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## Coorespondence, The Short Shadow of U.S. Primacy?

Lantis, Jeffrey S.; Sauer, Tom; Wirtz, James J.; Lieber, Keir  
A.; Press, Daryl G.

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# Correspondence

## The Short Shadow of U.S. Primacy?

Jeffrey S. Lantis  
Tom Sauer  
James J. Wirtz  
Keir A. Lieber and  
Daryl G. Press

*To the Editors (Jeffrey S. Lantis writes):*

Keir Lieber and Daryl Press's recent article presents a compelling case for the rise of U.S. nuclear primacy in the twenty-first century. The authors, however, fail to address what they maintain is a central question in international relations scholarship: "Does nuclear primacy grant the superior side real coercive leverage in political disputes?"<sup>1</sup> Their passing discussion of the theme does little justice to the merit of the question, and as a result the article seems incomplete. In fact, the United States already enjoys primacy in the vast majority of its relations with other countries, but recent events suggest that this preponderance of power has not led to coercive leverage.

Since the terrorist attacks of September 11, 2001, nuclear primacy may cast a very short shadow on global politics. Evidence for this argument can be found in great power relations (characterized by Lieber and Press as near primacy) and in U.S. dealings with other states (true primacy). For example, the United States has gained little leverage against China and Russia even though it sits on the "cusp of nuclear primacy" today (p. 8). A 2006 Pentagon report warns of changes in China's conventional strategy designed to shape its military into a "more modern force capable of fighting short-duration, high-intensity conflicts against high-tech adversaries."<sup>2</sup> Meanwhile, Russia is pursuing a war on insurgents in its periphery and has even used its energy supplies as a weapon against its neighbors. The U.S. inability both to slow China's military modernization and its aggressive rhetoric toward Taiwan and to constrain Vladimir Putin's increasingly authoritarian turn in Russia, as well as the United States' failure to bring

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1. Keir A. Lieber and Daryl G. Press, "The End of MAD? The Nuclear Dimension of U.S. Primacy," *International Security*, Vol. 30, No. 4 (Spring 2006), p. 11. Additional references appear parenthetically in the text. See also Keir A. Lieber and Daryl G. Press, "The Rise of U.S. Nuclear Primacy," *Foreign Affairs*, Vol. 85, No. 2 (March/April 2006), pp. 42-54.
  2. U.S. Department of Defense, "Annual Report to Congress: Military Power of the People's Republic of China," May 23, 2006, <http://www.defenselink.mil/pubs/china.html>.

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China and Russia on board to halt the pace of nuclear proliferation in Iran, are but a few examples of the limits of near primacy today.

There are no clearer cases of the short shadow of primacy than in U.S. dealings with “axis of evil” nations since 2001. The United States enjoys true primacy in relation to these countries, yet in a real sense seems unable to prevent them from developing weapons of mass destruction. The Iraq case illustrates this dilemma. Even though the Iraqi regime abandoned its drive for weapons of mass destruction in the decade after the 1991 Persian Gulf War, Saddam Hussein sought to maintain the illusion that it had a viable program. In the buildup to the 2003 Iraq war, no action by the United States or its allies seemed to effectively convey the message that the coalition would strike to prevent Iraqi rearmament. According to a report by the U.S. Joint Forces Command that was declassified in February 2006, Hussein remained “very confident” in the months before the war “that the United States would not dare attack Iraq, and that if it did, it would be defeated.”<sup>3</sup> Nuclear primacy granted essentially no leverage in this case, and the United States is still paying the price for this breakdown in coercive diplomacy.

Iran and North Korea are moving forward with their nuclear programs in defiance of international condemnation and threats.<sup>4</sup> A secret Pentagon report leaked in April 2006 even suggested that U.S. military planners were considering the use of tactical nuclear weapons to destroy Iranian facilities.<sup>5</sup> These and other efforts to signal the Iranian regime, however, have fallen on deaf ears. President Mahmoud Ahmadinejad has celebrated scientific achievements in enrichment, boasted of the potential of Iran’s nuclear programs, rejected international pressure to change course, and threatened to withdraw from the nonproliferation regime altogether. In addition, after years of limited progress in the six-party talks, the George W. Bush administration recently switched gears to focus on a peace treaty for the Korean Peninsula as a step toward greater security. If U.S. primacy cannot prevent rival nations from taking the ultimate decision to develop nuclear arsenals of their own, then scholars must carefully reassess its utility for international security in the twenty-first century.

Exploring the limits of primacy requires a more detailed focus on the process by which strategic decisions are formulated. If constructivist security studies have made one significant contribution to the field in the past decade, it is in centering the dialogue on the influence of key actors, ideas, and institutions. By ignoring ideational variables in their article, Lieber and Press skirt a fundamental truth: elites are instrumental in defining security policy goals as well as the means to achieve them.<sup>6</sup> They do not pro-

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3. Kevin M. Woods, with Michael R. Pease, Mark E. Stout, Williamson Murray, and James G. Lacey, *Iraqi Perspectives Project: A View of Operation Iraqi Freedom from Saddam’s Senior Leadership* (Norfolk, Va.: U.S. Joint Forces Command, 2006), <http://www.jfcom.mil/newslink/storyarchive/2006/ipp.pdf>; and Kevin Woods, James Lacey, and Williamson Murray, “Saddam’s Delusions: The View from the Inside,” *Foreign Affairs*, Vol. 85, No. 3 (May/June 2006), p. 3.

