



Assessing the Impact of Low Nuclear Numbers on Strategic Stability

A Regional Analysis

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PASCC
PROJECT ON ADVANCED SYSTEMS AND CONCEPTS
FOR COUNTERING WEAPONS OF MASS DESTRUCTION



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EXECUTIVE SUMMARY

President Barack Obama has outlined a course toward lower numbers of U.S. nuclear weapons. Much attention has been paid to the U.S.-Russian context, where deterrence is believed to be basically stable and conditions ripe for gradually reducing arsenals on both sides. But considerably less attention has been paid to the possible implications of lower nuclear numbers on other regions of the world and the reactions of both adversaries and U.S. allies. If nuclear reductions are to be stabilizing and beneficial to security, reassurance and strengthened nonproliferation efforts in various regions need to accompany nuclear cuts. But the specific problems and remedies across regions vary. This report summarizes the results of a multi-author study conducted with support from the Defense Threat Reduction Agency.¹ It concludes that regions with U.S. allies and formal extended deterrence pledges may pose more vexing problems than those areas of the world without such close allies or commitments. It suggests that specific efforts to engage these allies, particularly in terms of planning for operational and decision-making coordination in advance of any crisis, should be a priority for U.S. policy.

INTRODUCTION

In 2009, President Barack Obama gave a speech in Prague in which he outlined a course toward achieving a world free of nuclear weapons, consistent with U.S. commitments under Article VI of the

¹ The principal investigator thanks the following individuals for their contributions to this project: Wade Huntley, Paul Kapur, James Russell, Nikolai Sokov, Chris Twomey, and David Yost. Jon Wolfsthal and Fred Wehling also provided valuable comments on the papers during a workshop held at the Naval Postgraduate School on December 18, 2012.

Non-Proliferation Treaty. The 2010 Nuclear Posture Review (NPR) reiterated this commitment but emphasized the “very demanding” conditions for getting to zero.”² The NPR noted that a significant portion of the problem stems from existing regional conflicts. Recognizing these current conditions, the NPR stated that the United States has to focus on “maintaining a credible nuclear deterrent and reinforcing regional security architectures with missile defenses and other conventional military capabilities.”³ Notably, recent nuclear developments by North Korea have resulted in requests by South Korea and Japan for consultations with Washington about extended deterrence, seeking a confirmation of U.S. nuclear commitments. Similarly, many NATO countries remain uncomfortable with the notion of removing existing U.S. tactical nuclear weapons from European soil. Thus, while the rhetoric of “zero nuclear weapons” is appealing at a global level, considerably more work needs to be done at the regional level to build the groundwork for such conditions. The NPR stated in regard to this challenge: “But we can—and must—work actively to create those conditions.”⁴

With this directive in mind, an important requirement is learning more about regional nuclear dynamics and developing strategies to deal with them. Unfortunately, in the current literature, there is a troubling gap in regard to the regional implications of moving to low nuclear numbers. Only a few recent studies discuss the problem and none get deeply into original source materials or interviews with experts and officials in regions of concern. One useful scoping study by David J. Trachtenberg, however, lays out some of the key issues, noting: “Strategic force reductions pursued, for example, as part of a bilateral U.S.-Russia effort to diminish reliance on nuclear weapons may have unintended consequences for assurance and extended deterrence.”⁵

Since the end of the Cold War, there have been a number of efforts to revive consideration of minimum deterrence postures and, eventually, move toward the complete elimination of nuclear weapons. These efforts have been joined by some significant figures from the Cold War U.S. nuclear establishment, including Henry Kissinger, William Perry, George Schultz, Fred Ikle, and others. But

² U.S. Department of Defense, “Nuclear Posture Review Article,” April 2010, p. xv.

³ *Ibid.*, p. 7.

⁴ *Ibid.*, p. xv.

