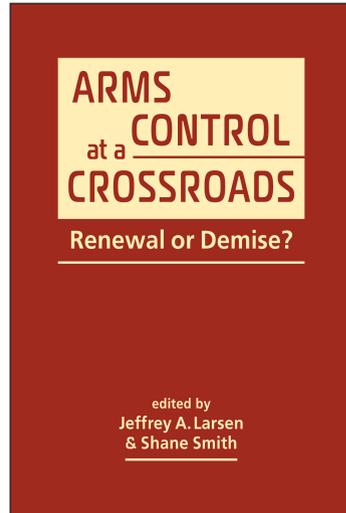


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Arms Control at a  
Crossroads:  
Renewal or Demise?

edited by  
Jeffrey A. Larsen and  
Shane Smith

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# 1

## Does Arms Control Have a Future?

*Jeffrey A. Larsen and  
Shane Smith*

**IS ARMS CONTROL DEAD? NOT QUITE, BUT ITS PROGNOSIS** appears grim. The challenges ahead are numerous and steep. That does not mean, however, that there is no future for arms control. Its value remains, and the need for its benefits is likely to grow, even as the resurgence of great-power competition casts a pall over existing arrangements that have long helped prevent the spread and use of the world's most dangerous weapons. As one veteran of nuclear arms control has written, "Formal, treaty-based arms control is likely coming to an end. But the need to prevent nuclear war will remain."<sup>1</sup> As long as there is a shared international interest in preventing the "unthinkable," arms control has a future.

One thing seems certain about that future: arms control over the next generation will look different than it has over the past half-century. In many ways, it must. Arms control will need to adapt to the realities of a new era to remain a relevant instrument of statecraft. Trends suggest the new era will be defined by competition among multiple nuclear-armed great powers, potentially intense regional conflicts, rising nationalism, the advancement of information and communication technologies, and the emergence of new strategic domains in space and cyberspace, all of which are having transformative impacts on international security relations. What arms control will look like in this new era is difficult to predict.

Arms control reflects politics, and politics are notoriously difficult to forecast, especially in a time of dramatic change. We may be at an inflection point in global history not unlike the immediate years after World War II or the end of the Cold War. In this uncertain context, arms control has lost its luster among many of the world's political leaders as they seek flexibility to adjust to the new era. The resulting stress on international cooperation may very well lead to a collapse of arms control as we know it.

However, just as in eras past, political leaders will one day again see the utility and value of arms control as a primary tool for managing competition—because the costs and risks of a world without it are too great.

It may be useful to think about arms control today like the early Cold War theorists and practitioners did, as they also sought to identify rules of the road and mechanisms for managing extreme competition in a new and unfamiliar era. Their work took decades to bear fruit and it was far from guaranteed that it would succeed. The arms control terms and processes they collectively defined and implemented eventually became a pillar of nonproliferation, international security, and strategic stability. But the arms control concepts, theories, and mechanisms designed for that era may no longer apply. Driven by a distantly familiar threat of nuclear Armageddon that reemerged in the wake of Russia's invasion of Ukraine, the world asks whether it is entering a new era, with new challenges and complexities, or returning to a cold war. Is arms control up to the task? Does it need to be reenvisioned? How might existing arrangements be strengthened or new ones fashioned to ensure arms control remains a valuable tool for the future? Are there alternative pathways for the arms control enterprise in this emerging security environment? How might this enterprise be reconceptualized?

This book provides students and practitioners with the scholarly foundation for answering those questions. It examines the state of play in the world of arms control and offers a chance to rethink its purpose and effectiveness as a tool, process, or set of mechanisms that can still enhance international security.

## **What Is Arms Control?**

### *Defining Arms Control*

*Arms control* can be defined as an arrangement among political entities (typically nation-states) to regulate some aspect of their military capability or potential. The arrangement may apply to the location, amount, readiness, or types of military forces, weapons, or facilities. Whatever their scope of terms, however, all forms of arms control have one common requirement: they presuppose a common interest and some form of cooperation or joint action to achieve it.

There have been historical exceptions to this cooperative approach. For example, at times one state has imposed coercive disarmament on another. During the George W. Bush administration of the early 2000s, for example, more assertive concepts of diplomacy, counterproliferation, and compellence gained some traction in the United States' approach to dealing with destabilizing elements of the international system. But the more common approach to controlling arms has been one based on cooperation

between adversaries. This makes arms control a subset of cooperative security, as previous editions of this book have made clear, and a concept to which the authors of this volume subscribe.

