Arms Control: Can Its Future Be Found in Its Past?

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As one of its very first acts in the realm of national security affairs, the Biden Administration extended the New START Treaty of 2010 which was set to expire on February 5, 2021. The unconditional extension of the treaty for five years was agreed with the government of the Russian Federation despite earlier calls by some experts, including the current Under Secretary of State for Political Affairs, Victoria Nuland, for a shorter extension conditioned on Russia engaging in good faith negotiations on future arms control measures, including those covering those elements of its nuclear forces not covered by the Treaty like so-called non-strategic nuclear weapons and some of the new exotic nuclear weapons that President Putin has announced in recent years. As Senate minority leader Mitch McConnell has noted, "President Biden agreed to Russian requests for a full five-year extension of the New START Treaty, no strings attached. He gave it up for free, undermining our leverage to extract concessions in future negotiations."

Nonetheless, the sigh of relief from advocates of arms control after the New START Treaty renewal was audible. In the wake of the Trump Administration's withdrawal from the Intermediate Nuclear Forces Treaty (INF) of 1988 and the Open Skies Treaty of 1992 there was a great deal of fear that the New START Treaty which one scholar has called "the key bilateral arms control agreement" would expire. Now that the keystone of the arms control enterprise remains in place it is worth examining why so many arms control experts and advocates have been warning about "the end," "the death" or the "deep crisis" of arms control. As one leading Russian scholar of arms control has argued, "legacy Cold Warera arms control is collapsing and an uncontrolled nuclear arms race is threatening to return." 2

What has produced that outpouring of concern? And how ought one think about arms control as we move from a strategic era dominated by concerns about terrorism and counterinsurgency to one in which the focus of national security affairs is once again great power competition?

¹ Eric Edelman and Franklin C. Miller, "Russia is Beefing Up Its Nuclear Arsenal. Here is What the U.S. Needs to Do," *Politico*, December 31, 2019; Victoria Nuland, "Pinning Down Putin: How A Confident America Should Deal with Russia," *Foreign Affairs* 99:4, pp. 93–106; Senator Mitch McConnell, Remarks on the Senate Floor, June 23, 2021, https://www.republicanleader.senate.gov/newsroom/remarks/a-tale-of-two-pipelines-biden-strategic-priorities-out-of-order. The author would like to thank Professor Peter Mansoor for inviting him to deliver an earlier version of this brief as the keynote address to the Military Frontiers Graduate Student Symposium sponsored by the Mershon Center for International Security Studies of the Ohio State Unuversity on April 16, 2021.

² For the assessment of New START as "the key" arms control agreement see Pavel Podvig, "Russia's Current Nuclear Modernization and Arms Control," *Journal of Peace* and Nuclear Disarmament, 1:2, pp. 256-267, quotation on page 256; Alexey Arbatov, "Mad Momentum Redux? The Rise and Fall of Nuclear Arms Control" *Survival*, 61:3, 7-38, quotation on p. 8

In retrospect many arms controllers look back on the late Cold War and the early post-Cold War—essentially the decade between 1988–1998—as the "golden era" of arms control. In addition, to the INF Treaty, two START Treaties were reached (although START II was never ratified) a START III Framework was agreed, and both sides took unilateral steps in parallel to reduce deployments of so-called non-strategic nuclear weapons. Beyond bilateral nuclear arms control, a number of multilateral agreements were reached, including on Conventional Forces in Europe and Chemical weapons as well as a variety of accords on confidence building measures.³

What disrupted the halcyon days of this supposed "golden era" of arms control?

First, the proliferation of nuclear weapons to new nuclear weapons states struck the first blow at the arms control system that had developed at the end of the Cold War. In 1998 both India and Pakistan conducted nuclear tests that inaugurated a so-called Second Nuclear Era marked by the nuclearization of East Asia according to many observers.⁴

North Korea's test of a Taepodong-1 missile in August of that year, coming on the heels of a national commission report on the dangers of ballistic missile proliferation, sparked concern in the U.S. about the dangers of so-called rogue states developing the capability to attack the continental U.S. with nuclear weapons. Many had believed that the issue of North Korea's nuclear program had been mitigated, if not resolved by the Agreed Framework reached with Kim Chong-il in 1994. But the missile test and concerns about Iraq and Iran's WMD programs prompted the Clinton Administration to pursue amending the Anti-Ballistic Missile Treaty of 1972 with the USSR to enable a limited missile defense capability to defend against either a small rogue state arsenal or an accidental launch. Those negotiations were unsuccessful, but they set the stage for President George W. Bush's decision to abrogate the ABM Treaty to allow the development of a limited BMD capability albeit a more expansive version of what Clinton had advocated.⁵

The second factor in upending the "golden age" of arms control was the long decline and envenoming of U.S.-Russian relations. The unraveling and collapse of the Soviet Union had removed a major impediment that had troubled the arms control process throughout the Cold War. Absent the ideologically driven strategic antagonism that created the bipolar distribution of power in the international system and drove the constant fear of the superpower rivals that the other was seeking unilateral advantage with every political development around the world, it was relatively easy to reach agreements that capped and then reduced the levels of strategic armament on both sides. In fact, the penumbra of reasonably good will on both sides persisted past the 9/11 attacks in the U.S. as well as the U.S. abrogation of the ABM Treaty and enabled the relatively quick and easy negotiation of the Moscow Strategic Offensive Reductions Treaty in 2002 which led to the largest numerical reductions of any nuclear arms treaty.

That, however, was the arguably the high point of strategic nuclear arms control. The dramatic reductions of the SORT Treaty committed the two sides to cut their forces down to a range of 1700-2200 warheads on each side. This was a

³ On this point see Michael Krepon, "The Golden Age of Arms Control," Arms Control Wonk, April 22, 2019, https://www.armscontrolwonk.com/archive/1207168/thegolden-age-of-nuclear-arms-control/.

⁴ Therese Delpech, "Nuclear weapons and the 'new world order': early warning from Asia?," Survival, 40:4, 57-76; Fred Ikle,"The Second Coming of the Nuclear Age," Foreign Affairs, 75:1, pp. 119–128; Keith Payne, Deterrence in the Second Nuclear Age, (Lexington, KY: University of Kentucky Press, 1996); Paul Bracken, Fire in the East: The Rise of Asian Military Power and the Second Nuclear Age, (New York: Harper and Row, 1999) and Paul Bracken, The Second Nuclear Age: Strategy, Danger, and the New Power Politics, (New York: St. Martins, 2013); Colin Gray, The Second Nuclear Age, (Boulder, CO: Lynne Rienner, 1999).