⁵ David J. Trachtenberg, “US Extended Deterrence: How Much Strategic Force Is Too Little?” *Strategic Studies Quarterly* 6 (Summer 2012), p. 73.

recent arguments have tended to focus on relatively simplistic lessons about deterrence drawn from the early days of nuclear weapons. Existing studies of the question of low numbers have similarly tended to focus on strategic relations between the United States and Russia only, to the neglect of other nuclear states. A number of experts have asserted, largely using a deductive approach, that lower numbers—even as low as 311 deployed U.S. nuclear weapons⁶—can be achieved relatively painlessly and with few effects on deterrence or strategic stability. As Forsyth, Saltzman, and Schaub argue about the thousands of nuclear weapons deployed during the Cold War: “the actual marginal utility of additional forces was quite small.”⁷ In support of their arguments, these and other advocates of lower numbers point to the work of such early theorists as Bernard Brodie and Arnold Wolfers in the 1940s, who believed nuclear security could be accomplished with very small arsenals because of the tremendous destructive power of nuclear weapons.⁸ However, these older studies were written under the expectation of conditions of nuclear bipolarity and came well before the level of even 1,000 nuclear weapons had been reached.

Later Cold War beliefs on nuclear stability raised doubts about the desirability of moving to low numbers of nuclear weapons. As Lawrence Freedman explains: “The concept of mutual assured destruction did not indicate any value in reductions of offensive weapons. If anything, excessive reductions could be destabilizing if they went past the point where destruction could no longer be assured.”⁹ Today, while U.S.-Russian tensions have decreased dramatically, gradual proliferation has increased the number of nuclear states and the world political structure is characterized by more complex multipolar dynamics.

Given the passage of time, many U.S. allies have become accustomed to extended deterrence at high levels of nuclear armaments, meaning that trade-offs in allotting weapons to the allied mission hardly existed in the past and counterforce scenarios seemed highly credible. Despite this context, the recent literature on low numbers has failed almost entirely to address security perceptions among U.S. allies

⁶ James Wood Forsyth, Jr., B. Chance Saltzman, and Gary Schaub, Jr., “Remembrance of Things Past: The Enduring Value of Nuclear Weapons,” *Strategic Studies Quarterly* 4 (Spring 2010).

⁷ *Ibid.*, p. 82.

⁸ See, for example, Brodie’s and Wolfers’s contributions in Bernard Brodie, ed., *The Absolute Weapon: Atomic Order and World Power* (New York: Harcourt, Brace, and Company, 1946).

⁹ Lawrence Freedman, *The Evolution of Nuclear Strategy* (Palgrave MacMillan: New York, 2003), p. 339.

or views of nuclear weapons in regions that are rife with tensions, where nuclear weapons are seen as *beneficial* to security and even stability. One recent and much-publicized study by the Carnegie Endowment's James Acton, for example, makes the case that prospects for deterrence at low numbers (which he defines as 500 nuclear weapons) are "generally good."¹⁰ But Acton's focus is technical and his logic is largely deductive. Thus, while he might be right about the narrow U.S.-Russian context, his study is of limited value in considering the rest of the world. As for the regional context, Acton assumes that China, India, Pakistan, India, the United Kingdom, France, and North Korea need not to be considered since their arsenals are still well below his 500 limit. He also chooses to make "black box" assumptions about politics in key allied countries. This leads him to predict their automatic acceptance of U.S. extended deterrence pledges at lower levels of weapons and conditions of continued regional stability.

Unfortunately, even with the United States moving to New START numbers of 1,550 deployed weapons, regional allies have already voiced their concerns. As a study led by Bruce Blair in support of lower U.S.-Russian numbers and on the value of de-alerting admits: "The bi-polar nuclear balance analyzed in this study will have to be broadened into a multi-polar balance, the stability of which at very low numbers remains an open question."¹¹ Indeed, another study by the Royal United Services Institute in England makes the case that despite past restraint in nuclear numbers by smaller nuclear states, continued moves downward in the context of deeper reductions by the United States and Russia "cannot be taken for granted."¹²

The issue of how countries allied with the United States might react politically or militarily to U.S. nuclear reductions has not been adequately considered. For this reason, we must view such deductive studies as "best-case" scenarios. Other recent articles have made deductive arguments in the worst-case direction. *Wall Street Journal* columnist Bret Stephens argues that the real choice facing the United

¹⁰ James Acton, *Deterrence During Disarmament: Deep Nuclear Reductions and International Security (Adelphi Series 50, No. 417, March 2011)*, p. 94.