Early theorists like Hedley Bull defined *arms control* as any form of military restraint between potential enemies in the interest of achieving a common purpose, even while pursuing conflicting goals.<sup>2</sup> Thomas Schelling and Morton Halperin conceptualized three primary objectives that arms control might serve: to reduce the likelihood of war, to reduce the costs of preparing for war, and to minimize the scope and violence of war if it occurred.<sup>3</sup> While the relative merits of each objective have been grounds for academic consideration, most theorists and political leaders have agreed that the prevention of war—particularly nuclear war—was the highest priority. The bottom line of early theoretical thinking about the subject was that arms control was a process involving specific, declared steps by a state to enhance security through cooperation with other states. Those steps could be unilateral, bilateral, or multilateral; cooperation could be either implicit or explicit. Arms control should not be seen as an end in and of itself, but as one tool in a state's national security tool kit that can enhance its—or more accurately, multiple nations'—sense of security through a process of agreed approaches and constraints. As Amy Nelson put it in an early authors' meeting, arms control is “a process punctuated by treaties.” Its ultimate purpose is to build trust and enhance the stability of the international order. What remains true is that arms control is but one of a series of alternative approaches to achieving international security and strategic stability through military measures.

Arms control embraces a broad set of mechanisms, including negotiations, treaties, bilateral and multilateral agreements, unilateral commitments, regimes, weapon-free zones, and the like. It is a process that has been proven over the past fifty-plus years. Today, however, the world faces the breakdown of this consensus over the value of military restrictions on the great powers. In a field that has experienced a sine wave of interest and disinterest since its origins in the early years of the Cold War, we are now at a nadir with disillusionment toward arms control obvious on all sides. Nevertheless, official US policy continues to recognize the potential relevance of arms control as a tool for enhancing national security.

### *The Relationship of Arms Control to Cooperative Security and Disarmament*

This book places arms control within the rubric of cooperative security. One definition of *cooperative security* is “a commitment to regulate the size, technical composition, investment patterns, and operational practices of all military forces by mutual consent for mutual benefit.”<sup>4</sup> That larger

concept grew in popularity during the post–Cold War years, perhaps because the prospects of war between major powers were receding, removing the perceived need for often contentious and rigorous restrictions of arms control.

Disarmament calls for the elimination of specific classes of weapons in the hope that without those weapons, the world will be a safer place. Traditionally, “disarmament” was used to indicate the full range of historical endeavors to reduce and restrict military weapons and forces through a wide variety of means, from cooperation to imposition. These efforts included the demilitarization or deconfliction of potential regions of conflict—at home and in colonial areas. They included postconflict limitations on state forces and weapons, as well as attempts to limit and eliminate particularly heinous or indiscriminate technologies. And they included efforts to regulate the conduct of warfare more broadly, from determinations of noncombatant status to precepts of just and moral uses of armed force. The concept was used as an umbrella under which all these arrangements and means of implementation could reside.

Disarmament underlay efforts to confront the specter of nuclear war in the 1950s, but it proved unable to prevent an arms race. Policymakers began rethinking an approach that had emphasized general and complete disarmament and to consider instead limited, partial measures that would gradually enhance confidence in cooperative security arrangements. This led to the creation of the concept of arms control in the early 1960s as a more realistic alternative to disarmament. Disarmament has enjoyed a modest resurgence since the early 2000s when the so-called “gang of four” US statesmen proposed the elimination of nuclear weapons, a theme picked up by President Barack Obama when he called for “a world without nuclear weapons.”<sup>5</sup> Since then, there has been a fertile debate on the concept of humanitarian disarmament, as well as some modest successes in this field led by a new generation of disarmament advocates. Several of these efforts do not fall under the traditional definition of arms control, but reflect bottom-up led approaches that in most cases do not have the full endorsement of the great powers and therefore have had limited effects. These include the 1997 Mine Ban Treaty, the 2008 Convention on Cluster Munitions, and the 2017 Nuclear Weapons Ban Treaty.

## **Arms Control in the Cold War**

With the failure of early proposals to eliminate atomic weapons, the focus shifted toward limiting their development and spread, and toward controlling their use and effects. Western academics and policy analysts soon realized that disarmament in the literal sense of eliminating nuclear

weapons was not going to happen; these weapons had become a long-term reality of the international system. Thus, as they began examining these weapons and nuclear strategy, they adopted a preference for terminology that directly captured efforts to come to grips with “controlling” these weapons and bounding their use.

