bargains that would likely undermine U.S. security: Arms control and limited nuclear first-use threats. While nuclear arms control during the Cold War focused largely on U.S. and Soviet strategic nuclear forces, a priority U.S. goal in this new geopolitical environment must be to help address opponents’ limited nuclear first-use threats and capabilities. This goal must include a focus on opponents’ non-strategic nuclear forces (NSNF) that are at the heart of that threat. The need to prioritize this goal has been apparent for years,¹³⁶ but the U.S. capacity to succeed in this goal via arms control is likely very limited for reasons brought about by past U.S. arms control policies and actions.

¹³⁵ Ibid., pp. 24-25.

¹³⁶ Perry and Schlesinger, et al., *America’s Strategic Posture*, op. cit., pp. 67-68.

During the Cold War, the United States deployed thousands of NSNF, including on ships and submarines.¹³⁷ A large portion of these weapons was deployed in defense of European NATO allies to compensate for NATO's conventional disadvantage vis-à-vis the Soviet Union. Following the end of the Cold War, President George H. W. Bush announced a series of unilateral measures that became known as the Presidential Nuclear Initiatives (PNIs). These measures included removing all U.S. ground-launched tactical nuclear weapons from Europe and from surface ships, attack submarines, and land-based naval aircraft.¹³⁸ As a consequence of PNIs, the U.S. nuclear stockpile (active and inactive) reportedly fell by 50 percent.¹³⁹

U.S. concern over the Soviet/Russian implementation of their PNI commitments started barely two years after they were announced.¹⁴⁰ The question of Russia's adherence was raised during the George W. Bush Administration.¹⁴¹ The 2018 *Nuclear Posture Review Report* stated that, "Russia is either rejecting or avoiding its obligations and commitment under...the Presidential Nuclear Initiatives."¹⁴² Both the 2020 and 2021 *Annual Compliance Reports* concluded that,

¹³⁷ Woolf, *Nonstrategic Nuclear Weapons*, op. cit., p. 11.

¹³⁸ Susan J. Koch, *The Presidential Nuclear Initiatives of 1991-1992*, Case Study Series 5 (Washington, D.C.: National Defense University Press, September 2012), p. 11. President Bush mentioned a few measures relevant for strategic weapons, e.g., ending the bombers' nuclear alert.

¹³⁹ *Ibid.*, p. 21.

¹⁴⁰ *Ibid.*

¹⁴¹ See, for example, Stephen Rademaker, *Press Conference on the G-8 and Nonproliferation Issues*, U.S. Department of State Transcript, April 12, 2006, available at <https://2001-2009.state.gov/t/isn/rls/rm/66428.htm>.

¹⁴² Department of Defense, *Nuclear Posture Review Report* (February 2018), p. 73, available at <https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF>.

“The United States assesses that Russia is not adhering to all of its PNI commitments.”¹⁴³

Deep U.S. NSNF reductions and Russia’s lack of reciprocity have resulted in a massive NSNF asymmetry in Russia’s favor. While the United States reportedly retains about 100 air-delivered bombs located in several European NATO countries,¹⁴⁴ Russia reportedly maintains about 20 times that number (about 2,000 total).¹⁴⁵ Some estimates place the number of Russian NSNF much higher – between 5,000 to 10,000, with many of these systems modernized recently.¹⁴⁶ With such a large asymmetry in NSNF in Russia’s favor, the United States has little apparent

¹⁴³ Department of State, Bureau of Arms Control, Verification and Compliance, *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments*, April 15, 2021, available at https://www.state.gov/2021-adherence-to-and-compliance-with-arms-control-nonproliferation-and-disarmament-agreements-and-commitments/#_Toc69385129; and, Department of State, Bureau of Arms Control, Verification and Compliance, *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments*, June 2020, p. 24, available at <https://www.state.gov/wp-content/uploads/2020/06/2020-Adherence-to-and-Compliance-with-Arms-ControlNonproliferation-and-Disarmament-Agreements-and-Commitments-Compliance-Report.pdf>.

