

OCTOBER 2016

The Evolving U.S. Nuclear Narrative

**Communicating the Rationale for the
Role and Value of U.S. Nuclear Weapons,
1989 to Today**

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Clark Murdock

Rebecca K. C. Hersman

PRINCIPAL AUTHORS

Rebecca K. C. Hersman

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A REPORT OF THE
CSIS INTERNATIONAL SECURITY PROGRAM

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Center for Strategic & International Studies
1616 Rhode Island Avenue, NW
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202-887-0200 | www.csis.org

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Lanham, MD 20706
301-459-3366 | www.rowman.com

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Executive Summary

Managing and operating the nation’s nuclear weapons, forces, and delivery systems is an enormous responsibility and among the most demanding of military missions. The men and women responsible for executing that mission—for acting as the custodians of the nuclear arsenal of the United States—must perform difficult and sometimes tedious tasks in highly challenging environments and under demanding expectations. They do so amid a changing “nuclear landscape” that has, since the end of the Cold War, seen the role of nuclear weapons in U.S. national security strategy decline as the concept of deterrence has become increasingly abstract in the twenty-first century.

Over the last few years, many observers, including key Department of Defense (DoD) officials, have commented on the need for DoD to better communicate a more compelling rationale for why the U.S. nuclear arsenal remains essential to the post–Cold War strategy of the United States and to the security of the American people. Those airmen and sailors who comprise the nuclear workforce, and who are asked to dedicate their lives in service of their mission, deserve a persuasive explanation as to why their unwavering stewardship of the U.S. nuclear arsenal will matter as long as these weapons exist in the world. In the assessment of some, including this study’s authors, a coherent narrative about the fundamental role of U.S. nuclear weapons has not been sufficiently stated and promulgated across the force. This is to the detriment of efforts to respond to the broader challenges facing the nuclear enterprise, as a compelling rationale contributes to a healthier, more vibrant, and better motivated nuclear workforce. Recognizing this need, the Office of the Deputy Assistant Secretary of Defense (DASD) for Nuclear Matters endorsed the three objectives of this study:

1. Track the changing historical narrative for U.S. nuclear weapons as it has evolved from 1989 to the present.
2. Evaluate the current narrative’s strengths and weaknesses.
3. Articulate a rationale that better meets the needs of the U.S. Air Force and Navy forces responsible for supporting and executing the U.S. nuclear mission, inclusive of the mid-level commanders, the junior officers, and the enlisted.

To be clear, this study does not make new nuclear policy. At its core, this study aims to create a dialogue with the nation's nuclear personnel about the rationales for the U.S. nuclear arsenal that already exist—some of which have been stated at the highest levels of leadership—to ask what the nuclear forces actually hear, what works and what does not, and what motivates them on a daily basis. Over the course of the research effort, however, it also became evident that, while the message matters, the individuals who deliver the rationale, the means by which it is communicated, and the context in which it is received are also important.

TRENDS IN THE HISTORICAL NUCLEAR NARRATIVE

To assess the evolving historical narrative for U.S. nuclear weapons, this study juxtaposes an overview of the international security environment with the statements and decisions made about the arsenal between 1989 and the present. Who said what, and when? What was happening in the world at the time, and did these statements represent a shift in nuclear policy at the time? For the purposes of this study, this period between 1989 and the present is divided into three eras:

Era 1: Decline and Dissolution of the Soviet Union (1989–2001)

The Soviet Union's sudden collapse relieved the United States of its primary strategic threat and caused an immense shift on the international stage.

Era 2: 9/11 and Terrorism, Afghanistan and Iraq Wars (2001–2010)

In the wake of 9/11, the United States embarked on a "Global War on Terror" and plunged into wars in Afghanistan and Iraq in 2001 and 2003, respectively, as it fought to subdue a new generation of extremists and state sponsors of terrorism.

Era 3: Growing Great-Power Competition in an Era of Rising Disorder (2011–Present)

Although the beginning of the third era is harder to determine, relations with Russia and, to a lesser extent, China began to deteriorate even as the threat posed by nonstate enemies metastasized and grew in severity.

Tracing how the U.S. nuclear policy narrative has evolved through these three periods reveals more consistency than change, even though the years since the fall of the Berlin Wall and collapse of the Soviet Union have seen a range of turbulent international events. Moreover, despite the highly polarized political climate of recent decades, the shifts and differences in the arc of the nation's nuclear narrative do not correspond to predictable partisan patterns. The most fundamental articulations of U.S. nuclear weapons' role, function, posture, and priority—the four key characteristics of the U.S. nuclear arsenal identified and defined in this study—have remained more or less the same through Republican and Democratic administrations; namely:

- The role and salience of U.S. nuclear weapons is declining, even as they remain critical to deterring the most dangerous current and imagined nuclear threats.
- As long as these weapons exist in the world, the United States must retain its arsenal safely, securely, and effectively.

These topline messages are also accompanied by other prominent narrative themes and counter-vailing narratives that, in some cases, reflect a shifting degree of consensus across the nuclear and national security communities:

- While deterrence remains important, the arsenal serves mostly as a hedge against future threats that may arise.
- As a greater number of current threats can be met with conventional capabilities, a greater share of the deterrence burden will be placed on conventional capabilities.
- Nuclear weapons do not necessarily deter twenty-first-century threats, such as nonstate actors or rogue states.
- The U.S. nuclear arsenal requires attention and investment, even as reductions take place.
- The United States must lead in reduction efforts if it wants nonproliferation to succeed.

BUILDING A COMPELLING RATIONALE

As the research progressed, it became clear that the effectiveness of the rationale for U.S. nuclear weapons has only partially to do with the words used to articulate it. Feedback from operational personnel overwhelmingly points to the significant influence of other factors in determining whether the rationale reaches the forces clearly and precisely, with a real impact. The message matters, but the individuals who deliver the rationale, the means by which it is communicated, and the context in which it is received are also important. As such, taking the historical nuclear narrative as its starting point, this study came to ask four questions:

1. Is the existing rationale the right one?
2. Is the rationale tailored to specific audiences with appropriate detail and specificity?
3. Is the rationale suitable but being improperly communicated?
4. Is the rationale communicated effectively within the mission but undermined outside of the mission?

In answering these questions, the study team identified a number of disconnects and challenges not only in the rationale for nuclear weapons over time, but in the way that narrative is perceived, internalized, and remembered over time by various audiences. These challenges naturally fall into six basic categories:

Message

Is the message clear, persuasive, and consistent?

- In many cases, U.S. nuclear weapons policy is described in highly sophisticated strategic logic that is not very accessible to the general public or the junior nuclear personnel. It is both rife with concepts and jargon that are not routinely defined and explained—for example, “deterrence,” “hedge,” “strategic stability,” “escalation”—and heavily caveated.

- The rationale tends to focus on what nuclear weapons will not do and is dominated by descriptions of decline, reduction, and diminishment.
- This review found few examples of an affirmative case for the role of U.S. nuclear weapons in U.S. national security across the time period from 1989 to the present. The only affirmative rationale that emerged during this time frame was the important role the U.S. arsenal plays in assuring partners and allies. Too little effort has been made to state the critical, albeit more limited, role of nuclear deterrence.
- These issues of complexity, caveating, and negative framing are remarkably consistent across all three eras. While some interviewees hold strongly to the notion that such narratives can be attributed to certain leaders, administrations, or time frames, the review of the historical record found no such correlation. The challenges are bipartisan.

Audience

Who comprises the audience for the rationale? Is the message tailored to them?

- The rationale must reach diverse communities throughout and beyond the operational forces. A compelling rationale must reach and resonate across the total force, not just the nuclear operational community.
- The audience for the rationale is both vast and comprised of numerous communities with varying levels of interest in and familiarity with nuclear weapons. It includes those in the services who execute the nuclear mission: the mid-level commanders, the junior officers, and the enlisted. It also encompasses their conventional counterparts, their families and friends, other members of the general public, the scientific community and the broader nuclear enterprise, and Congress.
- Junior and mid-grade officers are linchpin communicators—required to understand and re-communicate a compelling rationale—in speaking to these various audiences.

Messenger

Who is speaking this narrative and, just as important, who is not? Is the communicator clear, persuasive, and disciplined?

- Clear statements from the highest possible echelons of policymaking—the president, the secretary of defense, the secretaries of state and energy—carry a weight all their own, especially in terms of priority and strategic vision. What senior leadership says matters, but what they do not say also matters. Silence can be deafening.
- Those closest to the nuclear personnel in the chain of command are most responsible and thus accountable for communicating the rationale for U.S. nuclear weapons. The message will not get through to them if someone in the chain of command just one or two levels above in seniority decides the personnel do not need to hear it. They are the ones who must “make good” on the words from senior leadership.
- Junior officers, who begin as message receivers, quickly become messengers themselves in training the next generation of nuclear personnel. Junior and mid-grade officers, who are

charged with distilling complex policy statements and translating them into a sense of purpose and mission for their subordinates, need targeted and refined messages coupled with resources, materials, training, and support. The success of current efforts will depend on whether they are properly equipped to execute their role as re-messengers.

Mechanism

Is the message communicated effectively and appropriately through appropriate tools and forums that ensure that the message reaches its intended audience intact?

- Speeches, congressional testimony, media statements, and official documents, strategies, and reviews are the traditional mechanisms for establishing and communicating the nuclear narrative and for helping the “inside the beltway” policy elites, congressional members and staff, and high-level media and international audiences communicate with each other. But the detailed and caveated rationales to explain the role of nuclear weapons, the trade-offs between competing priorities, the complexities of deterrence in the post–Cold War era, or even the priority that military services put on the nuclear mission are a high-risk gamble to translate through trickle-down methods.
- The initial messengers at the beginning of the chain have yet to adapt their methods to new forms of communication that speak to audiences in highly personalized ways, such as blogs, personalized news alerts or feeds, and social media. Key messages are reaching the operational forces third- or fourth-hand at best, via communicators who may not be highly knowledgeable on the issues.

Volume and Dissonance

What is the volume of the message and how much noise must it overcome to be heard? Are competing voices and narratives crowding out the narrative?

- The problems with the mechanisms by which the rationale is conveyed to the nuclear forces are compounded by an oversaturated information landscape.
- It is crucial to not talk “inside a nuclear silo” without listening to what is being said or is left unsaid by and to the rest of the force. Synergies can and should be found across virtually every geographic region.
- Countervailing narratives can also contest and undermine the topline rationale. The nuclear policy community, both within the United States and internationally, is diverse and divided. Competing narratives, even within the nuclear mission space, can lead to a crowded message board.

Context

What is the context or environment in which the message is communicated? Does it reinforce or undermine the message?

- The importance of how well the context in which a message is received “fits” the message itself cannot be overstated. No matter how “right” the words or the means of delivery may

be, they will only be received and internalized in a positive environment—one of sufficiently supportive command leadership, educational opportunities and training support, and investment of time and resources—that encourages such strategic thinking.

- The nuclear workforce looks closely at the alignment of words and deeds to determine if the narrative is credible, sustainable, and persuasive. The “say-do” gap creates the impression that the words are hollow, which undermines the credibility of the narrative and fosters cynicism and low morale. Again and again, interviewees pointed to the gap between words (rationale) and deeds (funding, leadership attention, and personnel practices) as a fundamental problem with the rationale for nuclear weapons.
- A deeper dive into the various communities that comprise the nuclear forces shows that they each have their own deeds that carry the most impact and meaning depending on their service culture, deployment location, and operational activity.
- There is a “say-do-believe” gap. Overcoming perceptions that the message is not reflected in actions will take patience: it will require creating an affirmative context for the rationale, undoing and remedying the various pieces of the say-do gap, and doing so in a continuous, sustained effort that conveys to the nuclear workforce that this commitment is lasting.

A COMPELLING RATIONALE

The proposed rationale for U.S. nuclear forces set forth in this study reflects the authors’ effort to capture the themes that resonated most strongly with the target audience. In developing it, the authors have sought to adhere to the following “dos” and “don’ts”:

Do:

- Develop a rationale that is affirmatively, rather than negatively, framed
- Use language that is clear and direct and does not require a sophisticated understanding of nuclear policy
- Use topline messages that can be employed consistently with a wide range of audiences (the public, the Congress, the armed forces) but can also be tailored to various audiences through additional specificity
- Look to the future, not the past, as the source of challenge *and* opportunity
- Remember that words accompanied by meaningful and appropriate actions are always the most effective message

Don’t:

- Use jargonistic or theoretical language
- Appear nostalgic about the Cold War or suggest the future lies in a return to the past
- Criticize the audience in terms of knowledge, education, or interest

Overview of the Rationale

Today, the United States faces a nuclear landscape of complexity, uncertainty, and risk. While nuclear dangers have certainly receded from the high-water mark of the Cold War, the nuclear optimism of the post–Cold War era has declined as well. Today, the United States no longer faces a single primary adversary from one region of the globe, but rather a diverse set of nuclear dangers spanning at least three geographic regions and potentially with global reach. These dangers include:

- Nuclear attack by a nuclear-armed state
- Growing nuclear intimidation and coercion by regional powers
- Renewed and potentially expanded nuclear competition among great powers
- Risk of nuclear intimidation and use by nonstate actors and extremists
- Growing frustration regarding global disarmament
- Continued strategic uncertainty

The full proposed rationale appearing in Chapter 4 of this study seeks to articulate the role, function, posture, and priority of the U.S. nuclear arsenal in addressing the important challenges and problems that drive and constrain its place in U.S. national security strategy. To emphasize that the U.S. nuclear arsenal confers both power and immense responsibilities on the United States, the rationale builds on each of these elements and themes:

Our nuclear forces provide a critical foundation for U.S. power and influence in the world and serve as the only existing credible defense against nuclear destruction, ensuring that the U.S. homeland will remain protected when the nation's conventional forces carry out their responsibilities overseas.

U.S. nuclear weapons force our adversaries to consider that the benefits of attacking the United States or our allies are far outweighed by the risks and costs, so that restraint becomes a better option than aggression. As such, our nuclear forces offer our allies the option to trust in the United States' nuclear protection rather than acquire their own nuclear weapons.

An effective U.S. nuclear arsenal must be credible, flexible, survivable, responsive, and reliable. The value of U.S. nuclear weapons relies on their being permanent and persistent, as well as visible and demonstrable, so that they signal the United States' resolve to not only discourage aggression, but to also defend itself and its allies as necessary.

The United States respects the awesome responsibilities that accompany the custodianship of nuclear weapons, holding itself to the highest possible standard for responsible nuclear stewardship. As long as nuclear weapons exist in the world, the United States will shoulder these responsibilities and serve as the nuclear counterweight to those with malicious intentions.

The United States has given our nuclear forces profound responsibilities and in turn has set the highest possible expectations. Our forces require the investment of time, resources, and attention by leadership at all levels, as well as commitment to a climate that fosters personal responsibility, accountability, and innovation.

COMMUNICATING A COMPELLING RATIONALE FOR U.S. NUCLEAR WEAPONS

Interviews and roundtables repeatedly stressed the need for not only a new nuclear narrative, but also a detailed strategy to improve how leaders and policymakers talk about nuclear weapons, communicate their importance, and create a context in which such a compelling rationale can be heard, understood, shared, and believed. This study recommends the following next steps:

1. Develop and communicate an affirmative and compelling rationale for the U.S. nuclear arsenal that articulates the role, function, posture, and priority of U.S. nuclear weapons in U.S. national security.
2. Set the tone from the top. A new nuclear narrative cannot be compelling if not fully and formally owned and communicated by the president and the president's most senior national security advisers. Give the message authority, and have it come from the highest authorities.
3. Direct the rationale for U.S. nuclear weapons to the whole force, not just the nuclear operators.
4. Create an education-based context for communicating a compelling rationale, not just a public affairs plan.
5. Cultivate and encourage strategic and policy knowledge through opportunities for education and training earlier in the officer development process and beyond the nuclear force alone.
6. Focus on the re-communicators: the junior and mid-grade officers.
7. Close the gap between messenger and audience.
8. Distribute the rationale widely and via diverse communication modes that are short and easily accessed.
9. Make better use of operational exercises across the nuclear force to engage senior leaders, build stronger connections between operators and support elements, and demonstrate priority. These are huge missed opportunities.
10. Match words with meaningful actions.

The recommendations generated by this study are intended to be practical and implementable, but they will not be simple. They will require sustained efforts—not only to find the “right” words, but also to create and foster a proper context in which those words can take root—at every level of leadership. Only a meaningful realignment of words with concrete actions will form a compelling rationale for the continued role and value of U.S. nuclear weapons. The airmen and sailors who carry out the nuclear mission every day on behalf of the American people deserve no less.

Introduction

Managing and operating the nation’s nuclear weapons, forces, and delivery systems is an enormous responsibility and among the most demanding of military missions. The men and women responsible for executing that mission—for acting as the custodians of the nuclear arsenal of the United States—must perform difficult and sometimes tedious tasks in highly challenging environments and under demanding expectations. They do so amid a changing “nuclear landscape” that has, since the end of the Cold War, seen the role of nuclear weapons in U.S. national security strategy decline as the concept of deterrence has become increasingly abstract in the twenty-first century.

Over the last few years, many observers, including key Department of Defense officials, have commented on the need for DoD to better communicate to the nuclear personnel a more compelling rationale as to why the U.S. nuclear arsenal remains essential to the post–Cold War strategy of the United States and to the security of the American people. Those airmen and sailors who comprise the nuclear workforce, and who are asked to dedicate their lives in service of their mission, deserve a persuasive explanation as to why their unwavering stewardship of the U.S. nuclear arsenal will matter as long as these weapons exist in the world. In the assessment of some, including this study’s authors, a coherent narrative about the fundamental role of U.S. nuclear weapons has not been sufficiently stated and promulgated across the force. This is to the detriment of efforts to respond to the broader challenges facing the nuclear enterprise, as a compelling rationale contributes to a healthier, more vibrant, and better motivated nuclear workforce. Recognizing this need, the Office of the Deputy Assistant Secretary of Defense for Nuclear Matters endorsed the three objectives of this study:

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To be clear, this study does not make new nuclear policy. At its core, this study aims to create a dialogue with the nation's nuclear personnel about the various rationales for the U.S. nuclear arsenal that already exist—some of which have been stated at the highest levels of leadership—to ask what the nuclear forces actually hear, what works and what does not, and what motivates them on a daily basis.

As detailed further in Appendix B, CSIS conducted its research with an extensive review of the public record, supplementary interviews, and roundtables that examined whether the existing historical narrative has effectively elaborated the arsenal's role, function, posture, and priority. Each of these "focus areas," conceived as organizing principles for sorting the immense quantity of material in the historical record, addressed a key aspect of the U.S. nuclear arsenal:

- **Role:** How has the fundamental purpose of U.S. nuclear weapons and their place in U.S. national security strategy adapted to shifts in the international security context?
- **Function:** How do the U.S. nuclear arsenal and its associated infrastructure and delivery systems fulfill their role?
- **Posture:** What size, shape, distribution, and readiness of nuclear forces is necessary for them to fulfill their role and perform their functions?
- **Priority:** When faced with difficult trade-offs, are policymakers willing to make the difficult choices necessary to demonstrate commitment through the allocation of time, attention, and resources?

In assessing the "nuclear narrative" by these four fundamental questions and speaking to interviewees, this study traces the historical narrative as it evolved between 1989 and the present. Chapters 1 and 2 place key public statements about the U.S. nuclear arsenal within the context of their contemporary security environments. The study considers what these results and supplementary interviews say about the existing rationale and the narrative themes that have risen and fallen in prominence over the years, taking note of those themes that have endured longer than others. Full charts and timelines outlining major narrative themes and key statements appear in the appendixes.

Chapter 3, drawing on the interviews and roundtables, takes a more encompassing view of the elements that determine the effectiveness of the existing rationale. Recognizing that a message is more than its words, this study identifies a number of disconnects not only in the rationale itself, but also in the way that rationale is perceived, internalized, and remembered by its intended audience over time. Chapter 4 contains the rationale proposed by the study authors that attempts to capture the narrative themes most resonant with the nuclear personnel who participated in the roundtables. It also lists the "dos and don'ts" learned along the way to this recommended rationale. Chapter 5 follows with 10 recommendations for creating a context in which a compelling rationale can be heard, understood, shared, and believed.

CSIS has additionally created a website—which includes an interactive timeline tracing the historical nuclear narrative, the complete database of key statements used by the study team in its analysis, a downloadable version of this study, and additional learning resources—to accompany this report.

The recommendations generated by this study are intended to be practical and implementable, but they will not be simple. They will require sustained efforts—not only to find the “right” words, but also to create and foster a proper context in which those words can take root—at every level of leadership. Only a meaningful realignment of words with concrete actions will form a compelling rationale for the continued role and value of U.S. nuclear weapons. The airmen and sailors who carry out the nuclear mission every day on behalf of the American people deserve no less.

Evolution of the Historical Nuclear Narrative

The past 27 years—which encompass the demise of the Soviet Union, the September 11 attacks, the Iraq and Afghanistan wars, the rise of competing nations, and a powerful surge in instances of nonstate terrorism—have had a profound effect on the way the United States reflects upon, views, and articulates its reasoning for its nuclear capabilities. U.S. nuclear policy today is not the U.S. nuclear policy of the Cold War; neither is it the nuclear policy of 15 or even 10 years ago. Without an understanding of the global security threats under which those policy decisions were made, and without the broader circumstances in which certain words were said, any analysis of the narrative surrounding U.S. nuclear weapons would be incomplete. The threats and the words are inextricably linked.

This report therefore analyzes the evolving historical nuclear narrative while simultaneously juxtaposing it against an overview of the international security environment that has provided the backdrop for, and directly influenced, the statements and decisions made about the arsenal between 1989 and the present. (See Appendix D for the full timelines.) Who said what, and when? What was happening in the world at the time, and did these statements represent a shift in nuclear policy at the time? Though far from a complete recounting of history, the timelines do seek to highlight and provide a better sense of the global threats facing the United States, the evolution of nuclear capabilities elsewhere in the world, and the notable incidents that affected the organization and efficacy of the nuclear enterprise.

A CHANGING SECURITY ENVIRONMENT

This study divides the years between 1989 and the present into three “eras,” the first spanning from 1989 to September 11, 2001; the second from September 11, 2001 to the end of 2010; and the third from 2011 through the present. These divisions were chosen along defining moments in the international security environment. The 1989 fall of the Berlin Wall, as the iconic image symbolizing the end of the Cold War, and the al-Qaeda-sponsored terror attacks of September 11 provided

natural bookends for marking the first and second eras. The beginning of the third era proved more difficult to pinpoint. It seems, however, that with the launch of the Prague Agenda (to move toward a world without nuclear weapons) and the Nuclear Security Summit process (to deter nuclear terrorism around the globe), as well as the signing and ratification of the New START (Strategic Arms Reduction Treaty), 2010 ended as a high-water mark for nuclear optimism. By 2011, the Arab Spring was taking hold in the Middle East, prompting North Atlantic Treaty Organization (NATO) intervention in Libya. Relations with Russia had begun to deteriorate significantly, ultimately leading to Moscow's decision to terminate cooperative nuclear projects with the United States and intervene militarily in Ukraine and Syria. In Asia, China's more aggressive posturing, North Korea's provocative behavior, and new revelations about Pakistan's nuclear capabilities suggested a nuclear security environment that appeared more complex, chaotic, and risky than it had been in the preceding years.

Era 1: Decline and Dissolution of the Soviet Union (1989–2001)

The first era saw an immense shift on the international stage when the Soviet Union's sudden collapse relieved the United States of its primary strategic threat. By 1991, the Cold War was over, and it had left the United States as the singular superpower, with tens of thousands of weapons in its nuclear stockpile. While the preceding decades had been defined by constant anxiety and present dangers, this period instead simmered with a buildup of emerging powers in pursuit of nuclear and other nonconventional capabilities that threatened to destabilize the new international system.