The founding premise of traditional arms control theory—that arms control can be an important adjunct to national security strategy—has, in practice, not always been obvious or consistently observed because arms control is inherently a counterintuitive approach to enhancing security. Arms control makes national security dependent on the cooperation of prospective adversaries. It often involves setting lower levels of arms than might otherwise appear prudent based on a strict threat assessment. It mandates establishing an interactive relationship with potential opponents and, in the case of mutually intrusive verification and data exchanges, exposes sensitive national security information and facilities to scrutiny by foreign powers. It requires seeking and institutionalizing cooperation where the potential for conflicts of interest seemingly far outweighs common objectives. It is fundamentally a high-stakes gamble, mortgaging national security against little more than the collateral of trust and anticipated reciprocal restraint, often in a geopolitical context fraught with political hostility and tension. It is, in fact, a voluntary (and not always reversible) delimitation of national sovereignty. Viewed from this perspective, arms control is not obviously better than its alternative—unilaterally providing for one’s own security.<sup>6</sup>

For arms control to be an effective instrument of national security, its objectives must be determined by, and be in close harmony with, the broader objectives of overall national security strategy.<sup>7</sup> At the most basic level of abstraction, three grand conceptual dilemmas dominated strategic thinking and the formulation of US national security objectives during the Cold War: What deters? How much is enough? What if deterrence fails? Arms control was an attempt to deal with these questions.<sup>8</sup>

Traditional arms control theory was based on the premise that the superpowers inherently shared an area of common ground (avoiding nuclear war), and that this element of mutual interest could serve as the basis for limited, cooperative arrangements involving reciprocal restraint in the acquisition of weapons of mass destruction (WMD). Arms control assumed a high priority on the national security agenda as a way of managing the superpower nuclear rivalry. The new importance of arms control was a reaction to the bipolar structure of the international system and the revolutionary nature of nuclear weapons. Generally, negotiations were limited in scope, and focused on increased strategic nuclear stability between the superpowers. The conduct of bilateral negotiations became very formal, with agreements sometimes taking years to reach.

Multilateral efforts early in the Cold War sought to affect the control of nuclear weapons by bounding the physical scope of the weapons and limiting their testing and further technological development and proliferation. With the signing of the Nuclear Non-Proliferation Treaty in 1968, the nuclear agenda for cooperative controls was narrowed to issues between the major nuclear powers. The primary arms control focus of the second half of the Cold War became centered on bilateral strategic controls between the United States and the Soviet Union, and the meaning of “arms control” subsequently narrowed even further to focus on the formal processes.

Not all arms control had to do with nuclear weapons, however. In the multinational arena, arms control continued to make progress with treaties and agreements restricting chemical weapons, biological weapons, missile technologies, export controls, and conventional weapons. As the chapters in this book demonstrate, there is a rich history of multilateral arms control outside the narrow strictures of nuclear weapons. Arms control was so central to US national security and foreign policy during the Cold War that the US State Department created an in-house Arms Control and Disarmament Agency to deal with such weighty matters. One of the most valuable results of negotiations across multiple domains was the development of trust and an understanding between the United States and Soviet Union of a shared goal in creating a stable environment.

## **Changes in the Post-Cold War Era**

In the immediate aftermath of the Cold War, the West experienced a flush of optimism and activity regarding arms control. The 1990s were truly a high-water mark for arms control, as formal agreements and cooperative measures were signed and entered into force with astounding speed. Many of these, in fact, were agreements reached years before, but only now ratified. Arms control found a place in dealing with the new concerns of advanced weapons proliferation, regional instability, and economic and environmental security. The value of arms control appeared to be growing as states attempted to implement treaties already in place, stem the illegal proliferation of weapons of mass destruction to rogue nations or groups, and meet their security needs in a more interdependent, multipolar world.

Arms control held a preeminent place in US diplomacy during the Cold War. But after forty years as the centerpiece of bilateral security and US national security policy, its prominence began to wane after the attacks on September 11, 2001. The Soviet Union had disappeared, Russia was viewed as a strategic partner in such transnational threats as terrorism, China was not yet a peer competitor, and the problems that arose in the Middle East and Southwest Asia, which dominated US military planning and operations for a generation, were not ones that could be solved by arms control.