¹⁴⁴ Woolf, *Nonstrategic Nuclear Weapons*, op. cit., p. 24. See also, Hans M. Kristensen and Matt Korda, “United States Nuclear Weapons, 2021,” *Bulletin of the Atomic Scientists*, January 26, 2021, p. 43, available at <https://thebulletin.org/premium/2021-01/nuclear-notebook-united-states-nuclear-weapons-2021/>.

¹⁴⁵ Hans M. Kristensen and Matt Korda, “Russian Nuclear Weapons, 2021,” *Bulletin of the Atomic Scientists*, March 18, 2021, p. 90, available at <https://www.tandfonline.com/doi/pdf/10.1080/00963402.2021.1885869?needAccess=true>.

¹⁴⁶ Mark Schneider, “The Terrifying Way Russia Would Start a Nuclear War,” 1945, April 29, 2021, available at <https://www.19fortyfive.com/2021/04/the-terrifying-way-russia-would-start-a-nuclear-war/>.

negotiating capital with which to seek a serious reduction in these forces.

Predictably, some commentators have suggested that the United States agree to limit (“top-off”) its strategic missile defense capabilities to “minimal” levels in exchange for asymmetric Russian NSNF reductions.¹⁴⁷ The logical incoherence of this suggestion for a grand bargain that trades U.S. strategic missile defense limits for Russian NSNF reductions is that the demand for U.S. strategic missile defense is not driven by the number of Russian NSNF; it is driven primarily by the post-Cold War requirement for the protection of U.S. society against North Korean and potentially Iranian long-range missiles. Even if feasible in principle, reducing Russian NSNF would do nothing to help in this regard. Trading U.S. strategic defenses for Russian NSNF might help reduce one security problem but would simultaneously create another. If U.S. society is to be protected against “rogue state” missile threats, U.S. strategic defenses must be free to advance to keep pace with those threats. The United States must preserve the freedom to expand and increase its strategic defenses as rogue long-range missile capabilities expand.

A U.S. approach to arms control informed by the new realities of the post-Cold War threat environment may, in the case of Russian NSNF, be limited to avoiding any such “grand bargains” that could do dramatic harm to U.S. security in one area in pursuit of arms control success in another. The lesson here is that, given past deep U.S. NSNF reductions and the lack of opponent reciprocity, regional nuclear first-use capabilities confronting the United States and allies are unlikely to be amenable to an arms control

¹⁴⁷ Michael Krepon, “Topping-Off National Missile Defense for Tac-Nuc Reductions?” *Arms Control Wonk*, August 12, 2021, available at <https://www.armscontrolwonk.com/archive/1212661/topping-off-national-missile-defenses-for-tac-nuke-reductions/>.

solution. A need, instead, in any arms control endeavor will be to help preserve those U.S. capabilities and options likely to help provide meaningful protection for society and an effective deterrent to opponents' nuclear first-use threats.

Limit the duration of arms control treaties and preserve flexibility. The approach to arms control derived from the Cold War stability paradigm envisioned fixed, long-term or unlimited duration agreements. This was considered prudent at the time because the main features of the U.S.-Soviet balance of terror evolved slowly and the purpose of strategic arms control was to codify that particular form of deterrence. Because limits were meant to codify a "balance of terror," a frequently-heard principle was that arms control agreements should "lock in" "irreversible limits." The underlying presumptions obviously were that the then-current conditions would remain in place and that the U.S. understanding of deterrence would be valid in perpetuity. Based on those presumptions, the thought was that agreements could prudently lock in irreversible limits that advanced and sustained a stable Cold War balance of terror.

In a highly-dynamic international threat environment, however, the United States should seek to preserve its ability to respond to rapidly changing conditions. Arms control agreements must not take on the aura of holy writ. They can make sense only so long as the conditions that recommended them continue to hold—and those conditions may change rapidly. Consequently, in a dynamic context, arms control treaties generally ought to be of limited duration and/or contain easily-implemented provisions that allow adaptation to shifting threat conditions as necessary to preserve stability. Those who might reject this approach to agreements should reflect upon the dramatic geopolitical differences between the early- and late-1930s, or the first and second decades of the 21st century. Agreements of limited duration and/or easily

implemented adjustments provide the opportunity for timely consideration of whether the conditions that recommended a treaty's specific limitations continue to exist.