¹¹ Bruce Blair, Victor Esin, Matthew MacKinzie, Valery Yarynich, and Pavel Zolotarev, "One Hundred Nuclear Wars: Stable Deterrence between the United States and Russia at Reduced Nuclear Force Levels Off Alert in the Presence of Limited Missile Defenses," *Science and Global Security* 19 (October 2011), p. 186.

¹² Malcolm Chalmers, Andrew Sommerville, and Andrea Berger, eds., "Small Nuclear Forces: Five Perspectives," *Whitehall Reports*, No. 3-11, December 2011, Royal United Services Institute, London, United Kingdom, p. 9.

States is “between a world of fewer U.S. nuclear weapons and more nuclear states, or the opposite.”¹³ He concludes: “In his idealism, the president is setting the stage for a more nuclearized world.”¹⁴ But this may not be true either. Instead, we need to deal with *actual* conditions in various regions and the specific national perspectives that will affect the speed and success of U.S. and other countries’ nuclear reductions as well as regional proliferation tendencies.

Drawing on a team of senior experts on regional nuclear affairs, this project—supported by funding from the Defense Threat Reduction Agency—sought to dig much deeper into the potential problems of low nuclear numbers region-by-region and to develop possible solutions. It did so not only by focusing on regional politics, alliance stability, and regional security writ large, but also by considering the impact of larger planned reductions than New START levels of 1,550. Clearly, if the United States is considering moving to zero, it is necessary to understand the possible implications of getting to 1,000 weapons and lower.

This project sought to outline possible problems down the road in various regions and possible means of addressing them *before* they become unsolvable obstacles that could lead to future nuclear proliferation, strategic instability, or even conflict. Some of the findings of the project include the following general points:

- **Beliefs** about nuclear weapons in various countries and within various regions matter.
- **Perceptions** about the U.S. commitment to provide security to allies and the continuity and credibility of these pledges may matter more than the specific number of nuclear weapons.
- **The process** of nuclear reductions will matter in how successful or unsuccessful it is, requiring advance notice and close consultations with both allies and adversaries.
- **Reassurance** may be a more important driver of nuclear requirements than deterrence, because it is easier to convince an adversary that you will fire back if attacked than it is to convince an ally that you will come to his defense in a situation where you have not been attacked.

¹³ Bret Stephens, “Obama’s Nuclear Fantasy,” *Wall Street Journal*, February 12, 2013, p. A13.

¹⁴ *Ibid.*

Despite these general observations, the most notable finding of this research is that the implications of U.S. reductions in nuclear numbers are *not* uniform across regions. Instead, due to differences in history, the structure of alliances, the nature of security assurances, and assumptions about nuclear weapons themselves, the problems that might be created are likely to be unique to each part of the world and the possible responses to them will also need to be tailored to the specific characteristics and requirements of each region. This point highlights the importance of what we might call “differentiated” nuclear reassurance and deterrence, where strategies may need to vary across regions and indeed be tailored to individual countries, whether adversary or ally.

This paper provides a summary of some of the main findings from the four regions studied: Europe, the Middle East, South Asia, and East Asia.¹⁵ It shows how some of the most sensitive details of U.S. nuclear reductions may involve allies, not adversaries. It also argues that new mechanisms may need to be put into place to provide non-nuclear forms of reassurance prior to moving forward with further cuts. At the same time, it argues that signaling to potential adversaries and to prospective partners in moving to very low numbers will be critical if such efforts are to be possible. Underlying this research is the premise that nuclear reductions are indeed about improving security, not lower numbers for their own sake. Absent new mechanisms for overcoming problems and for providing that security, countries are surely not going to be willing to reduce or eliminate their arsenals, regardless of what the United States does. The paper concludes with a set of policy recommendations, as well as thoughts on some possible directions for further research.

EUROPE

Europe is often considered to be the most stable region in the world from a nuclear weapons perspective. The legacy of apparently successful Cold War nuclear deterrence, the post-Cold War U.S.-Soviet political rapprochement, the vast drawdown in the U.S. and Russian arsenals, the removal of intermediate-range nuclear forces, and cuts in both British and French nuclear forces all seem to predict relative ease in moving to lower numbers. But certain factors in NATO Europe and in Russia pose possible problems for stability at lower numbers.

¹⁵ As of this writing, the individual studies are under review for publication in an academic journal.