4. Steven R. Weisman, “Cheney Warns of ‘Consequences’ for Iran on Nuclear Issue,” *New York Times*, March 8, 2006.

5. Seymour Hersh, “The Iran Plans,” *New Yorker*, April 17, 2006, pp. 30–37.

6. The authors leave little room in their analysis for the role of individual leaders and intentionality. Statements such as, “A preemptive strike on an alerted Russian arsenal would still likely fail, but a surprise attack at peacetime alert levels would have a reasonable chance of success,” are particular disconcerting. Lieber and Press, “The End of MAD?” p. 8. Key works that address ideational variables in international security include Alexander Wendt, “Constructing International Politics,” *International Security*, Vol. 20, No. 1 (Summer 1995), pp. 73–74; Alexander

vide sufficient evidence that past U.S. leaders have actually sought nuclear primacy, nor do they adequately characterize decisions taken by any governments as inherently subjective responses to threat perceptions.<sup>7</sup>

The achievement of U.S. nuclear primacy is a function of complex circumstances, but recent systematic and purposeful Bush administration decisions are an important part of the story. The 2001 Nuclear Posture Review made clear the administration's willingness to launch preemptive strikes against potentially hostile states. This was followed by decisions to abrogate the 1972 Antiballistic Missile Treaty with Russia and begin construction of a national missile defense system. The administration recently unveiled a new program to deploy an antimissile defense network in Europe, ostensibly to thwart the challenge from Iran or other nations. Research and development initiatives for mininukes and bunker busters, as well as revitalized programs for nuclear weapons research and civilian energy production, confirm the new direction in U.S. nuclear strategy.<sup>8</sup>

The United States, however, has enjoyed very few benefits of nuclear primacy in relation to lesser powers in the twenty-first century, and it has failed in its bid to prevent several states from developing nuclear weapons. Why has coercive diplomacy failed? Why does the shadow of U.S. nuclear primacy appear so short in the twenty-first century? One avenue for exploration of these important questions lies in strategic cultural studies of the concepts of deterrence, coercion, and dissuasion.<sup>9</sup> Answers may also emerge from contemporary scholarship on identity and strategic choice.<sup>10</sup> Bruce

Wendt, "Collective Identity Formation and the International State System," *American Political Science Review*, Vol. 88, No. 2 (June 1994), pp. 384–396; Martha Finnemore and Kathryn Sikkink, "International Norm Dynamics and Political Change," *International Organization*, Vol. 52, No. 4 (October 1998), pp. 887–917; Jeffrey Checkel, "Norms, Institutions, and National Identity in Contemporary Europe," Arena Working Paper, No. 98/16 (Oslo: Advanced Research on the Europeanisation of the Nation-State, University of Oslo, 1998); Ronald Jepperson, Alexander Wendt, and Peter J. Katzenstein, "Norms, Identity, and Culture in National Security," in Katzenstein, ed., *The Culture of National Security: Norms and Identity in World Politics* (New York: Columbia University Press, 1996), pp. 33–75; Nina Tannenwald, "Stigmatizing the Bomb: Origins of the Nuclear Taboo," *International Security*, Vol. 29, No. 4 (Spring 2005), pp. 5–49; and Nina Tannenwald, "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-use," *International Organization*, Vol. 53, No. 3 (July 1999), pp. 433–468.

7. Compelling research at the intersection of political psychology and proliferation studies argues that "leaders' national identity conceptions" are the most powerful predictors of proliferation decisions around the world. Jacques E.C. Hymans, *The Psychology of Nuclear Proliferation: Identity, Emotions, and Foreign Policy* (Cambridge: Cambridge University Press, 2006), p. 19. See also Jane Mansbridge and Aldon Morris, eds., *Oppositional Consciousness: The Subjective Roots of Social Protest* (Chicago: University of Chicago Press, 2001).

8. The 2006 National Security Strategy identifies proliferation as the "greatest threat to our national security" and asserts that the United States will act preemptively when necessary to stop it." George W. Bush, *National Security Strategy of the United States of America, 2006* (Washington, D.C.: White House, 2006), pp. 19–20.

9. Some of the most influential works in this area for security studies are Katzenstein, *The Culture of National Security*; Alastair Iain Johnston, "Thinking about Strategic Culture," *International Security*, Vol. 19, No. 4 (Spring 1995), pp. 32–64; Stephen Peter Rosen, "Military Effectiveness: Why Society Matters," *International Security*, Vol. 19, No. 4 (Spring 1995), pp. 5–31; Elizabeth Kier, "Culture and Military Doctrine: France between the Wars," *International Security*, Vol. 19, No. 4 (Spring 1995), pp. 65–93; and Jeffrey W. Legro, "Culture and Preferences in the International Cooperation Two-Step," *American Political Science Review*, Vol. 90, No. 1 (March 1996), pp. 118–137.

10. Alexander L. George, "The Need for Influence Theory and Actor-Specific Behavioral Models

Jentleson and Christopher Whytock's excellent investigation of coercive diplomacy in Libya is one such study that recognizes strategies as heavily dependent on context.<sup>11</sup>

In summary, Lieber and Press's treatment of nuclear primacy remains surprisingly incomplete. Only at the end of their piece do they begin the hard task of evaluating the political effectiveness of nuclear primacy. Primacy and hegemony may be complementary, they argue, but a combination of primacy with "a more restrained foreign policy" posture may lead to greater instability (p. 39). Unfortunately, these brief policy references raise more questions than they answer, and the article represents only the beginning of a progressive scholarly dialogue on the implications of nuclear primacy in the twenty-first century.

—Jeffrey S. Lantis  
Wooster, Ohio

*To the Editors (Tom Sauer writes):*

The U.S. nuclear weapons arsenal is, as Keir Lieber and Daryl Press's recent article notes, the most powerful in the world, a situation that is unlikely to change in the coming years.<sup>1</sup> Despite this gross imbalance, I argue that neither Russia nor China is likely to undertake significant countermeasures to help close this gap, for three reasons. First, neither country feels directly threatened by U.S. nuclear primacy. Second, leaders in Moscow and Beijing do not believe that the United States will use nuclear weapons again. Third, Russia and China need only a minimum deterrent capability. In the conclusion of this letter, I suggest an alternative explanation for the United States' pursuit of nuclear primacy following the end of the Cold War.

NO U.S. INTENTION TO ATTACK GREAT POWERS

Russia and China do not fear a U.S. nuclear strike for the same reason they have chosen not to balance against the United States: they do not regard it as an expansionist state, especially vis-à-vis other great powers. Even the neorealist John Mearsheimer argues that the United States is essentially a status quo power that poses little danger to the survival or sovereignty of other great powers.<sup>2</sup> Although in an earlier article Lieber and Gerard Alexander single out China as the most likely candidate for balancing against the United States, they also assert that "China's defense buildup is not new, nor is it as ambitious and assertive as it should be if the United States posed a direct threat that re-

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of Adversaries," in Barry R. Schneider and Jerrold M. Post, eds., *Know Thy Enemy: Profiles of Adversary Leaders and Their Strategic Cultures*, 2d. ed. (Maxwell Air Force Base, Ala.: U.S. Air Force Counterproliferation Center, July 2003), pp. 271–310.