As the Soviet Union's central government failed, so too did its infrastructure for securing its expansive nuclear, biological, and chemical weapons stockpiles collapse—leading to increased risk that the chaos of the new political system would give opportunity to third parties seeking to acquire such arms. U.S. observers at the time feared that weakened control mechanisms over Soviet tactical nuclear weapons, deterioration of nuclear facilities, and unemployment of nuclear scientists might leave materials and knowledge vulnerable to exploitation, theft, or misuse. Of additional concern were the tens of thousands of nuclear warheads, as well as components of other weapons of mass destruction (WMD), left by the former Soviet regime in the newly independent republics. Though Belarus, Kazakhstan, and Ukraine signed the Lisbon Protocol in May 1992, actual implementation of the agreement proved thorny, with Ukraine in particular requiring compensation and extensive security assurances from Russia and the United States before it would relinquish what was then the third-largest nuclear arsenal in the world.¹ In response to both of these proliferation risks, the United States established the Nunn-Lugar Cooperative Threat Reduction (CTR) Program to assist Russia in safeguarding and eliminating these weapons of mass destruction.² Simultaneously, the United States also led in cooperative international initiatives to prevent the further proliferation of nuclear weapons: after signing START I and II treaties with Russia in 1991 and 1993 to initiate bilateral drawdowns of the two nations'

1. Arms Control Association, "The Lisbon Protocol at a Glance," last modified March 2014, <https://www.armscontrol.org/node/3289>.

2. Defense Threat Reduction Agency, "Nunn-Lugar Cooperative Threat Reduction Program," accessed September 27, 2016, <http://www.dtra.mil/Missions/Partnering/CooperativeThreatReductionProgram.aspx>.

respective nuclear forces, the United States also pushed for the renewal of the Nuclear Non-Proliferation Treaty (NPT) in 1995.³

As one threat to the U.S. interests fell into decline, others sought to fill its space. The Gulf War, the United States' first major post–Cold War military operation, shed light on Iraq's burgeoning chemical weapons program and illustrated the new, wider range of chemical, biological, radiological, and nuclear (CBRN) threats opposing the United States. Several nations—China, France, India, and Pakistan—conducted nuclear tests, and Pakistan publicly admitted that it had the ability to make a nuclear weapon. The unpredictable leadership of “rogue regimes” such as Iran and North Korea actively sought nuclear capability, while a series of breaches at U.S. nuclear laboratories sparked worries that the nation's nuclear secrets were vulnerable to theft, particularly by the Chinese. Additionally, nonstate actors came to the fore as instances of terrorism, most notably the World Trade Center bombing in 1993 and the Oklahoma City bombing in 1995, demonstrated the danger that individuals or groups could pose should they acquire weapons of mass destruction.

Yet, in spite of this rising tide of states and rogue actors, it was clear in the wake of the Cold War that the United States now possessed a nuclear arsenal, some 23,000 weapons at the start of George H. W. Bush's presidency in 1989,⁴ that was disproportionate to the existing threat. Absent the Soviet Union, the existential threat that animated the role of nuclear weapons in U.S. strategy, the U.S. arsenal's function—to deter a nuclear attack through the retaliatory threat of unacceptable damage—seemed misaligned with a security environment that was trending in the right direction for U.S. interests. As various government officials noted in the mid-to-late 1990s, nuclear weapons had not played so small a role in U.S. security strategy “at any time since their inception.”⁵ In 1995, then Senator Joe Biden sharply criticized those “nuclear theologians in the Pentagon and elsewhere,” with their “old-time religion,” who would instead prefer to see the status quo maintained. Even 7,000 warheads, he said, was “a level as seemingly obsolete as a statue of Lenin on a square in Saint Petersburg.”⁶

Like Senator Biden, other policymakers largely welcomed the change and advocated for the continued decline of the U.S. nuclear stockpile. They reimagined the function of nuclear weapons (see Table 1.1), circumscribing its place within U.S. national security strategy in favor of placing more of the burden of deterrence on conventional weapons, which they deemed capable of meeting a greater number of the threats to the United States. In this emerging post–Cold War security environment, many believed that, increasingly, the United States' conventional military capability could deter and counter most, if not all, credible threats. Retired U.S. Army Gen. Andrew J. Goodpaster and retired U.S. Air Force Gen. Lee Butler testified to this effect before the Senate Governmental Affairs Committee:

3. U.S. Department of State, “Treaties and Agreements,” accessed September 27, 2016, <http://www.state.gov/t/avc/trty/index.htm>.

4. U.S. Department of State, “Fact Sheet: Transparency in the U.S. Nuclear Weapons Stockpile,” last modified April 29, 2014, <http://www.state.gov/documents/organization/225555.pdf>.

5. *Consideration of Ratification of the Treaty between the U.S. and the Russian Federation on Further Reduction and Limitations of Strategic Offensive Arms Treaty*, Hearing before the Senate Committee on Foreign Relations, 104th Cong. 28 (1995) (statement of John D. Holum, director, U.S. Arms Control and Disarmament Agency).

6. Ibid., 14–15 (statement of Senator Joseph R. Biden, Jr.).

Table 1.1. Narrative Themes in Era 1

	Role	Priority	Function	Posture
Era 1 1989–2001: Decline and Dissolution of the Soviet Union	Salience of nuclear weapons at lowest point since their inception A greater number of current threats can largely be met with conventional weapons Trend that more threats can be covered by conventional capabilities seems likely to continue	Reduced prominence of nuclear-relevant threats allows for cost-cutting and downsizing of nuclear enterprise Emphasis on reducing the stockpile of nuclear weapons, not defining the role of the remaining weapons	Deterrence still important, but arsenal mostly a hedge against future threats and reversal of positive trends Nuclear arsenal deters WMD acquisition and use by allies under nuclear umbrella as well as rogue states and dictators Assurance of allies emerging as a primary rather than secondary justification for U.S. nuclear forces	United States will have nuclear weapons as long as other states do Maintenance of nuclear triad required for “hedge” to manage uncertainty “Lead but hedge”: Reduce deployed forces, but retain stockpile and non-strategic weapons as a hedge

Note: For full matrix, see Appendix C.

The roles of nuclear weapons for purposes of security have been sharply narrowed in terms of the security of the United States. Now and in the future they basically provide an option to respond in kind to a nuclear threat or nuclear attack by others. In the world environment now foreseen, they are not needed against nonnuclear opponents. Conventional capabilities can provide a sufficient deterrent and defense against conventional forces and in combination with defensive measures, against the threat of chemical or biological weapons. As symbols of prestige and international standing, nuclear weapons are of markedly reduced importance.⁷

The change would allow for a commensurate downscaling of the nuclear enterprise, which would adjust accordingly with the new requirements of the Stockpile Stewardship and Management Program. There would be, in other words, “fewer weapons, fewer types of weapons, no production of new types of weapons, an aging stockpile, a production capability in need of modernization, and no nuclear testing.”⁸ The nuclear mission post-1992, as one former senior military official interviewee described it, seemed to DoD to be “a ‘sunset mission’ that would eventually go away.”

7. *The Future of Nuclear Deterrence, Hearing before the Senate Subcommittee on International Security, Proliferation, and Federal Services*, 105th Cong. 61 (1997) (statement of Gen. Andrew J. Goodpaster, U.S. Army [Ret.], and Gen. Lee Butler, U.S. Air Force [Ret.]).

8. *Department of Energy Budget Request for Fiscal Year 1997, Hearing before the House Subcommittee on Military Procurement*, 104th Cong. 72 (1996) (statement of C. Bruce Tarter, director, Lawrence Livermore National Laboratory).

A range of policymakers, including Secretary of Defense Richard Cheney, nonetheless kept an eye on the “uncertain future,”⁹ cognizant that positive trends in the former Soviet Union could reverse and that unanticipated crises might arise elsewhere in the world. While they believed that the posture of the arsenal could and should be adjusted to fit the changed circumstances, they did not push for the complete elimination of U.S. nuclear weapons. The United States, they determined, must “lead but hedge.” That is, it must simultaneously lead the world toward “further reductions and increased weapons safety and improved relations” and “[hedge] against the possibility of reversal of reform in Russia.”¹⁰ William J. Perry, then deputy secretary of defense, noted the necessity of these precautions in 1993: “Not only do we need to maintain a deterrent in place, but we need to have some capability to reconstitute our nuclear forces above the levels which you are now driving them to in the START I and the START II, to hedge against the possibility that such an unfriendly regime might not only reassert the military power, but might begin a buildup of nuclear forces.”¹¹

Era 2: 9/11 and Terrorism, Afghanistan and Iraq Wars (2001–2010)

The second era begins with the September 11, 2001 attacks on the World Trade Center in New York, the Pentagon in Washington, and a commercial airplane in Pennsylvania, and ends with the United States’ ratification of New START in 2010. In the wake of 9/11, the United States embarked on a “Global War on Terror” and plunged into the wars in Afghanistan and Iraq in 2001 and 2003 as it fought to subdue a new generation of extremists and state sponsors of terrorism. The two wars’ subsequently dismaying results embroiled the United States in the turmoil of the Middle East for much of the decade, though President Barack Obama’s reassessment of U.S. foreign policy sought to shift the nation’s attentions and to usher in both a rebalance to East Asia and a reset with Russia.

Shortly after the 9/11 attacks, the United States launched Operation Enduring Freedom in Afghanistan against the Taliban and al Qaeda. Within two months, coalition forces recaptured Kandahar—a victory that appeared to have marked the fall of the Taliban’s rule and the start of reconstruction. But a resurgence of the Taliban over the next several years frustrated efforts to establish a stable system of governance and scale back the American presence in Afghanistan.¹² In March 2003, the United States turned toward Iraq, which preoccupied national attention for the next decade. Despite the capture of Saddam Hussein in December 2003, the Iraq War continued, with a “surge” of troops committed in 2007, until President Obama formally ended the combat mission in 2010.¹³ The demands of global terrorism and two grueling wars naturally diverted attention and resources

9. *Military Implications of START I and START II, Hearing before the Senate Committee on Armed Services*, 102nd Cong. 9 (1992) (statement of Richard B. Cheney, secretary of defense, U.S. Department of Defense).

10. *The Future of Nuclear Deterrence, Hearing before the Senate Subcommittee on International Security, Proliferation, and Federal Services*, 105th Cong. 6 (1997) (statement of Walter B. Slocumbe, undersecretary of defense for policy, U.S. Department of Defense).

11. *Evaluation of the U.S. Strategic Nuclear Triad, Hearing before the Senate Committee on Governmental Affairs*, 103rd Cong. 14–15 (1993) (statement of William J. Perry, deputy secretary of defense, U.S. Department of Defense).

12. Greg Bruno, “Timeline: U.S. War in Afghanistan,” Council on Foreign Relations, June 2013, <http://www.cfr.org/afghanistan/us-war-afghanistan/p20018>.

13. Greg Bruno, “Timeline: The Iraq War,” Council on Foreign Relations, October 2011, <http://www.cfr.org/iraq/timeline-iraq-war/p18876>.

away from a nuclear mission that focused on less urgent and less likely threats, even though the latter had more existential implications.

In the meantime, the nuclear ambitions of other parties challenged nonproliferation efforts. Unlike Libya, which voluntarily disclosed and began dismantlement of its WMD programs in 2003 after pressure from the United States,¹⁴ Iran maintained its illicit programs in the face of crippling sanctions. North Korea withdrew from the Non-Proliferation Treaty in 2003 and conducted nuclear tests in 2006 and 2009.¹⁵ Further, intelligence sources found that al Qaeda and other extremists actively plotted CBRN attacks and learned crude procedures for making chemical agents.¹⁶

States elsewhere in the world also rose to the status of economic and strategic powerhouses. China, in particular, had become the world's second-largest economy by the end of 2010¹⁷ and had adopted an aggressive stance on territorial disputes that resulted in tension with several neighbors. The Obama administration's rebalance to Asia recognized the growing importance of this region and the need to work closely with allies to maintain security.

Most U.S. thought leaders maintained in this era that the United States could proceed in reducing its nuclear stockpile. Conventional capabilities had improved by leaps and bounds—while the still-vast U.S. nuclear arsenal “[continued] to reflect its Cold War origin.”¹⁸ The September 11 attacks, for some, highlighted the question of whether the United States should rely on nuclear weapons to meet the evolving needs of the twenty-first century. Nuclear terrorism loomed large. It seemed unclear at the time, however, whether nuclear weapons would deter terrorists. Secretary of Defense Donald Rumsfeld expressed this very doubt in 2002, saying:

Today our adversaries have changed. The terrorists who struck us on September 11 were clearly not deterred by doing so from the massive U.S. nuclear arsenal. In the twenty-first century, we need to find new ways to deter new adversaries that will most assuredly arise. That's why President [George W.] Bush is taking a new approach to strategic deterrence, one that will combine deep reductions in offensive nuclear forces with improved conventional capabilities and the development and deployment of missile defenses capable of protecting the U.S. and our friends and forces deployed from limited missile attacks.¹⁹

14. Arms Control Association, “Chronology of Libya’s Disarmament and Relations with the United States,” last updated September 2016, <https://www.armscontrol.org/factsheets/LibyaChronology>.

15. “North Korea Nuclear Timeline Fast Facts,” CNN, February 27, 2014, <http://www.cnn.com/2013/10/29/world/asia/north-korea-nuclear-timeline—fast-facts/>.

16. Rolf Mowatt-Larssen, “Al Qaeda’s Pursuit of Weapons of Mass Destruction,” *Foreign Policy*, January 25, 2010, <http://foreignpolicy.com/2010/01/25/al-qaedas-pursuit-of-weapons-of-mass-destruction/>.

17. Andrew Monahan, “China Overtakes Japan as World’s No. 2 Economy,” *Wall Street Journal*, February 14, 2011, <http://www.wsj.com/articles/SB10001424052748703361904576142832741439402>.

18. U.S. Department of Defense, “2002 Nuclear Posture Review [Excerpts],” January 8, 2002, available at <http://web.stanford.edu/class/polisci211z/2.6/NPR2001leaked.pdf>.

19. Donald Rumsfeld, “Secretary Rumsfeld Speaks on ‘Twenty-first Century Transformation’ of U.S. Armed Forces” (speech, National Defense University, Fort McNair, Washington, DC, January 31, 2002), <http://www.au.af.mil/au/awc/awcgate/dod/transformation-secdef-31jan02.htm>.

Table 1.2. Narrative Themes in Era 2

	Role	Priority	Function	Posture
Era 2 2001–2010: 9/11 and Terrorism, Afghanistan and Iraq Wars	Proactive shifting of deterrence from nuclear to conventional capabilities	Nuclear arsenal in need of revitalization, but “War on Terror” took precedence Increasing alarm, particularly about the National Nuclear Security Administration (NNSA) and the labs, about the pernicious effects of lack of attention and investment	Nuclear weapons do not deter twenty-first-century terrorist organizations and rogue states, which make illogical cost calculations Hedge even more appropriate given an increasingly complex security environment Need to reassure allies that might otherwise consider nuclear option a policy priority	United States will have nuclear weapons as long as other states do Overhaul of nuclear capabilities for flexibility in addressing new threats New Triad will encompass more than offensive nuclear forces Though arsenal will shrink, it must remain safe, secure, and reliable

Note: For full matrix, see Appendix C.

Some policymakers believed that the United States could actively shift away from dependence on nuclear weapons for deterrence (see Table 1.2). Rather than argue for such a reduced dependence, however, the Bush administration emphasized the need to adapt the U.S. deterrence posture to new threats. Yet the initiatives laid out in the congressionally mandated²⁰ 2002 Nuclear Posture Review (NPR)—which included a design of a reliable replacement warhead (RRW), as well as a New Triad that encompassed the ability “to defeat emerging threats such as hard and deeply buried targets (HDBT), to find and attack mobile and relocatable targets, to defeat chemical or biological agents, and to improve accuracy and limit collateral damage”²¹—eventually petered out. The 2002 NPR was a classified review with no unclassified companion document, which sharply limited coherent public discourse on the emerging policy and yet fueled opposition among an already-skeptical audience of stakeholders. Many of the review’s key proposals, which quickly leaked to Bush administration opponents, were met with skepticism and criticism from some corners. The country as a whole was preoccupied with the wars in the Middle East. The appetite for investing in nuclear weapons, especially in the middle of this era, was at an all-time low. One former senior civilian official interviewed for this report reflected on the absence of attention to and consensus on nuclear weapons during this era, saying, “In 2004/5 to 2008, I was in the depth[s] of despair.”

A number of public Air Force incidents, most notably the 2007 accidental transportation of nuclear-tipped cruise missiles from Minot Air Force Base (AFB) in Minot, North Dakota to

20. Charles D. Ferguson, “Nuclear Posture Review,” Nuclear Threat Initiative, August 1, 2002, <http://www.nti.org/analysis/articles/nuclear-posture-review/>.

21. U.S. Department of Defense, “2002 Nuclear Posture Review [Excerpts].”

Barksdale AFB in Bossier Parish, Louisiana,²² illustrated the growing management and organizational challenges gripping the nuclear enterprise, even as the United States would continue to reduce the role of nuclear weapons in U.S. national security. The concern that the enterprise was then, as one former senior civilian official interviewee put it, “on the ragged edge of being unable to provide a ‘safe, secure, and effective’ nuclear force” led to a public review of the DoD’s role in nuclear weapons management. The 2008 Schlesinger Report observed a “loss of attention and focus, downgrading, dilution, and dispersal of officers and personnel” in DoD’s approach to the nuclear mission, and attributed this to a “failure to appreciate the larger role of deterrence—as opposed to warfighting capability.”²³ At the same time, the deterrence function received less emphasis while the assurance of allies, now a policy priority, was described as “[playing] an irreplaceable role in reducing proliferation.”²⁴ As long as other states had nuclear weapons, so too would the United States.

Toward the end of this era, discussions on the role of U.S. nuclear weapons increasingly focused on reducing the dangers of nuclear terrorism and proliferation, both of which were seen to pose a higher risk to U.S. national security than a direct nuclear attack. President Obama’s focus on nuclear security and four successive nuclear summits greatly raised awareness of nuclear security and terrorism challenges and increased the available capabilities to deal with these issues. In 2010, the continued perceived decline in strategic nuclear threats, even amid the rising concerns about nuclear terrorism by nonstate and rogue actors, made further reductions possible. President Obama’s vision of a world without nuclear weapons captured the world’s attention and raised expectations in much of the international community that such a day could be near at hand. In hindsight, ratifying New START with Russia in 2010 represented the high-water mark for nuclear optimism. When George W. Bush began his presidency in 2001, the United States possessed over 10,500 weapons in its nuclear stockpile; at the end of 2010, 5,066 remained.²⁵

Era 3: Growing Great-Power Competition in an Era of Rising Disorder (2011–Present)

This third and final era starts with the United States’ ratification of New START at the end of 2010 and continues through the present. It has been an era of unpredictable threats. As offensive military operations in Iraq wound down, nonstate enemies such as the Islamic State of Iraq and the Levant (ISIL) confounded expectations by rapidly ascending to power through astonishing acts of violence, and old adversaries—namely Russia, China, and North Korea—employed novel,

22. Joby Warrick and Walter Pincus, “Missteps in the Bunker,” *Washington Post*, September 23, 2007, <http://www.washingtonpost.com/wp-dyn/content/article/2007/09/22/AR2007092201447.html>.

23. James R. Schlesinger, “Report of the Secretary of Defense Task Force on DoD Nuclear Weapons Management, Phase II: Review of the DoD Nuclear Mission,” Secretary of Defense Task Force on DoD Nuclear Weapons Management, December 18, 2008, <http://www.defense.gov/Portals/1/Documents/pubs/PhaseIIReportFinal.pdf>.

24. Robert Gates, “Nuclear Weapons and Deterrence in the Twenty-first Century” (address, Carnegie Endowment for International Peace, Washington, DC, October 28, 2008), http://carnegieendowment.org/files/1028_transcrip_gates_checked.pdf.

25. U.S. Department of State, “Fact Sheet: Transparency in the U.S. Nuclear Weapons Stockpile.”

effective methods to challenge the United States and regional partners through both military and nonmilitary means.

The upheaval and unrest foreshadowed by the December 2010 protests in Tunisia erupted as a wave of revolutions swept through the Middle East in 2011, toppling several rulers in the region²⁶ and inciting the ongoing Syrian Civil War. The fighting within Syria has divided the country into warring factions, with parts of the territory held by the Syrian government, the Islamic State, the al-Qaeda-affiliated al-Nusra Front, the Kurdish People's Protection Units (YPG), Hezbollah, and other insurgencies.²⁷ Despite a U.S. warning in 2012 that use of chemical weapons by the regime of Bashar al-Assad would cross a "red line," the United States declined to respond with military force after 1,400 civilians were killed in a chemical weapons attack by the Syrian government in August 2013—opting instead for a U.S.-Russian framework for eliminating Syria's chemical weapons arsenal. Since 2014, the United States has led coalition forces in airstrikes against ISIL in Syria and Iraq, while also calling for President Assad's resignation.

As Syria crumbled into civil war, other world events were likewise shifting the nuclear landscape. The power vacuum created by the ouster of Ukrainian president Viktor Yanukovich in 2014, precipitated by his rejection of a political and economic treaty with the European Union in exchange for closer ties with Russia, allowed Russia to annex Ukraine's Crimean Peninsula. Russian president Vladimir Putin followed the invasion with "nuclear saber rattling," plainly "reminding" the West that "it's best not to mess with [Russia]" given its status as "one of the leading nuclear powers";²⁸ declaring the addition of 40 new intercontinental ballistic missiles (ICBMs) to Russia's nuclear arsenal; and beginning a multibillion-dollar nuclear modernization program.²⁹ A year later, over U.S. objections, Russia also injected itself into the Syrian conflict, conducting airstrikes and directing cruise missiles against the rebel groups challenging Assad. Russian aggression and its demonstrated willingness to abrogate state sovereignty have prompted NATO to announce that it would be reevaluating its nuclear weapons posture.³⁰ North Korea also made troubling progress in developing its nuclear weapons program and declared in January 2016 that it had tested a hydrogen bomb (despite evidence to the contrary).³¹ Further, Pakistan adopted a new doctrine, called "Full

26. "The Arab Spring: A Year of Revolution," NPR, December 17, 2011, <http://www.npr.org/2011/12/17/143897126/the-arab-spring-a-year-of-revolution>.

27. Katie Zavadski, "A Guide to the Many Groups Fighting in Iraq and Syria," *New York Magazine*, October 17, 2014, <http://nymag.com/daily/intelligencer/2014/10/guide-groups-fighting-iraq-and-syria.html#>.

28. Colin Freeman, "Vladimir Putin: Don't Mess with Nuclear-Armed Russia," *Telegraph*, August 29, 2014, <http://www.telegraph.co.uk/news/worldnews/vladimir-putin/11064209/Vladimir-Putin-Dont-mess-with-nuclear-armed-Russia.html>.

29. Karoun Demirjian, "Russia to Increase Nuclear Arsenal as U.S. Plans More Firepower in Europe," *Washington Post*, June 16, 2015, https://www.washingtonpost.com/world/russia-to-increase-nuclear-arsenal-as-us-plans-more-firepower-in-europe/2015/06/16/2e81d4f4-1445-11e5-8457-4b431bf7ed4c_story.html.

30. Geoff Dyer and Alex Barker, "Nuclear Deterrent on NATO Agenda amid Rise in Russian Rhetoric," *Financial Times*, June 25, 2015, <http://www.ft.com/intl/cms/s/0/aa11ac16-1a8f-11e5-a130-2e7db721f996.html#axzz3z2JsQCq7>.

31. Josh Keller, Ford Fessenden, and Tim Wallace, "Why Experts Doubt That North Korea Tested a Hydrogen Bomb," *New York Times*, January 6, 2016, <http://www.nytimes.com/interactive/2016/01/06/world/asia/north-korea-nuclear-bomb-test.html>.

Table 1.3. Narrative Themes in Era 3

	Role	Priority	Function	Posture
Era 3 2011–Present: Growing Great-Power Competition in an Era of Rising Disorder	United States will keep nuclear weapons as a deterrent against nuclear attack, but long-term policy is to work toward eliminating nuclear weapons	As long as U.S. nuclear weapons exist, they must be safe, secure, and effective United States will fund modernization despite budget cutbacks Severe lapses in nuclear enterprise demonstrate consequences of previous low prioritization	United States must lead in reduction efforts if it wants nonproliferation to succeed Communicates that enemies cannot escalate their way out of failed conventional aggression U.S. nuclear arsenal primarily exists to prevent war and reassure allies The function of nuclear weapons within deterrence still shrinking as the definition of deterrence strategy expands	As long as any other state has nuclear weapons, it will be necessary for the United States to retain nuclear weapons Triad deters future foreign leadership from seeking nuclear advantage Reductions and modernization each independently important

Note: For full matrix, see Appendix C.