The decade of the 2000s witnessed a much wider definition of cooperative security, one that de-emphasized traditional arms control and focused more on nonproliferation of WMD. International events beginning in late 2001 had a profound effect on all dimensions of international relations. Global terrorism—including the specter of terrorists armed with chemical, biological, radiological, or nuclear weapons—and actions well outside of accepted norms of international behavior by rogue and failing states raised severe challenges to the foundations of cooperation and diplomacy that lie at the heart of arms control.

The George W. Bush administration's decision to abandon the Anti-Ballistic Missile Treaty in 2002 and to de-emphasize the role of arms control in US foreign policy was welcomed by some observers as a realistic response to the end of the Cold War. The traditional role for arms control—to enhance stability and forgo potentially devastating misunderstandings between the two superpowers—was no longer seen as a central concern. By contrast, less formal international collaboration that organized collective action to stem the threat posed by rogue states, clandestine terrorist networks and entrepreneurial groups that trafficked in WMD, dual-use items, and associated delivery systems had increased in importance. Cooperative security seemed to offer a new and promising policy instrument.

By the 2000s, however, the reach and purpose of arms control had grown appreciably from its early beginnings. As one analyst has written, even in the realm of bilateral arms control the goals had increased to include the following:

1. Provide public recognition that the two sides regard one another as important equals.
2. Provide communication in difficult times.
3. Provide transparency that leads to predictability that, in turn, enhances stability.
4. Avoid an action-reaction arms race.
5. Close off militarization of a specific technology.
6. Reduce incentives for preemptive attacks in times of crisis by shaping the structure of forces.
7. Save money by capping expenditures on new systems.
8. Reduce the chance of inadvertent escalation caused by mismanagement during crises.<sup>9</sup>

Arms control had indeed exceeded far beyond its originators' assumptions. But within a few years, it all began tumbling down. One of the big losses in the decade of the 2010s was the breakdown of confidence that strategic stability remained a shared US-Russian goal, thereby undermining the role of arms control and increasing the possibility of nuclear use—whether deliberately, via escalation, or through accident or miscalculation.<sup>10</sup>

## The Return of Great-Power Competition

The last arms control treaty between the United States and the Russian Federation, the New START Treaty, was signed in 2010 and entered into force in February 2011 during the Obama administration. At the same time, President Obama was calling for continued efforts to reduce the number and role of nuclear weapons, while simultaneously pursuing across-the-board modernization of the US nuclear enterprise. In addition to New START, he began a series of discussions with Moscow on stability and hosted four nuclear security summits that included nearly every nation that had some role for nuclear weapons or energy.

President Donald Trump came into office in 2017 with a quite different agenda, including skepticism toward any agreement that might delimit US military power. He withdrew from the Intermediate-Range Nuclear Forces Treaty in 2019, following reports of Russian cheating on the provisions of the treaty. He also accepted the de facto demise of the Open Skies Treaty. But the administration also maintained a rigorous mutual inspection relationship with Russia for New START, although it failed to extend New START as its February 2021 expiration deadline approached. The administration called on China to join in trilateral or multilateral negotiations over a follow-on strategic agreement, but was unable to pull Beijing into those discussions.

One of President Joe Biden's first acts on entering office in January 2021 was to agree to the Russian proposal to extend New START until 2026. Unfortunately, the Covid-19 pandemic resulted in the suspension of inspections for two years after 2020. In August 2022, the United States announced it was temporarily suspending further inspections by Russia due to that country's invasion of Ukraine. Nonetheless, in December 2021 Russia had put forward a proposal for agreement on broader security guarantees, which it delivered to Brussels and Washington. These were deeply flawed Russo-centric positions to which neither the United States nor the North Atlantic Treaty Organization (NATO) would concede, but they could be potential building blocks for future negotiations when Russia eventually decides to rejoin the international community.<sup>11</sup>

Challenges today include the complexity created by a larger number of nation-states involved in issues that typically can be ameliorated through arms control such as biological and chemical weapons development and use, nuclear weapons and threats, missiles, and advanced conventional weapons. In addition, the world now faces the possibility of strategic consequences resulting from nefarious acts in new domains such as space and cyber. Added to these issues is the impact of new and emerging technologies across the board, many of which are available to states other than the superpowers. None of these new policy instruments or emerging technologies are covered by arms control. The enlargement of the concept of deterrence into a broader, holistic, cross-domain, or integrated form also creates uncertainty and stress,

for which traditional arms control may not be the most appropriate answer. This includes apparent changes to the norms surrounding nuclear weapons, the increasing use of bellicose language in diplomatic circles, and the actual use of proscribed chemical and biological agents on the battlefield and in operations such as targeted assassinations.