The usual strategic arms control provision that allows the United States to withdraw from a treaty of indefinite duration if its supreme interests are in jeopardy may be insufficient protection in this regard. Withdrawing from established agreements poses a greater political challenge for liberal democracies devoted to arms control process than for authoritarian regimes. The example of the U.S.-Soviet ABM Treaty illustrates that the United States has an immensely difficult time withdrawing from arms control agreements that have outlived their geopolitical circumstances – in this case, even after the Soviet Union had manifestly violated the Treaty and it became abundantly clear that countries not a party to the treaty were intent on developing long-range ballistic missiles with which to threaten the vulnerable U.S. homeland.

Similarly, the United States had no effective options to bring Russia into compliance with the 1987 Intermediate-Range Nuclear Forces (INF) Treaty after Russia blatantly violated it, and China, which was not party to the Treaty, deployed hundreds of intermediate-range missiles in Asia. Given Russia's continuing non-compliance and blatant refusal to come back into compliance, the United States ultimately was compelled to bear severe domestic political criticism for withdrawing from the treaty, while Russia incurred marginal costs and deflected much of the criticism for its continuing violation of the Treaty. While the United States clung to the terms of the Treaty for years, Russia developed and deployed supposedly banned missiles with the potential to undermine the credibility of U.S. deterrence commitments in Europe.¹⁴⁸

¹⁴⁸ Of course, the U.S. inability to address violations of other parties to an agreement is old news. See, for example, Fred Charles Iklé, "After

In short, the constellations of adversaries, their intentions and capabilities may change dramatically during the long tenure of a traditional strategic arms control treaty. Force limits may need to be adjusted as adversaries pursue their favored nuclear forces postures, including those outside a treaty's limit. Yet, as noted, while treaties often include withdrawal provisions, withdrawing from a treaty is a particularly difficult proposition for a liberal democracy. In the new post-Cold War era, a successful arms control agreement may not necessarily be one that "locks in" limits that are "irreversible," but one that best supports the prevention of war by facilitating the adaptation of forces and policies necessary to deter war. The United States can use the 2002 Strategic Offensive Reduction Treaty—the Moscow Treaty—as a partial model. The Treaty required the United States and Russia to reduce their accountable strategic nuclear forces dramatically—to a range of 1,700-2,200 operationally deployed warheads each—and also allowed them the freedom to deploy forces as each believed necessary within those limits.

Recognize the nuclear production complex as a critical instrument of stability and arms control. The "significantly atrophied" state of the U.S. nuclear production complex is a dramatic change from the arms control conditions of the Cold War. It is inversely related to the potential U.S. capability to adapt to changing circumstances in a timely way and to opponents' likely willingness to accept serious restraints in negotiations with the United States.¹⁴⁹ It is important to recall Herman Kahn's above admonition that useful negotiations demand that opponents, "feel that we are putting adequate attention and resources into meeting

Detection: What?," *Foreign Affairs*, Vol. 39, No. 2 (January 1961), pp. 208–20, available at <https://doi.org/10.2307/20029480>.

¹⁴⁹ Demarest, "The Nuclear Weapons Council is Worried About Biden's Spending. So Are Activists," *op. cit.*

our military, political, and economic problems.”¹⁵⁰ In this regard, the state of the U.S. nuclear weapons complex will certainly add or detract from opponents’ perceptions of the United States.

During the Cold War, the United States maintained a capable and active nuclear warhead production complex, apparently deploying several new warhead designs into the stockpile each decade;¹⁵¹ moreover, it reportedly was capable of producing a large number of plutonium pits per year.¹⁵² U.S. arms control negotiations implicitly relied on the complex’s capability, flexibility, and resilience to buttress U.S. negotiating positions. The United States no longer has that support in negotiations given opponents’ robust nuclear weapon production capabilities and the significant atrophy of the U.S. nuclear production complex since the end of the Cold War.