Spectrum Deterrence,” for its nuclear posture, which envisions a range of nuclear responses to conventional attacks by India.³²

These increased nuclear and other unconventional threats in the international security environment, combined with the recognition that the nuclear enterprise had suffered the consequences of past low prioritization, have instigated a slow but steady change in the conversation surrounding U.S. nuclear weapons. The exigencies of the present era, particularly the recent downturn in U.S.-Russia relations, have led to greater acknowledgment of the role of nuclear weapons in U.S. national security. Many of the most familiar narrative themes from the preceding eras have carried through to this period. Per President Obama’s direction, the long-term policy of the United States is to work toward a world without nuclear weapons, though the United States will retain a nuclear deterrent against nuclear attack and keep its weapons safe, secure, and effective as long as any other nation has an arsenal as well (see Table 1.3).

At the same time, another round of scandals across the nuclear enterprise in 2013 drove the morale and image of the operational nuclear force into yet another trough, suggesting that lessons observed in the prior era had not translated into lessons learned, and prompting extensive review and rethinking among those responsible for the nuclear weapons complex.

In 2015, the Obama administration has remained committed to leading in nuclear reduction efforts to promote nonproliferation around the world, while seeking to temper disarmament

32. Toby Dalton and Michael Krepon, “A Normal Nuclear Pakistan,” Carnegie Endowment for International Peace and Stimson Center, August 27, 2015, <http://carnegieendowment.org/files/NormalNuclearPakistan.pdf>.

expectations absent Russian cooperation, and has pledged strong support for modernizing an aging nuclear arsenal. Nevertheless, with a modernization bow wave fast approaching even as the government seeks to reduce the overall cost of defense under the pressures of the budget caps,³³ there is increased scrutiny on the future of the arsenal. Plans remain for the United States to modernize its weapons, which, at the end of 2013, numbered some 4,804.³⁴ In 2014, Chuck Hagel, then secretary of defense, firmly stated the Department's commitment to the nuclear enterprise: "Our nuclear deterrent plays a critical role in ensuring U.S. national security, and it's DoD's highest priority mission. No other capability we have is more important. . . . Consistent with President Obama's guidance, our policy is to reduce the role of nuclear weapons in our nation's security strategy and to seek the peace and security of a world without nuclear weapons."³⁵ Numerous officials have, over the years, further restated the assertion that the arsenal not only reassures the United States' allies but communicates "to potential nuclear-armed adversaries that they cannot escalate their way out of failed conventional aggression."³⁶

The narrative of this present era continues to take shape as the U.S. Air Force, Navy, and the broader defense establishment reflect, with greater interest than has been evident in quite some time, upon why U.S. nuclear weapons matter. The same former senior civilian official who commented that he was previously in the "depth of despair" agreed that there has been tangible change: "The consensus today on the role and value of nuclear weapons is as good as it has been in years. . . . In 2009, I never thought we would be where we are in 2015. . . . The state of the enterprise is the best I've seen in 15 years." Junior and mid-level officers interviewed in the study also tend to speak positively about the uptick in attention and express hope that the progress continues. Whether the narrative proves to be more effective than the forms that preceded it has yet to be seen, but analysis of the historical narrative across time shows that even these early developments—especially when placed within the context of the past quarter century—are greatly encouraging.

33. "Sequestration," Congressional Budget Office, August 12, 2016, <https://www.cbo.gov/topics/budget/sequestration>.

34. U.S. Department of State, "Fact Sheet: Transparency in the U.S. Nuclear Weapons Stockpile."

35. Chuck Hagel, "Statement on the Nuclear Enterprise Review and Reforms" (speech, Pentagon Press Briefing Room, Arlington, VA, November 14, 2014), <http://www.defense.gov/News/Speeches/Speech-View/Article/606634>.

36. *2014 Department of Defense Authorization for Appropriations for Fiscal Year 2015 and the Future Years Defense Program, Hearing before the Senate Committee on Armed Services*, 113th Cong. 6 (2014) (statement of Elaine Bunn, deputy assistant secretary of defense, nuclear and missile defense policy, U.S. Department of Defense).

Trends in the Nuclear Narrative: 1989 to Present

Analysis of the trends within each of the individual focus areas across the entire expanse of the post–Cold War era shows that, though the years since the fall of the Berlin Wall and collapse of the Soviet Union reflect a range of shifting threats and turbulent international events, the overall narrative surrounding U.S. nuclear weapons reflects more consistency than change. Certain narrative threads weave through, in astonishingly similar articulation, the full quarter century: the role and salience of nuclear weapons is declining, even as they remain critical to deterring the most dangerous current and imagined nuclear threats. As long as these weapons exist in the world, the United States must retain its arsenal safely, securely, and effectively.

Moreover, despite the highly polarized political climate of recent decades, the shifts and differences in the arc of the nation’s nuclear narrative are relatively apolitical and do not correspond to predictable partisan patterns. That said, other prominent themes, countervailing narratives, shifting threat environments, and the degree of consensus across the nuclear and national security communities do vary significantly across the time periods. These trends and transitions within the focus areas provide important insights, not only into the most enduring and durable aspects of the historical narrative, but also into those missing themes that, even in their absence, have had a tangible impact on the health of the nuclear enterprise.

ROLE

How has the fundamental purpose of U.S. nuclear weapons and their place in U.S. national security strategy adapted to shifts in the international security context?

The collapse of the Soviet Union produced an immediate and unassailable change in the national conversation about nuclear weapons. In stark contrast to the Cold War narrative, which emphasized the irreplaceable centrality of nuclear weapons, this new conversation reflected the consequences of the near-overnight disappearance of the primary existential nuclear threat to the

United States: nuclear weapons could now and would now play “a smaller role in U.S. security than at any other time in the nuclear age.”¹ This top-level theme, which emerged in 1992, has not only persisted, but has also changed surprisingly little in the last 25 years—in spite of the international security environment having been fundamentally reshaped during that time. While the exact wording of the nuclear narrative has changed, the basic message has not: the place of nuclear weapons within U.S. national security strategy has been substantially reduced and continues to diminish.

In fact, if reduction existed as more of a reactive concept in this first post–Cold War era as a direct response to a changed environment, then it transitioned into a proactive concept in the second era. Both the Bush and Obama administrations sought to take concrete steps to reduce the role of the U.S. arsenal further still. The de-scoping of nuclear weapons, as outlined in the 2002 NPR, focused on the role of nuclear weapons with regard to deterring adversaries and on the repeated assertions that conventional offensive and defensive capabilities could and should carry more of the deterrence burden. Senator Richard Lugar’s statement in May 2002—that “the Cold War nuclear strategy [was] not appropriate for the current threat environment” and that “[nuclear weapons would] not be our primary form of deterrence”²—was echoed seven years later in 2009 by James Schlesinger, who said:

The end of the Cold War and, particularly, the collapse of the Soviet Union/ Warsaw Pact, along with the substantial edge that the United States has now developed in conventional military capabilities, have permitted this country sharply to reduce our reliance on nuclear weapons, radically to reduce our nuclear forces, and to move away from a doctrine of nuclear initiation to a new stance of nuclear response only under extreme circumstances of major attack on the United States or its allies.³

The Obama administration’s narrative has since gone a step further, proactively seeking both to reduce the role and salience of nuclear weapons and to prioritize nonproliferation and nuclear security as the primary means for addressing the most likely nuclear threats. The president offered the most defining articulation of his policy yet in his 2009 Prague speech:

The United States will take concrete steps towards a world without nuclear weapons. To put an end to Cold War thinking, we will reduce the role of nuclear weapons in our national security strategy, and urge others to do the same. Make no mistake: As long as these weapons exist, the United States will maintain a safe, secure, and effective arsenal to deter any adversary, and

1. *National Security Implications of U.S. Ratification of the Strategic Arms Reduction Treaty—START II*, Hearing before the Senate Committee on Armed Services, 104th Cong. 16 (1995) (statement of Walter B. Slocombe, Under Secretary of Defense for Policy).

2. *Examining the Nuclear Posture Review*, Hearing before the Senate Committee on Foreign Relations, 107th Cong. 4 (2002) (statement of Senator Richard Lugar).

3. *Report of the Congressional Commission on the Strategic Posture of the United States*, Hearing before the House Committee on Armed Services, 111th Cong. 9 (2009) (statement of James R. Schlesinger, vice chairman, Congressional Commission on the Strategic Posture of the United States).

guarantee that defense to our allies. . . . But we will begin the work of reducing our arsenal.⁴

Over the years, this fundamental topline message about the diminishing role of nuclear weapons has also been accompanied by several recurring narrative themes, repeated, in their various formulations, in the period between 1990 and the end of 2010 with remarkable consistency:

- Nuclear terrorism is the greatest nuclear threat to the United States but against which nuclear deterrence has little value.
- Conventional weapons can meet an increasing portion of the United States' deterrence needs more reliably and at less risk.
- Russia, a principal driver of U.S. nuclear deterrence requirements, can be more partner than adversary on nuclear matters.

In the current post-2011 time frame, these other narrative themes have come under substantial pressure as the United States has increasingly come to regard Russia and China as strategic competitors and North Korea, Pakistan, and Russia as nations that are increasing their reliance on nuclear weapons and posturing them more aggressively. Nonetheless, the topline narrative on the role of nuclear weapons has yet to shift fundamentally.

Most striking of all the observations to be made about the evolving role of U.S. nuclear weapons, however, might be the near-absence—through all three historical periods—of a clear, affirmative description of why the United States continues to need a nuclear arsenal. What has existed instead is essentially a negatively framed narrative that explains and justifies decline and reduction, but that does not seek to simultaneously offer a positively framed explanation of the role that this smaller arsenal still plays in the nation's security strategy. Whereas this tendency to emphasize one and not the other in the immediate post-Cold War years reflected the good-news story about the dramatic reduction in threat to the United States, the same asymmetry in the second and third eras seems to have been more of a conscious choice to follow changes in policy and ideological views about the utility of nuclear weapons and nuclear-based deterrence in U.S. national security, as well as a desire to elevate other means of securing those objectives. Looking ahead, any credible narrative will need to do more than justify and hedge: it will need to account for a shifting and increasingly complex threat environment, frame the role of nuclear weapons as limited but essential, and message U.S. resolve in preserving stability while flatly rejecting any impression of a renewed arms race or return to the Cold War.

FUNCTION

How does the U.S. nuclear arsenal, along with its associated infrastructure and delivery systems, fulfill its role—be it large or small—in U.S. national security?

4. Barack Obama, "Remarks by President Barack Obama," White House, Office of the Press Secretary (speech, Prague, Czech Republic, April, 2009), <https://www.whitehouse.gov/the-press-office/remarks-president-barack-obama-prague-delivered>.

The idea of deterrence, primarily of the Soviet Union, as the principal and relatively understood rationale for the function of U.S. nuclear weapons immediately came under fire following the end of the Cold War. Deterrence remained important, policymakers and defense officials repeated, but deterrence was now to serve more as a “hedge” against a future and unknown threat than as a means to counter and manage a known adversary. This revised posture reflected the perceptions of a security environment that appeared relatively devoid of immediate threats to the United States. Russia was not seen as a plausible substitute for the Soviet threat, even on a vastly smaller scale, and China was only minimally on the strategic radar in the early post–Cold War years. Toward the end of the 1990s, however, the narrative—prompted by instances of terrorism such as the World Trade Center bombing in 1993 and the Oklahoma City bombing in 1995—began to reflect growing concern about nuclear terrorism as the primary nuclear threat. Simultaneously, it also reflected deep skepticism about the role of nuclear deterrence in reducing, managing, or responding to these threats.

This skepticism at least partially contributed to a narrowing over time of the conceptual scope of “nuclear” deterrence. Nuclear deterrence of conventional attack was rejected as implausible. Nuclear deterrence of nuclear terrorism was described as ineffective. Nuclear deterrence of chemical or biological attacks, while considered in the second era, was largely dismissed by the third. In 2010, the nation’s nuclear narrative stopped only slightly short of saying that the sole purpose of nuclear weapons was to deter nuclear attack. It maintained instead, in the 2010 NPR, that the United States would not respond with nuclear weapons, even to the use of chemical or biological weapons, against any nonnuclear weapons states party to the NPT and in compliance with their nuclear nonproliferation obligations.⁵ In sum, it is possible to trace a steady decline in the scope of U.S. nuclear forces’ deterrence function across all three eras.

Yet, as the scope of nuclear deterrence has narrowed, deterrence as a loosely defined concept has steadily broadened—to include, for example, conventional and “gray area” deterrence, cross-domain deterrence, and cyber and space deterrence—leading to confusion and disagreement about what deterrence is and how it works.

Even as the deterrence function for U.S. nuclear weapons narrowed and became subsumed in broader, more loosely conceptualized notions of deterrence, their assurance functions showed steady broadening in both definition and attention through the three eras. Since 2010, the assurance of partners and allies that the United States will come to their defense, and that they need not pursue independent nuclear capabilities, has become the most prominent theme ascribed to the U.S. nuclear arsenal. According to this growing narrative theme, the U.S. “nuclear umbrella” not only provides extended deterrence for the United States’ treaty allies against nuclear threats to their nations, but it also serves a nonproliferation function by dissuading allies from pursuing nuclear arsenals of their own and bolsters alliance credibility and cohesion in the conventional and political realms.

Clearly, the assurance function of nuclear weapons will remain important to any future narrative. A rationale for U.S. nuclear weapons that continues to point to a narrowing of their deterrence

5. U.S. Department of Defense, “Nuclear Posture Review Report,” April 2010, viii, http://www.defense.gov/Portals/1/features/defenseReviews/NPR/2010_Nuclear_Posture_Review_Report.pdf.

function and a simultaneous broadening of the assurance function, however, is simply not sustainable. The effectiveness of nuclear weapons in assuring allies cannot be decoupled from or disproportionate to their fundamental deterrence function. These functions are inextricably linked and mutually dependent. Moreover, the muddling and misuse of the terms has sharply diminished their utility in clearly explaining how nuclear weapons fulfill their role in U.S. national security. A compelling future rationale will need to rearticulate the fundamental concepts that underlie long-standing notions of deterrence and assurance, redefining them for the current security environment and audience and speaking plainly as to why nuclear weapons remain relevant and necessary today.

POSTURE

What size, shape, distribution, and readiness of nuclear forces are necessary for them to fulfill their role and perform their functions? One simple, unwavering narrative dominates across the three eras: as long as any other state possesses nuclear weapons, the United States will as well. That said, the other narrative themes within this focus area, particularly with regard to the triad of delivery systems, have proved far more varied and contested through the years.

During the first era, officials focused primarily on reducing the stockpile, then deemed well in excess of foreseeable requirements. In the face of so much overcapacity, the narrative of the 1990s reflected support for a litany of reductions, with less concern for modernization and capability sustainment. Though senior leaders called for sustainment of the triad in the mid-1990s, they did so somewhat hesitantly and on the basis of strategic hedge, rather than defined requirements.

The beginning of the second era, however, marked an overt shift from “the threat-based approach of the Cold War to a capabilities-based approach.”⁶ The narrative that emerged in 2002 with the NPR attempted to reformulate the nuclear triad into a much wider concept, placing U.S. nuclear posture within a broader capability construct that included a range of conventional capabilities both offensive and defensive. The traditional triad—bombers, ballistic missiles, and submarines—received little public discussion during this period. Rather, by 2006 and continuing through 2011, the posture narrative returned to the matter of stockpile stewardship and warhead modernization. From 2010 to 2012, the negotiation and ratification of the New START Treaty dominated the national discussion on U.S. nuclear force structure. New START drove and codified strategic warhead numbers and delivery systems—essentially preserving the strategic triad, but with little public discussion of its sustainability and modernization. This appears to have been the quiet before the storm.

In the 2014–2015 time frame, the nuclear enterprise reviews exposed more problems within the operational nuclear force, and critical modernization decisions across all three legs of the triad received more public attention with the 2016 budget. The case for modernization and recapitalization was defended on the basis that “all three triad legs [would] best maintain strategic stability at reasonable cost, while hedging against potential technical problems or vulnerabilities or changes to

6. U.S. Department of Defense, “2002 Nuclear Posture Review [Excerpts],” accessed September 27, 2016, <http://web.stanford.edu/class/polisci211z/2.6/NPR2001leaked.pdf>.

the geopolitical environment.”⁷ But even as the modernization and sustainment requirements of the triad have risen in the public discourse, a fairly loud counternarrative—that the triad and some associated capabilities are unnecessary in the current environment and that modernization is unaffordable in the current fiscal climate—has emerged. It has also found influential proponents. Among them is William J. Perry, the former secretary of defense, who in 2015 said that ICBMs “aren’t necessary. . . . They’re not needed. Any reasonable definition of deterrence will not require that third leg.”⁸ In other words, as a positive narrative on the needs and importance of the triad of delivery systems has surfaced and taken shape, so too has a potent counternarrative appeared.

PRIORITY

When faced with trade-offs, how willing are policymakers to make difficult choices necessary to demonstrate commitment to the nuclear mission through the allocation of time, attention, and resources? Narrative themes regarding the strategic and budgetary priority of nuclear weapons in U.S. national security have fluctuated significantly across the three time frames. In the early 1990s, one message dominated in the immediate aftermath of the Cold War: the U.S. nuclear arsenal was so far in excess of the suddenly reduced threat that the United States could afford to reduce the nuclear arsenal unilaterally and focus priority and attention elsewhere.

However, a drumbeat of countervailing narrative themes, which raised concerns that the rush to reduce nuclear weapons was also placing the medium- to longer-term health of the nuclear enterprise at risk, began to emerge in the late 1990s. Most of the initial concerns with human capital recruitment, infrastructure neglect, and inattentive management came from the national laboratories and their congressional overseers and, as such, were focused on the weapons side of the complex. Some early trepidation about the nuclear complex reflected skepticism about the then-nascent stockpile stewardship program and concerns about the U.S. commitment to forgo nuclear testing. Encouraged and reinforced by the 2002 NPR, the tide slowly turned back, through the 2000s, with a steady return to expressions of confidence in stockpile stewardship, even as budgetary support for critical infrastructure continued to lag. This positive trend, however, proved relatively brief and remained confined to the stockpile stewardship aspects of the overall nuclear enterprise.

While early concerns about the health and reliability of the overall nuclear enterprise began on the Department of Energy (DoE) side of the ledger, it spread to DoD by the early 2000s and reached a boiling point toward the end of the decade. Affirmative statements of priority for the nuclear mission and its required capabilities and force structure were conspicuously lacking in this period. By 2008 and 2009, crises and scandals, and their associated panels and reviews, highlighted a lack of senior leader attention, while focus on the enterprise furthered policymakers’ concerns about

7. *Fiscal Year 2015 Budget Request for Atomic Energy Defense Activities and Nuclear Forces Programs, Hearing before the House Subcommittee on Strategic Forces*, 113th Cong. 165 (2014) (statement of Elaine Bunn, deputy assistant secretary of defense, nuclear and missile defense policy, U.S. Department of Defense).

8. Aaron Mehta, “Former SecDef Perry: U.S. on ‘Brink’ of New Nuclear Arms Race,” *Defense News*, December 3, 2015, <http://www.defensenews.com/story/defense/policy-budget/2015/12/03/former-secdef-perry-us-brink-new-nuclear-arms-race/76721640/>.

the health and professionalism of the nuclear force. Between 2009 and 2011, the dominant, topline narrative theme evolved into a now-familiar phase: “While nuclear weapons exist, the United States will sustain a safe, secure, and effective nuclear arsenal.”⁹ In retrospect, this was more a message of requirement than of support—only worsened still by a harsh budgetary climate that continued to take its toll, personnel practices that became increasingly risk-averse, and an already-low morale that proceeded to decline. Perceptions of a “say-do” gap took hold at the tactical, operational, and strategic levels, culminating in another round of scandal in 2013.

The resulting 2014 internal and external reviews, which pointed to a serious crisis in the health, management, and sustainability of the nuclear forces, marked a turning point in the nuclear narrative. Senior national security leaders have publicly recognized that past low prioritization led to severe lapses, and they have made positive and accountable statements promising better future management. Secretary Chuck Hagel’s 2014 statement that “our nuclear deterrent . . . [is] DoD’s highest priority mission,” taken together with vocal expressions of priority (including budget priority) from the now secretary of defense Ash Carter, the secretary of the Air Force, and other leaders, point to an encouraging shift in attention. Nonetheless, it is simply too early to fully understand how these new messages are being heard and implemented.

9. Obama, “Remarks by President Barack Obama.”

Building and Communicating a Compelling Rationale for U.S. Nuclear Weapons

This study tracks the changing rationale for U.S. nuclear weapons as it has evolved since the end of the Cold War and evaluates its effectiveness, particularly in terms of meeting the needs of the forces responsible for supporting and executing the U.S. nuclear mission. Over the course of the research effort, it became clear that the effectiveness of the rationale for U.S. nuclear weapons has only partially to do with the words used to articulate it. Feedback from the operational personnel themselves overwhelmingly points to the significant influence of other factors in determining whether the rationale reaches the forces clearly and precisely, with a real impact. The message matters, but the individuals who deliver the rationale, the means by which it is communicated, and the context in which it is received are also important. As such, this study came to ask four questions:

1. Is this the right rationale?
2. Is the rationale tailored to specific audiences with appropriate detail and specificity?
3. Is the rationale suitable but being improperly communicated?
4. Is the rationale communicated effectively within the mission but undermined outside of the mission?

In answering these questions, the study team identified a number of disconnects and challenges not only in the rationale for nuclear weapons over time, but in the way that narrative is perceived, internalized, and remembered over time in various audiences. These challenges naturally fall into six basic categories:

1. **Message**—Is the message clear, persuasive, and consistent?
2. **Audience**—Who comprises the audience for the rationale? Is the message tailored to them?
3. **Messenger**—Who is speaking this narrative and, just as important, who is not? Is the communicator clear, persuasive, and disciplined?
4. **Mechanism**—Is the message communicated effectively and appropriately through appropriate tools and forums that ensure that the message reaches its intended audience intact?

5. **Volume and Dissonance**—What is the volume of the message and how much noise must it overcome to be heard? Are competing voices and narratives crowding out the narrative?
6. **Context**—What is the context or environment in which the message is communicated? Does it reinforce or undermine the message?

MESSAGE

Is the message clear, persuasive, and consistent?

The existing U.S. nuclear narrative is complex, multilayered, and multifaceted

In trying to appeal to a large and highly distributed audience, reconcile competing viewpoints, distill highly technical information, and capture a wide variety of topics and issues, the rationale has understandably grown to be quite complicated. Referring to the 1994 Nuclear Posture Review, one senior official said:

We considered nonproliferation. We considered threat reduction with respect to reducing the number of nuclear weapons in nations of the former Soviet Union. We considered stockpile stewardship, how to maintain our nuclear weapons without nuclear testing. We considered declaratory policy associated with our nuclear posture. Of course, we considered important deterrence, commitments to allies, including the NATO alliance. And, very importantly, we considered the stability of the nuclear force structure we were proposing. . . . Those are the elements, the policy elements, that led us to the results of the Nuclear Posture Review [and] toward a smaller and safer force structure.¹

In many cases, U.S. nuclear weapons policy is described in highly sophisticated strategic logic that is not very accessible to the public or junior operators. It is rife with concepts and jargon that are not routinely defined and explained—"deterrence," "hedge," "strategic stability," "escalation," and so on. In speaking to officers during roundtables, it becomes evident that the tendency to mystify, overuse, or misuse "deterrence," a foundational concept, has taken its toll: one mid-grade nuclear command-and-control officer observed, "Talking about deterrence still works, but less than it used to."