11. Bruce W. Jentleson and Christopher A. Whytock, "Who 'Won' Libya? The Force-Diplomacy Debate and Its Implications for Theory and Policy," *International Security*, Vol. 30, No. 3 (Winter 2005/06), pp. 47–86.

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1. Keir A. Lieber and Daryl G. Press, "The End of MAD? The Nuclear Dimension of U.S. Primacy," *International Security*, Vol. 30, No. 4 (Spring 2006), pp. 7–44. Further references to this article appear parenthetically in the text.

2. John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: W.W. Norton, 2001).

quired internal balancing."<sup>3</sup> Why? Because U.S. grand strategy "is not [perceived as] broadly threatening."<sup>4</sup>

#### THE NUCLEAR TABOO

More than sixty years after Hiroshima and Nagasaki, the threat of using nuclear weapons sounds hollow. It is highly unlikely that the United States or, for that matter, any other state will use nuclear weapons in a conflict. Simply put, no military rationale exists for using nuclear weapons; this is especially true for the United States, which also maintains the world's largest conventional weapons arsenal. The use of such weapons would obliterate the nuclear taboo, the norm that holds that using weapons with such sheer destructive capacity is immoral.<sup>5</sup> Nuclear weapons do not distinguish between civilians and soldiers, which is hard to square with the ethical rules of modern warfare. Given the nonuse of nuclear weapons over the last several decades, including during the Vietnam War, the taboo against their use has only strengthened. And as the concept of nuclear deterrence becomes less credible, nuclear weapons become more irrelevant, at least with respect to state actors.

Lieber and Press acknowledge the existence of the nuclear taboo, but they argue that it does not influence Russian and Chinese thinking and behavior. I find no reason, however, why the taboo would not apply to both countries. Does the current generation of Russian and Chinese decisionmakers have such low moral standards that they are prepared to slaughter tens or hundreds of thousands of foreigners in a single strike, and at the same time risk a military response that could kill even more of their own citizens?

In addition, Lieber and Press question the strength of the nuclear taboo more broadly, pointing to comments by former Secretary of Defense Robert McNamara, who is generally considered a strong critic of the use of nuclear weapons.<sup>6</sup> The authors cite recently declassified documents to suggest that McNamara would have supported the use of nuclear weapons against China in the event of a Chinese attack against India in 1963, as opposed to the introduction of a large number of U.S. troops. This does not mean, however, that McNamara actively advocated the use of nuclear weapons. Rather, he was assessing two different military options. In January of the same year, McNamara stated before a congressional hearing, "Nuclear weapons, even in the lower kiloton range, are extremely destructive devices. . . . Furthermore, while it does not necessarily follow that the use of tactical nuclear weapons must inevitably escalate into global nuclear war, it does present a very definite threshold, beyond which we enter a vast unknown."<sup>7</sup> That McNamara never recommended the use of nuclear weapons later, during the Vietnam War, supports his skepticism of their usefulness.

More fundamentally, the nuclear taboo has grown stronger over time. In the spring of 2006, the White House questioned the idea of the Joint Chiefs of Staff not to consider the use of nuclear weapons in the event of a U.S. attack against Iranian nuclear weap-

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3. Keir A. Lieber and Gerard Alexander, "Waiting for Balancing: Why the World Is Not Pushing Back," *International Security*, Vol. 30, No. 1 (Summer 2005), p. 122.

4. *Ibid.*, p. 133.

5. Nina Tannenwald, "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-use," *International Organization*, Vol. 53, No. 3 (July 1999), pp. 433–468.

6. *Ibid.*, pp. 451–466.

7. Quoted in Michael Mandelbaum, *The Nuclear Question: The United States and Nuclear Weapons, 1946–1976* (New York: Cambridge University Press, 1979), p. 103.

ons facilities. Indeed, rumors circulated that high-level military officers even threatened to resign if such an option were contemplated.<sup>8</sup> A similar exchange occurred during preparations for the 1991 Persian Gulf War. When Secretary of Defense Dick Cheney asked Chairman of the Joint Chiefs of Staff Colin Powell about the United States' nuclear options, Powell refused even to consider the idea.<sup>9</sup> When Vice President Dan Quayle was asked at a press conference in early February 1991 (i.e., during the Persian Gulf War) whether President George H.W. Bush had considered introducing nuclear weapons, he answered: "I just can't imagine President Bush making the decision to use chemical or nuclear weapons under any circumstances."<sup>10</sup>

Finally, Lieber and Press rightly argue that a nuclear taboo does not prevent the use of nuclear weapons. The point, however, is that the taboo makes such use considerably less likely, reduces the credibility of nuclear deterrence, and relegates nuclear primacy to irrelevancy.

#### MINIMUM DETERRENCE

In 1974 Secretary of State Henry Kissinger questioned the principle of nuclear superiority: "What in the name of God is strategic superiority? What is the significance of it, politically, militarily, operationally, at these levels of numbers? What do you do with it?"<sup>11</sup> Even in the extremely unlikely event the United States uses nuclear weapons against Russia or China, whether either country can retaliate with one, five, ten, or a hundred nuclear weapons does not really matter for deterrence calculations. As advocates of minimum deterrence (like myself) argue, one accurate and invulnerable nuclear weapon is sufficient as a second-strike force. I can hardly imagine an attack against vital U.S. interests in the foreseeable future destructive enough to risk an assured nuclear response and the annihilation of one major U.S. city. Thus, the size of the nuclear arsenal does not matter, unless one believes that the United States can engage in a prolonged nuclear war and emerge victorious.<sup>12</sup>

Because a minimum deterrent is sufficient, Russia and China need not worry greatly about the exact nature of the United States' nuclear posture. In practice, China can apparently live with the tremendous nuclear imbalance that has existed since the mid-1960s. It currently possesses 80–130 nuclear weapons, of which only 30 could be used on an intercontinental scale.<sup>13</sup> Because of a lack of resources, Russia may have to pursue a similar course over time. In addition, some U.S. experts have argued that the security of the United States would be enhanced with a much smaller nuclear arsenal.<sup>14</sup> A deci-

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8. Seymour Hersh, "The Iran Plans," *New Yorker*, April 17, 2006, pp. 30–37.