Today, more than half of the National Nuclear Security Administration’s infrastructure is over 40 years old and a quarter dates back to the Manhattan Project era.¹⁵³ During much of the post-Cold War period, the United States has been under specific policy direction to neither build new warheads nor provide existing warheads with new

¹⁵⁰ Kahn, *The Nature and Feasibility of War and Deterrence*, op. cit., pp. 42-43.

¹⁵¹ Dakota Wood (ed.), *2019 Index of Military Strength* (Washington, D.C.: The Heritage Foundation, 2019), p. 432, available at https://www.heritage.org/sites/default/files/2018-09/2019_IndexOfUSMilitaryStrength_WEB.pdf.

¹⁵² Joseph Martz, “Detonation from the Bottom Up,” *National Security Science*, July 2013, p. 6, available at https://www.lanl.gov/discover/publications/national-security-science/2014-july/_assets/docs/NSS_JUL2014_Bottom.pdf.

¹⁵³ Department of Defense, *Nuclear Posture Review Report* (February 2018), p. 61, available at <https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF>.

missions or capabilities.¹⁵⁴ The United States shut down the pit production facility in Rocky Flats, Colorado in 1992 and the decision left the nation without a viable pit production alternative. In fact, the United States has still not recovered from the shutdown, even as it pursued over time several pit production capability replacement plans.¹⁵⁵ Law now mandates that the United States have capacity to build at least 80 pits per year by 2030, a requirement set prior to the recent sharp deterioration in relations with Russia and China. However, the United States reportedly may not be able to meet this deadline.¹⁵⁶

In contrast, Russia and China appear to have particularly ambitious nuclear production capabilities. Indeed, Russia has maintained robust nuclear warhead production capabilities and has never stopped building new nuclear warheads, unlike the life extension and sustainment efforts pursued in the United States, and China appears to be pursuing a massive nuclear expansion program.¹⁵⁷ ADM Charles Richard calls this Chinese nuclear buildup “breathtaking,” and a “strategic breakout.”¹⁵⁸

¹⁵⁴ Department of Defense, *Nuclear Posture Review Report* (April 2010), op. cit., p. xiv.

¹⁵⁵ For more information see, Michaela Dodge, “Nuclear Weapons: United States Should Rebuild Its Plutonium Pit Manufacturing Capability,” The Heritage Foundation, *Backgrounders*, No. 3581, February 1, 2021, available at <https://www.heritage.org/sites/default/files/2021-02/BG3581.pdf>.

¹⁵⁶ Dan Leone, “NNSA Can’t Make 80-Pit Production Deadline, Acting Administrator Says,” *Nuclear Security & Deterrence Monitor*, June 21, 2021, available at <https://www.exchangemonitor.com/nnsa-cant-make-80-pit-production-deadline-acting-administrator-says/>.

¹⁵⁷ See, for example, David Brunnstrom, “U.S. Concern Over China Nukes Buildup After New Silos Report,” *Reuters*, July 27, 2021, available at <https://www.nbcnews.com/news/world/u-s-concern-over-china-nukes-buildup-after-new-silos-n1275247>.

¹⁵⁸ Quoted in, Bill Gertz, “EXCLUSIVE: China building third missile field for hundreds of new ICBMs,” *The Washington Times*, August 12, 2021, available at

The apparent asymmetries in U.S. nuclear production capabilities relative to those of Russia and China can hardly contribute to their perceptions of the United States as a competent opponent with whom it is much better to collaborate than not. These asymmetries are very likely to reduce the U.S. capability to secure Russian or Chinese agreements to meaningfully reduce or limit their force postures in new parlay with the United States. Indeed, Russia has shown no apparent interest in responding to U.S. entreaties for further negotiated reductions beyond those of the 2010 New START Treaty, and China has rejected U.S. efforts to engage in strategic nuclear negotiations altogether.¹⁵⁹ In short, the United States must now recognize the invaluable role that a modernized U.S. nuclear production complex would play, not only in the pursuit of deterrence stability, but also in support of useful arms control negotiations.

