

# Meeting the Challenges of the New Nuclear Age: U.S. and Russian Nuclear Concepts, Past and Present



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# Introduction

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In fall 2016, the American Academy of Arts and Sciences began a project on “Meeting the Challenges of the New Nuclear Age.” Over a quarter century after the collapse of the Berlin Wall and the dissolution of the Soviet Union, it is universally acknowledged that the world is in a new nuclear era, sometimes called the “second nuclear age”—but there is far less agreement on the essential nature of the new era. Indeed, for much of the past two and a half decades, the primary descriptive term for the modern period was the “post–Cold War world,” defining our era by what it was *not* because we lacked a clear understanding of what it *was*. The American Academy set out to help create the intellectual foundation needed for that understanding.

In addition to the obvious intellectual need, the Academy was motivated by its success almost sixty years ago in laying the foundation for modern arms control. As Academy President Jonathan Fanton and Project Co-Director Robert Legvold noted in their invitation to the initial members of the working group:

In summer 1960, the American Academy of Arts and Sciences convened a study group . . . to take a deep look at the challenges posed by a new and rapidly evolving nuclear era. The ideas generated by the group, captured in the volume edited by Donald G. Brennan, *Arms Control, Disarmament, and National Security*, and developed in Thomas Schelling and Morton Halperin’s *Strategy and Arms Control*, became the intellectual foundation for thinking about the revolution these weapons had produced and ways by which the dangers they posed could be managed.<sup>1</sup>

The Academy committed itself to making a comparable contribution to understanding the modern era and assembled a diverse working group toward that end. As the working group began its deliberations, many discontinuities with the Cold War were obvious. The nuclear aspects of the Cold War were exclusively bilateral, with both superpowers regarding China as a lesser included case. Today there are multiple nuclear actors with complex and conflicting relations with one another. Cold War nuclear policies and plans were largely separate from plans for nonnuclear conflict; military planners often spoke of a future war “going nuclear” to suggest the actions after nuclear use were both different

1. Email message from Jonathan Fanton, President of the American Academy of Arts and Sciences, and Robert Legvold, Project Co-Director, to prospective participants, May 2016.

and disconnected from those that came before. Today long-range precision strike capabilities, the growing importance of space, and, especially, the implications of what is often called the cyber domain deeply influence, and are in turn influenced by, nuclear capabilities. Attitudes too have changed dramatically. Throughout the Cold War there were individuals deeply opposed to nuclear weapons who called for near-term steps toward disarmament. At least in the United States, however, the most passionate disarmament advocates had never served in government, were unlikely to do so in the future, and therefore were of limited political relevance.<sup>2</sup> Today there are dozens of former senior political appointees and military officers who endorse moving rapidly toward abolition.

While these changes are important, there are also important continuities. Two of the most significant are the American approach to thinking about nuclear weapons and the centrality of the U.S.-Russian relationship. The Cold War shaped the American concept of deterrence as well as current nuclear policy and strategy. It shaped the attitudes of most of the current nuclear policy elite, many of whom came of age during the Cold War. And it created the nuclear force structure of today. Every existing nuclear delivery system and every existing nuclear warhead in the U.S. arsenal was designed and, with minor exceptions, manufactured during the Cold War.

Similarly, while it is no longer accurate to speak of a bipolar world or to consider Russia as a superpower, Russia still matters. As a permanent member of the United Nations Security Council, Russia's cooperation—or at least its acquiescence—is vital to solving global problems like sanctions on North Korea or the crafting of the Joint Comprehensive Plan of Action (JCPOA) with Iran. Russia is the only country whose interests impinge on all three major areas of U.S. international engagement—Europe, the Middle East, and the Asia-Pacific. And it is the only country on the planet that could destroy the United States as a functioning society in an afternoon.

The essays included in this occasional paper examine these two enduring realities. In the first, Francis Gavin provides important insights into the Cold War uses of nuclear weapons beyond the deterrence of Soviet nuclear attack. Of particular importance to the modern era is his discussion of extended nuclear deterrence and alliance management.

The United States is unique in assigning nuclear weapons a significant role in the political task of managing alliances. That role is unique because the U.S. alliance system is unique. Since the end of World War II, Americans have based our approach to security on a global system of alliances, arguing we want to fight “over there” so we don't have to fight at home, even though it is often exceptionally difficult to see a direct state-level threat for which this formulation is relevant. Because of the centrality of the alliance system, both extended deterrence and reassuring allies remain fundamental to America's global approach.

2. President Ronald Reagan was a spectacular and important exception to this generalization, but for reasons extensively discussed in the literature, his long-term impact on disarmament was limited.

Extended deterrence plays a central role in U.S. nuclear thinking. Only the United States provides extended nuclear deterrence to so many allies and takes its commitment to such deterrence so seriously. NATO takes credit for the nuclear weapons of France and the United Kingdom as part of the overall nuclear capability of the alliance, but those forces are essentially national. Because of the importance of alliances, reassuring allies plays into many U.S. nuclear policy decisions. Examples abound. In 2016, the U.S. government examined adopting a “no first use” policy. Virtually all internal nuclear experts opposed it on grounds it would undercut allied confidence in extended deterrence. President Obama determined, “we can ensure the security of our Allies and partners . . . while safely pursuing a one-third reduction in deployed nuclear weapons.”<sup>3</sup> The administration refused to make those reductions unilaterally in part because it believed maintaining nuclear forces that were roughly equivalent to those of the Russian Federation was important to our allies. The George W. Bush administration made the largest percentage reduction in U.S. total nuclear weapons in history and rejected treating Russia as a day-to-day threat. But it still sought to maintain nuclear forces that were perceived as “second to none” because of its concern with assuring allies.