⁵ Sheryl WuDunn, "North Korea Fires Missile Over Japanese Territory," New York Times, September 1, 1998; Ballistic Missile Threat Commission, https://www.hsdl.org/?view&did=439649; Joel S. Witt, Daniel B. Poneman and Robert Gallucci, *Going Critical: The First North Korean Nuclear Crisis*, (Washington, DC; Brookings Institution Press, 2004); on the Clinton Administration and national missile defense see, https://clintonwhitehouse5.archives.gov/WH/new/html/Wed_Oct_4_141122_2000.html and Steven A. Hildreth and Amy F. Woolf, National Missile Defense: Issues for Congress, CRS Issue Brief for Congress, July 17, 2001, https://www.everycrsreport.com/files/20010717_IB10034_e9cabd11f213633765e85ef3d89ef16f1120f27b.pdf; Terence Neilan, "Bush Pulls Out of ABM Treaty, Putin Calls Move a Mistake," New York Times, December 31, 2001.

dramatic reduction from roughly 6,600 on each side under the START II Treaty (and well down from the respective highs of 36,000 and 40,000 on each side at the peak of the Cold War). Future progress would seem considerably less dramatic. The New START Treaty of 2010 reduced the warhead level for each side to 1550 but because of the vagaries of the counting rules under the Treaty (specifically the bomber counting rule allowing bombers to count as one warhead whatever their actual load) for accountable warheads both sides would, in fact, be entitled to build up their warhead holdings (as the Russians ultimately did).

Moreover, the Russo-American relationship entered a period of steep decline after 2003. Differences over the Iraq War certainly didn't help the relationship, but the so-called Orange Revolution in Ukraine in 2004-05 followed by other so-called "color revolutions" in Georgia, Kyrgyzstan, and elsewhere appear to have convinced President Putin that U.S. policy was not just animated by imposing regime change on rogue regimes identified by President George W. Bush as the so-called "Axis of Evil" (Iraq, Iran, and North Korea), but on Russia itself.

These concerns were accompanied by the creation of an increasingly authoritarian and personalized regime in Moscow centered on Putin and his cronies from his days in the security services and the St. Petersburg mayor's office. Vladimir Putin's angry speech at the Munich Security Conference, the NATO Bucharest Summit, and its conclusion that Georgia and Ukraine would someday become members of NATO, were way stations to the Russian invasion of Georgia in 2008 and the seizure of Crimea and destabilization of Ukraine in 2014.⁷

Although it was barely noted at the time the forcible incorporations (despite a fig leaf plebiscite) undid one of the major achievements of the "golden age" of arms control—the Budapest Memorandum of 1994 that resolved the dispute between Moscow and Kiev over control of the nuclear weapons that had been left on Ukrainian territory after the dissolution of the USSR. In that agreement, the signatories, including the United States, the UK, and Russia, agreed to compensate Ukraine for giving up its claims to the nuclear weapons amidst guarantees that all parties would respect the territorial integrity of Ukraine within its existing boundaries and renounce the use of force against Ukraine. This, of course, was followed by Russia unleashing a political warfare campaign of disinformation to interfere in U.S. Presidential election campaigns in 2016 and 2020.8

The third factor that has disrupted the arms control regime has been Russia's record of non-compliance. Soviet violations of arms control treaties were a hardy perennial of the Cold War and a major talking point for critics of the entire arms control enterprise. The asymmetry between a closed society like the Soviet Union and an open society like

⁶ For the basic limits of the Moscow and New START Treaties see Amy F. Woolf, *Nuclear Arms Control: The Strategic Offensive Reductions Treaty*, Congressional Research Service Report for Congress, RL31448, February 7, 2011 and Woolf, *The New START Treaty: Central Limits and Key Provisions*, Congressional Research Service Report for Congress, R41219, July 30, 2021. For concerns about the potential for Russia to build up to the New START Treaty limits see the testimony of Ambassador Robert Joseph and the author during the ratification hearings for the Treaty, *The New START Treaty (Treaty Doc. 111–5)*, Hearings Before the Committee on Foreign Relations, United States Senate, One Hundred Eleventh Congress, Second Session, (April 28, May 18, 19, 25, June 10, 15, 16, 24, July 15, 2010), pp. 356–368.

⁷ For the domestic backdrop in Russian and the decline of U.S.-Russian relations and the failure of multiple efforts to reset those relations see the late Karen Dawisha's *Putin's Kleptocracy: Who Owns Russia*, (New York, Simon and Schuster, 2014); Catherine Belton, *Putin's People: How the KGB Took Back Russia and then Took On the West*, (New York, Farrar, Strauss, and Giroux, 2020), Angela E. Stent, *The Limits of Partnership: U.S.-Russian Relations in the Twenty-First Century*, (Princeton, NJ: Princeton University Press, 2014) and Angela Stent, *Putin's World: Russia Against the West and with the Rest*, (New York: Hachette, 2019); for a participant's account that reflects empathy (if not sympathy) for Russia's current geopolitical circumstances, see Robert M. Gates, *Exercise of Power: American Failures, Successes, and a New Path Forward in the Post-Cold War World*, (New York: Alfred A. Knopf, 2020), pp. 249-291; see also the author's contribution to a *National Interest* symposium, "America and Russia: Permanent Confrontation?" *The National Interest*, 171, September-October 2017, pp. 8–10.

⁸The most comprehensive account of the Budapest Memorandum is, David Yost, "The Budapest Memorandum and Russia's Intervention in Ukraine," International Affairs, 91:3, pp. 505-538, but for the impact on the non-proliferation regime see Mariana Budjeryn and Andreas Umland, "Damage Control: The Breach of the Budapest Memorandum and the Nuclear Non-Proliferation Regime," in Soviet and Post-Soviet Politics, 229, pp. 177–190; for accounts by U.S. participants see Strobe Talbott, The Russia Hand: A Memoir of Personal Diplomacy, pp. 78–114, 375; Steven Pifer, "The Trilateral Process: The United States, Ukraine, Russia and Nuclear Weapons," Brookings Institution, Arms Control Series, Paper 6, May 2011, for an interesting analysis of Ukraine's renunciation of an independent nuclear deterrent in the early 1990s see Polina Sinovets and Mariana Budjeryn, "Interpreting the Bomb: Ownership and Deterrence in Ukraine's Nuclear Discourse," Nuclear Proliferation International History Project, Woodrow Wilson Center for Scholars, Working Paper No. 12, December 2017

the United States had been an obstacle to controlling nuclear weapons from the onset of the atomic age. Ultimately, Soviet objections to on-site inspections in order to verify agreements, gave way to reliance on so-called "national technical means" of verification (spy planes and overhead satellite photography and sensing) that enabled the agreements of the 1970s–1990s. But concerns about whether the Soviets were in fact abiding by the agreements persisted. One prerequisite for the successful negotiation of the arms control agreements reached during the "golden age" was the USSR cleaning up its record of compliance as it did with the Krasnoyarsk Radar during the Reagan Administration.9