Leverage potential areas of common interest. Future arms control and diplomacy efforts ought to focus on areas of potential mutual interest, e.g., on cooperation regarding best safety and security practices, transparency, and preventing misperceptions and nuclear accidents. Inasmuch as other states may share the desire to “not run unacceptably high risks of unauthorized or irresponsible behavior,” the United States should explore whether such mutual interest exists and offers an area for agreement.¹⁶⁰

<https://www.washingtontimes.com/news/2021/aug/12/china-engaged-breathtaking-nuclear-breakout-us-str/>.

¹⁵⁹ Zeng Rong, “Letter to the Editor: China Rejects Calls to Join Nuclear Disarmament Talks,” *Financial Times Online* (UK), August 24, 2021, available at <https://www.ft.com/content/634220f9-0d34-4e85-9290-698b333852e2>.

¹⁶⁰ Kahn, *The Nature and Feasibility of War and Deterrence*, op. cit., p. 43.

There is a precedent for these kinds of agreements. For example, U.S. ICBMs are targeted at the open ocean.¹⁶¹ In the event of accidental launch, they would not strike populated areas in other countries. Another example is the Ballistic Missile Launch Notification Agreement between the United States and the Russian Federation. The agreement requires advanced notice of ICBM and submarine-launched ballistic missile launches, launch areas, and impact areas so as to increase transparency and prevent potential misunderstandings. It is in the U.S. interest to multilateralize these practices and agreements.¹⁶² There are also cooperative programs that do not “look like” traditional arms control agreements or treaties but nevertheless could, in principle, contribute to deterrence stability, such as military-to-military exchanges.

Develop a competitive mindset, take time to prepare, and be prepared to walk away. It is now well understood that deterrence strategies should be tailored to the specific opponent and context in question; U.S. negotiating efforts should similarly be tailored. In preparation for arms control negotiations, the United States would do well to heed once again Herman Kahn’s advice: “...we must do our homework. We must know what we are trying to achieve, the kinds of concessions that we can afford to give, and the

¹⁶¹ Testimony of General John Hyten, Commander, U.S. Strategic Command before the U.S. House of Representatives, Committee on Armed Services, *Military Assessment of Nuclear Deterrence Requirements*, Hearing Before the United States House Committee on Armed Services, 115th Congress, 1st Session (Washington, D.C.: U.S. Government Publishing Office, 2017), available at <https://www.govinfo.gov/content/pkg/CHRG-115hhrg24683/html/CHRG-115hhrg24683.htm>.

¹⁶² The idea of doing so has been most recently introduced in James Acton and Pranay Vaddi, “A ReSTART for U.S.-Russian Nuclear Arms Control: Enhancing Security Through Cooperation,” *Carnegie Endowment for International Peace Report*, October 2020, available at https://carnegieendowment.org/files/Acton_Vaddi_ReStart.pdf.

kinds of concessions that we insist on getting... All of this will require, among other things, much higher quality preparations for negotiations than have been customary.”¹⁶³ Henry Kissinger, President Nixon’s National Security Advisor and Secretary of State, reportedly bemoaned the government’s lack of preparation for the Strategic Arms Limitation Talks.¹⁶⁴

The United States should approach the arms control process from a competitive mindset, beginning with a careful analysis of U.S. goals, strategies, strengths and weaknesses. A competitive mindset recognizes that nuclear forces require spending and limited resources translate into making trade-offs in spending priorities. The United States ought to pursue its best effort to understand adversaries’ priorities and how they will approach spending trade-offs. This analysis also would include a detailed understanding of the other party’s goals, strategies, strengths and weaknesses, operational planning, strategic culture, decision-making processes, values, and negotiating strategies, including precise analyses of foreign leaders and their backgrounds. A detailed analysis of how these factors shape the opponent’s arms control goals and practices ought to be performed prior to the start of negotiations and as part of the U.S. effort to identify its own goals and negotiating strategy. U.S. negotiators should be intimately familiar with such analyses. It is not a stretch to imagine that not all U.S. negotiations are so well informed.¹⁶⁵

Finally, achieving an agreement is not the proper metric of arms control success. The priority goal is not simply reaching an agreement, even one that reduces force

¹⁶³ Kahn, *On Thermonuclear War*, op. cit., p. 576.