That is in part because the nuclear cognoscenti have grown accustomed to talking to themselves and speaking their own language. In some cases, this has gone so far as to suggest a degree of intellectual elitism and exclusivity, perhaps best exemplified by the label "nuclear priesthood" to refer to those whose thoughts and writings dominate the American nuclear landscape. Invariably, however, this type of exclusivity prevents the development of a rationale that is persuasive and transmissible outside of nuclear policy circles. This challenge is amplified by divergent views held across the current nuclear policy community that often divides into competitive and contentious camps—U.S. nuclear policy and deterrence proponents, on the one hand, and nonproliferation

1. *U.S. Nuclear Policy, Hearing before the House Committee on Foreign Affairs*, 103rd Cong. 2 (1994) (statement of John M. Deutch, deputy secretary of defense, U.S. Department of State).

and disarmament practitioners, on the other. Each camp co-opts and redefines the nuclear policy vocabulary in ways that support its arguments and distort its opponents'. In this environment, it is hardly surprising that other vitally important audiences—the operational military, the public, and even most of the Congress—tune out the discourse.

Not only is the message complex and highly nuanced, it is also heavily caveated

The narrative is sprinkled with words like “but,” “except,” and “in some cases.” Consider some of these examples from the historical record:

- “Deterrence continues to be a relevant consideration for many states with regard to threats from other states, **but** reliance on nuclear weapons for this purpose is becoming increasingly hazardous and decreasingly effective as the prospect of nuclear proliferation grows increasingly ominous.”²
- “Conventional forces, therefore, could and should and would assume a far larger share of the deterrent role. The administration concluded **nonetheless** that nuclear weapons continue to play a critical role in deterring aggression against the United States, its overseas forces, its allies and friends.”³
- “Our primary reliance there should be on our conventional capability, **but** we will, in fact, have nuclear weapons for many, many years, and there will be what some have called an existential deterrent that they provide against people using or threatening chemical and biological attack against us if indeed we ever had to make use of those nuclear weapons. More important in my mind is that we should not through reliance on nuclear weapons use that as an excuse for failing to provide the kind of conventional capability that we ought to have to respond to chemical or biological threat.”⁴
- “**While** nuclear weapons will continue to play a role in United States defense policies, they will not be our primary form of deterrence.”⁵
- “So we are going to maintain an assured destruction capability as a hedge, as Bill might say, against the possibility—however remote it may be—that the Russians would engage in a strike against the United States, so as to deter them. **But** I think that that possibility is vastly remote.”⁶

2. *U.S. Nuclear Weapons Policy, Hearing before the House Subcommittee on Strategic Forces*, 110th Cong. 8 (2007) (statement of Sidney Drell, professor emeritus, Stanford Linear Accelerator Center, Stanford University). Emphasis added.

3. *The Future of Nuclear Deterrence, Hearing before the Senate Subcommittee on International Security, Proliferation, and Federal Services*, 105th Cong. 6 (1997) (statement of Walter B. Slocombe). Emphasis added.

4. *Ibid.*, 28 (statement of Gen. Andrew J. Goodpaster, U.S. Army [Ret.], cochair, Atlantic Council of the United States). Emphasis added.

5. *Examining the Nuclear Posture Review, Hearing before the Senate Committee on Foreign Relations*, 107th Cong. 4 (2002) (statement of Senator Richard Lugar). Emphasis added.

6. *Report of the Congressional Commission on the Strategic Posture of the United States, Hearing before the House Committee on Armed Services*, 111th Cong. 25–26 (2009) (statement of James R. Schlesinger, vice chairman, the Congressional Commission on the Strategic Posture of the United States). Emphasis added.

Nuance, clarity, and specificity are important aspects of a rationale for nuclear weapons. But overreliance on caveats can lead to a highly defensive narrative designed to counter critics rather than build support for and encourage the operational force.

Throughout the three eras, the U.S. rationale and narrative for nuclear weapons suffer from another challenge—negative framing

In other words, the rationale has tended to focus on what nuclear weapons will not do and is dominated by descriptions of decline, reduction, and diminishment. When reflecting positive results—saving money, reducing costs, eliminating threats—this approach has been a positive for the public and the policy community. For the communities responsible for managing and operating the U.S. nuclear deterrent, however, such negative framing fails to provide the affirmative case for the nuclear arsenal that remains, and it sparks anxiety about their mission and their future. Consider these examples from the historical record:

- “The role of nuclear weapons in our defense posture has **diminished** dramatically. We in the Department of Defense welcome this trend and expect it will continue in the future.”⁷
- “The addition of nonnuclear strike forces—including conventional strike and information operations—means that the U.S. will be **less** dependent than it has been in the past on nuclear forces to provide its offensive deterrent capability.”⁸
- “Our policy is to **reduce** the role of nuclear weapons in our nation’s security strategy and to seek the peace and security of a world without nuclear weapons. We’ll continue to do both, but that doesn’t diminish our responsibilities.”⁹

In fact, this review found few examples of an affirmative case for the role of U.S. nuclear weapons in U.S. national security across the time period from 1989 to the present. The only positive rationale that emerged during this time frame was the important role the U.S. arsenal plays in assuring partners and allies. The emphasis, which is reinforced by the dramatic drop in the size of the U.S. nuclear arsenal, has been and continues to be on reducing the role of U.S. nuclear weapons in U.S. nuclear security.

This is not to say that there should never be any talk of reduction or decline. But too little effort has been made to state positively the critical, albeit more limited, role of nuclear deterrence, and the personnel responsible for supporting and executing the mission have taken note of this absence. During a roundtable interview, a mid-grade missileer attributed the nuclear forces’ “identity crisis” to the poor messaging: “There’s a divide between why and how. The Air Force is good at teaching how. We make proficient missile officers. But the why provides meaning and context, and we are completely lacking that.”

7. *The Future of Nuclear Deterrence, Hearing before the Senate Subcommittee on International Security, Proliferation, and Federal Services*, 4 (statement of Walter B. Slocombe). Emphasis added.

8. U.S. Department of Defense, “2002 Nuclear Posture Review [Excerpts],” January 8, 2002, available at <http://web.stanford.edu/class/polisci211z/2.6/NPR2001leaked.pdf>. Emphasis added.

9. Chuck Hagel, “Statement on the Nuclear Enterprise Review and Reforms” (speech, Pentagon Press Briefing Room, Arlington, VA, November 14, 2014), <http://www.defense.gov/News/Speeches/Speech-View/Article/606634>. Emphasis added.

Negative framing reflects policy, not politics

Complex, caveated, and negatively framed rationales are remarkably consistent across all three eras: the role of nuclear weapons is declining; such decline should be encouraged; a world without nuclear weapons is preferable, but as long as any other state possesses them, so will the United States. While some interviewees hold strongly to the notion that such narratives can be attributed to certain leaders, administrations, or time frames, the review of the historical record found no such correlation. These narrative challenges are bipartisan. Examples from across the political spectrum in this time frame are as follows:

- “Nuclear weapons are playing a smaller role in U.S. security than at any other time in the nuclear age. Nevertheless, the United States must maintain a nuclear force of sufficient size and capability to hold at risk a broad range of assets valued by potentially hostile political and military leaders.”¹⁰
- “The United States will continue to reduce the role of nuclear weapons in deterring non-nuclear attack. However, nuclear forces continue to play a limited but critical role in the nation’s strategy to address threats posed by states that possess nuclear weapons and states that are not in compliance with their nuclear nonproliferation obligations.”¹¹
- “While nuclear weapons will continue to play a role in United States defense policies, they will not be our primary form of deterrence. We must continue to move the world, while we exercise necessary care and prudence, away from nuclear-dependent deterrence.”¹²
- “I don’t believe there is an urgent problem, and it certainly is much reduced from what it was five years ago. Our policy is to have a deterrent posture to ensure that that is the case in the future. I am not saying we have an eminent nuclear threat today. It is significantly reduced from what it was five years ago. I would like to ensure we have a posture that maintains that reduced threat in the future.”¹³
- “The end of the Cold War and, particularly, the collapse of the Soviet Union/Warsaw Pact, along with the substantial edge that the United States has now developed in conventional military capabilities have permitted this country sharply to reduce our reliance on nuclear weapons, radically to reduce our nuclear forces, and to move away from a doctrine of nuclear initiation to a new stance of nuclear response only under extreme circumstances of major attack on the United States or its allies.”¹⁴

10. *National Security Implications of U.S. Ratification of the Strategic Arms Reduction Treaty—START II*, Hearing before the Senate Committee on Armed Services, 104th Cong. 16 (1995) (statement of Walter B. Slocombe, Under Secretary of Defense for Policy), 16.

11. U.S. Department of Defense, *2014 Quadrennial Defense Review*, 14, http://archive.defense.gov/pubs/2014_Quadrennial_Defense_Review.pdf.

12. *Examining the Nuclear Posture Review*, before the Senate Committee on Foreign Relations, 4 (statement of Senator Richard Lugar).

13. *U.S. Nuclear Policy*, Hearing before the House Committee on Foreign Affairs, 7 (statement of John M. Deutch).

14. *Report of the Congressional Commission on the Strategic Posture of the United States*, Hearing before the House Committee on Armed Services, 9 (statement of James R. Schlesinger).

It is easy to look back now with the gift of hindsight and reexamine words written 20 years ago, as though to imply that they were somehow inadequate or incommensurate with the time in which they were said. But it is in reflecting on the narrative that it becomes clear that reduction, complexity, and caveating in the narrative have largely been a result of their historical context. The words have in fact generally been appropriate, and perhaps unsurprising, for their contemporary circumstances, which have allowed for a topline message that has remained much the same. Nonetheless, it is also clear that this rationale, while truthful to a security environment that has curtailed the role of U.S. nuclear weapons, now lags behind in reacting to a rise in nation-state competition that has the role of nuclear capabilities trending upward. The nuclear narrative must evolve—and it must be not only appropriate for the present, but also clear, positive, and accessible.

It becomes important, then, that the articulation of the rationale not be improved to only then be undermined or distorted by the means through which it is communicated. The message must reach all of the necessary audiences, through the best communicators and mediums, and in the ideal contexts. There is more to do than just finding the “right” words: building a compelling rationale for U.S. nuclear weapons in the twenty-first century also means building an overall messaging strategy.

AUDIENCE

Who comprises the audience for the rationale? Is the message tailored to them?

Successfully communicating a compelling rationale depends first and foremost on an understanding of the intended audience, as well as an ability to reach that group with a message that suits its specific requirements. The audience for the rationale, however, is both vast and comprised of numerous communities with varying levels of interest in and familiarity with nuclear weapons. It includes those in the services who execute the nuclear mission, inclusive of the mid-level commanders, the junior officers, and the enlisted. It also encompasses their conventional counterparts, their families and friends, other members of the general public, the scientific community and broader nuclear enterprise, and Congress.

The narrative in years past has not been adapted to speak to such distinct groups. Instead, it exists in two extremes and seeks either to be everything to everyone all at once or to capture only a small subset of the population that is actively engaged, day in and day out, in nuclear weapons policy. The existing narrative has been developed by and for the members of this latter group, without enough inclination to translate its concepts for others somewhere in the middle who must also be engaged in policy development but who do not share the same degree of expertise. Roundtable interviews at the junior personnel level indicate that some communities within the nuclear forces want access to such concepts and strategic thinking at an early stage of human capital development; other communities do not. But across the board, they want appeals that dig deeper than cookie-cutter language and that speak to their specific roles and why they are important, without being so mired in the weeds that they become unapproachable. The narrative has yet to meet these sometimes-contradictory needs.

These differences create an imperative for a rationale that is self-sufficient and persuasive in itself and yet also flexible enough to be tailored specifically to the needs and capabilities of each of these audiences. While the words may therefore vary, the essential underlying narrative must be consistent across the forms that it may take. There cannot be any substantive discrepancies or contradictory messaging.

The rationale must reach diverse communities throughout and beyond the operational forces

In each roundtable with junior and mid-grade officers, participants emphasized the need to explain the role and value of U.S. nuclear weapons not just to the operational forces. The junior and mid-grade officers stressed the importance of also reaching the people in their lives who have a direct influence on how they understand and feel about their jobs on a day-to-day basis. That first includes their families—their parents, spouses, and children—because, as one mid-grade officer commented, “It hurts us a lot that they can’t see what we do.” But that also includes their neighbors and their surrounding communities and those who might not have exposure at all to the nuclear field but who read the news and use social media and see the occasional headline about the nuclear forces. Nuclear personnel perceive those headlines as usually negative and critical, rather than reflective of the positive changes that have been made in the last few years. Several roundtable participants independently commented on the image of the nuclear community in the media. One mid-grade officer, during a roundtable, asked, “When’s the last time you read a positive story [about the nuclear forces]?”

It is not enough to direct the message at the nuclear workforce alone. At times, the most important messages with the most lasting impressions are those that reach these personnel indirectly and that reflect positive standing and appreciation in their families and communities.

A compelling rationale must reach and resonate across the total force, not just the nuclear operational community

Among those whose opinions hold outsize influence on the nuclear personnel’s perception of their role are the conventional forces. Despite their impact, however, as a senior civilian official said during his interview: “Officers that are not in the nuclear business aren’t being told anything about nuclear weapons and their role in national security. We need to look at what is being said and is not being said.” This sentiment is shared widely by the junior officers who, in several separate instances, wondered whether enough was being done to—in one such officer’s words—“teach nukes to nonnuke people,” such as the pilot who “didn’t understand how I played into his life.”

The nuclear forces do not exist as a self-contained community within the services. They are in constant contact with their conventional counterparts. They want to know not only that they are contributing something of value to the broader strategic mission as the conventional forces are, but also that their brethren know as well and have at least some awareness of what the nuclear forces do to support them in protecting and defending the United States. As a former senior civilian said, “I think a lot of the problem [that is, loss of morale in the nuclear force] comes from what is being said to the rest of the force about the nuclear mission.” This concern speaks to a cultural need within the nuclear forces to believe that their mission is important and respected across the military. That is, if the nuclear mission is truly important, the conventional forces should

have at least a minimal level of conversancy or literacy in the concept of nuclear deterrence and the role of the U.S. nuclear arsenal.

Junior and mid-grade officers are linchpin communicators, required to understand and recommunicate a compelling rationale, in speaking to these various audiences

Senior leadership cannot totally shoulder the onus of reaching these disparate audiences—and, in fact, they should not, given that junior and mid-grade officers are even more ideally suited to delivering a resonant, personal message to their families, communities, and colleagues about why they do what they do. When the audience is so diverse, the rationale must also come from the nuclear personnel themselves, whose views sometimes hold more weight than messages delivered from on high. The role of senior leaders, then, is to make that possible so that junior and mid-grade officers feel supported, prepared, and eager to tell the people in their lives what it means to them to be a part of the nation's nuclear forces.

MESSENGER

Who is speaking this narrative and, just as important, who is not? Is the communicator clear, persuasive, and disciplined?

Who talks matters

Clear statements from the highest possible echelons of policymaking—the president, the secretary of defense, the secretaries of state and energy—carry a weight all their own, especially in terms of priority and strategic vision. What senior leadership says matters, of course, because they set the tone for the conversation. But what they do not say also matters. Silence can be deafening.

Multiple junior officers from both the Air Force and the Navy noted in their roundtable interviews that even presidential-level messages can be undercut if other key communicators in the chain of command undermine, dismiss, disregard, or censor them—if, that is, the message “gets distorted as it goes down the hierarchy,” as a former senior civilian official observed during his interview. The roundtable interviews make clear that it is those closest to the nuclear personnel who are most responsible and thus accountable for communicating the rationale for U.S. nuclear weapons. The message will not get through to them if someone in the chain of command just one or two levels above in seniority decides the personnel do not need to hear it. They are the ones who must “make good” on the words from senior leadership. As another former senior civilian and military official remarked, “The head of an organization can do a lot, but the lower-level managers can quickly undo that.”

Junior officers are not just an audience—they are essential communicators

Junior officers, who begin as message receivers, quickly become messengers themselves in training the next generation of nuclear personnel. Distorted messages and misperceptions thus unfortunately live on, past the influence of any single individual, as they are passed down through the ranks.

In some instances in which junior officers lacked sufficient guidance from their immediate supervisors, they found themselves left to their own devices in coming to an understanding of the

nuclear mission so that they would be able to convey this sense of purpose to their subordinates. Absent clear direction from his leadership, a junior officer thought through the mission himself: "I had to redefine my mission. My purpose was to make sure that there was a safe, secure, and effective warhead on alert. I had to redefine my scope and scope the deterrence mission." It was not uncommon, in speaking to junior and mid-grade officers, to find that they had devised their own explanations for the role of nuclear weapons in U.S. national security strategy. During a roundtable, for example, a mid-grade officer stated, "You couldn't fly an F-15 in another country without extended deterrence." Another in a separate discussion said, "An F-15 pilot can fly over to Syria because of us." Some of the reasonings were more valid, and some more overstated, than others. But the fact that junior personnel feel the need to create their own such rationalizations points to an underlying desire to know where the nuclear forces fit in the bigger picture of U.S. national security strategy.

In addition, concerns about classification surfaced in every roundtable discussion. Junior officers and the enlisted personnel with whom they serve are acutely aware of the sensitivity and importance of their mission, many aspects of which are highly classified. Many parts of the community are extremely cautious (sometimes even overly cautious) about discussing their mission and the role of the U.S. nuclear arsenal in U.S. national security. For this audience, a compelling (and usable) rationale must not only be unclassified, it should be clearly designated and reiterated as such so that the nuclear workforce can use and draw from it without concern that they could release sensitive information accidentally.

It should not be so difficult for the nuclear personnel to find guidance in understanding their roles and conveying that understanding to the officers below them. Of course, senior leaders must make every effort to encourage and facilitate consistent and compatible messages at all levels. But when that is impossible, they must at the very least foster those officers who take the initiative to self-educate and self-motivate, especially those in that critical level of seniority who are now transitioning into leadership positions themselves, and provide them with the right tools and resources to help instill that initiative in others. Junior and mid-grade officers, who are charged with distilling complex policy statements and translating them into a sense of purpose and mission for individual operators, need targeted and refined messages coupled with resources, materials, training, and support. The success of current efforts will depend on whether they are properly equipped to execute their role as re-messengers. They will be the heart and soul of either the problem or the solution.

MECHANISM

Is the message communicated effectively through appropriate tools and forums that ensure that the message reaches its intended audience intact?

Relying on traditional "trickle-down" approaches often results in message distortion—or the telephone effect

Speeches, congressional testimony, media statements, and official documents, strategies, and reviews are the traditional mechanisms for establishing and communicating the nuclear narrative

and for helping the “inside the beltway” policy elites, congressional members and staff, and high-level media and international audiences communicate with each other. Policymakers generally assume that messages disseminated through these means will slowly make their way down to the personnel in the field.

But nuclear messaging suffers the same distortions experienced in the childhood game of telephone, in which a group of people sit in a circle and the first person whispers a sentence to the individual to his or her left and everyone laughs when an entirely different sentence comes back on the right. Trickle-down approaches are most effective when the narrative is short and simple, based on clear, declarative statements. If the secretary of defense says that the nuclear deterrent is “the DoD’s number-one, highest priority mission” and that “no other capability we have is more important,”¹⁵ then chances are that the message will get through intact. But the detailed and caveated rationales to explain the role of nuclear weapons, the trade-offs between competing priorities, the complexities of deterrence in the post–Cold War era, or even the priority military services put on the nuclear mission are a high-risk gamble to translate through trickle-down methods.

Interviewees pointed to one such case of distorted messaging that is now nearly infamous in nuclear circles. General Lance Lord (Air Force Space commander from April 2002 to April 2006 and the top-ranked officer for 13S career field of space and missile officers) once said, “If you are not in space, you are not in the race.” When told by a member of the CSIS study team that Lord had actually *not* been talking about promotion rates when he made his infamous statement, a senior military interviewee said, “That doesn’t matter. Everybody believes he was talking about promotional opportunities in the Air Force, and it’s the perception that matters.”

Couple this perspective with the fact that most of the personnel that comprise the operational nuclear force are between the ages of 25 to 34¹⁶—and it becomes easy to understand how messages are lost to time, distance, and countless layers in the chain of command. The young airmen and sailors, much like their peers, are not watching C-SPAN or searching for hearing transcripts. They are instead accustomed to receiving news and information in highly personalized ways, such as blogs, personalized news alerts or feeds, and social media. But the initial messengers at the beginning of the chain have yet to adapt their methods of communication to such formats. As a mid-grade officer said: “With social media, we’re losing the battle.” Key messages are reaching the operational forces third- or fourth-hand at best, via communicators who may not be highly knowledgeable on the issues.

15. Hagel, “Statement on the Nuclear Enterprise Review and Reforms.”

16. As of February 2016, 10.2 percent of officers in Air Force Global Strike Command are between the ages of 17 and 24, and 58.7 percent are between the ages of 25 and 34. See U.S. Air Force, “Air Force Personnel Center: IDEAS Report,” accessed February 11, 2016, http://access.afpc.af.mil/vbinDMZ/broker.exe?_program=ideaspub.IDEAS_Step1.sas&_service=pZ1pub1&_debug=0.

VOLUME AND DISSONANCE

What is the volume of the message and how much noise must it overcome to be heard? Are competing voices and narratives crowding out the narrative?

The problems with the mechanisms by which the rationale is conveyed to the nuclear forces are compounded by an oversaturated information landscape. The United States does not articulate a rationale for nuclear weapons in a vacuum—which means that the nuclear narrative may often be either overpowered by other events and priorities, such as the 9/11 attacks, or amplified by them, such as with the Russian invasion of Crimea.

Other missions, events, and priorities can drown out the nuclear conversation

Often—in fact, most of the time—the strategic narrative for nuclear deterrence is not the only conversation going on. It is hard to hear if there are too many conversations occurring at once and other leaders are speaking loudly as well. This figured prominently during the second era when, after 9/11, the president and his national security leadership were consumed with terrorism and the wars in Iraq and Afghanistan. Defense and military leaders were advocating for missions, force structure, and capabilities in high-priority areas outside the nuclear mission space, such as special operations capability, cyber, and other conventional forces and systems. Senior leaders inevitably focus on near-term, urgent missions or requirements such as Middle East conflicts or the rise of ISIL at the expense of longer-term concerns. Throughout all three eras, the nuclear message has often been left to the nuclear community, which then struggles to make its voices heard while leaders from outside the nuclear community dismiss the role of nuclear weapons or see them as competing for “more urgent” priorities.

Multiple interviews and working groups pointed out the importance of not talking inside a nuclear silo without listening to what is being said or is left unsaid by and to the rest of the force. Synergies can and should be found across virtually every geographic region. When global terrorism has dominated the security landscape, such as throughout the second era, then such synergies have been hard. But in Asia—with a modernizing China, the India-Pakistan competition, and a bellicose North Korea—and, increasingly, in Europe, the messages and the messengers should be more aligned.

Countervailing narratives can contest and undermine the preferred rationale

The nuclear policy community, both within the United States and internationally, is diverse and divided. The rationale for the U.S. nuclear deterrent is controversial and contested. Activists, non-governmental organizations, and nonproliferation and arms-control advocates often do not share the same rationale for nuclear weapons or necessarily even agree that such a rationale exists. Countervailing narratives from the doomsday clock to the “Global Zero” campaign question the fundamental purpose and morality for the existence of the U.S. nuclear enterprise, let alone its size, shape, posture, and budget. In some cases, these voices can be louder in the public discourse than those supporting the U.S. arsenal. Several times during roundtable discussions, interviewees expressed concern that the American public only hears negative news about the U.S. nuclear arsenal and thus comes away with a false perception of the state of the nation’s nuclear forces.

“We exercise no effort to control the narrative,” one mid-grade officer said. “We deflect when it gets really bad and ignore the rest. The best we can hope for is that [the public] didn’t read it.”

In the lead-up to and immediate aftermath from President Obama’s Prague speech, these alternative narratives seemed to dominate. Multiple interviewees expressed frustration that the president’s balanced approach—between seeking a world without nuclear weapons and ensuring a safe, secure, and effective nuclear deterrent until that was possible—has been co-opted and distorted by others. As one senior civilian official observed, the “yin” and the “yang” of the NPR and the Prague speech—modernization balanced with working toward zero—are not always equally conveyed: “Down at the operator level, the dominating narrative that operators hear is that we want to get rid of the nuclear arsenal. . . . How many times did we have people talking about the ‘safe, secure, and effective’ part of the narrative versus the ‘reduction to zero’ part?”