David Yost points out that European countries are used to the protection provided by the U.S. nuclear guarantee.¹⁶ While some countries in Europe no longer advocate maintaining nuclear weapons on the European continent, he says that most countries would be uncomfortable if this nuclear guarantee were withdrawn altogether, or, in some cases, even challenged at all through reductions.¹⁷ This is especially true in new NATO states adjacent to Russia. Many of these countries in Central Europe and the Baltics were once part of the Warsaw Treaty Organization and unwillingly had to station Soviet troops and nuclear weapons on their soil. While Yost admits that “the key factors shaping strategic stability are ultimately political,” he argues that these political perspectives matter. He states: “If reductions to low numbers diminished Allied confidence in the United States as a reliable and responsible security guarantor, this could have profoundly destabilizing effects within Europe....”¹⁸

Yost also points out that factors outside Europe—such as arms build-ups in South Asia or by China—could influence opinions in Europe regarding risk, thus making low numbers seem more destabilizing.¹⁹ One problem is the possible effects of the reduced availability of U.S. nuclear weapons for European missions. Specifically, Yost identifies concerns among Europeans that low numbers will encourage a countervalue (and, specifically, anti-cities) strategy that could make U.S. extended deterrence in Europe less credible.²⁰ That is, if the only U.S. option for retaliation against Russian nuclear use in Europe is the massive slaughter of Russian civilians, Washington might be unwilling to respond—or be seen by Moscow as unwilling to respond—thus making deterrence ineffective.

Overall, Yost concludes: “The challenges in maintaining U.S. and Allied confidence in NATO’s deterrence and defense posture could be much greater in a situation of ‘low numbers’ than with the projected New START levels.”²¹

¹⁶ David S. Yost, “Risks for Strategic Stability in Europe with Low Numbers of U.S. and Russian Nuclear Forces,” final paper for the project on “Assessing the Impact of Low Nuclear Numbers on Strategic Stability: A Regional Analysis,” Naval Postgraduate School, Monterey, California, March 16, 2013.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Ibid.

At the same time, Nikolai Sokov questions Russian willingness to proceed further down the path to lower numbers in the first place. For Russia, nuclear weapons have taken on the role of an “equalizer” since the loss of its Eastern European buffer in 1989 and with the major cuts in its conventional forces since 1991.²² U.S. missile defense is yet another reason why Russia is not likely to support moves to strategic nuclear numbers below 1,000, he says. Russian concerns with China’s rise and the security risks it poses to the sparsely populated Russian Far East are another constraint for Moscow.²³ This creates a two-level game where cooperation in nuclear reductions with the United States may put Russia at a disadvantage in its strategic relations with China.

As Sokov argues:

The conclusion that follows...is somewhat discouraging: the requirement for the multilateralization of the nuclear arms reduction process is likely to acquire an even greater importance than today and might turn into another serious stumbling bloc. It remains an open question whether a new, perhaps modest, round of bilateral reductions remains possible, but even if this is true, in the foreseeable future the ball will be increasingly in the court of the “second-tier” states.²⁴

Finally, Sokov observes that Russia is unlikely to support strict verification deemed by the United States as necessary at low numbers due to self-perceived doubts about its conventional weapons capabilities.²⁵

All of these points suggest that, contrary to popular expectation, Europe may be as much— if not more—of a problem for U.S. efforts to reduce nuclear numbers than other regions of the world.

²² Nikolai Sokov, “Assessment of Russian Attitudes Toward Phased, Deep Reductions of Nuclear Weapons: Strategic and Regional Aspects,” final paper for the project on “Assessing the Impact of Low Nuclear Numbers on Strategic Stability: A Regional Analysis,” Naval Postgraduate School, Monterey, California, February 15, 2013.