¹⁶⁴ John Newhouse, *Cold Dawn: The Story of Salt* (New York: Holt, Rinehart and Winston, 1973), p. 149.

¹⁶⁵ Mark Schneider, *New START: The Anatomy of a Failed Negotiation* (Fairfax, VA: National Institute Press, July 2012), available at <https://www.nipp.org/wp-content/uploads/2014/12/New-start.pdf>.

numbers, but promoting greater safety and security. As former senior U.S. officials Henry Kissinger and Brent Scowcroft observed—using familiar deterrence jargon: “The overarching goal of contemporary U.S. nuclear policy must be to ensure that nuclear weapons are never used. Strategic stability is not inherent with low numbers of weapons; indeed, excessively low numbers could lead to a situation in which surprise attacks are conceivable.”¹⁶⁶ Securing an agreement is no challenge if the United States is willing simply to accept the opponent’s favored terms. Such an approach to negotiations, however, is likely to serve the opponent’s purposes but not those of the United States. The United States should be willing to walk away from negotiations when an outcome that serves U.S. purposes cannot be achieved. President Reagan essentially walked away from the 1986 Reykjavik Summit with the Soviet Union when it became clear that the negotiations would not achieve the end he sought. The manifest willingness to do so may ultimately be an important element in a successful negotiation. Yet, being so willing appears to be a surprisingly difficult proposition for the United States. As a former director of the Arms Control and Disarmament Agency observed over three decades ago, “...the passion for ‘an agreement’ is barely resistible. American society is result oriented. To be without any agreement is to invite serious criticism... To achieve an agreement, even one that leaves the strategic plans of both sides relatively unaffected, is to earn acclaim. Such a standard invariably proves counterproductive. As Dean

¹⁶⁶ Henry Kissinger and Brent Scowcroft, “Nuclear Weapon Reductions Must be Part of Strategic Analysis,” *The Washington Post*, April 22, 2012, available at https://www.washingtonpost.com/opinions/nuclear-weapon-reductions-must-be-part-of-strategic-analysis/2012/04/22/gIQAKG4iaT_story.html.

Acheson said, we can never get a good arms control agreement unless we are willing to live without one.”¹⁶⁷

Red team verification provisions. The United States should conduct a serious “Red Team” review of arms control agreements that carefully compares the assumptions driving the terms of an agreement with the realities of the threat environment and the interplay of verification measures and opponents’ possible noncompliance.¹⁶⁸ Given Russia’s history of violating agreements—leading to the label “serial violator”—careful attention should be given to any prospective agreement with Russia, particularly with regard to verification procedures, the potential for its violation, and the options for response. To foster independence, the assessment should be performed by an entity akin to a non-partisan, senior advisory board discrete from the executive branch; it must be provided access to the negotiating record and documents relevant to a treaty or agreement.

Historically, addressing an adversary’s noncompliance and treaty violations has been a weak spot in the U.S. approach to arms control.¹⁶⁹ That is why the United States should clearly and publicly outline potential violations, spell out their consequences, and commit to follow through should a party to a treaty or an agreement be found in violation. The potential value of the arms control process is degraded when violations are dismissed, ignored or rationalized. As an original member of the U.S. SALT delegation observed, “It is not the discovery and discussion

¹⁶⁷ Adelman, “Arms Control with and without Agreements,” *op. cit.*, p. 241.

¹⁶⁸ The idea is introduced in Susan Koch, Thomas Scheber, Kurt Guthe, *Securing Compliance with Arms Control Agreements* (Fairfax, VA: National Institute Press, June 2018), p. 98, available at <https://www.nipp.org/wp-content/uploads/2018/06/2018-Arms-Control-for-web-2.pdf>.