Following a brief period of relative quiet and consensus, especially with regard to the nuclear modernization program, these countervailing narratives seem to be getting stronger in recent months—both as the debate over nuclear modernization intensifies on Capitol Hill, especially with regard to the long-range standoff weapon (LRSO), and as the Obama administration considers additional executive actions to implement the April 2009 Prague Agenda.

Competing narratives, even within the nuclear mission space, can lead to a crowded message board

Not only can there be strong countervailing primary narratives, there can be varying degrees of consensus within the overall narrative on a range of secondary issues and themes. At some times, such as during the first era following the collapse of the Soviet Union, the degree of consensus within the narrative was fairly strong. Even so, far less consensus existed during that period on issues such as nuclear testing and stockpile stewardship, the applicability of nuclear deterrence to chemical and biological threats, or the utility of hedging. During the second era, the rationale for nuclear weapons existed in a more polarized and ideologically driven policy environment that challenged the perception of consensus on issues such as deterring terrorism, whether the U.S. deterrent helps or hinders nonproliferation, and the balance between conventional and nuclear capabilities in an effective deterrence posture. The third era, meanwhile, is marked on the one hand by growing consensus on the importance of restoring focus and senior attention on the nuclear mission and on the criticality of modernization and recapitalization of the nuclear enterprise. On the other hand, the narrative is still currently evolving, with prominent countervailing narratives competing against others.

CONTEXT

What is the context or environment in which the message is communicated? Does it reinforce or undermine the message?

The importance of how well the context in which a message is received “fits” the message itself cannot be overstated. On several occasions, junior officers pointed out that the message, no matter how “right” the words or the means of delivery may be, will only be received and

internalized in a positive environment—one of sufficiently supportive command leadership, educational opportunities and training support, and investment of time and resources—that encourages such strategic thinking.

Most important, the operational community looks closely at the alignment of words and deeds to determine if the narrative is credible, sustainable, and persuasive. Several reviews, both external and internal, have highlighted the “say-do gap,” a finding that is reinforced by this study. This say-do gap creates the impression that the words are hollow, which undermines the credibility of the narrative and fosters cynicism and low morale. Again and again, interviewees pointed to the gap between words (rationale) and deeds (funding, leadership attention, and personnel practices) as a fundamental problem with the rationale for nuclear weapons. “Actions speak louder than words” is the obviously applicable adage here. But the problem is worse than the adage suggests. The failure to act—to redress problems and fulfill promises—is deeply demoralizing and fosters skepticism and even contempt.

Overcoming perceptions that the message is not reflected in actions will take patience: it will require creating an affirmative context for the rationale, undoing and remedying the various pieces of the say-do gap, and doing so in a continuous, sustained effort that conveys to the nuclear workforce that this commitment is lasting.

The command climate needs to better encourage the development of strategic thinkers

Feedback from the operators’ roundtable interviews also suggests that a strategic understanding of “why” their job is essential to national security and “how” it contributes is not currently part of their daily experiences—not because they are unwilling to learn, but because, as a mid-grade officer said, “nobody knows where to look, so nobody looks.”

This can be at least partially attributed to command and work environments in which junior personnel are often expected to do the job, but not necessarily understand the job. The roundtable discussions not only showed that to be true in some of the personnel’s experiences, but also illustrated the extent to which such a “don’t think, just do” culture can influence motivation and morale, which can in turn affect both job performance and the willingness to remain in the career field. A number of participants recalled instances in which they or others they knew felt demoralized by their immediate supervisors’ attitudes toward the mission or else actively discouraged from pursuing their interest in broader strategic thinking—being told to simply “shut up and color,” as one junior military officer put it.

- Mid-grade military officer: “In my missile command, the leadership didn’t care about motivating the operations; I was told to just teach them to turn the key.”
- Junior military officer: “I asked leadership about why we didn’t learn more about our actual mission, and was told to ‘read about it on your own.’”

Such an environment stifles an intellectual curiosity that directly informs how junior officers view their assignments, their careers, their community, and their mission.

Interviewees also underscored the effect that the inspections or compliance culture can have on their capacity to spend any of their time on broader strategic thinking. DoD and service leadership

have taken numerous steps to remedy the excessive testing and evaluation process and to review test-based performance standards, but it is nonetheless important to recognize that this problem, too, has implications for messaging: a unilateral standard of perfection across everything the operators do depletes their mental and physical bandwidth for receiving, processing, and understanding nuclear policy and strategy. A mid-grade missileer exemplified this takeaway, saying, “The efficacy of the message also depends on the ability of the audience to actually hear the message when it’s being communicated. . . . [My] headspace was so used up by the Air Force’s standard of perfection, I could not have heard you even if you said the right message at that point.” A workforce that is beaten down is also tuned out.

Educational and development opportunities must be more widely available and accessible, at an early stage of the junior operators’ careers

Hurdling these, at times, localized or individualized challenges requires developmental and educational opportunities to, as one mid-grade officer explained it, “get outside the narrow pipeline quicker” and see the broader picture of where the nuclear forces fit in U.S. national security strategy. The unique role of nuclear weapons and their function of “always in operation but never in use” creates a special imperative for strategic awareness that should be fostered from an earlier stage of career development.

When asked how to best reach the nuclear workforce with a positive rationale, a junior officer replied, “If you open up the opportunity, it depends on the individual. They want to know if there’s time and it’s easily accessible.” That officer pointed to his attending the U.S. Strategic Command Deterrence Symposium, his “first time interacting with any missileers,” as a crucial learning experience. Another officer, who was able to attend an ICBM test launch with several colleagues, said, “That single event for people was the culmination to understand day-to-day that [deterrence] works.” For those junior officers, and for others who were given assignments, such as STRATCOM, that afforded them a wider picture of their roles, these experiences were critical in showing them why they matter. Hearing a compelling rationale for the U.S. nuclear arsenal is critical, but living and experiencing it fosters belief and commitment in the mission.

The opportunities, however, according to junior and mid-grade officers, are currently difficult to find, depend on individual initiative, and receive uneven support from command leadership. They also pointed to a noticeable absence of nuclear weapons and deterrence information and training in the service academies and the early stages of professional education. One junior officer observed: “There is a disconnect between this [the Hagel statement on the nuclear mission being number one] and what actually gets priority at the [Air Force] Academy. . . . It looks great on paper, but if you said this to cadets at the Academy, they would think you are crazy and would not believe it.” He elaborated further, noting that trainees in the Air Force Academy must memorize the various types of planes in the Air Force—“everyone would be able to tell the difference between an F-15 and an F-16”—but not many would be able to identify the different warheads in the nuclear force. Another junior officer noted that she had not even been informed that nuclear engineering was an option until she was assigned to the Air Force Technical Applications Center (AFTAC).

This challenge in developing an educational path that gives due weight to broader strategic thinking is not limited to the nuclear community. In the professional military education system, strategy

and policy are not a focus of the curriculum until the senior service schools at the 05/06 level. The national laboratories face a similar version of this challenge: strategic and policy knowledge does not seem to be cultivated or encouraged at the lower levels. Junior personnel are highly educated and possess advanced degrees, but are entirely focused on, and funded for, their scientific pursuits in their early career.

The good news is that the same hierarchical system that contributes to the problem can also solve it by encouraging—indeed, requiring—knowledge, competency, and communication of nuclear strategy and policy at the tactical level. Junior officers recognize the changes, including a nuclear minor at the Air Force Academy, currently being made in this area. By providing education in nuclear policy and strategy at lower levels of command, military leaders not only communicate a sense of priority for the nuclear mission to the entire force, they also cultivate young officers and enlisted personnel with some of the basic education and training necessary to absorb, process, and think critically about nuclear weapons and their role in the United States' security. Explaining the rationale and importance of U.S. nuclear weapons is not just a speech to the operational personnel; it is a conversation with them.

The perceived “say-do gap” severely undermines the rationale

The dearth of educational and developmental opportunities for the junior officers who participated in the roundtables fell within the say-do gap identified by the external and internal reviews—and exemplifies an absence of follow-through in spite of words that stress the importance of the nuclear mission. This say-do gap was described by many of the interviewees, with several underscoring its importance as particularly acute when it came to investment of resources into properly equipping the nuclear operators and those who support them for their daily jobs. As one senior military official said, “You can’t tell people in the field that [the nuclear mission] is the most important mission that we have and give them 40-year-old equipment to do it.”

- Mid-grade military officer: “There’s always a say-do gap, but come on! Men and women on alert using a bucket because you can’t get money to fix the toilets. And this went on for six months!”
- Mid-grade military officer, when told that B-2 pilots sat alert in Federal Emergency Management Agency (FEMA) trailers: “I would kill for that trailer.”
- Current government official: “If Tier 1 flag officers and SES’s [Senior Executive Service] don’t bring the fight [for modernization and priority] to the Joint Staff, nothing happens. Helicopters [are] a major concern for the safety and security of nuclear forces. Yet, we still don’t have new helicopters.”
- Mid-grade military officer: “Are they really taking care of infrastructure? Are they really going to modernize or are they going to put it on the chopping block when they see the price tag?”
- A former senior military official reported an anecdote concerning the bomber pilots from Minot AFB who were temporarily moved to where the conventional-only B-1s were based: When they “saw the better facilities . . . and overall quality of life,” he said, “the nuclear

bomber pilots were dismayed that this was for conventional bombers—they expected this at an F-35 base, but not at a bomber base.”

The “say-do gap” includes lack of attention and motivation from leadership

The “say-do gap,” the contradictory environment that it creates for a positive rationale, and the lasting effects it has on morale are similarly evident when it comes to the issue of attention and focus from leadership across all levels. Both the public record and interview data suggest that one must be careful about not overgeneralizing about senior or mid-grade leadership as homogenous blocs. The senior leadership comprises individuals from the Office of the Secretary of Defense, the combatant commands, the services, and other organizations within the inter-agency who speak in their own name and voice even when speaking on behalf of the DoD or the administration; the mid-grade officers are similarly diverse in background and personality. The data also suggests, nonetheless, that the absence of sustained attention and focus from the individuals who represent these two groups to the personnel below them corrodes confidence in the message.

When senior and mid-grade leaders send messages seen as conflicting with the rationale, junior officers deftly perceive the hypocrisy and remember it. Negative statements, as well as the complete absence of public interest, are noted as such. Junior officers take stock of not only the unenthusiastic mid-grade officers—the group commander, for example, who said to a junior officer in an off-hand comment, “I don’t want you to get a speeding ticket. Why are you going so fast anyway? You’re just going on alert”—but also the senior leaders who say nothing about the nuclear workforce. One former senior civilian official observed, “As report after report says, the nuclear mission needs high-level interest and visibility; public leadership from the top.”

The implications are clear: finding a compelling rationale is necessary but not sufficient; it is also important to identify the deeds that matter in reinforcing the rationale. As one former senior military official stated: “Yes, we need a compelling rationale [for the nuclear mission], but without the right context [in terms of senior-level attention, funding, etc.], they are just words. And young people are very quick to see that.”

The “nuclear inferiority complex” raises barriers to communication

The say-do gap exacerbates long-standing and deeply rooted perceptions, particularly in the Air Force and acutely among the ICBM community, that the nuclear mission is not truly valued. The seeming difference between actions and words, if allowed to fester in a nuclear mission that is already internally sensitive to its own sense of “inferiority,” further raises the barriers to effective and persuasive messages.

Interviews and roundtables give evidence to the existence of such a cultural inferiority complex:

- Former military official: “The Air Force has dual-capable fighters and bombers, but really would like to get out of the DCA [dual-capable aircraft] business. You can see it in how they spend money—no investments in MUNs [munitions squadrons] in Europe, pushing the F-35A mod [the Block 4B software for nuclear capability] out until FY2019–20, putting off nuclear certification for the LRS-B [long-range strike bomber], et cetera. Plus, pilots are only

rewarded for conventional missions. No one wanted to be known as a ‘nuke guy.’ There was no goodness in passing surety inspections; just punishment for failing them.”

- A former senior civilian official, who was “most concerned about the Air Force and their tendency to not give the enterprise the attention it needs,” elaborated: “The ICBM community doesn’t get the cream of the crop of those coming out of the [Air Force] Academy, because the cream of the crop don’t want to choose the ICBM role; the system does a poor job of showing a clear career path for ICBMers.”
- Former senior-level military official: “Could never get crew [rotational] cycle fixed. Crews viewed it as punishment, rather than consensual, to go to nuclear duty. [It was] difficult to keep [nuclear] bomber crews motivated when conventional guys were flying, deployed. This was exacerbated by deficiencies on the material side.”
- A junior officer, with a nuclear security background: “A senior guy comes in saying it’s the number-one priority, and all of our vehicles are falling apart. . . . Very few people want to do nuclear security. People in my field want to go to CENTCOM [U.S. Central Command].”

If the issues of culture, psychology, and identity are important throughout the Air Force nuclear enterprise, the challenges for those in the ICBM component of the mission are especially acute. Virtually every interviewee who addressed this issue agreed that the challenges associated with ICBMs were the greatest, in part because the results of the missileers’ duties were intangible:

- Former senior military official: “[At Minot], it’s a struggle to demonstrate the importance of the nuclear mission, particularly to the guy standing watch on missiles, which are weapons that we don’t want to use. It’s a challenge to keep that force occupied in an environment of deprivation—social, light, daily activity, weather, and so on. It’s an extremely difficult environment, much like Alaska, and people don’t appreciate how difficult it is to keep morale up.”
- Senior civilian official: “An ICBMer commented on the fact that they do nothing ‘mission useful’ but ‘sit in the silo.’ With respect to the security ground teams and maintenance teams: ‘At least they get to do something.’”
- A former senior military officer cited a colleague who “makes the argument that the ‘triangle’ of command is upside-down for ICBMers. In a flying wing, the triangle of maintainers, security, et cetera, flows upwards to the pilot, and a rated officer is the commander and everything flows down from him. In an ICBM, the triangle points downward to the ICBM watch officers, and the maintainers and security people are up on the surface running around, and the operational watch officers [the equivalent of a pilot] don’t have a clue about what they are doing or how they are doing it. And what they [the watch officers] do every day is boring.”

Some of the interviewees noted that this institutional “inferiority complex” appears to be less of a challenge in the Navy, and the roundtables do support this belief. Junior ballistic missile submarine (SSBN) officers were not unanimous in whether they believed that the nuclear mission is DoD’s number-one priority. Yet it was still widely recognized that, as a former senior civilian and military official observed, “Submarines in the Navy are clearly a top-level priority and ‘boomers’ are at the top of Navy subs.” Junior Navy officers in the roundtables, those on nuclear and nonnuclear subs

alike, noted that SSBNs come first when it comes to equipment, creating a dynamic—contrary to the experience of the ICBM community—in which “BNs [SSBNs] get everything they need, GNs [SSGNs, or guided-missile submarines] get second, and everyone else gets anything else.” Additionally, there is no indication that service in the nuclear deterrence mission is any impediment to development and promotion in the Navy. To the contrary, a large number of the Navy’s flag officers, including the current Chief of Naval Operations and his predecessor, have such experience. This roundtable feedback would suggest that, while creating a climate receptive to developing and encouraging strategic thinkers remains equally important in the Navy, there are fewer cultural biases and barriers to overcome in persuading that community that their mission is important and respected.

On the other hand, within the Air Force, the ICBM force may require special focus and attention. The demanding and unique challenges facing the ICBM forces lead to the conclusion that each community has its own metrics for measuring importance and its own set of “words” and “deeds” that would matter most. This further indicates that a compelling rationale for the role and value of nuclear weapons should include elements tailored to the ICBM community—ones that address not just “why U.S. nuclear weapons,” but “why ICBMs.” Of course, that would also necessitate similarly tailored rationales for each of the other components: submarine-launched ballistic missiles (SLBMs), bombers, and dual-capable tactical aircraft.

It’s not just about the money—meaningful deeds may differ widely between and among different communities

In speaking with junior officers, it becomes clear that certain types of deeds—quality of life, developmental and promotional opportunities, and maintenance and mission support—are more important to many of the operators than overall funding. One mid-grade officer said it best: “The monetary benefit is short-lived . . . because it’s throwing money at a problem that is not money-based. Sure, [the personnel] like the money, but maybe the money goes away in a few years. Hopefully, [changes] become culture, because programs die out.” This takeaway is especially interesting and evident in regards to the boomers—despite being a “land of plenty for parts” (as one junior SSBN officer put it), the junior officers still did not all perceive the nuclear mission as DoD’s highest priority. Funding only goes so far. Money, while critical for solving many of the “say-do gap” issues and creating a foundation for belief, cannot assuage all of the nuclear workforce’s concerns.

Additionally, meaningful deeds vary from one community to the other. Senior nuclear insiders look to overall budgets and program acquisitions for nuclear enterprise first for evidence of message credibility. Junior officers and enlisted in the operational community, however, often see their say-do gap in areas that affect their lives more directly: quality of life, direct mission support and priority, professional development and promotion, and comparative perceptions with other operational communities. A deeper dive into the various communities that comprise the nuclear forces shows they also each have their own deeds that carry the most impact and meaning depending on their service culture, deployment location, and operational activity. Recognizing these differences between audiences is an essential part of a tailored approach to developing a compelling rationale and communicating it effectively.

Only sustained investment of time and resources will address the “say-do-believe” gap

The fact that senior officials need to speak out strongly, publicly, and at high levels with a reinforcing rationale for the U.S. nuclear arsenal is clear. The gap between what they say and what the organizations they lead actually do, however, is even more important. Over the past 12 to 18 months, the Air Force has taken many actions, ranging from the creation of a four-star command to measures aimed at improving quality of life, to address the nuclear workforce’s concerns. But it is inevitable that these changes will take time to resonate across the force.

It takes time for words to translate to meaningful changes and concrete actions and for actions to translate into changed perceptions and beliefs—especially for deployed personnel in the field. Similarly, it takes sustained repetition and message consistency for new themes to take hold and penetrate through the force. Changes to culture, perception, and the “psychology” of the nuclear force will take even longer. The “say-do-believe” gap will only be bridged if DoD continues to take such significant steps to both speak and act differently about the nuclear mission. But it will take another 12 to 18 months before it will be evident if those efforts have been sustained and if those themes have taken hold throughout the nuclear force.

In the meantime, junior officers in roundtables have already seen a difference, and many of them agree that this is a “good time of transition of change.” They note when senior leaders make the effort to publicly affirm the nuclear mission. They recognize efforts from their immediate supervisors to create an atmosphere of affirmation: for example, the chief of boat who established a qualification criteria on the historical background of nuclear deterrence, or the crew commander who told his junior officers, “Always take the time to say to enlisted and security, ‘This is where you fit in.’” They are hopeful that these changes will persist. But they are also wary and remain only cautiously optimistic: one such junior officer represented this “wait and see” sentiment by saying, “I think we’re in a good spot now. Will it stick? We’ll see. I think we’re heading [in] the right direction.” Senior leaders must persist and be patient as they await recent efforts to be reflected in the workforce. They must, as a mid-grade officer expressed it, “have the institutional fortitude, the backbone, to say it’s good for culture if we continue to invest.”

A Compelling Rationale for U.S. Nuclear Weapons in the Twenty-First Century

An effective rationale for U.S. nuclear weapons must answer five essential questions.

- What are the most important challenges and problems that both drive and constrain the role and importance of nuclear weapons in U.S. national security?
- Given these challenges, what is the fundamental purpose or role of U.S. nuclear weapons in its twenty-first-century national security strategy?
- How does the U.S. nuclear arsenal and its associated infrastructure and delivery systems fulfill this role?
- What capabilities and attributes must the U.S. nuclear force possess to perform these functions with confidence?
- When faced with difficult trade-offs, how willing are policymakers to make difficult choices necessary to demonstrate commitment through the allocation of time, attention, and resources?

In answering these questions, this rationale must be consistent, clear, declarative, and simply stated in terms that resonate outside of the confines of the nuclear policy community. Roundtable discussions with young officers and stakeholders across the nuclear enterprise make clear that such a rationale would be more readily absorbed across the force and allow young officers and enlisted personnel to re-communicate this narrative to peers, subordinates, family members, and communities much more effectively. This approach marks a departure from some of the language, concepts, and vocabulary of prior statements and will require patience and flexibility from the nuclear policy elite.

The following proposed rationale for U.S. nuclear forces reflects the authors' effort to capture the themes that resonated most strongly with the target audience. In developing it, the authors have sought to adhere to the following "dos" and "don'ts" that emerged from our research:

Do:

- Develop a rationale that is affirmatively, rather than negatively, framed
- Use language that is clear and direct and does not require a sophisticated understanding of nuclear policy
- Use topline messages that can be employed consistently with a wide range of audiences (the public, the Congress, the armed forces) but can also be tailored to various audiences through additional specificity
- Look to the future, not the past, as the source of challenge *and* opportunity
- Remember that words accompanied by meaningful and appropriate actions are always the most effective message

Don't:

- Use jargonistic or theoretical language
- Appear nostalgic about the Cold War or suggest the future lies in a return to the past
- Criticize the audience in terms of knowledge, education, or interest

PROPOSED RATIONALE

The following narrative articulates the essential elements of a compelling rationale for the U.S. nuclear arsenal using the themes and concepts (highlighted in bold) that resonated most strongly with roundtable participants:

Today, the United States faces a nuclear landscape of **complexity, uncertainty, and risk**. While nuclear dangers have certainly receded from the high-water mark of the Cold War, the nuclear optimism of the post–Cold War era has declined as well. Today, the United States no longer faces a single primary adversary from one region of the globe, but rather a diverse set of nuclear dangers spanning at least three geographic regions and potentially with global reach. These dangers include:

- **Nuclear attack by a nuclear-armed state**—which while relatively unlikely, remains the primary existential threat to the United States and our way of life.
- **Growing nuclear intimidation and coercion by regional powers** that hope to use their own nuclear capabilities to reshape their regions to their advantage and limit the ability of the United States to exercise power and influence in those regions.
- **Renewed and potentially expanded nuclear competition among great powers**—namely, China and Russia—as they seek to expand and improve their nuclear capabilities and increase the relative role and importance of nuclear weapons in their own national strategies, despite our efforts to do the opposite.
- **Risk of nuclear intimidation and use by nonstate actors and extremists** who continue to seek nuclear capabilities and may show little (if any) restraint in using such weapons to further their violent agendas.

- **Growing frustration regarding global disarmament** and efficacy of the NPT from increasing numbers of nonnuclear armed states that view the great powers, including the United States, not as nuclear protectors but rather as sources of nuclear danger.
- **Continued strategic uncertainty** that leaves open the prospect that the future could take an even more dangerous turn and for which we could be ill-prepared to respond quickly and effectively.

In a world with nuclear weapons, U.S. nuclear forces provide a **critical foundation for U.S. power** and influence. Faced with such a world, U.S. nuclear weapons serve as a **powerful insurance policy** by ensuring that, no matter how the threats or enemies change in an uncertain world, the United States has the freedom of action to defend itself and respond. Our nuclear arsenal **underwrites the United States' national survivability against its greatest threats**, providing the only existing credible defense against nuclear destruction and ensuring that no enemy can see benefit in attacking or holding hostage the U.S. homeland. The United States' nuclear forces therefore act as a **backstop to U.S. conventional power**, allowing their conventional brethren to carry out their responsibilities overseas without worry that the country will go unprotected. Nuclear weapons provide awesome, world-altering, destructive power and bring with them **awesome responsibilities**. As long as nuclear weapons exist in the world, the U.S. will shoulder these responsibilities and serve as the nuclear counterweight to those with malicious intentions. Failure to do so would leave the world a far more dangerous place.

U.S. nuclear weapons perform these essential roles by forcing any adversary to consider that **the benefits of attacking the United States are far outweighed by the costs**. The U.S. arsenal provides an **assured nuclear retaliatory force** against any enemy state, ensuring that, should an adversary seek to disarm the United States through nuclear first strike, the United States will always have the option of responding in kind. The possibility of such a devastating response factors into every adversary state's calculus in deciding whether launching a military attack on the United States. It **"raises the bar" for that state, creating risks and costs** so much greater than any gains to be achieved that **restraint becomes a better option than aggression**.