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

MIDDLE EAST

Common wisdom regarding the Middle East today is that it is perhaps the region most likely to experience instability and new cases of nuclear proliferation over the next two to three decades, with Iran as the leading candidate. Given hostile Israeli-Iranian relations and pressures on the Gulf states to respond with nuclear weapons programs of their own, it could therefore be assumed that lower U.S. nuclear numbers could lead to further panic among U.S. friends and allies. Yet although the United States fought two major wars against Iraq in 1991 and 2003 and has been involved in hostilities on several other occasions (including in Libya in 2011), nuclear weapons have not been part of the equation, or at least been very much in the background. As project author James Russell argues, the United States has not made explicit extended nuclear deterrence commitments in the region, even as it has provided significant security pledges, sold major armaments, and constructed U.S. bases.²⁶ For these reasons, Russell argues that strategic nuclear forces are not central to the U.S. presence and that cuts in the U.S. arsenal will not demonstrably affect the region:

Instead, the United States has successfully pursued a system of conventional deterrence and defense throughout the region – arming its friends and allies with a range of offensive and defensive conventional weapons over the last quarter century. Evidence presented in this paper suggests that there is no compelling reason either for the United States to abandon and/or modify the defensive system of conventional deterrence and defense by adding nuclear-backed guarantees to the mix.²⁷

While critics point to the threat of a destabilized Middle East if Iran acquires nuclear weapons, Russell argues that Israeli's nuclear deterrent combined with U.S. missile defenses and conventional forces are likely to be able to maintain the balance of forces without requiring the introduction of a U.S. nuclear component.²⁸ Interestingly, in contrast to Europe, Russell notes the considerable ambivalence regarding U.S. nuclear deterrence among its friends in the Middle East. He states: “it is unlikely that

²⁶ James A. Russell, “Strategic Stability and the Middle East: Assessing the Impact of Lower Nuclear Numbers,” final paper for the project on “Assessing the Impact of Low Nuclear Numbers on Strategic Stability: A Regional Analysis,” Naval Postgraduate School, Monterey, California, March 15, 2013.

²⁷ Ibid.

²⁸ Ibid.

the regional states themselves either want or desire U.S. nuclear guarantees and instead prefer to continue current security arrangements that leave American nuclear weapons out of the equation.”²⁹

Russell caveats some of his remarks when considering a possible future involving an Iran with nuclear weapons. Still, he argues that “even this development would prove unlikely to shift the preferred approach of the regional states and its guarantor for conventional deterrence and defense.”³⁰ The reasons relate to history and the nature of the military relationship that has been established between the United States and various ruling families and governments. As he explains: “Advances in anti-missile systems, for example, provide the kinds of defensive capabilities that would help mitigate the threat of an Iranian nuclear missile. Moreover, the continued presence of U.S. forces and the Gulf’s extensive military infrastructure present the Sunni monarchies with a continued political assurance of America’s commitment to their defense.”³¹ He concludes: “All of these factors argue against a direct relationship between the size and composition of America’s nuclear arsenal and the security guarantees extended by the United States to protect its regional interests.”³²

Thus, contrary to common expectations, the Middle East may be relatively indifferent to lower U.S. nuclear numbers.

SOUTH ASIA

South Asia is another region where fears of nuclear stability are widespread, particularly among outside observers. U.S. and Russian reductions, theoretically, could lead to a heightened sense of abandonment in both India and Pakistan, possibly stimulating further vertical proliferation. But Paul Kapur argues that the lack of specific U.S. (or Russian) nuclear or defense commitments in the region mean that South Asia may not likely to be greatly affected by nuclear cuts.³³ Indeed, Kapur argues that since neither Pakistan nor India fear the United States as a nuclear rival, U.S. reductions are likely to

²⁹ Ibid.

³⁰ Ibid.

³¹ Ibid.

³² Ibid.

³³ S. Paul Kapur, “The United States Move to Low Nuclear Numbers: Effects on South Asia,” final paper for the project on “Assessing the Impact of Low Nuclear Numbers on Strategic Stability: A Regional Analysis,” Naval Postgraduate School, Monterey, California, February 28, 2013.

have little impact on the region, particularly compared to the status of either's nuclear forces pitted against the other or, for India, the level of Chinese forces.³⁴

Given the recent U.S.-Indian rapprochement, Kapur sees the possibility of U.S. reductions as possibly weakening some form of informal extended deterrence. As he argues: "U.S. nuclear reductions may...lead Indian leaders to question its willingness to continue informally to provide deterrence and other stabilizing public goods by remaining actively engaged in the Indian and Pacific Ocean regions. India could respond with arms racing and coalition building that could threaten Pakistan and China, lead them to respond in kind, and increase overall regional tension."³⁵