¹⁶⁹ Iklé, “After Detection: What?,” *op. cit.*, pp. 89-95.

of Soviet cheating that endangers arms control, but the cheating itself that discredits arms control as an instrument of international relations. The arms control process is strengthened when the parties comply with their commitments."¹⁷⁰ The temptation to cheat on an arms control agreement is likely higher if opponents suspect that the United States is unable to muster the political will necessary to call out violations promptly and in a meaningful manner. One administration's proclamations do not necessarily translate to another administration's policy, which is why effective responses to treaty violations and countermeasures should be part of a treaty ratification process.¹⁷¹ Arms control can be strengthened if significant costs are established for noncompliance. In a more complex world of several nuclear-armed adversaries, letting an adversary's arms control violations go unremarked or unaddressed inevitably will influence the calculus of others in determining whether they need to uphold their treaty commitments.

Verification provisions beyond national technical means must be in place for as long as treaties and agreements are in force.¹⁷² As Russian violation of the INF Treaty shows, even the elimination of systems subject to a treaty does not guarantee that they will remain eliminated during the treaty's duration. The key arms control challenge for the United States historically has been holding the other party accountable for its noncompliance—particularly noncompliance that casts doubt on the value and effectiveness of a treaty that has been touted as a great foreign policy success. Identifying in advance the potential avenues for an opponent's noncompliance, and specifying

¹⁷⁰ William R. Van Cleave, "Arms Negotiations," *Science*, Vol. 228, No. 4702 (May 1985), pp. 936–937.

¹⁷¹ Adelman, "Arms Control with and without Agreements," *op. cit.*, p. 245.

¹⁷² Koch, Scheber, and Guthe, *Securing Compliance with Arms Control Agreements*, *op. cit.*, p. xi.

U.S. options for responding to continuing noncompliance, may ease this challenge somewhat.

Conclusion

The late historian Donald Kagan's unparalleled study, *On the Origins of War*, concludes that a "special characteristic" of Western enlightenment civilization is the belief that the physical and social environment can be controlled so as to continually improve society, including the orchestration of peace. Kagan observes, "It is not surprising to come upon these hopeful expectations by men of the Enlightenment and their intellectual heirs."¹⁷³ Since the 18th century, Western enlightened thought has viewed war as abnormal and irrational—the result of a wayward drive for national gain. The preferred solution to military threats is to educate opposing leaders about the irrationality of war in the expectation that they will then choose peace.¹⁷⁴ The balance of terror deterrence paradigm is a remarkable reflection of this "special characteristic" of Western civilization and Enlightenment thought: Nuclear weapons and mutual societal vulnerability obviously render war "unthinkable" for any rational leadership, and when opponents are sufficiently aware of this condition, they will choose prudent peace over nuclear risk. From this expectation of leadership calculations and behavior, arms control negotiations may be expected to play a vital role—they can serve to educate opponents about nuclear risks and codify mutual societal vulnerability, and thus advance the decisive disincentive to war for all rational leaderships.¹⁷⁵ This is the

¹⁷³ Donald Kagan, *On the Origins of War* (New York: Doubleday, 1995), pp. 3-4.

¹⁷⁴ *Ibid.*, pp. 569-572.

¹⁷⁵ Paul Warnke, former Director of the U.S. Arms Control and Disarmament Agency, famously observed that the United States "ought to be trying to educate them [Soviet leaders] into the real world of

expected great value of strategic stability and arms control per the Cold War paradigm.

Yet, the harsh reality is that many apparently rational foreign leaderships do not share this Western Enlightenment view of international politics—they are not the mirror image of Western leaders. As the late Professor Adda Bozeman observed, all national leaderships are not “structurally alike in essence,” and are not driven predictably by common unifying themes such as the survival of the nation and the avoidance of war. Instead, “The evidence shows, in particular, that [in contrast to Western thought] peace is neither the dominant value nor the norm in foreign relations and that war, far from being perceived as immoral or abnormal, is viewed positively.”¹⁷⁶ These departures from Western enlightened thinking certainly appear to be reflected in contemporary opponents’ offensive, coercive nuclear first-use threats and planning, in addition to China’s lack of interest in nuclear arms control and Russia’s apparent serial violation of some existing and past agreements.¹⁷⁷

Given the great variability in opponents’ thinking about nuclear weapons and the inglorious record of many U.S. strategic arms control efforts compared to promises, some commentators suggest that the United States simply withdraw from strategic arms control engagements. There is some sense to just saying “no,” as China does now. However, this almost certainly is not a politically viable option for the United States and would preclude even the

strategic nuclear weapons.” See the interview of Paul Warnke in, “The Real World of Paul Warnke,” *New Republic*, March 26, 1977, pp. 23-24.