Russian compliance with arms control agreements became an issue again in the past decade and it was not unrelated to the proliferation of ballistic and cruise missile technology mentioned earlier. As the People's Republic of China, Pakistan, and others all built up their medium- and intermediate-range missile systems, Russia expressed more and more disquiet about the INF Treaty which restricted the United States and Russia from all missiles with a range of 500 to 5500 kilometer. Russian Defense Minister Sergei Ivanov in 2005 protested so vigorously about the Treaty to then Secretary of Defense Donald Rumsfeld that Rumsfeld jokingly told him the U.S. would follow Russia out of the INF Treaty, but Russia would have to go first since the U.S already had abrogated the ABM Treaty in 2002. Ivanov raised the issue with Rumsfeld's successor Robert Gates during their first meeting in 2007. Ivanov asserted that Russia would not deploy intermediate range missiles "in the west" but wanted "to place them in the south and the east – to counter Iran, Pakistan, and China." Gates responded that "You are on your own. The United States will not support discarding the INF Treaty." President Vladimir Putin denounced the Treaty in his famous, dyspeptic speech at the 2007 Munich Security Conference. "The Russian president said the treaty was outdated because it prohibited the U.S. and Russia from possessing such weapons while other countries were not restricted in developing them. 'We are forced to think about guarantees of our security," he told the distinguished audience.¹⁰

The Russians did not follow through on their threats to abrogate the Treaty, despite their clear misgivings about the rising missile threats along their southern and far eastern borders. A joint Russo-American effort to globalize the treaty at the UN was unsuccessful since no other countries were willing to sign on. At that point, sometime around 2008, the Russians apparently made a conscious decision to develop systems that could fly in the Treaty prohibited ranges, like the 9M729 missile, or would constitute a violation of the INF Treaty if they were deployed on land (the SS-N-30A or *Kalibr* land-attack cruise missile).¹¹

Subsequently, the United States, working with its allies, sought over 5 years through two different Presidential Administrations to get Russia to address the issue of INF Treaty compliance. The Russians, however, countered with charges of their own, alleging U.S. violations that were clearly calculated to deflect attention from Russia's noncompliance. Ultimately, the Trump Administration notified the Russian Government of its intent to withdraw from the Treaty, a step that was completed in August 2019. The withdrawal was justified on the understandable grounds that

⁹ Mark B. Schneider, "Russian Violations of Its Arms Control Obligations," Comparative Strategy, 31:4, 331–352; Christopher A. Ford, "Russian Arms Control Compliance: A Report Card, 1984–2020," United States Department of State, Arms Control and International Security Papers, 1:10, June 18, 2020; Pavel Podvig and Amy Woolf, Monitoring, Verification, Compliance Resolution in U.S.—Russian Arms Control, United Nations Institute for Disarmament Research, 2019.

¹⁰ Hubert Wetzel, Demeteri Sevastopolu, and Guy Dinmore, "Russia Confronts U.S. on Nuclear Arms Pact," Financial Times, March 8, 2005; Robert M. Gates, Duty: Memoirs of a Secretary at War, (New York: Alfred A. Knopf, 2014); p. 154; Stephen Fidler and Demeteri Sevastopolu, "Putin Rails Against U.S. Foreign Policy," Financial Times, February 10, 2007.

[&]quot;An excellent summary can be found in House of Commons, Defence Committee, Missile Misdemeanours: Russia and the INF Treaty, Fifteenth Report of Session 2017-2019, 26 March 2019, pp. 12–15; Amy F. Woolf, Russian Compliance with the Intermediate Range Nuclear Forces (INF) Treaty: Background and Issues for Congress, Congressional Research Service Report to Congress, R43832, August 2, 2019, p. 24; for the Joint U.S.–Russian statement on globalizing the Treaty see U.S. Department of State, Joint U.S.–Russian Statement on the Treaty on the Elimination of Intermediate-Range and Shorter-Range Missiles at the 62nd Session of the UN General Assembly, New York, NY, October 25, 2007, which can be found at https://2001-2009.state.gov/r/pa/prs/ps/2007/oct/94141.htm

it made no sense to be part of an agreement that limited only two nations on earth from one class of weapons if only one of them was abiding by the agreement as well as the potential utility of conventional missiles in the prohibited ranges for purposes of deterrence.¹²

As U.S. and western relations with Russia deteriorated, concerns about arms control were not limited to the area of nuclear weapons. Russia also "suspended" its participation in the agreement limiting the Conventional Forces in Europe (although there was no provision for "suspension" in the agreement). Despite repeated efforts by the U.S. and its allies to address Russian grievances about the Treaty (which had some arguable basis in reality) they were unsuccessful in alleviating Russian concerns since the Russians seemed to be more interested in being aggrieved than in reaching any kind of practical agreement to assuage their putative grievances.¹³

The fourth factor, not unrelated to the previous discussion of the failure of the INF Treaty, that helped undermine the "golden era" was the rise of China and the proliferation of Chinese ballistic missile capabilities. The dramatic growth and diversity of China's ballistic and cruise missile arsenal raised concerns in both Moscow and Washington about the potential need for countervailing capabilities. In addition, the quantitative and qualitative modernization of the PRC's nuclear weapons capabilities (e.g., submarine launched ballistic missile capability, multiple independently retargetable and maneuverable warheads and prospectively hypersonic boost-glide vehicles) underscored the seriousness of the issue for both the U.S. and Russian governments. Although China's nuclear arsenal has remained numerically small compared to the US and Russian arsenals, as the latter's warhead counts have come down (as the result of arms control agreements) the modernizing Chinese force becomes more of concern for both. Recent revelations that China is creating the infrastructure for a serious numerical increase will only heighten those concerns in Moscow and Washington. As State Department Under Secretary Bonnie Jenkins recently noted "The PRC's nuclear build-up, which has accelerated in the last year, now looks to include novel nuclear-powered capabilities and a massive increase of its silo-based ICBM forces. The destabilizing dynamic originating from the PRC's rapid and opaque nuclear build-up cannot be ignored." ¹⁴

Finally, much as the nuclear age took a fateful turn in the early 1960s with the rapid advent of ground-launched and seabased ballistic missiles, which dramatically shortened the warning time of an impending attack for both sides while

¹² U.S. Government efforts to address the Russian noncompliance are outlined in both the House of Commons and CRS reports cited above. For the utility of conventional missiles for U.S. deterrence in Europe and the Indo-Pacific see Alexander Lanoszka, "The INF Treaty: Pulling Out in Time," Strategic Studies Quarterly, 13:2, pp. 48–67

¹³ Mika Hayashi, "Suspension of Certain Obligations of the CFE Treaty by NATO Allies: Examination of the Response to the 2007 Unilateral Treaty Suspension by Russia," Journal of Conflict and Security Law, 18: 1, pp. 131–150; for an account of the issues by three leading experts on conventional arms control see Anne Witkowsky, Sherman Garnett, and Jeff McCausland, "Salvaging the Conventional Armed Forces in Europe Treaty Regime: Options for Washington," Brookings Institution, Arms Control Series, Paper 2, March 2010.