But Washington does have tools to address these potential developments. Kapur argues that "Credible United States assurances to India of its commitment to maintaining an active presence in the Indian and Pacific Ocean regions would be helpful. If the Indians feel confident that the U.S. intends to remain regionally engaged, they will be less likely to view nuclear cuts as the first step in a process of United States retreat, and feel less pressure to adopt potentially destabilizing compensatory strategies."³⁶ He suggests that the recent U.S. "pivot" toward Asia may be helpful in this regard, if the United States follows up on its rhetoric.³⁷

Over the longer term, Kapur believes that only U.S. and Russian moves to very low numbers—sufficient to bring in China—might eventually put pressure on India and Pakistan to join the process of nuclear reductions.³⁸ But Pakistan's view of the centrality of its nuclear arsenal for its survival in the face of an economically and militarily more powerful India make such trends unlikely, unless broader (currently unforeseeable) changes in global security were to occur.

³⁴ Ibid.

³⁵ Ibid.

³⁶ Ibid.

³⁷ Ibid.

³⁸ Ibid.

Thus, the expected outcome is neither positive nor especially negative. But continued nuclear tensions in South Asian and a situation where the United States has relatively limited leverage challenges the viability of a broad international move to very low nuclear numbers.

EAST ASIA

The dominant focus of East Asian countries over the past several decades has been on economic development and trade. But China's rise and North Korea's nuclear and missile programs have created significant unease among U.S. allies in the region, making the prospect of lower nuclear forces less welcome than in other parts of the world. East Asian countries are uncertain regarding Pyongyang's possible motivations and seek to avoid possible coercion from a China that is both economically and militarily far more powerful than it was at any point in the twentieth century. For these reasons, there is likely to be a significant need in this region to reassure U.S. allies of the credibility of its commitments and the continued viability of U.S. extended deterrence.

Wade Huntley's study for this project notes how both South Korea and Japan requested bilateral discussions on extended deterrence after the 2010 NPR was released and have since eagerly engaged U.S. officials on the topic of nuclear security.³⁹ Despite these efforts, two-thirds of South Koreans believe that their country should acquire nuclear weapons,⁴⁰ something the United States does not support and would certainly find destabilizing, as well as counter to its intentions in pursuing further nuclear reductions. Japanese public opinion is less openly supportive of nuclear weapons, but officials have repeatedly voiced concern over the importance of the U.S. nuclear commitment to its security. As Huntley writes: "Reassuring allies of the integrity and commitment of U.S. security guarantees is perhaps the most important factor shaping the strength of those alliance relationships [with South Korea and Japan]."⁴¹

Nevertheless, Huntley's reading of the politics of these two U.S. Asian allies suggests that nuclear weapons themselves may not be the most important part of the equation. As he observes:

³⁹ Wade Huntley, "Assessing the Impact of Low Nuclear Numbers on Strategic Stability: The Cases of Japan and South Korea," paper for the project on "Assessing the Impact of Low Nuclear Numbers on Strategic Stability: A Regional Analysis," Naval Postgraduate School, Monterey, California, December 18, 2012.

⁴⁰ "2/3 of S. Koreans Support Nuclear Armament," *Chosun Ilbo*, English edition, February 21, 2013.

⁴¹ *Ibid.*

Recognizing the centrality of security reassurances in the U.S. alliance relationships with Japan and South Korea fruitfully directs analysis to the many factors...that lie outside the criteria of nuclear deterrence credibility, such as supporting deterrence with conventional forces, straightforward defense (including missile defenses), transparency and communication to minimize misperceptions, socio-political harmony, and promoting a durably improved regional security environment.⁴²

Huntley concludes that possible negative implications of U.S. nuclear reductions can be managed, but that “fulsome and effective consultations” with both allies, renewed reassurance of the U.S. presence in the region, and firm reiteration of its extended deterrence guarantees (both nuclear and non-nuclear) will need to be part of the process.