The United States' extension of its **nuclear protection to its allies strengthens those ties and forms the basis of the underlying security relationships**, making the United States an essential provider of global security and stability in the world. U.S. nuclear weapons help bind the United States together with its closest allies based on shared interests and values as well as risks and threats. It provides those friendly states that might otherwise feel compelled to acquire their own nuclear weapons **the option to instead trust in the United States' nuclear guarantees**, empowering them to go without nuclear capabilities while also feeling secure and supported. The U.S. nuclear arsenal thus enables the U.S. alliance system, allowing it to serve as a cornerstone in the overall non-proliferation framework.

Finally, the United States holds itself to the highest possible standard for **responsible nuclear stewardship**. U.S. nuclear weapons are entirely defensive in character, **designed to prevent attacks, not to initiate them**. The United States will never brandish its nuclear weapons, use them as a source of coercion or intimidation, or seek to further regional aggression through their use. The United States maintains the **highest expectations** for the safety, security, and command and

control of its nuclear weapons and seeks at every step to demonstrate what it means to be a responsible nuclear power. The United States **sets an example** by leading in international efforts to establish and enforce norms in protecting nuclear materials and working to reduce the dangers that existing nuclear arsenals pose to the world.

The value and reliability of nuclear weapons in shaping the decisions of potential adversaries depends on their perception that the **capability is credible and their use in response to a threat is plausible**. Similarly, U.S. decisionmakers must feel confident that nuclear weapons provide the president with a range of suitable **options that meet the needs of the situation and discourage, rather than encourage, continued aggression**. Our nuclear weapons must inspire confidence in our leaders and allies and fear in our adversaries. To do this, U.S. nuclear forces must, in aggregate, possess a number of essential attributes. The U.S. nuclear force must possess the necessary capabilities to be **credible** (i.e., inspire confidence that these weapons can and will be used if necessary), **flexible** (i.e., able to produce a variety of plausible options and alternative responses appropriate to and commensurate with the threat at hand), and **survivable** (i.e., fully capable against the full spectrum of first-strike attacks so that no adversary can believe a disarming strike is possible). In addition, the U.S. nuclear arsenal must be **permanent and persistent** so that no adversary believes that windows of opportunity to attack the United States will open. These capabilities must also be **visible and demonstrable** so that when a potential adversary questions U.S. intentions in defending itself and its allies, the United States can signal its resolve and remind potential adversaries of the risks involved. Finally, these capabilities must be **responsive**. They must be able to adapt and adjust to new threats, emerging technological surprises, or potential opportunities in ways that cannot be fully anticipated today.

The United States has given our nuclear forces profound responsibilities and in turn has set the highest possible expectations. These responsibilities and expectations cannot be met on the cheap. Our forces cannot perform their mission without the **investment of time, resources, and attention by leadership** at all levels. At times, this calls for difficult trade-offs and sacrifice to ensure that the nuclear enterprise receives the priority it needs to succeed. Facing long-delayed modernization requirements across the force, the United States today faces just such a challenge of trade-off and sacrifice. But these sacrifices can and will be made when the nation's fundamental security hangs in the balance. Modernization and recapitalization of our nuclear infrastructure and delivery systems is essential but insufficient for building the nuclear force of the future. The **nuclear force of the future** depends fundamentally on our commitment to and investment in the human capital of the enterprise—the men and women who develop, maintain, operate, and support our nuclear arsenal. Sustaining a highly motivated and highly skilled workforce requires meaningful dialogue; appropriate training, education, and exercising across the force; sufficient opportunity for career and professional development; and a climate that fosters personal responsibility, accountability, and innovation. This is our commitment to our force and our pact with the American people. We can do no less.

Communicating a Compelling Rationale for U.S. Nuclear Weapons

As stressed elsewhere in this report, an effective and compelling rationale for the U.S. nuclear arsenal requires far more than just the right words. It requires a commitment to communicating that rationale and encouraging a meaningful dialogue between policymakers, the operational force (both nuclear and nonnuclear), and the communities in which they serve and work. Interviews and roundtables repeatedly stressed the need for not only a new nuclear narrative, but also a detailed strategy to improve how leaders and policy makers talk about nuclear weapons and communicate their importance and create a context in which such a compelling rationale can be heard, understood, shared, and believed.

RECOMMENDATION 1

Develop and communicate an affirmative and compelling rationale for the U.S. nuclear arsenal that articulates the role, function, posture, and priority of U.S. nuclear weapons in U.S. national security.

RECOMMENDATION 2

Set the tone from the top. A new nuclear narrative cannot be compelling if not fully and formally owned and communicated by the president and his or her most senior national security advisers. Give the message authority and have it come from the highest authorities.

- A compelling rationale in any hierarchical organization must begin at the top and then flow consistently and pervasively throughout.

RECOMMENDATION 3

Direct the rationale for U.S. nuclear weapons to the whole force, not just the nuclear operators.

- A compelling rationale will not work if only the nuclear operators hear it. The message needs to reach across the services, combatant commands, and forces in the field.
- A message that is not believed and shared cannot be credible to the nuclear operators.

RECOMMENDATION 4

Create an education-based context for communicating a compelling rationale, not just a public affairs plan.

- An education-based approach ensures not only a better message, but also creates the environment in which this narrative can be heard, understood, and re-communicated. Moreover, learning through education has staying power and can withstand the constant barrage of competing messages.
- Require basic literacy regarding the purpose and function of U.S. nuclear weapons across the whole force, not just the nuclear community.

RECOMMENDATION 5

Cultivate and encourage strategic and policy knowledge through opportunities for education and training earlier in the officer development process and beyond the nuclear force alone.

- Require a minimum basic knowledge of strategic nuclear matters at the service academies and make supplemental knowledge and instruction more easily accessible.
- Provide accessible, digestible, and easily distributable learning resources to junior officers and their subordinates.
- Adapt resource materials to suit the needs and schedules of different operational communities. For example, SSBN crews need low-bandwidth websites and resources saved onto compact disc that are easily accessible when under way.
- Provide opportunities to broaden experience and perspective early on so that young operators can better understand how their specific role (ICBMs, bombers, SSBNs, etc.) fits into the bigger picture. These opportunities can be fairly simple: internships, fellowship programs, joint assignments—for example, STRATCOM, Joint Staff, the Defense Threat Reduction Agency (DTRA), the Office of the Secretary of Defense, the National Military Command Center (NMCC), the Defense Information Systems Agency (DISA), etc.—or conferences such as the STRATCOM Deterrence Symposium.

RECOMMENDATION 6

Focus on the re-communicators—that is, junior and mid-grade officers.

- As the “frontline” operators of the nuclear mission, they “spread the word” to nonnuclear colleagues, friends, and families.

RECOMMENDATION 7

Close the gap between messenger and audience.

- In addition to relying on “trickle down” message delivery, leaders and messengers should “thicken” the communication chain to the audience through use of social media, detailed talking points, and guidance for all officers in the nuclear chain of command, and a deliberate campaign of interactive communications including roundtables, town halls, and base visits by senior leaders.
- Nuclear personnel should be engaged in a direct conversation, in person when possible.
- Hearing these messages directly not only ensures that the message gets through undistorted, it also supports message credibility by demonstrating that senior leaders’ words are backed up by action.

RECOMMENDATION 8

Distribute the rationale widely and via diverse communication modes that are short and easily accessed (millennials don’t play telephone—they have Google).

- Make better use of personalized methods of communication such as social media, blogs, and personalized news alerts.
- Use communications that are participatory (e.g., town hall meetings and roundtable discussions, not speeches) because they are shown to be most effective, particularly with millennials.

RECOMMENDATION 9

Make better use of operational exercises across the nuclear force to engage senior leaders, build stronger connections between operators and support elements, and demonstrate priority. These are huge missed opportunities.

- Involve more senior policy personnel in order to introduce more policy realism into the exercises and demonstrate senior engagement.

- Reduce the number of simulated elements of the exercises to allow broader community engagement and improve realism.

RECOMMENDATION 10

Match words with meaningful actions.

- Without a reinforcing context, messages lose traction and lack credibility.

Final Thoughts

Since the end of the Cold War, the United States has struggled to articulate successfully an affirmative rationale for why nuclear weapons, even at reduced numbers and salience, play an essential role in U.S. national security. In addition, a historical pattern of morale challenges and operational errors have undermined confidence in the DoD nuclear enterprise and raised questions about the broader institutional health of the mission—prompting a series of extensive reviews, both internal and external, to address the problem. Maintaining the standard of excellence needed to sustain and operate the nation’s nuclear arsenal requires a nuclear narrative that resonates beyond the policy elite and speaks to the personnel responsible for the nuclear mission.

Developing and communicating an effective rationale for nuclear weapons that informs, shapes, and resonates with this community starts with getting the words right. A compelling narrative must be clear, affirmative, and straightforward. It must have tailorable elements that speak to the specifics of the nuclear mission, its operators, and its delivery systems—and it must take into account the role, function, posture, and priority of U.S. nuclear forces. But it cannot stop there. It also requires an audience that is educated in strategic concepts and encouraged to be strategic thinkers. It demands senior-level communicators who speak often, persuasively, and directly about the nuclear missions, as well as supervisors and managers who encourage and engage the conversation as both message givers and message receivers. Finally, it requires consistent, coordinated actions that align with the narrative and reflect a tailored approach to each audience.

It will require all of these things on a sustained basis that can overcome entrenched organizational challenges and institutional biases. In other words, this narrative must be accompanied by an implementation plan to explain the importance of nuclear weapons in U.S. national security and convey the awesome responsibility these weapons entail to those men and women charged with maintaining and operating the nation’s nuclear forces, as well as their conventional brethren.

Appendix A. Glossary of Key Terms

Bomber. A bomber is a military aircraft designed and outfitted to utilize air-to-ground weaponry such as gravity bombs, cruise missiles, or torpedoes to destroy a target.¹

Conventional. Conventional capabilities are all military armaments not utilizing nuclear warheads. Conventional warfare consists of combat operations not including nuclear strikes.²

DCA. A dual-capable aircraft (DCA) is an aircraft tasked and configured to perform both conventional and nuclear missions.³

Enlisted. An enlisted member of the military is any individual below the rank of commissioned officer. Enlisted military members generally have a high school diploma and have at minimum completed Basic Training.⁴

ICBM. An intercontinental ballistic missile (ICBM) is a nuclear-capable, land-based ballistic missile with a range of more than 3,500 miles (5,600 kilometers). Only three countries actively deploy ICBMs: the United States, Russia, and China.⁵

Missileer. Missileers, also known as missile combat crews, are specialists trained to operate, maintain, and launch a ballistic missile. Missileers traditionally work in underground missile silos; however, they may also operate above-ground ballistic missiles depending on available capabilities.⁶

1. "Bomber," *Encyclopedia Britannica*, accessed August 23, 2016, <https://www.britannica.com/technology/bomber-aircraft>.

2. "Conventional Weapons," UN Regional Centre for Peace and Disarmament in Asia and the Pacific, accessed August 23, 2016, <http://unrcpd.org/conventional-weapons/>.

3. "DCA," DoD Dictionary of Military Terms, Defense Technical Information Center, accessed August 23, 2016, http://www.dtic.mil/doctrine/dod_dictionary/data/d/11195.html.

4. "Enlisted Personnel," RAND Corporation, accessed August 23, 2016, <http://www.rand.org/topics/enlisted-personnel.html>.

5. "ICBM," *Encyclopedia Britannica*, accessed August 23, 2016, <https://www.britannica.com/technology/ICBM>.

6. U.S. Air Force, "Nuclear and Missile Operations Officer," accessed August 23, 2016, <https://www.airforce.com/careers/detail/nuclear-and-missile-operations-officer/>.

Nuclear forces/nuclear personnel/nuclear community. This community includes the U.S. Air Force and Navy forces responsible for supporting and executing the U.S. nuclear mission, inclusive of the mid-level commanders, the junior officers, and the enlisted.

Officer. A commissioned officer outranks all enlisted members and serves as the principal sources of authority and leadership in any military unit. Officers generally have at minimum a bachelor's degree and advanced military training.⁷

Operator. Operators, also known as key turners, are individuals specifically tasked with launching a ballistic missile. Ballistic missile launches are unique in that two individuals must initiate the sequence simultaneously for the missile to fire.

SSBN. A nuclear-powered ballistic missile submarine (SSBN) is considered to be the most survivable of all nuclear delivery systems. SSBNs are both mobile and utilize advanced stealth technology.⁸

7. U.S. Department of Defense, "The Armed Forces Officer," January 2006, <http://www.dtic.mil/doctrine/education/armedforcesofficer.pdf>.

8. U.S. Navy, "Fleet Ballistic Missile Submarines—SSBN," U.S. Navy Fact File, accessed August 23, 2016, http://www.navy.mil/navydata/fact_display.asp?cid=4100&tid=200&ct=4.

Appendix B. Study Concept and Methodology

The initial objective of *The Evolving Nuclear Narrative: Communicating the Rationale for the Role and Value of U.S. Nuclear Weapons, 1989 to Today* was twofold: (1) track the changing conceptual and political landscape of U.S. nuclear deterrence since the end of the Cold War, and (2) build a compelling rationale for the role and value of nuclear weapons for those executing the nuclear mission. As Phase I proceeded, however, it became apparent that the CSIS study team needed to broaden the scope of its study objectives in several important respects:

- While the principal target audience of the study remained military personnel, this group was later expanded to include the personnel's immediate supervisors. The study team also recognized that, while the rationale might be developed for this specific audience, it also needs to resonate with all levels of the Department of Defense, key stakeholders in the federal government, and the American people. That is, this tailored rationale needs to be consistent with and complementary to other existing narratives related to the role and value of U.S. nuclear weapons.
- Since the effectiveness of any message depends on the context in which it is communicated, the CSIS study team sought to identify those actions that reinforce or detract from the receptivity of its target audience.
- The CSIS study team also found that, to ensure a reinforcing context for effective messaging, the DoD must become a more effective advocate for the nuclear mission, both across the DoD and beyond it. As such, the study team formulated a series of recommendations for DoD with that objective in mind.

The study was conducted in two phases to reflect these updated objectives. Phase I outlined the trends in the evolving "narrative" for the U.S. nuclear deterrent between 1989 and the present and asked whether this narrative has been effective in achieving its intended goals. Phase II provided an action plan comprised of (1) the key elements of a lasting and compelling rationale and (2) recommendations for more effectively communicating that message to internal and external audiences in the future.

PHASE I—THE EVOLVING HISTORICAL NARRATIVE

Phase I used an extensive review of the public record, supplemented by expert consultations, including working group sessions and interviews, to elaborate how the changing narrative explains the nuclear arsenal's role, function, posture, and priority. Each of these "focus areas," conceived as organizing principles for sorting the immense quantity of material in the historical record, addresses a key aspect of the U.S. nuclear arsenal:

- **Role:** How has the fundamental purpose of U.S. nuclear weapons and their place in U.S. national security strategy adapted to shifts in the international security context?
- **Function:** How do the U.S. nuclear arsenal and its associated infrastructure and delivery systems fulfill their role?
- **Posture:** What size, shape, distribution, and readiness of nuclear forces is necessary for them to fulfill their role and perform their functions?
- **Priority:** When faced with difficult trade-offs, are policymakers willing to make the difficult choices necessary to demonstrate commitment through the allocation of time, attention, and resources?

The review of the public record compiled statements addressing these focus areas from key U.S. government publications, particularly DoD strategy and policy guidance documents and the statements of U.S. government and DoD officials, such as nuclear posture reviews and quadrennial defense reviews, as well as the reports of other reviews, commissions, and studies addressing the nuclear enterprise. The study team then compiled a comprehensive set of congressional testimony transcripts from 1989 to 2015 related to "nuclear" (excluding civil nuclear) issues and read through these 331 documents to extract key excerpts. These two processes supplied the bulk of the data for the review of the historical record, which was further supplemented by less systematic searches for newspaper articles and speeches. In total, the database consists of nearly 800 key statements.

The coleaders of the study also conducted not-for-attribution interviews with individuals throughout the nuclear enterprise of various levels of experience, seniority, and expertise. The basic questions guiding these interviews are listed in Appendix C; the scope of questions often expanded, however, depending on the interviewees. Though pertinent quotes and anecdotes from the interviews appear in this report, none will be attributed to any of the interviewees by name, nor will the list of interviewees be publicly released.

PHASE II—TOWARD A MORE COMPELLING NUCLEAR RATIONALE

During Phase II, the study team adopted the Phase I "focus areas" (role, function, posture, and priority) as essential elements of any future compelling rationale. The team then held seven roundtables, comprised of stakeholders of varying degrees of seniority from across the nuclear enterprise, at three military bases and in Washington, DC, to assess its preliminary rationales. Based on

these discussions, the study team reduced its initial list of dozens of different rationales and their various articulations to those published in this study.

The roundtables provided numerous insights about the relative importance and resonance of the various elements and themes, the associated actions and activities that are positively reinforcing, and those that, perhaps contrary to conventional wisdom, are less effective.

LIMITATIONS

The driving questions behind this study concept are familiar. *The Evolving Nuclear Narrative: Communicating the Rationale for the Role and Value of U.S. Nuclear Weapons, 1989 to Today* was inspired and informed by the various reviews of the U.S. nuclear enterprise. While it may touch on similar issues, this report does not, however, seek to cover the same ground or attempt to evaluate broader challenges facing the nuclear enterprise. Neither does this study propose to alter fundamentally any aspect of current U.S. nuclear policy.

Rather, this study takes those concerns as a starting point to inform how a compelling rationale can contribute to a healthier, vibrant, and motivated nuclear workforce; how an insufficient message (or one inadequately delivered) contributes to challenges facing the enterprise; and how specific narrative themes and approaches, and which ones in particular, would best serve the mission. It also speaks to a broader audience than the enterprise reviews, which were written primarily for policymakers. Just as the resulting rationale must make sense to all relevant constituencies in order to be effective, the study as a whole is meant to be widely accessible. It aims to be a dialogue with the nuclear personnel about why their jobs matter and how they fit into the greater national security strategy of the United States. It is meant also to be a reminder to the general public that, in the face of new, post–Cold War nuclear challenges, there is indeed a need for a safe, secure, and effective nuclear arsenal.

To achieve these objectives, CSIS has additionally created a website—which includes an interactive timeline tracing the historical nuclear narrative, the complete database of key statements used by the study team in its analysis, a downloadable version of this study, and additional learning resources—to accompany this report.

Appendix C. Key Nuclear Narrative Themes

	Role	Priority	Function	Posture
Era 1 1989–2001: Decline and Dissolution of the Soviet Union 1989 through 2001 saw an immense shift on the international stage as the Soviet Union's sudden collapse relieved the United States of its primary strategic threat. Even as the danger of nuclear attack declined precipitously, the United States grew increasingly concerned that a rising tide of nuclear-armed states and rogue actors would create new threats in this post-bipolar world.	Salience of nuclear weapons at lowest point since their inception • "Nuclear weapons are playing a smaller role in U.S. security than at any other time in the nuclear age." (1995) • "Nuclear weapons play a smaller role in our security strategy now than at any time since their inception." (1995) A greater number of current threats can largely be met with conventional weapons • "As symbols of prestige and international standing, nuclear weapons are of markedly reduced importance." (1997) • "The emphasis in the United States defense strategy has shifted back toward conventional weapons and away from nuclear weapons, so that the strain, as it were, on our nuclear capability has lessened." (2001) Trend that more threats can be covered by conventional capabilities seems likely to continue	Reduced prominence in nuclear-relevant threats allows for cost-cutting and downsizing of nuclear enterprise • "It entails cost-cutting, making necessary investments, and adjusting to new circumstances: fewer weapons, fewer types of weapons, no production of new types of weapons, an aging stockpile, a production capability in need of modernization, and no nuclear testing." (1996) Emphasis on reducing the stockpile of nuclear weapons, not defining the role of the remaining weapons	Deterrence still important, but arsenal mostly a hedge against future threats and reversal of positive trends • "We must, therefore, maintain a deterrent capability that will deter any risk of nuclear attack upon the United States as we move into this uncertain future." (1992) • "While the risk of large-scale nuclear war is now very low, our nuclear forces continue to serve as an important hedge against an uncertain future." (2000) Nuclear arsenal deters WMD acquisition and use by allies under nuclear umbrella as well as rogue states and dictators • "Any decline in that confidence that we have or in our commitment to nuclear deterrence could signal to other nations that are now under our nuclear umbrella that we are not serious. And I would suggest to you that sophisticated nations—Japan, Germany, Italy, who knows which countries—would revisit whether or not they might need their own nuclear option in the future." (1998) Assurance of allies emerging as a primary rather than secondary justification for U.S. nuclear forces • "What is the basis for the presence of any nuclear weapons in NATO now within the framework of the alliance? . . . The political value of those weapons as a commitment to the alliance is still high." (1994)	United States will have nuclear weapons as long as other states do • "There is, in fact, no reasonable prospect that all the declared and de facto nuclear powers will agree in the near term to give up all their nuclear weapons. But as long as one such state refuses to do so, it will be necessary for us to retain a nuclear force of our own." (1997) Maintenance of nuclear triad required for "hedge" to manage uncertainty • "We must retain a triad of strong, modern, complementary forces to ensure that no other nuclear state or states ever see an opportunity to gain a nuclear advantage over us." (1992) "Lead but hedge": Reduce deployed forces, but retain stockpile and non-strategic weapons as a hedge

	Role	Priority	Function	Posture
Era 2 2001–2010: 9/11 and Terrorism, Afghanistan and Iraq Wars In the wake of 9/11, the United States embarked on a "Global War on Terror" and plunged into the Afghanistan and Iraq wars in 2001 and 2003, respectively, as it fought to subdue a new generation of extremists and state sponsors of terrorism. Despite the chaotic situation in the Middle East, and the rise of a number of parties (Iran and North Korea) with nuclear ambitions, most continued to perceive an overall decline in strategic nuclear threats to the United States. Accordingly, the United States committed to reducing its arsenal, while also affirming that it would remain safe, secure, and effective.	Proactive shifting of deterrence from nuclear to conventional capabilities • "The addition of nonnuclear strike forces—including conventional strike and information operations—means that the United States will be less dependent than it has been in the past on nuclear forces to provide its offensive deterrent capability." (2002) • "While nuclear weapons will continue to play a role in United States defense policies, they will not be our primary form of deterrence." (2002) • "The end of the Cold War and, particularly, the collapse of the Soviet Union/Warsaw Pact, along with the substantial edge that the United States has now developed in conventional military capabilities, have permitted this country sharply to reduce our reliance on nuclear weapons, radically to reduce our nuclear forces." (2009)	Nuclear arsenal in need of revitalization, but "War on Terror" took precedence • "Underinvestment in the infrastructure—in particular the production complex—has increased the risks that if substantial problems in the stockpile are discovered, future options to refurbish or replace existing designs will be limited." (2002) Increasing alarm, particularly about the National Nuclear Security Administration (NNSA) and the labs, about the pernicious effects of lack of attention and investment	Nuclear weapons do not deter twenty-first-century terrorist organizations and rogue states, which make illogical cost calculations • "Today our adversaries have changed. The terrorists who struck us on September 11 were clearly not deterred by . . . the massive U.S. nuclear arsenal. In the twenty-first century, we need to find new ways to deter new adversaries that will most assuredly arise." (2002) • "So it seems all too clear that we cannot deal with the danger of nuclear terrorism either by defense or, for that matter, by deterrence, which is not likely to be effective against a terror organization like al Qaeda." (2007) Hedge even more appropriate given an increasingly complex security environment • "Rising and resurgent powers, rogue nations pursuing nuclear weapons, proliferation of international terrorism, all demand that we preserve this hedge." (2008) Need to reassure allies that might otherwise consider nuclear option a policy priority • "We should be mindful that our friends and allies perceive different levels of risk within their respective regions. Here our arsenal plays an irreplaceable role in reducing proliferation." (2008) • "Both the size and specific elements of our forces are driven more by the need to reassure those that we protect under the nuclear umbrella than by U.S. requirements alone." (2009)	United States will have nuclear weapons as long as other states do • "As long as other states have or seek nuclear weapons and potentially can threaten us, our allies, and friends, then we must have a deterrent capacity." (2008) Overhaul of nuclear capabilities for flexibility in addressing new threats • "Today's nuclear arsenal continues to reflect its Cold War origin. . . . New capabilities must be developed to defeat emerging threats such as hard and deeply buried targets (HDBT), to find and attack mobile and relocatable targets, to defeat chemical or biological agents, and to improve accuracy and limit collateral damage." (2002) New Triad will encompass more than offensive nuclear forces • "The second leg of the New Triad requires development and deployment of both active and passive defenses—a recognition that offensive capabilities alone may not deter aggression in the new security environment of the twenty-first century." (2002) Though arsenal will shrink, it must remain reliable and credible • "As our force shrinks, this reliability must grow if we are to maintain full confidence in our nuclear deterrence." (2002)