¹⁴ The build-up of China's ballistic and cruise missile forces has been chronicled by the annual Department of Defense Reports to Congress on Chinese military power as well as the reports of the Congressionally mandated China Economic and Security Review Commission. The 2020 DoD reports notes that, "The PRC has more than 1,250 ground-launched ballistic missiles (GLBMs) and ground-launched cruise missiles (GLCMs) with ranges between 500 and 5,500 kilometers. The United States currently fields one type of conventional GLBM with a range of 70 to 300 kilometers and no GLCMs." Office of the Secretary of Defense, Military and Security Developments Involving the People's Republic of China 2020, Annual Report to Congress, (Washington, DC: Department of Defense, 2020), p. ii, See also Defense Intelligence Ballistic Missile Analysis Committee, Ballistic and Cruise Missile Threat 2020 (Dayton, OH: National Air and Space Intelligence Center (NASIC), 2020). A useful assessment of the Chinese missile force is David C. Logan, "Making Sense of China's Missile Forces," in Phillip C. Saunders, Arthur S. Ding, Andrew Scobell, Andrew N.D. Yang, and Joel Wuthnow, eds. Chairman Xi Remakes the PLA: Assessing Chinse Military Reforms (Washington, DC: National Defense University Press, 2019), pp.393-436; on the role of the PRC's missile build-up on U.S. withdrawal from the INF Treaty see, Jacob Stokes, "China's Missile Program and U.S. Withdrawal from the Intermediate Nuclear Forces (INF) Treaty," Staff Research Report, U.S.-China Economic and Security Review Commission, Updated February 4, 2019; for discussion of China's nuclear arsenal and Chinese thinking about nuclear weapons see Jacob Cohn, Adam Lemon and Evan Braden Montgomery, Assessing the Arsenals: Past, Present, and Future Capabilities, (Washington, DC: Center for Strategic and Budgetary Assessments, 2019) and Thomas G. Mahnken, Gillian Evans, Toshi Yoshihara, Eric S. Edelman, and Jack Bianchi, Understanding Strategic Interaction in the Second Nuclear Age, (Washington, DC: Center for Strategic and Budgetary Assessments, 2019); for China's silo-building see "China is Rapidly Building New Nuclear-Missile Silos," The Economist, July 31, 2021 at https://www.economist.com/china/2021/07/31/china-is-rapidly-building-newnuclear-missile-silos and William J. Broad and David Sanger, "A 2nd New Nuclear Missile Base for China, and Many Questions About Strategy," The New York Times, July 26, 2021; for a different view that stresses the limits on China's ability to rapidly grow its arsenal see David C. Logan, 'Hard Constraints on a Chinese Nuclear Breakout,' The Nonproliferation Review, 24:1-2, pp. 13-30, Bonnie Jenkins, "Nuclear Arms Control: A New Era?" Remarks to the 17th Annual NATO Conference on WMD Arms Control, Disarmament, and Nonproliferation, September 6, 2021.

heightening the potential advantages of striking first with a devastating and potentially decapitating blow, today we stand on the cusp of another revolution in military affairs with new technologies including cyber, hypersonic vehicles, long-range conventional precision strike and artificial intelligence that threaten to blur the line the between conventional and nuclear warfare and drastically complicate the entire enterprise of attempting to limit and control the arsenals of the nuclear weapons powers. As Alexei Arbatov, a noted Russian arms controller, has noted, "the strategic circumstances have profoundly changed during the last 50 years, and arms control has simply failed to adapt to the changes." In a context marked by persistent proliferation of ballistic and cruise missile technology, the United States and Russia proved themselves singularly unable to adapt "the existing arms control treaties...to the new military environment." ¹⁵

To complicate matters further all three major nuclear powers—Russia, China and the United States—are all in the midst of modernizing their nuclear forces. When then-President Barack Obama proposed, during a speech at the Brandenburg Gate in Berlin, to negotiate even lower warhead levels with Russia after the New START Treaty entered into force, perhaps down to a level of 1,000 warheads on each side, the Russians balked unless China (as well as the UK and France) were included in the negotiations. In response to the speech Russia's Deputy Foreign Minister Sergey Ryabkov said that Russia "cannot endlessly agree to bilateral cuts and limitations of nuclear weapons with the United States," and that "lending the disarmament process a multilateral character is becoming an ever more pressing task." ¹⁶

When the Trump Administration, some seven years later, proposed including China in any New START follow-on treaty, however, the Russians suggested it was a "non-starter for us." In any event, the PRC has shown absolutely zero interest in negotiating about the size or scale of its nuclear weapons arsenal. As Ambassador Bonnie Jenkins has observed, "PRC officials have sidestepped a meaningful dialogue on nuclear weapons."¹⁷

The growing complexity of the military competition among the United States, Russia, and China has both thrown a brighter light on the nuclear dimensions of that competition while at the same time making the prospects of finding arms control solutions to the problems and concerns that each power harbors about the others that much more daunting. It makes sense, against that backdrop, to step back and consider the original purposes of arms control and the question of whether the history of the "golden age" of bipolar, strategic nuclear arms control provides, as many arms controllers suggest, the key to moving "back to the future" as it were or whether an older, history of arms control efforts during the pre-nuclear era suggests some alternative approaches.

The origins of arms control are rooted in concerns about arms races and their impact on international security and, in particular, the purported connection between arms competition and the outbreak of war. According to arms race theorists, because nations operate in a state of anarchy with no overarching supranational legal authority, they seek to improve their own security by self-help. But because of the "security dilemma"—that is, that efforts by one nation to

¹⁵ The impact of the advent of ballistic missiles on ideas of deterrence and arms control were explored very shrewdly by Henry Kissinger, *The Necessity for Choice:* Prospects of American Foreign Policy, (New York: Harper Bros., 1960), pp. 10–58 and 218–297, Arbatov, "Mad Momentum Redux," pp. 12–13.

¹⁶ Jackie Calmes, "Obama Asks Russia to Join In Reducing Nuclear Arms," *The New York Times*, June 19, 2013, Ryabkov's response can be found in Alexander Kolbin, "Obama Dreams of a Nuclear Free World," *Russia-Direct*, June 24, 2013 at: ttps://www.russia-direct.org/opinion/obama-dreams-nuclear-free-world

¹⁷ Michael R. Gordon, "Russia Rebuffs Trump's Arms Control Proposal," *The Wall Street Journal*, October 1, 2020. The case for including China in ongoing strategic nuclear arms control discussions has been evaluated with serious doubts in Frank G. Klotz and Oliver Bloom, "China's Nuclear Weapons and the Prospect for Multilateral Arms Control," *Strategic Studies Quarterly*, 7:4, pp 3–10, and more positively in Stephen J. Cimbala, "China's Strategic Nuclear Arms Control: Avoiding the 'Thucydides Trap,'" *Military and Strategic Affairs*, 7:3, pp. 79–92, Alexei Arbatov, "Engaging China in Nuclear Arms Control," *Carnegie Moscow Center*, October 2014, and Susan Turner Haynes, "Dragon in the Room: Nuclear Disarmament's Missing Player," Strategic Studies Quarterly, 12:1, pp. 25–47, Jenkins remarks to the 17th Annual NATO Conference on WMD Arms Control, Disarmament, and Nonproliferation, September 6, 2021

increase its security by arming itself inevitably make other rivals feel less secure—these efforts at self-help lead to a spiraling increase in armaments by all parties.¹⁸