9. Colin Powell, *My American Journey* (New York: Random House, 1995), pp. 452, 486.

10. Quayle quickly corrected himself by saying that no option would be ruled out. Quoted in William M. Arkin, "Calculated Ambiguity: Nuclear Weapons in the Gulf War," *Washington Quarterly*, Vol. 19, No. 4 (Autumn 1996), p. 6.

11. Quoted in George Quester, "Cultural Barriers to an Acceptance of Deterrence," in Roman Kolkowicz, ed., *The Logic of Nuclear Terror* (Boston: Allen and Unwin, 1987), p. 87.

12. For the distinction between minimum and maximum deterrence, see Tom Sauer, *Nuclear Inertia: U.S. Nuclear Weapons Policy after the Cold War* (London: I.B. Tauris, 2005), especially chap. 1.

13. Jeffrey Lewis, "The Ambiguous Arsenal," *Bulletin of the Atomic Scientists*, Vol. 61, No. 3 (May/June 2005), pp. 52–59.

14. Glenn Buchan, *U.S. Military Strategy for the Post-Cold War Era* (Santa Monica, Calif.: RAND, 1994); and Gen. William Burns, ed., *The Future of U.S. Nuclear Weapons Policy* (Washington, D.C.: U.S. National Academy of Sciences, Committee on International Security and Arms Control, 1997).

sion to shrink the U.S. arsenal would also strengthen the nuclear nonproliferation regime at a time when many observers believe that it is on the verge of collapse.<sup>15</sup>

#### BUREAUCRATIC POLITICS AND THE LACK OF POLITICAL LEADERSHIP

Lieber and Press write, “[The] steady improvement in the U.S. nuclear arsenal is entirely consistent with America’s across-the-board effort to maintain and expand its military primacy” (p. 31). In other words, political decisionmakers in Washington have deliberately chosen to follow the road to nuclear primacy, thus making it a rational choice. This claim, however, is highly debatable. If the major objective is nuclear primacy, why is the United States helping Russia safeguard its nuclear weapons complex? And even more surprising, why did the George W. Bush administration propose to collaborate with Russia on missile defense?

There is a simple, more convincing explanation for the United States’ pursuit of continued nuclear primacy—namely, bureaucratic politics and the lack of political leadership, which also explain the irrational overkill capacity developed by both superpowers during the Cold War.<sup>16</sup> The U.S. and Soviet nuclear weapons establishments were massive during this period, employing hundreds of thousands of workers. After the Cold War, U.S. nuclear weapons laboratories (Lawrence Livermore, Los Alamos, and Sandia) that are part of the Department of Energy and the Strategic Air Command under the Department of Defense strove to remain relevant. Although downsizing did occur, the U.S. nuclear weapons community did more than just survive. By the end of the 1990s, the annual nuclear weapons budget in absolute terms was still more than \$30 billion. The yearly budget of the nuclear weapons laboratories grew from \$4 billion to \$6.4 billion in the second half of the 1990s. Paradoxically, this figure was higher than during the Cold War, due to the Stockpile Stewardship Program that had been agreed with the nuclear weapons establishment in exchange for its endorsement of the Comprehensive Test Ban Treaty in 1996.

The 1993–94 Nuclear Posture Review offers the clearest indication of bureaucratic resistance and the lack of political leadership on the nuclear weapons issue. At that time, U.S. Secretary of Defense Les Aspin clearly intended to adapt U.S. nuclear weapons policy to the changed circumstances produced by the end of the Cold War and to drastically cut the U.S. arsenal. Midlevel officials in the Department of Defense, however, failed to provide Aspin with proposals on how to accomplish these objectives. After Aspin resigned in December 1993, his equally determined assistant secretary of defense for international security policy, Ashton Carter, tried to push through Aspin’s nuclear agenda but failed as well. Midlevel military and civilian officials in the Department of Defense, supported by members of Congress, succeeded in resisting any change in U.S. nuclear weapons policy. Responsibility for their success—and for U.S. nuclear primacy

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15. Harald Müller, “Nichtverbreitungsvertrag: Regime kaput” [The Nonproliferation Treaty: A regime destroyed], *International Politik*, Vol. 61, No. 8 (August 2006), pp. 16–23; and Tom Sauer, “The Nuclear Nonproliferation Regime in Crisis,” *Peace Review*, Vol. 18, No. 3 (Fall 2006), pp. 333–340.

16. Steven E. Miller, “Politics over Promise: Domestic Impediments to Arms Control,” *International Security*, Vol. 8, No. 4 (Spring 1984), pp. 67–90; Desmond Ball, *Politics and Force Levels: The Strategic Missile Program of the Kennedy Administration* (Berkeley: University of California Press, 1980); Janne Nolan, *Guardians of the Arsenal: The Politics of Nuclear Strategy* (New York: Basic Books, 1989); and Terry Terriff, *The Nixon Administration and the Making of U.S. Nuclear Strategy* (Ithaca, N.Y.: Cornell University Press, 1995).

today—rests with William Perry, Aspin's successor, and his deputy, John Deutch, as well as with President Bill Clinton and his National Security Council staff. Their unwillingness to support Aspin's and Carter's efforts was, in the words of former Secretary of Defense McNamara, a "real disgrace."<sup>17</sup> That U.S. nuclear primacy results from bureaucratic politics and not from a rational decisionmaking process is an additional reason for Russian and Chinese political policymakers not to lose too much sleep over U.S. nuclear primacy.

—Tom Sauer  
Antwerp, Belgium

*To the Editors (James J. Wirtz writes):*

Crisis stability is an issue that has received little attention since the end of the Cold War. The reduction in the number, capability, and alert levels of U.S. and Russian nuclear forces might call into question one side or the other's secure second-strike capability, although generally benign U.S.-Russian relations reduce the salience of these "hypothetical" or "technical" concerns about the nuclear balance.<sup>1</sup> The possibility that Washington or Moscow has a fleeting opportunity to disarm the other side by being first to use nuclear weapons might become apparent during a crisis as preventive motivations for war peak. Nevertheless, worries about crisis instability based on increasingly far-fetched scenarios lack the traction needed to stop the U.S. nuclear drawdown or to restart the U.S. nuclear force modernization programs that were canceled by the George H.W. Bush administration in the early 1990s. In just six short years, when the Moscow Treaty on Strategic Offensive Reductions takes effect, the United States and Russia will have reduced the size of their strategic nuclear arsenals by approximately 16,000 deployed warheads, or about 80 percent of the force they fielded in the late 1980s.