In regard to China, critics of the Obama administration have suggested that nuclear reductions could lead Beijing into grasping the opportunity for a “race to parity.” But China’s perception of its security may be less influenced by the number of U.S. nuclear weapons than by the impact of Russian and Indian nuclear weapons, as well as the array and posture of the conventional forces that surround it, which include U.S. and allied missile defenses. As Chris Twomey points out, China is comfortable living with low numbers of nuclear weapons and has made a limited nuclear arsenal central to its deterrent posture since the mid-1960s.⁴³ At the same time, he argues that U.S. motivations to reduce nuclear numbers are viewed with suspicion by China, which sees the United States as pursuing compensatory advantages in space, conventional precision weapons, and missile defense. Twomey suggests that if the United States wants to do more to ensure Chinese restraint in response to U.S. nuclear reductions, it might need to consider new signaling policies, such as adopting a pledge on the no-first-use of nuclear weapons,⁴⁴ a long-held Chinese goal. Additionally, U.S. pledges to accept certain limits of scale or type in the area of missile defense—such as perhaps refraining from placing missile defenses in space— or offering reassurance regarding U.S. reactions to Chinese missile defense

⁴² Ibid.

⁴³ Christopher P. Twomey, “Nuclear Stability ad Low Numbers: The Perspective from Beijing,” final paper for the project on “Assessing the Impact of Low Nuclear Numbers on Strategic Stability: A Regional Analysis,” Naval Postgraduate School, Monterey, California, March 26, 2013.

⁴⁴ Ibid.

efforts might help elicit more receptive Chinese nuclear behavior and help convince China that the United States is not seeking to acquire a first-strike advantage (as Chinese critics charge).

But China remains concerned, according to Twomey, about the implications of extended nuclear deterrence pledges in emboldening Japan in its territorial disputes with China, a major issue of concern for Beijing.⁴⁵ Instability related to conflicting territorial claims could also fuel pressures for regional arms racing, which could drag in the United States. As Twomey argues, the Chinese “continue to call for improving those broader political relations as a key determinant of true strategic stability.”⁴⁶

For these reasons, continued dialogue with China on nuclear and other security issues will likely be necessary if Washington ever hopes to achieve the kind of multilateralization of nuclear arms reductions that might make very low numbers feasible. China remains, in many respects, on a different sheet of music. Twomey notes: “[G]iven that Chinese threat perceptions in the strategic arena have sources other than “high numbers” of U.S. weapons, these are not likely to be materially assuaged by unilateral reductions, nor are such reductions likely to entice Chinese reductions themselves.”⁴⁷

U.S. commitments to limit other systems, according to sources cited by Twomey, may be necessary if it seeks to bring China into actual nuclear reductions at some point in the future. He is pessimistic regarding near-term prospects. In the long term, however, he sees the possibility of an eventual opening. He observes: “Chinese views on the role of missile defenses and stability may change in coming years. China has begun to develop its own system, and its military leaders are grasping for strategic concepts to guide its use.”⁴⁸ Again, discussions with the United States could yield new grounds for coordination.

Still, bilateral relations and China’s own perception of its security needs would likely have to change. Accordingly, Twomey concludes on a note of caution, saying: “[I]t seems likely that in the context of

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Ibid.

continued U.S. conventional dominance, reducing Chinese arsenal size is likely to be viewed as destabilizing by Chinese leaders.”⁴⁹

CONCLUSION

The purpose of moving to lower nuclear numbers is ultimately about increasing U.S. and broader international security. For this reason, moving toward such reductions needs to be a carefully thought out process. The United States, as the world’s most powerful country, has both the most to lose if this effort goes wrong and potentially the most to gain if it can be carried out in a manner that puts all countries on a path toward cooperative security, nonproliferation, and reduced nuclear tensions. Unfortunately, as the papers in this collection show, there is still much work to be done in various regions of the world to ensure such success.

Substantive questions need to be addressed regarding how much conventional weapons, for example, can substitute for nuclear weapons. As Trachtenberg notes, despite their accuracy and new ability to defeat military targets, “they cannot substitute for nuclear weapons in all cases.”⁵⁰ But some of these points, in regard to adversaries, may be subjective. Again, as Trachtenberg correctly notes: “Deterrence is an art, not a science.”⁵¹ By the same token, reassurance is also in the eye of the beholder. The credibility of extended deterrence may be questionable (or credible) at both high numbers and low numbers, in part because it relates to the perceptions and intentions of the adversary. It also relates to the strength of the deterrence commitment to one’s ally (credibility) *and* how that commitment is perceived. A strong commitment may be given, but not recognized. All of these points suggest that the psychological component of nuclear deterrence remains critical and could provide either success or failure at lower nuclear numbers.