This "action-reaction" model of arms races, as Robert McNamara dubbed it, has a mechanical quality to it and close study of the actual arms competitions between the US and Soviet Union during the Cold War, for example, suggest a far more complicated picture that reflects—among other things—national history, strategic culture, bureaucratic politics, military service specific doctrines, etc. Nonetheless, the idea of an action-reaction model, "apes on a treadmill" as one former Director of the Arms Control and Disarmament Agency once suggested, has been dominant. With the advent of nuclear weapons many experts concluded that an unconstrained arms race would lead almost inevitably to a global catastrophe.¹⁹

If the arms race was likely to lead to a devastating disaster many of these same experts decided that disarmament would be the best antidote. But total and complete disarmament seemed an overly idealistic and impractical goal, particularly in the aftermath of the second world. Hence, finding some means to cap the arms race seemed a worthy endeavor. This became even more urgent when the compression in time and space of destructive power that nuclear weapons created became tied to the very short decision times for retaliation that resulted from new technologies. This occurred when intercontinental ballistic missiles and submarine launched ballistic missiles entered the mix of forces on both sides of the superpower divide. The founding fathers of arms control theory—Thomas Schelling, Morton Halperin, Hedley Bull and Donald Brennan—while differing on many points, agreed that the characteristics of modern nuclear weapons created a "reciprocal fear of surprise attack" because the character of nuclear weapons gave a first mover advantage to whichever side fired first and that the short decision time available to policy makers also increased the chances of miscalculation or accidental war.²⁰

Since a nuclear war would be ruinous for both sides, as Schelling and Halperin argued in their canonical 1961 study, *Strategy and Arms Control*, there was a mutual interest in avoiding war, minimizing the costs of the arms race, and "curtailing the scope of violence of war in the event that it occurs." Since potential adversaries shared an interest in military cooperation as well as competition "the essential feature of arms control is the recognition of the common interest, of the possibility of reciprocation and cooperation." They remained agnostic as to "whether the most promising areas of arms control involve reductions in certain kinds of military force, increases in certain kinds of military force, qualitative changes in weaponry, different modes of deployment, or arrangements superimposed on existing military

¹⁸ The Arms Race literature is too voluminous to cite in its entirety. A seminal consideration was provided by Samuel P. Huntington, "Arms Races: Prerequisites and Results," Public Policy, 8.1, pp. 41–86, excellent surveys of the arms race literature are George Downs, "Arms Races and War," in Philip E. Tetlock, John L. Husbands, Robert Jervis, Paul C. Stern, and Charles Tilly, eds, Behavior, Society and Nuclear War, Volume Two (New York: Oxford University Press, 1991) pp. 73-109 and Charles L. Glaser, "The Causes and Consequences of Arms Races," Annual Review of Political Science, 3, pp. 251-276, especially important are the skeptical notes in Colin S. Gray, "The Arms Race Phenomenon," World Politics, 24:1, pp. 39–79 and Gray, "The Urge to Compete: Rationales for Arms Racing," World Politics, 26:2, pp. 207–233. The Security Dilemma is explained in Robert Jervis, "Cooperation Under the Security Dilemma," World Politics, 30:2, pp. 167–214, an essential effort to contextualize arms races in their appropriate historical setting is Thomas Mahnken, Joseph Maiolo, and David Stevenson, Arms Races in International Politics: From the Nineteenth to the Twenty-First Century, (Oxford: Oxford University Press, 2016).

¹⁹ The articles by Colin Gray cited above began a more critical literature about arms races. See also Albert Wohlstetter, "Racing Forward, or Ambling Back?" in Robert Zarate and Henry Sokolski, *Nuclear Heuristics: Selected Writings of Albert and Roberta Wohlstetter* (Carlisle, PA: Strategic Studies Institute, 2009), pp. 417-472, the comprehensive, 1000 page study of the U.S.-Soviet arms competition that was commissioned by the Pentagon's Office of Net Assessment highlights bureaucratic and other factors, see Ernest R. May, John D. Steinbruner, and Thomas W. Wolfe, *History of the Strategic Arms Competition*, 1945-1972, Volumes 1 and 2, Office of the Secretary of Defense, Historical Office, March 1981, located at

https://archive.org/stream/HistoryoftheStrategicArmsCompetition19451972Part2/History+of+the+Strategic+Arms+Competition+1945-1972+Part+2 djvu.txt; for the "apes on a treadmill" metaphor see Paul C. Warnke, "Apes on a Treadmill," Foreign Policy, 18, pp. 12–29 which was a rejoinder to articles by Albert Wohlstetter that were revised and extended in the citation above, the most recent and thorough-going critique of the "action-reaction" model is David J. Trachtenberg, Michaela Dodge and Keith Payne, The 'Action-Reaction' Arms Race Narrative vs. Historical Realities, (Fairfax, VA: National Institute Press, 2021).

²⁰ T. C. Schelling, "The Reciprocal Fear of Surprise Attack," P-1342, RAND Corporation, May, 1958. This essay was reprinted in Schelling's classic work on nuclear weaponry and deterrence, *The Strategy of Conflict*, (Cambridge, MA: Harvard University Press, 1960).

systems we prefer to treat as an open question." The growing national commitment to arms control was reflected in institutional innovation as well as the intellectual ferment of which Schelling and Halperin's efforts were a part. This resulted in the passage of the Arms Control and Disarmament Act of 1961 which created the Arms Control and Disarmament Agency to serve as a focal point for government deliberation not just on the competitive element of the arms race but on the cooperative element as well.²¹

Although the superpowers reached agreement on a limited test ban treaty in the aftermath of the Cuban Missile Crisis, despite the flowering of arms control as a school of thought, it took more than a decade before the United States and the USSR were able to conclude any significant arms limitations agreements and even longer to reach agreements that meaningfully reduced the levels of nuclear armament on both sides. The SALT and ABM agreements were largely driven by the Nixon Administration's desire to limit the arms competition with the USSR because of the strategic distraction and drain on resources created by the Vietnam War. The INF and START agreements which eliminated a class of nuclear weapons and massively reduced the strategic arsenals on both sides largely occurred as the issues which had initially divided them—control of Europe—had largely receded as the result of domestic changes in the Soviet Union. In that sense, arm control had done little to stabilize the arms race itself indeed the arms control process frequently ratified or provided a rationale for programs that national security elites on both sides were pursuing for other reasons. ²²