Keir Lieber and Daryl Press should be commended for raising issues of crisis stability that are inherent in the reduction of U.S. and Russian strategic nuclear forces.<sup>2</sup> As they note in their article, theorists credit the situation of mutual assured destruction, which is based on mutual second-strike capabilities, not nuclear weapons per se, with helping to keep the Cold War cold.<sup>3</sup> The effort to preserve a secure second-strike capability at increasingly lower force levels, however, is no small task, especially as governments keep a shrinking percentage of their nuclear forces on "day alert" to save on operations and maintenance costs. Mobile missiles kept in garrison or nuclear weapons

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17. Quoted in Jonathan Schell, "The Gift of Time," *Nation*, February 2, 1998, p. 26. See also Janne Nolan, *An Elusive Consensus: Nuclear Weapons and American Security after the Cold War* (Washington, D.C.: Brookings, 1999); and Sauer, *Nuclear Inertia*, especially chaps. 9–11.

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1. George Quester, "The Continuing Debate on Minimal Deterrence," in T.V. Paul, Richard Harknett, and James J. Wirtz, eds., *The Absolute Weapon Revisited: Nuclear Arms and the Emerging International Order* (Ann Arbor: University of Michigan Press, 1998), pp. 167–188.

2. Keir A. Lieber and Daryl G. Press, "The End of MAD? The Nuclear Dimension of U.S. Primacy," *International Security*, Vol. 30, No. 4 (Spring 2006), pp. 7–44. Additional references appear in parentheses in the text.

3. Robert Jervis, *The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon* (Ithaca, N.Y.: Cornell University Press, 1989).

stored in a few heavily guarded depots for safekeeping against terrorism or theft are more vulnerable to strategic attack than are dispersed forces. Almost by definition, intercontinental ballistic missiles “de-targeted” to prevent catastrophic accidents might not be able to be launched on warning or launched while under attack, leaving them potentially vulnerable to destruction in the event of a bolt-out-of-the-blue strike. Nevertheless, Lieber and Press’s suggestion that the United States possesses a splendid first-strike capability against Russia offers a scenario that is not as risk free or cut and dried as they imply. Below I raise several reservations about their findings.

Lieber and Press’s bolt-out-of-the-blue scenario is within the realm of possibility, but it is not realistic. Surprise attacks sometimes occur and generally succeed, so there is always a chance that a nuclear-armed state could be caught napping.<sup>4</sup> Government officials, military officers, and the general public have an uncanny ability to ignore what in hindsight are clear indicators of trouble.<sup>5</sup> But a bolt-out-of-the-blue attack is unlikely in the absence of significant political motivation for undertaking such a risky act. If a crisis increases the political salience of preemption, it is likely to generate pressures on both sides to alert their forces, reducing the technical opportunity to launch a splendid first strike. Modest, nonprovocative actions could greatly increase a state’s secure second-strike capability; the availability of partial-alert measures such as moving a few mobile missiles from garrison or putting submarines out to sea increases the probability that some action will be taken in response to a warning. When the technical possibility of launching a bolt-out-of-the-blue attack exists, policymakers will lack the political motivation for rolling the dice. And during a crisis when preemption appears politically tempting, the likelihood that both sides would alert their forces eliminates the technical opportunity to disarm the opponent. It is difficult to escape the conclusion that the scenario identified by Lieber and Press might occur, but that the problem they identify is not especially significant.

This observation still leaves open the possibility that U.S. policymakers might order an attack to disarm Russians simply because it appears as if they can. A bolt-out-of-the-blue attack, however, would remain unlikely because even a remote possibility of retaliation is likely to deter all but the most risk-acceptant individuals. U.S. policymakers are not going to launch a preventive war because they are enticed by the fact that a deteriorating Russian day-alert posture creates a higher probability of launching a splendid first strike. Instead, they will more likely be deterred by the lingering probability that a few (dozen, score, hundred?) nuclear weapons might land on major U.S. urban-industrial centers. Deterrence works not only because the United States military can kill some Russians, but also because of the fear that in a nuclear war, Russia might de-

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4. Roberta Wohlstetter’s classic study of intelligence failure, *Peal Harbor: Warning and Decision* (Stanford, Calif.: Stanford University Press, 1962), has for decades been considered a none-too-veiled warning about the dangers of relying on tactical or strategic intelligence to guarantee the survivability of U.S. nuclear forces. See Warner R. Schilling, “Surprise Attack, Death, and War,” *Journal of Conflict Resolution*, Vol. 9, No. 3 (September 1965), pp. 385–390.

5. The performance of Israeli intelligence prior to the 1973 Yom Kippur War is a case in point. Few other intelligence organizations have done so little—in terms of responding to warning—with so much—in terms of accurate, detailed, and compelling indications of what is about to transpire. See Uri Bar-Joseph, *The Watchman Fell Asleep: The Surprise of Yom Kippur and Its Sources* (Albany: State University of New York Press, 2005).

stroy some U.S. countervalue targets. Of course, the only way to win a nuclear war is by firing first, and it would be preferable to destroy all of your opponent's nuclear forces before they can be used against you. But U.S. and Russian policymakers are more likely to be terrified by the prospect of even a couple of nuclear weapons fired in retaliation than energized by the opportunity to attempt to catch the opponent napping.