	Role	Priority	Function	Posture
Era 3 2011–Present: Growing Great-Power Competition in an Era of Rising Disorder The era 2011 to the present has been one of unpredictable and complex threats. As official military operations in Iraq wound down, nonstate enemies such as the Islamic State confounded expectations by rapidly ascending to power through astonishing means of violence, and old adversaries—Russia, China, and North Korea—employed novel, effective methods to challenge the United States and regional partners through both military and nonmilitary means.	United States will keep nuclear weapons as a deterrent against nuclear attack, but long-term policy is to work toward eliminating nuclear weapons “Our nuclear deterrent plays a critical role in ensuring U.S. national security, and it’s DOD’s highest priority mission. No other capability we have is more important. . . . Consistent with President Obama’s guidance, our policy is to reduce the role of nuclear weapons in our nation’s security strategy and to seek the peace and security of a world without nuclear weapons. We’ll continue to do both, but that doesn’t diminish our responsibilities.” (2014)	As long as U.S. nuclear weapons exist, they will continue to be safe, secure, and effective “Just as long as nuclear weapons exist, the United States will sustain a safe, secure, and effective nuclear arsenal.” (2011) “The president said, as long as weapons exist, we are going to take care of them to make sure they are safe, secure, and effective.” (2013) United States will fund modernization, despite budget cutbacks “So the nuclear modernization costs we’re talking about are all part of what’s getting squeezed. . . . The other inescapable fact is we have to do it. Especially if we’re going to reduce our nuclear weapons, we have to make sure that what we have left works.” (2012) Severe lapses in nuclear enterprise demonstrate consequences of previous low prioritization “Four or so years ago, [in] some parts of our nuclear force, I think we came to the brink of, potentially, a ‘hollow force.’” (2011)	United States must lead in reduction efforts if it wants nonproliferation to succeed “With respect to whether there is a connection between disarmament and nonproliferation, I would argue, yes, there is very much a connection.” (2012) “Our ability to influence others depends on our willingness to lead and meet our obligations.” (2013) Communicates that enemies cannot escalate their way out of failed conventional aggression “It also supports our ability to project power by communicating to potential nuclear-armed adversaries that they cannot escalate their way out of failed conventional aggression.” (2014) U.S. nuclear arsenal primarily exists to prevent war and reassure allies “Our policy throughout the Cold War—and I would argue [even] today—is to reassure those kinds of countries that they don’t need their own nuclear weapons because they can rely on America’s nuclear weapons to defend them.” (2012) “Our nuclear forces contribute to deterring aggression against U.S. and allied interests in multiple regions, assuring U.S. allies that our extended deterrence guarantees are credible.” (2014) The function of nuclear weapons within deterrence still shrinking as the definition of deterrence strategy expands	As long as any other state has nuclear weapons, it will be necessary for the United States to retain a nuclear arsenal “As long as nuclear weapons exist, the United States must invest the resources necessary to maintain—without testing—a safe, secure, and effective nuclear deterrent that preserves strategic stability.” (2015) Triad deters future foreign leadership from seeking nuclear advantage “Retaining all three triad legs will best maintain strategic stability at reasonable costs, while hedging against potential technical problems or vulnerabilities and changes to the geopolitical environment.” (2014) Reductions and modernization are each independently important “This administration is following through on all of its commitments on modernization. And modernization, as I said earlier, is in the same room with the New START Treaty and what the New START Treaty reductions will do. But they are linked tangentially.” (2011)

Appendix D.

Security Environment Timelines

This timeline presents a sense of the security environment corresponding to the nuclear narrative. Each era includes a summary description of those years, a summary of key quotes describing the threat environment, and a timeline with illustrative quotes on the nuclear narrative.¹

Era 1: Decline and Dissolution of the Soviet Union (1989–2001)

The era 1989 through 2001 saw an immense shift on the international stage as the Soviet Union's sudden collapse relieved the United States of its primary strategic threat. Even as the danger of nuclear attack declined precipitously, the United States grew increasingly concerned that a rising tide of nuclear-armed states and rogue actors, propelled by the potential loss of control over proliferation in the newly independent republics, would create new threats in this post-bipolar world.

Era 2: 9/11 and Terrorism, Afghanistan and Iraq Wars (2001–2010)

In the wake of 9/11, the United States embarked on a "Global War on Terror" and plunged into the Afghanistan and Iraq wars in 2001 and 2003, respectively, as it fought to subdue a new generation of extremists and state sponsors of terrorism. Despite the chaotic situation in the Middle

1. Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, "Nuclear Chronology," last modified June 2016, http://www.acq.osd.mil/ncbdp/nm/docs/NuclearChronology_June2016.pdf; "China profile—Timeline," *BBC News*, August 31, 2016, <http://www.bbc.com/news/world-asia-pacific-13017882>; U.S. Department of State Office of the Historian, "Milestones: 1989–1992," last modified November 1, 2013, <https://history.state.gov/milestones/1989-1992>; U.S. Department of State Office of the Historian, "Milestones: 1993–2000," last modified November 1, 2013, <https://history.state.gov/milestones/1993-2000>; "2013 Year in Review: Tragedy, Transition, Triumph," *Wall Street Journal*, last modified January 14, 2014, <http://www.wsj.com/articles/SB10001424052702304475004579276751433735152>; "Timeline: Turning Points in the U.S. Debate on Syria," *Reuters*, August 31, 2013, <http://www.reuters.com/article/2013/08/31/us-syria-crisis-timeline-idUSBRE97U0D820130831>; Department of Energy, "DOE History Timeline," accessed September 29, 2016, <http://energy.gov/management/office-management/operational-management/history/doe-history-timeline>; Central Intelligence Agency, "Timeline," last modified April 26, 2016, <https://www.cia.gov/about-cia/cia-museum/experience-the-collection/text-version/timeline.html>.

East and the rise of parties (namely, Iran and North Korea) with nuclear ambitions, most U.S. thought leaders continued to perceive an overall decline in strategic nuclear threats to the United States. Accordingly, the United States committed to reducing its arsenal, while also affirming that it would remain safe, secure, and effective.

Era 3: Growing Great-Power Competition in an Era of Rising Disorder (2011–Present)

The era 2011 to the present has been one of unpredictable and complex threats. As official military operations in Iraq wound down, nonstate enemies such as the Islamic State confounded expectations by rapidly ascending to power through astonishing means of violence, and old adversaries—Russia, China, and North Korea—employed novel, effective methods of attack. Russia, after annexing the Crimean Peninsula, adopted the aggressive rhetoric of “nuclear saber rattling”; North Korea acquired an estimated dozen warheads; and Pakistan accepted a new nuclear posture that envisioned a range of nuclear responses to conventional attack. These developments have raised the salience of nuclear weapons in U.S. national security strategy, particularly as NATO has begun reevaluating its nuclear policy in relation to Russia.

DECLINE AND DISSOLUTION OF THE SOVIET UNION (1989–2001)

This first era begins with the fall of the Berlin Wall in 1989 and ends with the September 11, 2001 attacks on the World Trade Center, the Pentagon, and in Pennsylvania. Defined primarily by the dissolution of the Soviet Union in the early 1990s, the formal end of the Cold War, and the United States’ adjustment to a post-bipolar world, the years from 1989 through 2001 saw a concerted American effort to support nonproliferation amid a rising tide of states and rogue actors in pursuit of nuclear and other nonconventional capabilities.

As the Soviet Union’s central government failed, so too did its infrastructure for securing its expansive nuclear, biological, and chemical weapons stockpiles collapse—leading to increased risk that the chaos of the new political system would give opportunity to third parties seeking to acquire such arms. U.S. observers at the time feared that weakened control mechanisms over Soviet tactical nuclear weapons, deterioration of nuclear facilities, and unemployment of nuclear scientists might leave materials and knowledge vulnerable to exploitation, theft, or misuse. Of additional concern were the tens of thousands of nuclear warheads, as well as components of other WMDs, left by the former Soviet regime in the newly independent republics. In response to both of these proliferation risks, the United States established the Nunn-Lugar Cooperative Threat Reduction Program to assist Russia in safeguarding and eliminating these weapons of mass destruction.² Simultaneously, the United States also led in cooperative international initiatives to prevent the further proliferation of nuclear weapons: after signing START I and II treaties with Russia in 1991 and 1993 to initiate bilateral drawdowns of the two nations’ respective nuclear forces, the United States also pushed for the renewal of the Nuclear Non-Proliferation Treaty (NPT) in 1995.³

2. Defense Threat Reduction Agency, “Nunn-Lugar Cooperative Threat Reduction Program.”

3. U.S. Department of State, “Treaties and Agreements.”

As one threat to U.S. interests fell into decline, others sought to fill its space. The Gulf War, the United States' first major post-Cold War military operation, shed light on Iraq's burgeoning chemical weapons program and illustrated the new, wider range of chemical, biological, radiological, and nuclear (CBRN) threats opposing the United States. Several nations—China, France, India, and Pakistan—conducted nuclear tests, and Pakistan publicly admitted that it had the ability to make a nuclear weapon. The unpredictable leadership of “rogue regimes” such as Iran and North Korea actively sought nuclear capability, while a series of breaches at U.S. nuclear laboratories sparked worries that the nation's nuclear secrets were vulnerable to theft, particularly by the Chinese. Additionally, nonstate actors came to the fore as instances of terrorism, most notably the World Trade Center bombing in 1993 and the Oklahoma City bombing in 1995, demonstrated the danger that individuals or groups could pose should they acquire weapons of mass destruction.

Key Events

Nov. 9, 1989	Berlin Wall falls
Oct. 3, 1990	Reunification of Germany
Jan. 17–Feb. 28, 1991	U.S. engagement in the Gulf War
July 31, 1991	START I signed
Dec. 26, 1991	Resignation of Soviet president Mikhail Gorbachev; Soviet Union is dissolved
Jan. 3, 1993	START II signed
Feb. 26, 1993	World Trade Center bombing
Dec. 15, 1995	Treaty of Bangkok, creating Southeast Asia nuclear-weapons-free zone, opens for signature
Apr. 11, 1996	Treaty of Pelindaba, creating African nuclear-weapons-free zone, opens for signature
Sept. 24, 1996	Comprehensive Nuclear Test Ban Treaty (CTBT) opens for signature
May 1998	India and Pakistan conduct nuclear tests
Oct. 13, 1999	U.S. Senate votes against ratifying CTBT
Apr. 23, 2000	Russian president-elect Vladimir Putin approves new military doctrine, allowing use of nuclear weapons in response to large-scale, conventional aggression
Sept. 11, 2001	Attacks on World Trade Center, the Pentagon, and an airliner that crashed in Pennsylvania

Quotes

1992

Thomas Reed, former secretary of the U.S. Air Force, April 8, 1992, House Hearing: Future Nuclear Weapons Requirements: “What is the answer to the question, ‘What is the role of nuclear

weapons in the New World Order?’ Well, I think that the threats to our security that require U.S. ownership of nuclear weapons really can be condensed down into three threats and three reasons. The first threat is the Soviet nuclear detritus: for example, the weapons, and the forces, and the military industry left behind by the Soviet empire. What is the role of nuclear weapons, U.S. nuclear weapons? It is to deter those who control or who could control the Soviet legacy until it is gone [and] in the process, to act as bargaining chips in bringing about that dissolution. The second threat is those who would aggravate our industrial allies. That is not the same thing as ‘attack’ or ‘irritate.’ By aggravate, I am talking about aggressors such as China or North Korea in the Orient, or a revisionist republic in Europe. Or I am talking about competitors, who would challenge the status, the respect of these major industrial powers who will want seats on the [UN] Security Council. The role of U.S. weapons, I think, is to provide the assurance of a nuclear umbrella, thus to dissuade our industrial allies from going nuclear. The third threat [is] these third world antagonistic resourceful states, which are currently Iraq, Iran, North Korea, Libya, and Algeria. That list can lengthen or shorten with history. The role of U.S. nuclear weapons is to deter, as a last resort, the use of weapons of mass destruction or other unconscionable acts in ways that we now only dimly perceive. We cannot know how these threats will play themselves out. I think that it is best to prepare for difficult possibilities, while trying to entice history into civilized channels.”

1993

Representative Tom Lantos, July 28, 1993 and September 14, 1993, House Hearing: U.S. Security Policy toward Rogue Regimes: “The ‘rogue regimes,’ as I am using the term, are not necessarily a constant list. The regimes that would be included shift over time. At present, I personally would include in the list of such regimes Iran, Iraq, Libya, Syria, North Korea, Cuba, Serbia, the Sudan, and possibly Burma. . . . The most serious threat that is posed by some of these ‘rogue regimes’ is the effort that many have made to acquire nuclear weapons. In the last few months, we have witnessed the deadly seriousness of the threat to international security from the acquisition of nuclear weapons by some of these international renegades.”

1996

Michael Krepon, Stimson Center, June 19, 1996, House Hearing: Review of the Clinton Administration Nonproliferation Policy: “The use of chemical weapons, as a means of terror, we have seen our first precedent in that regard [in] the Tokyo subway system. There is a lesson there. Biological weapons can be used as a weapon of terror. These are the biggest parts of the problem. And their means of delivery are not a ballistic missile that travels thousands and thousands of kilometers. The essence of the problem, Mr. Chairman, is the truck bomb, right now. It is not the ballistic missile that can land on our country. And if you look again and disaggregate the problem, you see that the ballistic missile threat to our country is the least of our problems. It is the most remote of the problems we face. This is not just me speaking. It is the CIA speaking; it is the intelligence community speaking; and not just now, but in the past; it is BMDO [Ballistic Missile Defense Organization] speaking; it is the Department of Defense speaking. And I hope you take their testimony.”

Timeline

Senator Sam Nunn, 1992: "I just want to respond to the statement that we are basically moving away from what I call the deterrence based on survivability and ability to retaliate, and we clearly are not. That is the heart of our strategy."

Richard B. Cheney, Secretary of Defense, 1992: "Since we have reached these agreements on strategic reductions, some have questioned whether there is a continuing role for nuclear deterrence in the post–Cold War world. There clearly is. Even though the risk of a massive strategic nuclear attack has decreased significantly with the rise of democratic forces and the collapse of the Soviet Union, deterring nuclear attack will remain the highest defense priority for our nation. It is the one threat that could put our national survival at risk in a matter of moments. . . . We must therefore maintain a deterrent capability that will deter any risk of nuclear attack upon the United States as we move into this uncertain future."

John D. Holum, Director, U.S. Arms Control and Disarmament Agency, 1995: "The Nuclear Posture Review has recently confirmed that nuclear weapons play a **smaller role in our security strategy now than at any time since their inception.**"

Deputy Secretary of Defense Walter B. Slocombe, 1995: "Nuclear weapons are **playing a smaller role in U.S. security than at any other time in the nuclear age.** Nevertheless, the United States must maintain a **nuclear force of sufficient size and capability to hold at risk a broad range of assets** valued by potentially hostile political and military leaders."

Nov. 9, 1989: Berlin Wall falls

Oct. 3, 1990: East and West Germany reunified

Jan. 17, 1991: Operation Desert Storm begins

Feb. 28, 1991: Gulf War ends with a cease-fire

July 31, 1991: START I signed

Dec. 26, 1991: Resignation of Soviet President Gorbachev; Soviet Union is dissolved

Feb. 8, 1992: Pakistan reveals nuclear weapon production capability

Mar. 3, 1992: China joins NPT

Sept. 23, 1992: Last nuclear test conducted by the United States; de facto moratorium established

Jan. 3, 1993: START II signed

Feb. 26, 1993: 1993 World Trade Center bombing

Oct. 3–4, 1993: Battle of Mogadishu

Nov. 1, 1993: Maastricht Treaty comes into effect, creating European Union

Jan. 1, 1994: North American Free Trade Agreement (NAFTA) comes into force

Apr. 7–July 1994: Rwandan genocide

Mar. 20, 1995: Nerve gas attack on Tokyo subway

Apr. 19, 1995: Oklahoma City bombing

Apr. 25, 1995: Kazakhstan repatriates nuclear stockpile, declared "nuclear-free"

Generals Andrew J. Goodpaster, U.S. Army (Ret.) and Lee Butler, U.S. Air Force (Ret.), 1997: "The roles of nuclear weapons for purposes of security have been sharply narrowed in terms of the security of the United States. Now and in the future they basically provide an option to respond in kind to a nuclear threat or nuclear attack by others. In the world environment now foreseen, they are not needed against nonnuclear opponents. **Conventional capabilities can provide a sufficient deterrent and defense against conventional forces and, in combination with defensive measures, against the threat of chemical or biological weapons. As symbols of prestige and international standing, nuclear weapons are of markedly reduced importance.**"

Deputy Secretary of Defense Walter B. Slocombe, 1997: "First, whatever would be desirable, there is, in fact, no reasonable prospect that all the declared and de facto nuclear powers will agree in the near term to give up all their nuclear weapons. **But as long as one such state refuses to do so, it will be necessary for us to retain a nuclear force of our own.**"

Quadrennial Defense Review, 1997: "The primary role of U.S. nuclear forces in the current and projected security environment is to deter aggression against the United States, its forces abroad, and its allies and friends. Although the prominence of nuclear weapons in our defense posture has diminished since the end of the Cold War, **nuclear weapons remain important as a hedge against NBC [nuclear, biological, chemical] proliferation and the uncertain futures of existing nuclear powers, and as a means of upholding our security commitments to allies.**"

"Road Map for National Security: Imperative for Change," by Gary Hart et al.:⁴ "On the prevention side, maintaining strong nuclear and conventional forces is as high a priority for homeland security as it is for other missions. Shaping a peaceful international environment and deterring hostile military actors remain sound military goals. **But deterrent forces may have little effect on nonstate groups secretly supported by states, or on individuals with grievances real or imagined. . . . For this purpose . . . the United States needs to be prepared to use its rapid, long-range precision strike capabilities.**"

4. "Road Map for National Security: Imperative for Change, The Phase III Report of the U.S. Commission on National Security/21st Century," The United States Commission on National Security/21st Century, February 15, 2001, 24, <http://www.au.af.mil/au/awc/awcgate/nssg/phaseIIIfr.pdf>.

Dec. 15, 1995: Bangkok Treaty, creating nuclear-weapons-free-zone in Southeast Asia, opens for signature

Apr. 11, 1996: Treaty of Pelindaba, creating African nuclear-weapons-free zone, opens for signature

June 25, 1996: Khobar Towers bombing

Sept. 24, 1996: CTBT opens for signature

July 1, 1997: Hong Kong becomes special administrative region (SAR) of China

Apr. 7, 1998: France and the United Kingdom ratify CTBT

May 11, 1998: India conducts underground nuclear tests

May 28, 1998: Pakistan's first nuclear detonations

Aug. 7, 1998: Bombings of U.S. Embassies in Tanzania and Kenya

Aug. 31, 1998: North Korea tests Taepo-dong 1 missile

Mar. 24—June 10, 1999: NATO bombing campaign against Yugoslavia in response to war in Kosovo

June 10, 1999: THAAD [Terminal High Altitude Area Defense] system's first successful intercept of test target

Oct. 13, 1999: U.S. Senate votes against ratifying CTBT

Mar. 1, 2000: National Nuclear Security Administration established

Apr. 23, 2000: Russian president-elect Putin approves new military doctrine, allowing use of nuclear weapons in response to large-scale, conventional aggression

Sept. 11, 2001: Attacks on World Trade Center, Pentagon, and a commercial airliner in Pennsylvania

9/11 AND TERRORISM, AFGHANISTAN AND IRAQ WARS (2001–2010)

The second era begins with the September 11, 2001 attacks on the World Trade Center, the Pentagon, and a commercial plane in Pennsylvania, and ends with the United States' ratification of New START in 2010. In the wake of 9/11, the United States embarked on a "Global War on Terror" and plunged into the Afghanistan and Iraq wars in 2001 and 2003 as it fought to subdue a new generation of extremists and state sponsors of terrorism.

Shortly after the 9/11 attacks, the United States launched Operation Enduring Freedom in Afghanistan against the Taliban and al Qaeda. Within two months, coalition forces recaptured Kandahar—a victory that appeared to have marked the fall of the Taliban's rule and the start of reconstruction. But a resurgence of the Taliban over the next several years frustrated efforts to establish a stable system of governance and scale back the American presence in Afghanistan.⁵ In March 2003, the United States turned toward Iraq. Despite Saddam Hussein's capture in December 2003, the Iraq War continued, with a "surge" of troops committed in 2007, until President Obama formally ended the combat mission in 2010.⁶ In the meantime, the nuclear ambitions of other parties challenged nonproliferation efforts. Unlike Libya, which voluntarily disclosed and began dismantlement of its WMD programs in 2003 after pressure from the United States,⁷ Iran maintained its illicit programs in the face of crippling sanctions. North Korea withdrew from the NPT in 2003 and conducted nuclear tests in 2006 and 2009.⁸ Further, intelligence sources found that al Qaeda and other extremists actively plotted CBRN attacks.⁹ States elsewhere in the world also rose to the status of economic and strategic powerhouses. China had become the world's second-largest economy by the end of 2010 and had adopted an aggressive stance on territorial disputes that resulted in tension with several neighbors.

Nonetheless, most U.S. thought leaders continued to perceive an overall decline in strategic nuclear threats to the United States. Accordingly, the United States committed to President Obama's vision of a world without nuclear weapons by hosting the inaugural Nuclear Security Summit, as well as ratifying New START with Russia in 2010. When President George W. Bush began his presidency in 2001, the United States possessed over 10,500 weapons in its nuclear stockpile; at the end of 2010, 5,066 remained. With the steady drawdown of nuclear weapons, it became increasingly important that the remaining arsenal be safe, secure, and effective—yet a number of incidents, most notably the accidental transportation of nuclear-tipped cruise missiles from Minot to Barksdale AFB in 2007, highlighted the malaise and disorganization of the nuclear enterprise in this era.

5. Council on Foreign Relations, "Timeline: U.S. War in Afghanistan."

6. Council on Foreign Relations, "Timeline: The Iraq War."

7. Arms Control Association, "Chronology of Libya's Disarmament and Relations with the United States."

8. "North Korea Nuclear Timeline Fast Facts," CNN.

9. Mowatt-Larssen, "Al Qaeda's Pursuit of Weapons of Mass Destruction."

Key Events

Oct. 7, 2001	Start of Operation Enduring Freedom in Afghanistan
May 24, 2002	Russia and the United States sign the Strategic Offensive Reductions Treaty (SORT)
June 13, 2002	United States unilaterally withdraws from the Anti-Ballistic Missile (ABM) Treaty
June 14, 2002	Russia withdraws from START II
Mar. 20, 2003	Start of Iraq War
Aug. 29, 2007	Six U.S. cruise missiles mistakenly transported from Minot to Barksdale Air Force Base
Apr. 5, 2009	President Obama's Prague speech
Apr. 8, 2010	President Obama and Russian president Dmitri Medvedev sign New START
Dec. 17, 2010	Protests in Tunisia spark Arab Spring
Dec. 22, 2010	U.S. Senate ratifies New START

Quotes

2002

From the 2002 Nuclear Posture Review: "Immediate contingencies involve well-recognized current dangers. . . . **Current examples of immediate contingencies include an Iraqi attack on Israel or its neighbors, a North Korean attack on South Korea, or a military confrontation over the status of Taiwan.** . . . North Korea, Iraq, Iran, Syria, and Libya are among the countries that could be involved in immediate, potential, or unexpected contingencies. All have long-standing hostility toward the United States and its security partners; North Korea and Iraq in particular have been chronic military concerns. All sponsor or harbor terrorists, and all have active WMD and missile programs. . . . Due to the combination of China's still-developing strategic objectives and its ongoing modernization of its nuclear and nonnuclear forces, China is a country that could be involved in an immediate or potential contingency. . . . Russia maintains the most formidable nuclear forces, aside from the United States, and substantial, if less impressive, conventional capabilities. **There now are, however, no ideological sources of conflict with Moscow, as there were during the Cold War.** The United States seeks a more cooperative relationship with Russia and a move away from the balance-of-terror policy framework, which by definition is an expression of mutual distrust and hostility. As a result, a [nuclear strike] contingency involving Russia, while plausible, is not expected. . . . Russia's nuclear forces and programs, nevertheless, remain a concern."