The lack of communication and dialogue between the United States, Russia, and China is also of concern. For example, because of the annexation of Crimea in 2014 the NATO alliance ended all practical cooperation with Russia, a mandate that remains in place today. Even in the depths of the Cold War, the two superpowers routinely talked to one another. Indeed, that is where arms control earned its stripes as a valuable means for reducing tensions and building cooperation and trust. Reduced US embassy staffing in Moscow, ending on-site inspections for New START, China's refusal to participate in bilateral or trilateral nuclear talks, and the lack of high-level meetings all bode ill for settling the serious differences between the major nuclear players. This lack of dialogue has ripple effects across domains, geographic regions, and functional considerations. As Brad Roberts clearly states in the conclusion to this book, "The collapse of bilateral US-Russian nuclear arms control . . . would likely have significant consequences for a treaty system that depends on cooperation among the major powers to ensure effective enforcement of its main provisions." Such a collapse was perhaps foreordained by the Russian government's announcement in February 2023 that it was suspending its participation in the New START treaty regime.

On top of these specific issues affecting relations between the great powers, the world seems to be undergoing a slow descent into nationalism and autarky, moving away from the liberal rules-based international order that the West has been building over the past seventy-five years. All of this warrants a reevaluation of arms control and its approach to enhancing stability. As the 2022 US National Security Strategy said: "Global cooperation on shared interests has frayed, even as the need for that cooperation takes on existential importance. The scale of these changes grows with each passing year, as do the risks of inaction."<sup>12</sup> That is why "the United States will work with allies and partners, civil society, and international organizations to strengthen arms control and nonproliferation mechanisms, especially during times of conflict when escalation risks are greater."<sup>13</sup> Therefore, "We will continue to seek pragmatic engagement with competitors about strategic stability and risk reduction" even given the return of great-power competition.<sup>14</sup>

## **Overview of the Book**

Despite the discouraging situation facing arms control in the world of the 2020s, the authors in this book believe there is still a role for arms control and cooperative security. In the chapters that follow, they assess the role,

value, and purpose of arms control and cooperative security with regard to the political realities we face today. They explore arms control theory, arms control's successes and challenges during the Cold War and since, changes to the international security environment in recent years, and the likelihood of future cooperative arrangements or agreements in various issue areas, geographic regions, and domains. This book takes the position that the underlying principles and objectives of arms control remain relevant. Arms control may not be as centrally important in the near term as it was during the Cold War, but it still has a role to play in a globalized world that has growing security concerns.

Part 1, "The Foundations and Context of Arms Control," establishes a baseline for understanding arms control and cooperative security. It begins with a discussion of arguably the most important goal of arms control, to create strategic stability and avoid a nuclear war. Schuyler Foerster ably addresses this critical concept in his chapter, describing stability as "preserving a degree of predictability about state behavior, reducing uncertainty in a crisis, and minimizing the risks of miscalculation in circumstances that might escalate into conflict." His key point is the necessity for dialogue between potential adversaries to meet the original goals described by Thomas C. Schelling and Morton H. Halperin. As Foerster writes, the challenge today is that "arms control and other forms of collaboration on security issues can address sources of strategic stability, but only if the broader political climate will allow it." Arms control can help that dialogue, he says: "Arms control—in its broader sense of encompassing a range of collaborative security efforts—can play an important role, even if only to ensure that the potential adversary is part of the conversation."

James M. Smith provides a historical overview of arms control and its multifarious mechanisms. Arms control and disarmament have resulted in "ratified treaty positions with the force of law, norms of broad agreement on the most dangerous of weapons, and rules of the road over behaviors and technologies in novel realms of conflict." Together, this *mélange* of cooperative security agreements has encouraged peace since the end of World War II.

Part 2 turns to perspectives on arms control of the three major powers: Russia, China, and the United States. Amy F. Woolf begins with a survey of US views of arms control and the way in which it creates arms control policy. According to her, "Arms control and collaborative security endeavors are among the tools that help strengthen US national security... they complement military, diplomatic, and economic measures in an integrated deterrence architecture." The challenge today is that after five decades of consensus within the US government on the value of negotiations and agreements, that perspective is breaking down and is subject to competing interests within the American political system.