Extended deterrence requires an adversary to believe we will treat an attack on an ally as an attack on the United States. Extended *nuclear* deterrence requires the belief that there is at least some chance the U.S. response will include the use of nuclear weapons, even at the risk of a nuclear counterstrike on the U.S. homeland. This was a tough sell during the Cold War, but it is an even harder sell today. In the Cold War, there were so many deployed American forces in Europe that it was impossible to believe the United States wouldn’t regard itself as under attack in any large confrontation. Further, a Soviet takeover of Western Europe would have irrevocably altered the global balance of power in a way that would have been unacceptable to the United States. Even so, American political and military leaders had to work very hard to assure allies that we would meet our obligations under Article 5 of the North Atlantic Treaty.<sup>4</sup>

Today extended deterrence is more complex and more difficult, because it is less certain what the stakes will be in a future crisis. Further, while any given extended deterrence crisis will almost certainly be bilateral, the new multipolar nuclear world means U.S. leaders must assess the leadership beliefs of Russia, China, and North Korea and must be able to reassure both NATO and Asian allies. During the Cold War, the United States made a huge effort to understand the Soviets and didn’t always get things right. There is less effort today to

3. United States Department of Defense, *Report on the Nuclear Employment Strategy of the United States Specified in Section 491 of 10 U. S. C.*, June 12, 2013.

4. Article 5 reads in part: “The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defense recognized by Article 51 of the Charter of the United Nations, will . . . [take] such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area.”

understand any of the three potential aggressors who possess nuclear weapons. This is probably a strategic mistake.

Understanding adversaries is important. But regardless of our success, alliance management will almost certainly remain a central element of U.S. grand strategy. As a result, the United States must continue to focus on extended deterrence and allied reassurance, both of which will be more difficult than in the past. Understanding that past is crucial to shaping the future.

Understanding Russia is equally vital. In the twenty-five years since the dissolution of the Soviet Union, three successive U.S. presidents have sought to help integrate Russia into the global order and to establish a U.S.-Russian relationship that replaces confrontation with cooperation. The Clinton administration arranged for Russia to join the G-8 and worked on establishing a relationship with NATO. The Bush administration formally determined Russia was not a day-to-day nuclear threat and cooperated extensively on counterterrorism, especially nuclear terrorism. The Obama administration sought to “reset” and improve the entire relationship. These efforts all failed. While President Trump, like his three predecessors, hopes for better relations, his efforts are likely to fail as well.

Improving relations faces significant challenges. Of greatest concern is a growing Russian belief that the United States seeks to change the nature of the Russian government and that the democratic revolutions that took place in Central European states—the so-called color revolutions—were instigated by the United States and designed in part as rehearsals for similar steps against Russia in the future. A second challenge arises from Russian fears that the United States seeks a first-strike capability with respect to Russian strategic forces and that U.S. ballistic missile defense, expansion of space-based capabilities, and deployment of long-range, nonnuclear precision strike systems are all designed to enable such a capability. Long-term stability, let alone partnership, is unlikely unless the United States can dissuade Russia from these two beliefs.<sup>5</sup>

Because of these and other developments, instead of finding ways to improve a relationship of partnership, the United States must now focus on managing a relationship that is increasingly adversarial and confrontational. This places a great premium on understanding Russian thinking. Here the second essay in this occasional paper is vital. Academician Alexei Arbatov outlines current Russian thinking on the nuclear relationship. His articulation of differences in U.S. and Russian ways of thinking (what he refers to as their “nuclear mentality”) is especially valuable. These differences include different sources for shaping early nuclear thinking and policy in the two countries, different understandings of the appropriate military objectives were deterrence to fail, different views of the relevance of so-called stabilizing force postures in lowering the risk of nuclear war, different understandings of strategic stability, and

5. For additional discussion, see United States Department of State, International Security Advisory Board, *Report on U.S.-Russia Relations*, December 9, 2014, <https://www.state.gov/t/avc/isab/234902.htm>.

different degrees of concern with how the forces of one country are perceived in the other. These differences need to be understood in the context of broader political developments since the end of the Cold War—particularly contrasting U.S. and Russian views of NATO expansion.

Nuclear weapons continue to present a paradox. Their almost unimaginable destructiveness makes their use almost inconceivable and—for many—both immoral and unlawful.<sup>6</sup> Yet many analysts and practitioners (including the present writer) believe they have played an important role in the dramatic reduction in major power wars since 1945, leading to the so-called long peace in Europe. Reconciling their horror and their utility requires a major intellectual effort. These two essays are a good place to start.

6. United Nations General Assembly, “Treaty on the Prohibition of Nuclear Weapons,” July 7, 2017, <https://www.un.org/disarmament/ptnw/A/CONF.229/2017/8>.