The analytical excursion offered by Lieber and Press, however, sidesteps the entire issue of retaliation and deterrence. Because the results of the stochastic analytical techniques the authors employ are largely driven by the assumptions that guide their analysis, the U.S. policymakers in their scenario need not fear Russian retaliation. The assumptions that the United States is able to catch the Russians in an extremely weak day-alert position—with their submarines in port, bombers concentrated on a few runways, and their mobile missiles in garrison, while launching a fully generated nuclear force undetected by either Russian early warning systems or overhead and human surveillance of the United States—determine the outcome of the exchange. By assuming that “Russia is unable to launch its missiles before the first wave of U.S. warheads arrives on target” (p. 19), or that “the Russian early warning system would probably not give Russia's leaders the time they need to retaliate” (p. 22), one grants the United States a splendid first-strike capability before even beginning the analysis. Given the assumptions that drive Lieber and Press's nuclear exchange, the outcome enjoyed by the United States would be no different than if the Russians lacked a nuclear arsenal: in both situations, the United States could destroy or threaten to destroy Russia with no fear of retaliation.<sup>6</sup> This result does not correspond to reality because so long as a state possesses a nuclear arsenal, there is always a possibility—however remote—that nuclear retaliation might occur following a nearly splendid first strike.<sup>7</sup>

Because policymakers can never ignore even the remotest possibility of retaliation, U.S. officials would have to possess nerves of steel or brains of lead to undertake an attack on Russia based on the assumptions that guide Lieber and Press's analysis. An assessment of first-strike prospects should not rest on the idea that U.S. strategy and weapons will work perfectly and that the opponent will not receive or execute orders to retaliate. The hypothetical attack described by Lieber and Press is too serious a matter to be based on these kinds of assumptions. For instance, in an analysis of a “limited” U.S. nuclear strike against Soviet strategic forces involving 1,740 aimpoints and 4,108 attacking nuclear warheads, Barbara Levi, Frank von Hippel, and William Daugherty estimated that 25 million to 54 million Soviets might be killed or injured by the immediate effects of such an attack.<sup>8</sup> Lieber and Press's scenario involves only 799 targets and

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6. If Lieber and Press gave Russia the same advantages enjoyed by the United States in their hypothetical exchange, we would be reading a description of Russian nuclear primacy. If the U.S. government and military are caught napping, only U.S. submarines at sea would survive a Russian first strike.

7. Lieber and Press's failure in their scenario to target Russian fixed and mobile command and control facilities during an attack that would apparently unfold over several days (they suggest that U.S. bombers might fly multiple sorties) might create an opportunity for the Russians to cobble together a ragged retaliatory strike.

8. Barbara G. Levi, Frank N. von Hippel, and William H. Daugherty, “Civilian Casualties from ‘Limited’ Nuclear Attacks on the Soviet Union,” *International Security*, Vol. 12, No. 3 (Winter 1987/88), p. 169.

2,890 nuclear weapons (p. 20), so the Russian casualties suffered in the attack would probably be near the low end of this earlier casualty estimate, or about the same number of casualties suffered by the Soviet Union in World War II. And if one reintroduces the prospect of retaliation into the scenario, one discovers something more than the nuclear taboo to restrain the United States. Daugherty, Levi, and von Hippel estimated that if the Soviets retaliated using 100 one-megaton nuclear warheads against U.S. urban areas in a way optimized to inflict the greatest number of casualties, they could promptly cause somewhere between 25 million and 66 million deaths, a high price to pay to reduce casualties from a potential Russian nuclear attack.<sup>9</sup> If the Russians were deterred from launching a concerted countervalue attack with their remaining forces, they might instead launch a series of attacks against the conventional military facilities of the United States and its allies to blunt a possible U.S. effort to exploit its moment of nuclear primacy. Even if the scenario described by Lieber and Press unfolds as advertised, the Russians could still deliver hundreds of tactical nuclear weapons against military bases, weapons storage facilities, command and control centers, ports, and critical transportation hubs using conventional (tactical aircraft operating on one-way missions if necessary) and unconventional methods of delivery. Given the high population densities and proximity of urban areas to military facilities in Japan and Europe, millions in countries the United States considers allies could die in this nuclear exchange.

There is a final irony embodied in Lieber and Press's scenario. It is not exactly clear what the United States would gain by eliminating Russia's strategic nuclear forces in a splendid first strike. Ignoring for the moment that U.S. officials might get their "hair mussed" if the Russians managed to retaliate with a few nuclear weapons, expending virtually the entire U.S. strategic arsenal in an all-out attack against Russia might place the United States behind Great Britain, France, China, or even Israel in the nuclear pecking order. The attack they posit *prima facie* would cost the United States its position of nuclear primacy. The attack also would leave the United States in a vulnerable position as it regenerated and reconstituted its nuclear forces. Would the United States' new peer competitors be seduced by the same logic that animates the U.S. policymakers in Lieber and Press's scenario and destroy U.S. ballistic missile submarines as they return to port or attack the U.S. nuclear infrastructure in a collective or individual bid to achieve nuclear primacy?

Extending Lieber and Press's scenario thus highlights an interesting facet of the nuclear balance. As U.S. nuclear force levels diminish, nuclear primacy is increasingly a chimera, because the effort to knock out one's nearest nuclear competitor almost guarantees a second-class nuclear status and the emergence of a window of vulnerability as nuclear forces are reconstituted and regenerated following a splendid first strike. The need to take into account the behavior of several nuclear-armed states will only increase in the future as U.S. nuclear force reductions continue. As Russian and U.S. nuclear forces reach Moscow Treaty levels, the need to regenerate and reconstitute nuclear forces following a splendid U.S. first strike against a relatively smaller Chinese nuclear force, for example, could leave the United States open to coercion or attack from Russia

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9. William H. Daugherty, Barbara G. Levi, and Frank N. von Hippel, "The Consequences of 'Limited' Nuclear Attacks on the United States," *International Security*, Vol. 10, No. 4 (Spring 1986), pp. 23–25.

or other smaller nuclear competitors. Given the variety of dynamics that might animate multipolar nuclear relationships, it might be time to explore the nature and points of crisis stability among several states that possess nuclear arsenals that differ in size and survivability.

—James J. Wirtz  
Monterey, California

### *The Authors Reply:*

Our recent article, “The End of MAD? The Nuclear Dimension of U.S. Primacy,” made three principal arguments.<sup>1</sup> First, the strategic nuclear balance has shifted so dramatically since the end of the Cold War that the United States stands on the cusp of nuclear primacy, meaning that it could conceivably conduct a successful nuclear disarming strike against any major power adversary. Second, U.S. nuclear primacy stems from the steep decline of the Russian arsenal, the slow modernization of the Chinese arsenal, and the steady growth of U.S. nuclear counterforce capabilities. Third, the trajectory of nuclear developments indicates that the balance will shift further in favor of the United States in the coming years.

We appreciate the thoughtful responses to our article by Jeffrey Lantis, Tom Sauer, and James Wirtz. Their letters do not challenge our central empirical claims; none of the authors question our finding that the United States could carry out a disarming first strike. Instead, all three responses focus on the implications of U.S. nuclear primacy for international politics. This is the debate we hoped to trigger.