Not surprisingly, Russia has a different perspective, as Ambassador Steven Pifer highlights. Russia's relations with the United States are in a post-Cold War slump. However, as he points out, in early 2022 (prior to the war in Ukraine) the United States and Russia each professed interest in continuing dialogue on strategic stability. Both presidents also declared in 2021 that "a nuclear war can never be won and must never be fought." Yet this did not stop Moscow from invading Ukraine or threatening the West with nuclear attack, using its arsenal as a deterrent to Western support for Kyiv. When and if negotiations resume over arms control issues, they will need to overcome several issues on which neither side seems willing to budge: for Moscow, that means concern over the United States' strategic missile defenses and conventional prompt global strike capabilities; for Washington, Russia's unnecessarily large arsenal of non-strategic nuclear weapons.

Phillip C. Saunders looks at China and arms race dynamics in East Asia. He describes a regional environment where arms control will be increasingly necessary to manage US-China strategic competition, but where obstacles are steep and growing. Progress will require a degree of mutual restraint and accommodation, even as competition is likely to intensify. North Korea's nuclear developments "promise to make an already tense regional security environment even more fraught."

Part 3 of the book addresses specific domains in which arms control might be expected to operate. It covers nuclear, biological, chemical, conventional, and so-called novel weapons; disarmament and nonproliferation approaches; and the new domains of cyber and space.

David A. Cooper starts by addressing nuclear weapons and arms control. This is the only realm that threatens the very survival of humanity should things go terribly wrong. This demands the creation and maintenance of norms of behavior governing these weapons and their handling, particularly given the global movement toward great-power competition. As he puts it, "It is increasingly obvious that nuclear weapons will play a key role in this new era of great-power competition. Unfortunately, the brief span of nuclear history provides few guideposts for the way ahead." Arms control and other cooperative measures will remain a valuable means of enhancing stability in this world.

Rebecca Davis Gibbons addresses nonproliferation and disarmament in her chapter. An expert on the Nuclear Non-Proliferation Treaty, she argues that the small number of nuclear states today reflects the success of global nonproliferation efforts since the 1960s. However, those efforts all required great-power cooperation, which is currently lacking. Fortunately, whereas historically a state would attempt to incorporate new technologies into its military arsenal, this has not been the case with WMD, due to the arrangements put in place to prevent proliferation. A breakdown in great-power cooperation will pose significant strains to those arrangements.

Justin Anderson describes various monitoring regimes that have been established in nuclear and chemical treaties, thereby ensuring compliance with the terms of those agreements. He points out that the Biological Weapons Convention (BWC) is notable as the only major international treaty without such a monitoring regime. One of the strengths of his chapter is his insightful case study of how a nominal on-site inspection might take place between adversaries.

The father-daughter team of Amanda and Michael Moodie together tackle chemical and biological weapons. The editors acknowledge that putting these two topics into one chapter is a disservice to each of these issues and is not necessarily the most useful way to think about these quite different capabilities or the challenges they present. It is a commonly used organizing technique but, as they point out, combining the two can lead to problems when trying to limit the spread and use of these weapons. The BWC and the Chemical Weapons Convention employ quite different approaches to dealing with the military capabilities associated with the different underlying sciences. Their conclusion that “exploring untraditional and potentially uncomfortable alternatives to familiar arms control practice could generate surprising (and valuable) results” is a perspective that could apply to arms control writ large.

Marina Favaro tackles the intellectually challenging topic of new and emerging technologies and their likely impact on arms control. She points to a lack of political will to engage in such complex and uncertain issues, in part because there is a dearth of understanding how such technologies work or how they might impact security issues. Her chapter helps fill that intellectual gap. She concludes that the mechanisms of arms control are meant to establish trust and enhance stability; they need to be “sufficiently flexible to accommodate a rapidly changing technology landscape.”

Amy J. Nelson covers conventional weapons and novel systems. While focusing on the Conventional Armed Forces in Europe Treaty as the strongest example of an extant arms control treaty for dealing with the challenges of limiting national military forces and equipment, the heart of her chapter is her review of weapons that may arise from new and emerging technologies. These include hypersonic delivery systems and other exotic systems, all of which may prove even more difficult to control than were more traditional systems.