The contribution of arms control to "crisis stability"—the effort to diminish the incentives for national leaders to launch a first strike under the extreme pressure of an incipient international conflict—are arguably more compelling. After the close call of the Cuban Missile Crisis and the establishment of the so-called "hot line" there were only a handful of crises where the two sides came close to nuclear war and both times—the 1973 War in the Middle East and the so-called Able Archer episode of 1983—there was a happy ending in that no nuclear conflict ensued.²³

Schelling and Halperin anticipated one of the most serious objections to arms control, one to which we will return, since unfortunately often Schelling and Halperin's successors in the arms control enterprise have been less inclined to recognize it than they were in the early 1960s. That is "that armaments are only a reflection of existing conflicts and not a cause of them." It is true that modern armaments and military plans are a response to basic international conflicts. It is also true that the size and character of military forces are an important determinant of national fears and anxieties, and of the military incentives of our potential enemies. There is a feedback between our forces and the conflicts that they simultaneously reflect and influence." The question of which comes first arms races or the international rivalries that

²¹ Thomas C. Schelling and Morton H. Halperin with the assistance of Donald G. Brennan, Strategy and Arms Control, (New York: Twentieth Century Fund, 1961), p. 2,

²² James Cameron, *The Double Game: The Demise of America's First Missile Defense System and the Rise of Strategic Arms Limitation*, (New York: Oxford University Press, 2018), Matthew J. Ambrose, The Control Agenda, A History of the Strategic Arms Limitation Talks, (Ithaca, NY: Cornell University Press, 2018), earlier accounts of the negotiations leading to the SALT 1 and SALT 2 Agreements are John Newhouse, *Cold Dawn: The Story of SALT* (New York: Holt, Rinehart and Winston, 1973), Strobe Talbott, *Endgame: The Inside Story of SALT II* (New York: HarperCollins, 1979), and Raymond Garthoff, *Détente and Confrontation: American-Soviet Relations from Nixon to Reagan* (Washington, DC: Brookings Institution Press, 1985). Hal Brands argues that quiet progress on arms control during the Johnson Administration contributed to the later flowering of détente, see Brands, "Progress Unseen: U.S. Arms Control Policy and the Origins of Détente, 1963–1968," *Diplomatic History*, 30:2, pp. 253–285.

²³ There is a large literature on the close call in the Cuban crisis of 1962, the two most recent accounts drawing on new sources of information are Martin J. Sherwin, *Gambling with Armageddon: Nuclear Roulette from Hiroshima to the Cuban Missile Crisis*, (New York: Alfred A. Knopf, 2020) and Serhhii Ploky, *Nuclear Folly: A History of the Cuban Missile Crisis*, (New York: W. W. Norton, 2021), Sheldon Stern, *The Week the World Stood Still: Inside the Secret Cuban Missile Crisis* (Stanford, CA: Stanford University Press, 2005) remains the standard short account of U.S. decision-making in the crisis based on the edited tapes of the deliberations of the Executive Committee (EXCOM) of the National Security Council. On the 1973 war see Barry M. Blechman and Douglas M. Hart, "The Political Utility of Nuclear Weapons: The 1973 Middle East Crisis," *International Security*, 7:1, pp. 132–156, on the 1983 Able Archer episode there is also a growing literature see especially, "The Soviet 'War Scare," Report of the President's Foreign Intelligence Advisory Board (PFIAB), February 15, 1990 located at https://nsarchive2.gwu.edu/nukevault/ebb533-The-Able-Archer-War-Scare-Declassified-PFIAB-Report-Released/2012-0238-MR.pdf as well as Gordon Barrass, "Able Archer 83: What Were the Soviets Thinking?," Survival, 58:6, pp. 7-30, Dmitry 'Dima' Adamsky, "The 1983 Nuclear Crisis: Lessons for Deterrence Theory and Practice," *Journal of Strategic Studies*, 36:1, pp. 4–41 and the skeptical view of Simon Miles, drawing on archival material from Soviet Central European allies, "The War Scare that Wasn't: Able Archer 83 and the Myths of the Second Cold War," *Journal of Cold War Studies*, 22:3, pp. 86–118.

prompt them is the gravamen of the critique of arms control that was most capably mounted by the late Colin Gray. Gray argued that the states most in need of arms control were unlikely to able to reach agreement because of the underlying political differences that cause them to arm in the first place. Moreover, since it is not the weapons per se that cause war, the control of weapons is not likely to cause peace. Wars are caused by revisionist states and the states that organize to thwart them. And although Gray acknowledged that the vaunted concept of "strategic stability" as defined by John Steinbruner—the crucial proposition that a stable nuclear balance required both sides to maintain a secure, second-strike nuclear retaliatory force—held some value, he always insisted on the sovereignty of context. Stability, Gray argued, is meaningless unless it is considered in the broadest political perspective with a granular understanding of the causes of national rivalries. "Countries arm," he wrote, "in order to deter, to defend if they must, and sometimes to secure the assets of others, but they do not fight because they are armed."²⁴

The devotees of Cold War-era nuclear arms control seem suggest that the current "crisis" of arms control requires, as a solution, a return largely to the processes and instruments of Cold War arms control. The most compelling and comprehensive case for this approach has been offered recently by my former State Department colleague, James Timbie, someone who labored honorably, diligently and inventively in the vineyards of arms control for 40 years.

In a recent essay Timbie charts "a way forward" beyond the New START treaty. As he notes "past success in reducing U.S. and Russian strategic nuclear warheads has increased the salience of other nuclear weapons, nuclear weapons of other countries, missile defenses, and advanced conventional and space systems, all of which need to be considered in future negotiations." He acknowledges in the future we are looking at "a transition from bilateral treaties to more complicated arrangements involving more subjects and more countries." Moreover, he recognizes that the international environment for arms control has radically changed:

While our objectives are somewhat familiar, the environment in which they are now pursued is not. We live in a world in which the major powers (and others) are preparing to fight in all domains. Now that military prowess on land, in the air, and on and under the sea critically depends on support from space and cyber assets, the future of conflict includes offensive and defensive operations in all of these domains.

And he adds that the "pace of innovation" in all of these areas is "rapid." Timbie makes several sensible recommendations about the need for cyber, space, and broader military resilience and his essay bears close reading by anyone interested in the subject. Still in the end his recommendations have a very familiar quality. An emphasis on limiting weapons systems to diminish the risk of unintended conflict but with a nod to the changed environment.

International agreements can reduce the risk of unintended conflict in an increasingly complex world in which actions can have unpredictable consequences, but the future will not be like the past. Future agreements will likely consist of political commitments rather than formal treaties, involve more countries in addition to the United States and Russia, and address a wide range of subjects in addition to strategic nuclear warheads.