Below we highlight the four broad questions raised by Lantis, Sauer, and Wirtz about the implications of nuclear primacy. Our views on these issues differ significantly from those of our critics. But more important, we believe that these questions demand much greater attention than they have received from international relations scholars in recent years. The answers reveal much about the nature of great power relations in the twenty-first century and the likely role of nuclear weapons in future crises and wars.

#### HOW WILL RUSSIA AND CHINA RESPOND TO U.S. NUCLEAR PRIMACY?

The first major question concerns how Russia and China will react to their growing strategic nuclear vulnerability. In “The End of MAD?” we argued that efforts to upgrade the United States’ nuclear counterforce capabilities may pressure Russia and China to increase and modernize their arsenals and raise the day-to-day readiness of their nuclear forces. Sauer and Wirtz disagree. They argue that Russia and China will not worry about their growing vulnerability. Sauer claims that leaders in Moscow and Beijing recognize that the United States is a status quo power and thus not a threat. He also argues that Russian and Chinese concerns are soothed by their confidence in the nuclear taboo. Wirtz argues that Russia will not feel vulnerable because it can greatly complicate a U.S. counterforce attack by alerting and dispersing its force if U.S.-Russian relations deteriorate.

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1. Keir A. Lieber and Daryl G. Press, “The End of MAD? The Nuclear Dimension of U.S. Primacy,” *International Security*, Vol. 30, No. 4 (Spring 2006), pp. 7–44.

THREAT ASSESSMENT. We are skeptical of Sauer's claim that Russia and China trust the United States or care little about their increased strategic vulnerability. Leaders in Moscow have noticed the expansion of U.S. counterforce capabilities and have reacted angrily. Russian President Vladimir Putin recently vowed to increase defense spending to check U.S. nuclear primacy.<sup>2</sup> In a separate statement, he complained about U.S. plans for "a whole arsenal of destabilizing weapons," referring specifically to weapons that could target Russia's diminished nuclear arsenal.<sup>3</sup> Two other senior Russian officials have pointed to U.S. missile defenses as proof that the United States intends to neutralize Russia's nuclear forces, and Russian Minister of Defense Sergei Ivanov has suggested that Russia unilaterally withdraw from the Intermediate-Range Nuclear Forces Treaty. Other Russian officials have called for increasing the rate of production of Russia's newest intercontinental ballistic missiles (ICBMs).<sup>4</sup> Former Russian Prime Minister Yegor Gaidar predicts that Russian concerns about U.S. nuclear primacy will trigger increased spending on Russia's nuclear forces.<sup>5</sup>

The notion that China trusts the United States—and will therefore acquiesce to U.S. nuclear primacy—is even less plausible. There are powerful reasons to expect serious friction between the United States and China in the future. Even if Chinese leaders view the United States as a status quo country, as Sauer suggests, China's rising economic power may put Washington and Beijing on a collision course; in fact, changes in the global distribution of power often trigger antagonism between status quo countries and rising challengers.<sup>6</sup> The U.S. government is aware of these dangers and has declared that U.S. policy is "to dissuade potential adversaries"—a thinly veiled reference to China—from "surpassing, or equaling, the power of the United States."<sup>7</sup> To make matters worse, China has hostile relations with Japan, the United States' key ally in the region. In a decade or two, China may find itself surrounded by an anti-China U.S. military alliance. We see no reason to expect that Chinese leaders will overlook these dangers and accept their country's vast inferiority in conventional and nuclear forces.

No one knows for certain how China will respond to U.S. nuclear primacy. But to assume that the United States can keep enhancing its counterforce capabilities without triggering a nuclear buildup from China requires a considerable leap of faith.<sup>8</sup>

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2. Fred Weir, "In Moscow, Buzz over Arms Race II," *Christian Science Monitor*, April 24, 2006.

3. Quoted in "End of Russian-U.S. Strategic Arms Control?" *Jane's Intelligence Digest*, September 22, 2006.

4. *Ibid.*

5. Yegor Gaidar, "Nuclear Punditry Can Be a Dangerous Game," *Financial Times* (London), March 28, 2006.

6. Sauer cites an article by Keir A. Lieber and Gerard Alexander to argue that leaders in Beijing "do not regard [the United States] as an expansionist state." But Sauer misses the point of that article: none of the great powers, including China, have begun balancing against the United States in response to the George W. Bush administration's post-September 11 strategy or decision to invade Iraq. Lieber and Alexander noted in that article that China's military buildup began long ago and is aimed first at addressing its weaknesses vis-à-vis Taiwan. Lieber and Alexander, "Waiting for Balancing: Why the World Is Not Pushing Back," *International Security*, Vol. 30, No. 1 (Summer 2005), pp. 109–139.

7. George W. Bush, *The National Security Strategy of the United States of America* (Washington, D.C.: White House, September 2002), p. 30.

8. During the Cold War, the Soviet Union was China's greatest threat, and China built a small nuclear force that could retaliate in case of a Soviet attack. Today the greatest long-term threat to China is the United States. The vast difference between Soviet counterforce capabilities during the

THE NUCLEAR TABOO. Sauer offers a second reason to believe that Russia and China will accept their current vulnerability: the nuclear taboo. According to Sauer, policymakers in Moscow and Beijing understand that the United States has a powerful aversion to using nuclear weapons. Knowing this, Russia and China have no reason to build up their nuclear forces.

There are several reasons—from different theoretical perspectives—to doubt that leaders in Moscow and Beijing will entrust their national security to the restraining power of the nuclear taboo. A realist, for example, would scoff at the notion that Russia or China will base its defense plans on the assumption that the United States is too moral to be ruthless in war. The paramount goal of national survival greatly overshadows leaders' confidence in the normative prohibitions constraining their adversaries.

Furthermore, even scholars who reject these realist arguments, and who believe that norms and taboos significantly constrain state behavior, should not draw the conclusion that Sauer reaches. They, too, should expect that Russia and China will work hard to reduce their vulnerability to a disarming attack. First, scholars of the nuclear taboo are explicit that the taboo has not made the use of nuclear weapons impossible; rather it has "decreased the likelihood that nuclear weapons will be used."<sup>9</sup> The seminal work by Nina Tannenwald focuses on establishing that the nuclear taboo has constrained U.S. behavior, but it never attempts to measure the power of that constraint. Her analysis does not reveal whether the taboo reduces the probability of U.S. nuclear use by 20 percent or 80 percent, relative to what it would be without the taboo. Absent that critical data, there is no rational reason for leaders in Moscow or Beijing to base their countries' security on the nuclear taboo.