George Perkovich provides one of the most interesting chapters in this book as he covers the new domains of cyberspace and outer space. One of the biggest challenges in these domains is that many cyber and space capabilities are “quadruple dual-use”: they are made, owned, and operated by both commercial and state users; they are used for peaceful as well as hostile purposes; they are used for espionage as well as attack; and from space they can deliver either conventional or nuclear weapons. This makes tradi-

tional, treaty-based arms control impractical for dealing with these domains. So, does arms control have any value? As he puts it, “Probably not much, but it doesn’t hurt to try.” The number of actors and systems that would have to be controlled in these domains is nearly boundless. Therefore, he recommends that we develop rules of the road that restrain behaviors, targets, and effects of operations in space or cyber, as well as means of verifying and ensuring compliance with those unilateral limitations.

In Part 4, David Santoro reviews the international system we live in today. He describes a system in which competition between the major powers has grown so intense that future historians may call this period “a defining moment for the next international order.” This is not what most observers believed would be the case at the end of the Cold War. Nevertheless, he argues that these developments do not necessarily augur poorly for the long-term prospects of arms control or its future usefulness. In the near term the focus should be on reducing nuclear risks and creating crisis management mechanisms to prevent inadvertent escalation of crises.

Kerry M. Kartchner addresses cooperative security and its potential future. His main point is that cooperative security, like arms control, is a means to an end, and can be trumped by problematic political relationships. The role of cooperative security is often to fulfill the need in security arenas when more formal arms control is unable to do so. He calls for a reconceptualization of cooperative security and its mechanisms to meet the challenges of a new era of great-power competition.

Brad Roberts concludes the book with his take on “Arms Control’s Uncertain Future.” He is pessimistic about the near-term possibilities for any arms control deals between the major powers. In fact, he predicts an “interregnum” developing, a period in which all sides focus on developing war-fighting capabilities that may lead to an arms race. Cooperation on limits to that behavior will not be of interest to the parties involved. In short, it will be a dangerous period. However, like all things, this period will also eventually end—although precisely when, why, or how is a matter of conjecture and debate. This interregnum will likely be similar to the early Cold War years, a competitive period that preceded the rise of arms control as a means of controlling behavior and stabilizing relations. Will arms control return this time? Probably, but most likely in a new form.

## **Conclusion**

Today there is debate over the future value of traditional arms control, not only in new arenas, but even with respect to the few treaties and agreements that remain. We are at a crossroads, with the future direction of arms control uncertain, but its past value indisputable. The great powers must

seriously consider what role arms control can play in enhancing future national security considerations. These new roles might be different than the way policymakers and scholars have thought about arms control in the past. Arms control in the future will need to address the concept much more broadly, including multiple actors, in all regions and in new domains, considering all types of military capabilities. New approaches may include not just traditional negotiations and treaties, but risk reduction, crisis management, data exchanges, confidence- and security-building measures, and stability dialogues.

While there may be pessimism within the security community over the possibility of a return of traditional arms control any time soon, there may perhaps be optimism over cooperative approaches, Russia's need to return to the international system as a normal power, and China's desire to be seen as great power and peer. Any of these elements could lead once again to renewed negotiations and the return of arms control to a central role in the relationship between nations.

## Notes

1. Brooks, "The End of Arms Control?" 96.
2. Bull, *The Control of the Arms Race*.
3. Schelling and Halperin, *Strategy and Arms Control*.
4. Carter, Perry, and Steinbruner, *A New Concept of Cooperative Security*.
5. See Shultz, Perry, Kissinger, and Nunn, "A World Free of Nuclear Weapons," A15; and the same authors in a follow-on piece, "Toward a Nuclear-Free World." Also "Remarks by President Barack Obama in Prague, as Delivered."
6. Kartchner "The Objectives of Arms Control."
7. In the introduction to their seminal book, Schelling and Halperin state: "There is hardly an objective of arms control to be described in this study that is not equally a continuing urgent objective of national military strategy—of our unilateral military plans and policies," *Strategy and Arms Control*, 3.
8. Throughout much of the Cold War, these three dilemmas were elaborated mostly in nuclear terms: What deters nuclear war? How many nuclear weapons are enough? What if nuclear deterrence fails? But they are equally applicable to the full range of defense scenarios, including policies and threats involving conventional, chemical, biological, and other weapons.
9. Brooks, "The End of Arms Control?" 85.
10. Wolfstahl, "Why Arms Control?" 102.
11. See Bugos, "Toward a New Nuclear Arms Control Framework Arrangement."
12. US Department of Defense, *National Security Strategy*, 7.
13. *Ibid.*, 29.
14. *Ibid.*, 29.