¹⁷⁶ Adda Bozeman, “War and the Clash of Ideas,” *Orbis*, Vol. 20, No. 1 (Spring 1976), pp. 76, 102.

¹⁷⁷ See, for example, Department of State, Bureau of Arms Control, Verification and Compliance, *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments*, op. cit.

potential for useful engagement for fear of the process. The drive to pursue arms control in some form is ingrained in Washington's political culture—the only question is whether it will be conducted in a potentially reckless or useful manner.

The United States may not entirely overcome the legacy of conducting arms control as a function of the now-archaic Cold War deterrence stability paradigm. However, given the realities of the threat environment, this history should not prevent the United States from thinking anew about stability and how arms control may now realistically contribute to a revised understanding of stable deterrence and Western security. The necessary reconsideration of what constitutes stable deterrence, and the conditions and forces that contribute to stable deterrence, demand a comparable reconsideration of U.S. strategic arms control goals and modes based on this new understanding. Indeed, understanding the problems with the archaic Cold War stability paradigm and with conducting arms control as a function of that paradigm is an imperative given the dramatic changes since the end of the Cold War. It is the initial step in establishing a basis for arms control that may be useful rather than harmful to stable deterrence.

About the Authors

Dr. Keith B. Payne is a co-founder of the National Institute for Public Policy, a nonprofit research center located in Fairfax, Virginia, and Professor Emeritus, Graduate Department of Defense and Strategic Studies, Missouri State University. In 2005, he was awarded the Vicennial Medal from Georgetown University for his many years on the faculty of the graduate National Security Studies Program.

Dr. Payne has served in the Department of Defense as the Deputy Assistant Secretary of Defense for Forces Policy and as a Senior Advisor to the Office of the Secretary of Defense (OSD). He has received the Distinguished Public Service Medal and the OSD Award for Outstanding Achievement.

Dr. Payne also served as a Commissioner on the bipartisan Congressional Commission on the Strategic Posture of the United States, as a member of the Secretary of State's International Security Advisory Board, and as a member of U.S. Strategic Command's Senior Advisory Group. He is an award-winning author, co-author, or editor of over 200 published articles and 40 books and monographs. His most recent book is *Shadows on the Wall: Deterrence and Disarmament* (2020).

Dr. Payne received an A.B. (honors) in political science from the University of California at Berkeley, studied in Heidelberg, Germany, and received a Ph.D. (with distinction) in international relations from the University of Southern California.

Dr. Michaela Dodge is a Research Scholar at the National Institute for Public Policy. Prior to joining the National Institute, Dr. Dodge worked at The Heritage Foundation from 2010-2019. She left Heritage to serve as Senator Jon Kyl's Senior Defense Policy Advisor from October to December 2018. Her last position at Heritage was a Research Fellow for Missile Defense and Nuclear Deterrence.

Dr. Dodge's work focuses on U.S. nuclear weapons and missile defense policy, nuclear forces modernization, deterrence and

assurance, and arms control. Additionally, she was a Publius Fellow at the Claremont Institute in 2011 and participated in the Center for Strategic and International Studies PONI Nuclear Scholars Initiative Program.

Dr. Dodge received a Ph.D. from George Mason University in 2019. She earned her Master of Science in Defense and Strategic Studies from Missouri State University in 2011. At Missouri State, Dr. Dodge was awarded the Ulrike Schumacher Memorial Scholarship for two years. She received a bachelor's degree in international relations and defense and strategic studies from Masaryk University, Czech Republic.

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