In terms of policy priorities for consideration by the U.S. government, several recommendations might be proposed based on this research:

⁴⁹ Ibid.

⁵⁰ Trachtenberg, “US Extended Deterrence,” pp. 79.

⁵¹ Ibid., p. 85.

- Consultations with allies are critical and will need to involve adjustments in security relations to include stronger elements of reassurance through joint training and discussion of crisis management, including nuclear crises.
- Discussions with Russia as the main potential partner in ensuring cooperative movement below 1,000 weapons are needed to address Russian concerns (if possible) and to begin engagement of China, which is a major concern of both Washington and Moscow.
- U.S. adoption of new reassurance mechanisms might be useful to counter Chinese claims that lower numbers are being pursued in order to increase U.S. unilateral advantages. These mechanisms might include U.S. ratification of the Comprehensive Test Ban Treaty, a no-first-use pledge regarding nuclear weapons, and efforts to engage China in cooperative monitoring and verification of lower nuclear numbers to enhance crisis prevention and, if one occurs, stability.
- Regional security initiatives involving the permanent five members of the UN Security Council and other relevant parties might be useful to address shared security concerns in three main regions of concern: the Middle East, South Asia, and East Asia. These discussions could focus on confidence-building, threat reduction, and mutual non-aggression pacts, while beginning to address underlying security problems whose solution are likely to be prerequisites to moving lower nuclear numbers.

This project on the regional implications of U.S. moves to lower nuclear numbers has been but a first step into a field that requires more research. With this in mind, it is worth setting out some possibly fruitful directions for follow-on studies. First, more work is needed on regions outside the focus of this study. While the main emphasis of this research was on regions with either close U.S. allies or with other nuclear weapon states, African and Latin American countries could conceivably have different reactions to changes in the nuclear balance. Studies on these regions would be useful to supplement the findings of this project. Second, more work is needed on how to construct the new allied and other international reassurance mechanisms called for by this research. None of this will be easy. Governments will need to get used to closer consultations on nuclear matters and with military-to-military dialogues on crisis prevention, possibly even including cooperative U.S.-Russian and U.S.-Chinese nuclear exercises.

Third, the area of verification—particularly cooperative verification—is an under-studied issue. While a variety of new technologies can now be applied to this problem, sharing sensitive nuclear information is likely to be difficult and may require new consultative bodies and unique technical protocols. Recent experience with the Comprehensive Test Ban Organization in Vienna or in the International Atomic Energy Agency may provide some useful guidelines. But verifying low numbers is likely to pose unique challenges and require more intrusive forms of verification and cooperation, including in early warning, typically a highly sensitive field.

Fourth, additional research will be needed on the viability of deterrence with modern conventional weapons. In the past, conventional deterrence proved relatively ineffective, at least judging by their failure to prevent World Wars I and II. Modern, precision-guided munitions offer new potential to target leaderships and other extremely highly valued personnel, infrastructure, and military assets. But can they prevent hostile actors from beginning hostilities? This point remains unclear, as does the breadth of what conventional deterrence might accomplish. Signaling matters, and such efforts have not yet been made in the advance of any specific conflict with a nuclear power or one threatening vital interests of U.S. allies. Further specific research might help clarify these points.

Fifth, and finally, more research will be required on how to deal with outliers in regard to nuclear reductions. At lower nuclear numbers, relative disparities between nuclear arsenals may be viewed as destabilizing, particularly given the potential for breakout. Moreover, if certain countries fail to join the process, collective persuasion and/or sanctions may be necessary, if the process of reductions is to be able to continue at all. These are challenges that the current nonproliferation regime faces, but they are likely to become even more important once major powers lose the still substantial nuclear hedge that they currently possess.

Overall, these various cautions and concerns need not derail movement toward lower nuclear numbers. The important message from this research is that getting the details right and tailoring them to the specific security requirements of individual regions is going to be a necessary part of the success of any such process. Again, the risks of failure—even in an era when the U.S.-Russian relationship is much more amicable—are substantial. Progress will likely be slow. But doing the political and military

spadework to develop new security and reassurance mechanisms should provide spillover benefits in terms of helping to foster general conditions for improved nuclear communication, stability, and, conflict prevention.