In effect, the approach he outlines would use agreements on limitations of arms, confidence building measures, and verification regimes that were put to use in what we might call the "near past"—the "golden age" of arms control in the

²⁴ Schelling and Halperin, p. 4, Colin S. Gray, *House of Cards: Why Arms Control Must Fail* (Ithaca, NY: Cornell University Press, 1992) p. 37, the Steinbruner definition of stability is drawn from his article, "National Security and Strategic Stability," *Journal of Conflict Resolution*, 22:3, pp. 411–428, "Strategic nuclear attack on the population and industrial structure of the United States, which cannot be repulsed given the technology of our era is to be deterred by threatening potential enemies with such massive damage in retaliation that no matter what their political or psychological state might be they will always choose not to attack. In order to avoid giving an enemy a rational incentive to initiate war in time of crisis, the strategic forces which carry the threat of retaliation must be sufficiently invulnerable to sudden destruction that the deterrent threat cannot be removed or sharply reduced by a preemptive attack aimed solely at those forces. Moreover, the appearance of vulnerability must be prevented, lest even in the absence of war an enemy derive significant political advantage from such appearance." p. 413.

1980s and 1990s—to deal with additional participants (China) and bring new technologies like cyber, hypersonic weapons, space and counter-space and AI into the discussion.²⁵

If one is bound and determined to try and resurrect the Cold War arms control paradigm one could do worse than seek guidance in the Timbie essay. There is, however, another tradition of arms control that bears examination as we think about the military-technical challenges that Timbie describes so well. That is the experience of arms control before the nuclear era—almost exclusively limitations on naval armament—between the two world wars.

These pre-atomic era arms control efforts did not get much attention from either the arms control community or policymakers in the Cold War since nuclear weapons were seen as so qualitatively different from the weaponry of the earlier period. The failure to make reference back to these earlier experiences was the source of one of Colin Gray's criticisms of the ahistorical nature of the arms control enterprise. His point was that cooperation between and among rivals in constraining armaments was not as novel a proposition as many arms controllers during the Cold War imagined it to be.²⁶

Moreover, inter-war arms control ultimately failed to constrain the arms competitions among the European powers (and especially between Japan and the United States) and came to nothing in preventing the outbreak of World War II. In fact, the comprehensive study by Joseph Maiolo makes a powerful case that the deeply embedded assumption, true for all the great powers, that future conflicts would be won by the nation that best mobilized its national industrial potential for war was, in and of itself, a powerful force in laying the groundwork for total war. Given his findings it is understandable that many would not see much relevance to studying the experience of interwar arms control given the sad outcome.²⁷

But history, as Ian Kershaw has pithily observed, is "lived forward and written backward." We know how the story turned out even as the protagonists operated behind a veil of ignorance and uncertainty that always afflicts policymakers. The architects of naval arms limitations between the wars did not know that Nazi Germany and Imperial Japan would recklessly launch the world into the most destructive war in history. During the Cold War historians developed a rich literature on these efforts at regulating naval armaments and briefly, at the end of the Cold War, several scholars including Robert Kaufman and Emily Goldman researched this "far past" of arms control for lessons that might guide a post-Cold War world less seized by the bipolar, highly ideological, nuclear stand-off of the post-World War II era. Even when the world's attention was focused on counter-terrorism and counter-insurgency after 9/11 scholars like John Maurer, Christopher Bell and Sadao Asada were exploring some of these in issues in depth but, as we enter a new era of great power competition, and a clear interest by policymakers to include China in some way in future arms control negotiations it seems that a more capacious view of the history of arms control is not only warranted but ought to be especially useful.²⁸

²⁵ James Timbie, "A Way Forward," Daedalus, 149:2, pp. 190-204, all quotations in the previous three paragraphs are from Timbie's stimulating essay.

 $^{^{\}rm 26}$ Gray, $House\ of\ Cards,$ pp. 9, 14–16.

²⁷ Joe Maiolo, Cry Havoc: The Arms Race and the Second World War, 1931-1941 (London: John Murray, 2010).

²⁸ As Colin Gray pointed out arms controllers during Cold War could have benefitted more from Merze Tate's classic study, The United States and Armaments (Cambridge, MA: Harvard University Press, 1948) which highlighted the long-standing U.S. interest in limiting armaments from the demilitarization of the Great Lakes to the atomic age. Even before Pearl Harbor, Harold and Margaret Sprout, Toward A New Order of Sea Power (Princeton, NJ: Princeton University Press, 1940) had traced the effort by U.S. policymakers to bound naval arms competition among the U.S., Britain and Japan with the Washington Naval Treaty noting that the Pacific Naval Balance was bound up with the Atlantic naval balance which was, in turn, linked to the European balance of power on land. The role of the U.S. Senate, critical in the aftermath of Wilson's failure to win ratification of the Versailles Treaty, in shaping naval arms limitation was John Chalmers Vinson, The Parchment Peace: The United States Senate and the Washington Conference, 1921–1922, (Athens, GA: University of Georgia Press, 1955), Thomas H. Buckley, The United States and the Washington Conference, 1921–1922 (Knoxville TN: University of Tennessee Press, 1970), and Roger Dingman, Power in the Pacific: The Origins of Naval Arms Limitation, 1914–1922 (Chicago: University of

Why is that the case?

First, we have examples of multilateral arms control from the Cold War era but they are largely universal treaties like the Nuclear Non-Proliferation Treaty or the Chemical Weapons Convention. The Washington Treaties of 1921-1922 dealt with the naval holdings of several great powers with differing interests in Europe and Asia and sought to establish reasonable numerical limits that took into account both geography and politics. As the U.S. seeks to incorporate the PRC's growing nuclear arsenal into the architecture of arms control it will similarly have to account for the geopolitical interests of a variety of parties.

Second, the Washington Treaties also sought to establish linkages between the Pacific and European theaters by including France and Italy in the mix. These kinds of linkages will be increasingly relevant as so-called non-strategic nuclear weapons in the U.S. and Russian arsenals (which were not addressed in the START or New START Treaties) become a subject for discussion as Jim Timbie's essay suggests they must. The connection between the nuclear balance in Europe and Asia almost upended the INF Treaty at the last minute in 1988 and, again, the experience of the inter-war years may have something to teach us on the linkages between arms balances in different geographic regions. This is especially true given the demise of the INF Treaty and the potential increased holdings of intermediate and medium range ballistic missiles by the U.S. as well as its allies in Europe and the Indo-Pacific region.²⁹

Third, the interwar system effort to build a stable balance of power in Asia was undermined by the fact that the US never actually built up to levels allowed under the Treaty (something encouraged by the process of naval arms limitations negotiations itself) and, as part of the Washington Treaties agreed not to fortify bases in the Pacific which created severe operational problems for the Navy. The importance of funding modernization efforts to provide leverage and tradespace in future negotiations is strikingly contemporary as Congress considers the future of the Ground-Based Strategic Deterrent (GBSD) the follow-on to the U.S.'s Minuteman III program as well as the other key elements of modernizing the U.S. nuclear triad—the Ohio-class replacement SSBN and the B-21 bomber.³⁰