2002

William S. Cohen, former secretary of defense, April 23, 2002, Senate Hearing: Increasing Our Nonproliferation Efforts in the Former Soviet Union: "We have an entirely different relationship with Russia today than we had back in 1991 and really until the past year, since September 11. Everything has changed, if you look at the world after September 11. . . . But the fact is that since September 11, you have seen a geopolitical shift that is perhaps unmatched in historical terms

with us having a relationship with Russia [and] with Russia saying, 'You can put bases without our objection into Tajikistan, Uzbekistan. We will work with you on this antiterrorist campaign.' A lot has changed, for their own self-interest, to be sure. They have a self-interest in aligning themselves in this war against terror, because they are also the potential victims. They have been victims."

2002

Senator Joseph R. Biden Jr., April 23, 2002, Senate Hearing: Increasing Our Nonproliferation Efforts in the Former Soviet Union: "I risk making myself hoarse by repeating it, but the primary finding is this—and I quote—and I will end with this: 'The most urgent unmet national security threat to the United States today is the danger that weapons of mass destruction or weapons-usable material in Russia could be stolen and sold to terrorists or hostile nations and used against American troops abroad or citizens at home.'"

2008

Robert Gates, secretary of defense, July 9, 2008, Remarks at the 50th Anniversary of the Mutual Defense Treaty with the United Kingdom: "Sadly, following the end of the Cold War, the world has not gotten less dangerous. Indeed, the threats have grown more diffuse and complex, posing new challenges for our national security institutions. As Russia and China continue to modernize their strategic nuclear capabilities, as Iran drives relentlessly toward a nuclear weapons capability, as proliferation of weapons of mass destruction continues to be a challenge, a smaller yet still powerful nuclear deterrent remains an essential component of our national defense."

2009

James R. Schlesinger, vice chairman, Congressional Commission on the Strategic Posture of the United States, May 6, 2009, House Hearing: Report of the Congressional Commission on the Strategic Posture of the United States: "Even though the most probable source of a weapon landing on American soil increasingly is that of a nuclear terrorist attack, nonetheless, the sizing of our own nuclear forces, in addition to other elements of our deterrent posture, remains driven in large degree by Russia. Our NATO allies and, most notably, the new members of NATO, remain wary of Russia and would eye nervously any sharp reduction of our nuclear forces relative to those of Russia, especially in light of the now greater emphasis by Russia on tactical nuclear weapons."

Timeline

Secretary of Defense Donald Rumsfeld, 2002: "During the Cold War, U.S. security demanded our having a nuclear force large enough and diverse enough to survive and to retaliate after a Soviet first strike. Today our adversaries have changed. The terrorists who struck us on September 11th were clearly not deterred by . . . the massive U.S. nuclear arsenal. In the twenty-first century, we need to find new ways to deter new adversaries that will most assuredly arise. That's why President Bush is taking a new approach to strategic deterrence, one that will combine deep reductions in offensive nuclear forces with improved conventional capabilities and the development and deployment of missile defenses capable of protecting the U.S. and our friends and forces deployed from limited missile attacks."

Senator Richard Lugar, 2002: "Whereas, previous strategic calculations assumed almost limitless offensive nuclear weapons systems but more or less rational actors, experiences with Saddam Hussein, Osama bin Laden, and others make this assumption less plausible today. President Bush has correctly pointed out that the Cold War nuclear strategy is not appropriate for the current threat environment. While nuclear weapons will continue to play a role in United States defense policies, they will not be our primary form of deterrence. We must continue to move the world, while we exercise necessary care and prudence, away from nuclear-dependent deterrence."

Sept. 11, 2001: Attacks on World Trade Center, Pentagon, and a commercial airliner in Pennsylvania

Sept. 18, 2001: First anthrax letter mailed, beginning series of attacks that sparks terrorism fears

Oct. 7, 2001: Start of Operation Enduring Freedom in Afghanistan

Oct. 26, 2001: Patriot Act signed into law by President Bush

May 24, 2002: Presidents Bush and Putin sign SORT

June 13, 2002: U.S. withdraws from ABM Treaty

June 14, 2002: Russia withdraws from START II

Nov. 25, 2002: U.S. Department of Homeland Security created

Jan. 10, 2003: North Korea withdraws from NPT

Mar. 20, 2003: Iraq War begins

Dec. 13, 2003: Hussein captured by American soldiers

Jan. 6, 2004: Libya ratifies CTBT

Apr. 28, 2004: Resolution 1540 adopted by UN Security Council

Dec. 26, 2004: 2004 Indian Ocean Tsunami

July 7, 2005: Bombings aboard London Underground trains and double-decker bus

Aug. 2005: First joint China-Russia military exercises

Sept. 8, 2006: Treaty of Semipalatinsk, creating Central Asian nuclear-weapons-free zone, signed

Oct. 8, 2006: North Korean leader Kim Jong-il announces successful detonation of nuclear weapon

William J. Perry, former Secretary of Defense, 2007: "So it seems all too clear that we cannot deal with the danger of nuclear terrorism either by defense or, for that matter, by deterrence, which is not likely to be effective against a terror organization like al Qaeda."

Secretary of Defense Robert Gates, 2008: "As long as other states have or seek nuclear weapons and potentially can threaten us, our allies, and friends, then we must have a deterrent capacity that makes it clear that challenging the United States in the nuclear arena or with other weapons of mass destruction could result in an overwhelming, catastrophic response."

James R. Schlesinger, 2009 : "The end of the Cold War and, particularly, the collapse of the Soviet Union/ Warsaw Pact, along with the substantial edge that the United States has now developed in conventional military capabilities, have permitted this country sharply to reduce our reliance on nuclear weapons, radically to reduce our nuclear forces, and to move away from a doctrine of nuclear initiation to a new stance of nuclear response only under extreme circumstances of major attack on the United States or its allies."

Principal Deputy Undersecretary of Defense for Policy James Miller, 2010: "The Posture Review closely considered the option of establishing deterrence of nuclear attack as the sole purpose of U.S. nuclear weapons and concluded that the conditions for making such a statement, making such a declaratory policy, don't exist today. Nuclear weapons continue to play an important role in deterring nonnuclear attack, including conventional or chemical/biological attack arising from a nuclear weapons state."

Oct. 26, 2006: U.S. Senate, after withdrawal of NNSA's request, drops FY2006 research funding for Robust Nuclear Earth Penetrator from bill; effectively marks close of project

Jan. 11, 2007: Reported that China conducted antisatellite missile test in space

Aug. 29, 2007: Six AGM-129 ACM cruise missiles mistakenly transported from Minot to Barksdale AFB

Sept. 15, 2008: Lehman Brothers files for bankruptcy

Mar. 6, 2009: Secretary of State Hillary Clinton presents Russian Foreign Minister Sergei Lavrov with "reset button" to symbolize a new era in Russian-U.S. relations

Apr. 5, 2009: President Obama's Prague speech, advocating for a world without nuclear weapons

May 25, 2009: North Korea's second nuclear test

Dec. 5, 2009: 1991 START Treaty expires

Apr. 8, 2010: Presidents Obama and Medvedev sign New START

Apr. 12–13, 2010: President Obama hosts first Nuclear Security Summit

May 3–28, 2010: Review Conference of the Parties on the NPT

June 4, 2010: Reported that Myanmar seeking to develop clandestine nuclear program for producing nuclear bomb

June 29, 2010: 10 alleged Russian agents arrested by FBI in United States

Aug. 31, 2010: President Obama declares end to American combat mission in Iraq

Dec. 17, 2010: Protests in Tunisia spark Arab Spring

Dec. 22, 2010: U.S. Senate ratifies New START

GROWING GREAT-POWER COMPETITION IN AN ERA OF RISING DISORDER (2011–PRESENT)

This third and final era starts with the United States' ratification of New START at the end of 2010 and continues through the present. It has been an era of unpredictable threats. As offensive military operations in Iraq wound down, nonstate enemies such as ISIL confounded expectations by rapidly ascending to power through astonishing acts of violence, and old adversaries—namely, Russia, China, and North Korea—employed novel, effective methods to challenge the United States and regional partners through both military and nonmilitary means.

The upheaval and unrest foreshadowed by the December 2010 protests in Tunisia erupted as a wave of revolutions swept through the Middle East in 2011, toppling several rulers in the region¹⁰ and inciting the ongoing Syrian Civil War. Despite warning in 2012 that use of chemical weapons by the regime of Bashar al-Assad would cross a “red line,” the United States declined to respond with military force after 1,400 civilians were killed in a chemical weapons attack by the Syrian government in August 2013—opting instead for a U.S.-Russian framework for eliminating Syria's chemical weapons arsenal. Since 2014, the United States has led coalition forces in airstrikes against ISIL in Syria and Iraq, while also calling for President Assad's resignation.

As Syria crumbled into civil war, other world events were likewise shifting the nuclear landscape. The power vacuum created by the ouster of Ukrainian President Viktor Yanukovich in 2014 allowed Russia to annex Ukraine's Crimean Peninsula. Russian president Putin followed the invasion with “nuclear saber rattling,” plainly “reminding” the West that “it's best not to mess with [Russia]” given its status as “one of the leading nuclear powers”;¹¹ declaring the addition of 40 new ICBMs to Russia's nuclear arsenal; and beginning a multibillion-dollar nuclear modernization program.¹² A year later, over U.S. objections, Russia also injected itself into the Syrian conflict, conducting airstrikes and directing cruise missiles against the rebel groups challenging Assad. Russian aggression and its demonstrated willingness to abrogate state sovereignty have prompted NATO to announce that it would be reevaluating its nuclear weapons posture.¹³ North Korea also made troubling progress in developing its nuclear weapons program and declared in January 2016 that it had tested a hydrogen bomb (despite evidence to the contrary).¹⁴ Further, Pakistan adopted a new doctrine, called “Full Spectrum Deterrence,” for its nuclear posture, which envisions a range of nuclear responses to conventional attacks by India.¹⁵ At the end of 2013, 4,804 nuclear weapons remained in the stockpile, which the United States plans to modernize over the next 10 years.

10. “The Arab Spring: A Year of Revolution.

11. Freeman, “Vladimir Putin: Don't Mess with Nuclear-Armed Russia.”

12. Demirjian, “Russia to Increase Nuclear Arsenal as U.S. Plans More Firepower in Europe.”

13. Dyer and Barker, “Nuclear Deterrent on NATO Agenda amid Rise in Russian Rhetoric.”

14. Keller, Fessenden, and Wallace, “Why Experts Doubt That North Korea Tested a Hydrogen Bomb.”

15. Dalton and Krepon, “A Normal Nuclear Pakistan.”

Key Events

Feb. 5, 2011	New START comes into effect
May 2, 2011	Al Qaeda leader Osama bin Laden killed in Pakistan
Dec. 15, 2011	U.S. operations in Iraq formally end
June 5, 2013	Classified National Security Agency (NSA) documents, leaked by Edward Snowden, published
Sept. 14, 2013	U.S.-Russia framework for elimination of Syrian chemical weapons
Mar. 18, 2014	Russia annexes Crimea
June 29, 2014	ISIL declares establishment of new caliphate
July 14, 2015	P5+1, the EU, and Iran reach Joint Comprehensive Plan of Action (JCPOA)
Sept. 30, 2015	Russia conducts first official airstrikes in Syria
Jan. 7, 2016	North Korea claims to have successfully conducted hydrogen bomb test

Quotes

2011

William J. Perry, chairman, Congressional Commission on the Strategic Posture of the United States, March 2, 2011, House Hearing: The Status of United States Strategic Forces: "The threat has indeed changed since the Cold War with much less risk of a nuclear exchange, but a greater risk of nuclear terrorism. . . . In terms of leading, we recommend strongly actions to reverse proliferation in North Korea and Iran, and I am sorry to report that nothing useful has happened in either of those cases. They still maintain threats—I would say greater threats—than at the time we wrote our report."

2011

General C. Robert Kehler, USAF, USSTRATCOM Commander, March 2, 2011, House Hearing: The Status of United States Strategic Forces: "Today's national security landscape is marked by protracted conflict, constant change, and enormous complexity. We are facing a significantly different operating environment than those we have experienced in the past—an operating environment that is characterized by extraordinary technology advances; rapid changes in the number and type of actors; and hybrid combinations of strategies, tactics, and weapons. Of the threats we face, weapons of mass destruction clearly represent the greatest threat to the American people, particularly when pursued or possessed by violent extremists or state proliferators."

2012

General James E. Cartwright, USMC, July 25, 2012, Senate Hearing: Examining the Proper Size of the Nuclear Weapons Stockpile to Maintain a Credible U.S. Deterrent: "We are a nation that's been at war for more than 10 years. That war is indicative of the conflicts that we're likely to see

as we move into the twenty-first century, and most any study that I've seen, whether they're from the intelligence community or the academic community, forecasts a level of persistent conflict [of the type that we're seeing] as we look to the future. Whether they characterize it as Arab Spring or counterinsurgency, it is that low-level conflict that is rising from a population that is represented with a mal-distribution of wealth, whether that be mineral wealth, homes, water, dollars."

2015

Representative Susan A. Davis, February 3, 2015, House Hearing: Worldwide Threats: "The world is a dangerous and complicated place, and it seems to be getting more complicated. It is easy to recite a list of challenges. We see Russia seizing the territory of Ukraine and supplying men, weapons, and assistance to the rebels there. In recent months, North Korea conducted a cyberattack against a major movie studio, bringing home to many Americans not just the challenge posed by the regime but the very real ways in which cyber operations can impact all of our lives. While we are engaged in very difficult negotiations with the Iranian regime, they continue to pose challenges in a number of places, such as backing the Houthis in Yemen, Hezbollah in Lebanon, and the Assad regime in Syria. At the same time, both they and we are assisting the Iraqi government in its struggles with the Islamic State of Iraq and the Levant, known as ISIL. ISIL and the Syrian conflict at large provide a seemingly endless list of potential challenges and threats, from waves of refugees to stabilizing neighborhood regimes, to the spread of terrorism, to broader Sunni-Shi'a fighting, to foreign fighters returning home, and the list goes on. Even as all of this continues, al Qaeda core has not entirely been eliminated, and some al Qaeda offshoots continue to plot attacks against us and cause further regional problems. We cannot take our eye off that ball, just as we need to be very cognizant that we still maintain troops in Afghanistan. And that country, while vastly better off than before, is still very fragile. And, similarly, Pakistan, a nuclear-armed state, is currently conducting major and effective operations against some internal extremist threats but hardly all of them, and the future stability of Pakistan is not a settled matter. As we look long term, Russia's role in Europe and Asia is not clear, but their recent actions and their renewed and ongoing military buildup are not encouraging signs. Although we should not assume an adversarial relationship with China, their actions in the South China Sea and their military developments bear watching. In summary, the world has hardly become less complex since the fall of the Iron Curtain. While we may not face the same existential threat posed by the Soviet Union, the threats we face today are still very real and, again, very complex."

Timeline

General C. Robert Kehler, 2011: "I will tell you that my experience here is that, four or so years ago, some parts of our nuclear force, I think we came to the brink of, potentially, a 'hollow force.' I think we found that there were some issues in our nuclear enterprise because we were so committed to the wars that we had in the Middle East and Southwest Asia that we found that, perhaps at some level, we had taken our eye from some of the most critical pieces of what it takes to have perfection as the standard."

Secretary Ellen Tauscher, undersecretary for arms control and international security, 2011: "And modernization . . . is in the same room with the New START Treaty and what the New START Treaty reductions will do. But they are linked tangentially. They are not specifically linked. It is not one for one. We didn't go into the New START Treaty saying that, unless we got this money, we would not go forward with these reductions."

Ambassador Thomas Graham, former special representative to the President (Clinton) on Arms Control, Nonproliferation, and Disarmament, 2012: "With respect to whether there is a connection between disarmament and nonproliferation, I would argue, yes, there is very much a connection. . . . It was very clear during the negotiations in the late 1960s and also when the treaty was made permanent in 1995 that the rest of the world was not giving us nonproliferation for the world as a gift. It was a bargain. It was a basic bargain based on nonproliferation for most of the world, disarmament and peaceful cooperation by the five nuclear weapon states mentioned in the treaty—or permitted by the treaty. That is, the United States, France, Russia, China, and the United Kingdom."

Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy Elaine Bunn, 2014: "The review did examine different nuclear force postures; however, the president determined that retaining all three triad legs will best maintain strategic stability at reasonable costs, while hedging against potential technical problems or vulnerabilities and changes to the geopolitical environment."

Feb. 5, 2011: New START comes into effect

Mar. 19–31, 2011: U.S. participation in military intervention in Libya

May 2, 2011: Osama bin Laden killed in Pakistan

Dec. 15, 2011: U.S. operations in Iraq formally end

Dec. 19, 2011: Death of Kim Jong-il and succession by son, Kim Jong-un, announced on North Korean state television

Sept. 20, 2012: President Obama warns Syrian President Assad that use of biological or chemical weapons in civil war would cross "red line"

Feb. 12, 2013: North Korea's third nuclear test

June 5, 2013: *The Guardian* details classified NSA documents leaked by Edward Snowden

July 3, 2013: President Mohamed Morsi ousted from office by Egyptian army

Aug. 31, 2013: Chemical attack in Damascus, Syria kills 1,400

Sept. 14, 2013: U.S.-Russia framework for elimination of Syrian chemical weapons

Nov. 24, 2013: P5+1 and Iran reach accord limiting nuclear weapons program in exchange for sanctions relief

Feb. 22, 2014: Ukrainian President Yanukovich ousted

Mar. 2014: Alleged Chinese cyberattack penetrates computer network at U.S. Office of Personnel Management (OPM); federal authorities eventually detect threat and block hackers from network

Mar. 18, 2014: Russia annexes Crimea

Secretary of Defense Chuck Hagel, 2014: "Our nuclear deterrent plays a critical role in ensuring U.S. national security, and it's DOD's highest priority mission. No other capability we have is more important. Our nuclear triad deters nuclear attack on the United States and our allies and our partners. It prevents potential adversaries from trying to escalate their way out of failed conventional aggression. And it provides the means for effective response should deterrence fail. **Consistent with President Obama's guidance, our policy is to reduce the role of nuclear weapons in our nation's security strategy and to seek the peace and security of a world without nuclear weapons.** We'll continue to do both, but that doesn't diminish our responsibilities."

National Security Strategy, 2015: "As long as nuclear weapons exist, the United States must invest the resources necessary to maintain—without testing—a safe, secure, and effective nuclear deterrent that preserves strategic stability."

June 29, 2014: ISIL declares establishment of new "caliphate" in occupied regions of Syria and Iraq

July 17, 2014: Malaysia Airlines Flight 17 downed in Ukraine

Aug. 8, 2014: United States begins airstrikes against ISIL militants in Iraq

Sept. 3, 2014: President Obama reaffirms American commitment to defense of Baltic States against Russian aggression

Sept. 19, 2014: Scotland votes "no" in referendum on independence from United Kingdom

Sept. 22, 2014: Coalition forces launch airstrikes against ISIL militants in Syria

Nov. 24, 2014: North Korea hacks Sony Pictures

Dec. 2014: Separate alleged Chinese cyberattack breaches OPM network, steals personal data and fingerprints of millions of federal employees

Dec. 17, 2014: President Obama announces restoration of full relations with Cuba

July 1, 2015: Greek debt crisis escalates as Greece misses deadline for €1.6 billion payment to International Monetary Fund (IMF)

July 14, 2015: P5+1, the EU, and Iran reach comprehensive agreement—the Joint Comprehensive Plan of Action—limiting Iran's nuclear program

Sept. 30, 2015: Russia conducts first official airstrikes in Syria against Syrian rebel groups

Jan. 7, 2016: North Korea claims to have successfully conducted hydrogen bomb test, sparking condemnation and skepticism

About the Authors

Rebecca K. C. Hersman is director of the Project on Nuclear Issues (PONI) and senior adviser for the CSIS International Security Program. Hersman joined CSIS in April 2015 from the Department of Defense (DoD), where she served as deputy assistant secretary of defense for countering weapons of mass destruction (WMD) since 2009. In this capacity, she led DoD policy and strategy to prevent WMD proliferation and use, reduce and eliminate WMD risks, and respond to WMD dangers. Hersman was a key leader on issues ranging from the nuclear security summit to the elimination of Syria's chemical weapons to the global health security agenda. She served as DoD's principal policy advocate on issues pertaining to the Biological Weapons Convention, Chemical Weapons Convention, Nuclear Non-Proliferation Treaty, and Cooperative Threat Reduction Program. Before joining the Defense Department, Hersman was a senior research fellow with the Center for the Study of Weapons of Mass Destruction at the National Defense University from 1998 to 2009. Her primary projects focused on the DoD's role in mitigating the effects of chemical and biological weapons attack, concepts and strategies for eliminating an adversary's WMD programs, as well as proliferation issues facing the United States. She also founded and directed the WMD Center's Program for Emerging Leaders, an initiative designed to shape and support the next generation of leaders from across the U.S. government with interest in countering weapons of mass destruction. Hersman previously held positions as an international affairs fellow at the Council on Foreign Relations, a special assistant to the undersecretary of defense for policy, and a member of the House Armed Services Committee professional staff. She holds an MA in Arab studies from Georgetown University and a BA from Duke University.

Clark Murdock was a senior adviser for the International Security Program at CSIS until he retired in June 2016. Joining CSIS in January 2001, Murdock has completed studies on a wide range of defense and national security issues, including strategic planning, defense policy and governance, and U.S. nuclear weapons strategy and policy. He directed the four-phase study on Defense Department reform, *Beyond Goldwater-Nichols: USG and Defense Reform for a New Strategic Era*, which released reports in 2004, 2005, 2006, and 2008. He has also recently completed studies on methodological approaches to building force-planning constructs and on the nuclear posture

implications of U.S. extended deterrence and assurance. He is the principal author of *Improving the Practice of National Security Strategy: A New Approach for the Post–Cold War World* (CSIS, 2004) and *The Department of Defense and the Nuclear Mission in the 21st Century* (CSIS, 2008). He also coauthored *Revitalizing the U.S. Nuclear Deterrent* (CSIS, 2002) and *Nuclear Weapons in 21st Century U.S. National Security* (American Association for the Advancement of Science, 2008).

Before joining CSIS, Murdock taught military strategy, the national security process, and military innovation at the National War College. Previously, from 1995 to 2000, he served in the Office of the Air Force Chief of Staff, where, as deputy special assistant to the chief for long-range planning, he helped develop a strategic vision for the 2020 Air Force. Then, as deputy director for strategic planning, he institutionalized the Air Force’s strategic planning process and spearheaded the development of new planning products. Before that, he was special assistant to the undersecretary of the Air Force, providing analytic support to the secretary and undersecretary on broad issues of concern, including the future of air power and Air Force missions. Before joining the Air Force, Murdock served in the Department of Defense, where he headed the Policy Planning Staff in the Office of the Undersecretary of Defense for Policy and held responsibility for mid- to long-range analysis and planning on strategy and defense policy issues. Prior to joining the Defense Department, he served for several years on the House Armed Services Committee as a professional staff member and as a senior policy adviser to the Committee’s then chairman, Les Aspin. Murdock’s experience in defense planning and policy also includes service on the National Security Council as senior director for Africa affairs and in multiple roles in the Central Intelligence Agency. Before turning to government service, Murdock taught for 10 years at the State University of New York at Buffalo. He is an honors graduate of Swarthmore College and holds a PhD in political science from the University of Wisconsin at Madison.

Shanelle Van is a research assistant with the Project on Nuclear Issues (PONI) at CSIS. She graduated with a BA in public policy and a minor in economics from Duke University, where she focused on nuclear nonproliferation, missile defense, and U.S. security alliances with East Asian countries.

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1616 Rhode Island Avenue NW
Washington, DC 20036
202 887 0200 | www.csis.org

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