Fourth, and perhaps most important, the initial effort at naval arms limitation at least attempted to address the underlying political issues that prompted great power rivalry in East Asia—the status of a fragmented and weak China. The arms limitations agreed among the powers in the so-called 5 Power and 4 Power Treaties was underpinned by an agreement in the 9 Power Treaty that sought to prevent China from becoming a cockpit of rivalry among the powers. The system succeeded in, at least initially, slowing an incipient arms race in the 1920's before collapsing in the 1930's under the pressure of German and Japanese arms build-ups. As John Maurer argues in his assessment of the London Naval Conference of 1930, "the leaders of Britain, Japan, and the United States could not insulate arms control from larger forces already emerging that would lead to another great war. The struggle for mastery in Asia remained, despite

Chicago Press, 1974) describe the background of the Treaties that emerged to form the Washington Conference system. The breakdown of the system in the 1930s is traced in Raymond G. O'Connor, Perilous Equilibrium: The United States and the London Naval Conference of 1930, (Lawrence, KS: University of Kansas Press, 1962) and Stephen Pelz, Race to Pearl Harbor: The Failure of the Second London Naval Conference and the Onset of World War II, (Cambridge, MA: Harvard University Press, 1974). Sadao Asada, From Mahan to Pearl Harbor: The Imperial Japanese Navy and the United States (Annapolis, MD: Naval Institute Press, 2006) and John H. Maurer and Christopher M. Bell, eds. At The Crossroads Between Peace and War: The London Naval Conference of 1930 (Annapolis, MD: Naval Institute Press, 2014).

²⁹ Timbie, "A Way Forward," p. 192, for the potential relationship between the European and Indo-Pacific theaters seeLuis Simón, Alexander Lanoszka and Hugo Meijer, "Nodal Defence: the changing structure of U.S. alliance systems in Europe and East Asia," Journal of Strategic Studies, 44:3, pp. 360–388, Tongfi Kim and Luis Simón, "Greater Security Cooperation: US Allies in Europe and East Asia, "Parameters 51:2, pp. 61–71, and Luis Simón, Linda Desmaele, and Jordan Becker, "Europe as a Secondary Theater? Competition with China and the Future of America's European Strategy," Strategic Studies Quarterly, 15:1, pp. 90–115.

³⁰ Kaufman, Arms Control During the Pre-Nuclear Era, p. 197, on the GBSD debate see Eric S. Edelman and Franklin C. Miller, "America's Nuclear Missiles Need Major Modernization: The Proposed Missile Upgrade Program Saves Money and Deters Nuclear War," The Bulwark, April 9, 2021.

their effort to regulate the three-way naval competition involving their countries. Dramatic changes in the international environment and deeper currents in domestic politics would soon wash away the barriers to competition...."³¹

Maurer judgment highlights the most important lesson from the record of interwar efforts at arms control. One that contemporary advocates would do well to factor into their approach to the problem. Ultimately, politics is the key to success in arms control, and without an effort to address the underlying political divisions among competing nations, arms control efforts are fated to come to grief. As Robert Kaufman pays tribute to the "primacy of politics in naval arms limitation. No formula or yardstick sufficed in itself to bring about the naval limitation agreements. On the contrary, the record of naval limitation suggests strongly that arms limitation will fail without corresponding political détente." ³²

The initial inter-war effort at Washington in 1921 was largely motivated by the widespread belief that the unconstrained naval rivalry between Britain and Imperial Germany at outset of the 20th Century, the "rise of the Anglo-German antagonism" as historian Paul Kennedy has dubbed it, led directly to the outbreak of the First World War. As all of the great powers were contemplating large-scale programs of naval modernization in the wake of the war it seemed only logical to focus on limiting naval arms. There was much support in both elite and popular opinion for such an approach. This approach, focused on battleships, the most destructive naval weapons of the time and the focus of naval institutions wedded to the doctrinal commitments of "control of the seas" articulated by Alfred Thayer Mahan, excluded auxiliary vessels and did not take newer technologies like submarines and air power into account. Not surprisingly competition among the powers was channeled into those areas that remained unconstrained.³³

Subsequent efforts at the London Conferences of 1930 and 1935 attempted to address some of these omissions but largely failed to keep pace with either technology or political developments as the Great Depression brought to power increasingly authoritarian governments in Central Europe and Japan. Land armaments—the most pressing concern for France given its experience in World War I and its persistent desire for a security guarantee of some kind—were never addressed between the wars in large measure because the United States, after the failure to ratify the Versailles Treaty was unwilling to undertake any kind of binding security guarantee for the French. Although the French tried repeatedly to engage the U.S. in Europe security, and although the Kellogg-Briand Pact outlawing war as an instrument of policy grew out of France's desire for such a guarantee and repeated efforts to secure one, the French quest for a binding security assurance was never properly addressed.

Emily Goldman's painstaking and detailed study of naval arms control between the wars arrives at similar conclusions. Cold War arms control she suggests was focused on the technology of warfare rather than the underlying political forces that drove the arms competition between the sides. The overriding goal was avoiding a hot war rather than resolving the underlying political causes of conflict and hence involved repeated efforts to manage military technology and military balances as well as to diminish the incentives for striking first. The interwar years demonstrate that an effort to use political means to reach understandings that diminish the drive to arm can have at least some success (even if time limited). Since that experience is more focused on multilateral agreements and regional military balances and reflects a

³¹ Maurer and Bell, *At the Crossroads Between Peace and War*, p. 251, on the changing international environment and domestic pressures see Maiolo, *Cry Havoc* and Asada. *From Mahan to Pearl Harbor*.

³² Robert Gordon Kaufman, Arms Control During the Pre-Nuclear Era: The United States and Naval Limitation Between the Two World Wars, (New York: Columbia University Press, 1990), p. 196.

³³ Paul Kennedy, *The Rise of the Anglo-German Antagonism*, *1860-1914*, (Amherst, NY: Humanity Press, 1980), is a magisterial account that situates the rivalry in a broad context that ranges well beyond the naval rivalry to which many contemporary observers reduced the run-up to World War I, Robert Gordon Kaufman, *Arms Control During the Pre-Nuclear Era*.

period when great power competition rather than a bipolar world was the order of the day it may provide a better template for thinking about arms control in the future than the record of Cold War superpower arms control.³⁴

The experience of arms control between the wars does not offer a cookie-cutter solution or a neat recipe for current arms control dilemmas and the recent research of Joseph Maiolo cited above demonstrates that there is still much to learn about precisely how great power military competition in the interwar years played out and influenced the thinking of policymakers. But the brief examination I have offered here does suggest that as we contemplate the future of arms control we would be well served by a research agenda that looks back to the "far past" of arms rather than indulge in nostalgia for a lost "golden age" of arms control. It is a truism that the future of warfare is rooted in its past. It is equally true that the future of efforts to prevent war are equally tied to the past.

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³⁴ Emily O. Goldman, Sunken Treaties: Naval Arms Control Between the Wars, (University Park, PA: The Pennsylvania State University Press, 1994).