Second, as the taboo literature acknowledges, countries (and individuals) violate taboos when confronting particularly frightening circumstances. The September 11 terrorist attacks led the United States to violate existing taboos against torture for five years, and only now is that practice being reined in. If the United States will violate taboos when Americans feel angry and scared, why would Russian and Chinese leaders assume that the taboo will protect their countries during a serious military crisis?

Finally, the taboo literature is explicit that taboos can change or disappear. Tannenwald lists a set of trends that "could unravel" the nuclear taboo.<sup>10</sup> What is strik-

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Cold War and U.S. counterforce capabilities today suggests that China's reaction to the U.S. nuclear threat will be much more vigorous than its Cold War reaction to the Soviet threat.

9. Nina Tannenwald, "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Nonuse," *International Organization*, Vol. 53, No. 3 (Summer 1999), p. 435. Elsewhere Tannenwald writes that the effect of the taboo is to "diminish the utility and legitimacy of nuclear weapons" and calls the use of nuclear weapons "unthinkable for many circumstances." Tannenwald, "Stigmatizing the Bomb: Origins of the Nuclear Taboo," *International Security*, Vol. 29, No. 4 (Spring 2005), pp. 39–41.

10. Tannenwald lists seven factors that could unravel the taboo: (1) the proliferation of nuclear weapons; (2) the continued discussion of nuclear weapons as "important instrument[s] of national security" within nuclear weapons states; (3) the development of new roles for existing nuclear weapons; (4) the development of lower-yield warheads that "blur the line between conventional and nuclear weapons"; (5) "loose talk" within nuclear-armed states about the "potential utility of nuclear weapons"; (6) the perceived utility of nuclear weapons to destroy deeply buried bunkers; and (7) the rise of "a new interpretation of U.S. hegemony" in which the United States "controls the world order . . . expressing active disdain for the UN and international treaties and advocating a new doctrine of preemptive use of military force to prevent acquisition of weapons of mass destruction by other actors." As Tannenwald recognizes, all but one of these factors are currently

ing is that every one of these trends is either happening or being considered. There is no guarantee that the nuclear taboo will disappear, but why should we assume, as Sauer does, that Russia and China will stake their national security on a malleable norm of unknown power and longevity?

The history of the nuclear age supports our skepticism. The nuclear taboo did not allow the superpowers to stop worrying about a nuclear attack during the Cold War. Scholars claim that the taboo became institutionalized within the U.S. government from the 1960s to the 1980s. But this period directly coincides with the most intense nuclear arms race in history, one in which both the United States and the Soviet Union deployed enormous nuclear arsenals and paid great attention to their survivability. There is no evidence that either superpower was willing to forgo building survivable deterrent forces and rely on the nuclear taboo instead. We see no reason to expect Russia or China to behave differently today.

**FALSE VULNERABILITY.** Wirtz suggests that Russia has little reason to fear growing U.S. counterforce capabilities. He notes that we model a surprise attack by the United States against the Russian strategic arsenal at peacetime alert levels. Wirtz argues that U.S. leaders would consider initiating a nuclear attack only if U.S.-Russian relations deteriorated into a crisis. In such a circumstance, Russia could alert its nuclear forces, thus reducing its vulnerability to a U.S. first strike. The implication is that Russia can live with its current vulnerability until U.S.-Russian relations take a seriously troubling turn.<sup>11</sup>

Although Russian leaders could choose to live with their peacetime vulnerability and plan to bolster their deterrent only if relations with the United States deteriorated, we doubt they will do this. Great powers do not typically leave their military forces vulnerable to a surprise attack. Russia, the victim of a catastrophic surprise attack in June 1941, is even less likely to do so. Thus far the reaction in Russia to increasing U.S. counterforce capabilities—and to our article—suggests that the leadership is indeed upset about its growing vulnerability.<sup>12</sup>

Furthermore, Russia would be wise to address its growing vulnerability soon, rather than assume that it can protect itself by simply alerting its forces during a crisis. Although Russia could currently reduce its vulnerability by sending a few submarines to sea and dispersing its mobile ICBMs, in the future such steps may not be adequate. The Russian force is eroding.<sup>13</sup> Its ballistic missile submarines are poorly maintained and they rarely patrol, so the crews are losing the skills needed to evade U.S. efforts to track

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present, and the other one (number 4) is under consideration. Tannenwald, "Stigmatizing the Bomb," pp. 43–45.

11. Wirtz raises two other criticisms. He incorrectly claims that our model assumes that U.S. "weapons will work perfectly." In fact, we conducted extensive sensitivity analysis on the reliability and accuracy of U.S. weapons and reported those results (Lieber and Press, "The End of MAD?" pp. 22–25). He also claims that a U.S. disarming attack would use up virtually all U.S. nuclear weapons, leaving the United States near the bottom of "the nuclear pecking order." This is also wrong. The attack would leave the United States with more than 350 deployed strategic warheads, which would be available immediately. More than 1,000 U.S. warheads would be operational within days. The United States would still be the world's most powerful nuclear-weapons state—by a wide margin. *Ibid.*, pp. 17, 22–26.

12. See Weir, "In Moscow, Buzz over Arms Race II"; "End of Russian-U.S. Strategic Arms Control?"; and Gaidar, "Nuclear Punditry Can Be a Dangerous Game."

13. See Lieber and Press, "End of MAD?" pp. 26–29.

them. At the same time, the United States is working to improve technology to track submarines and detect mobile missile launchers. In a few years, Moscow may be unable to protect its force by simply dispersing a few submarines and mobile missiles.

China faces even stronger incentives to respond to U.S. nuclear primacy. The Chinese force is so much smaller and weaker than Russia's that China could not significantly reduce its vulnerability by alerting its intercontinental-range nuclear forces. Until China deploys a robust arsenal of DF-31A mobile ICBMs (not the DF-31 missiles, whose range is too short to effectively target the U.S. mainland<sup>14</sup>), it will be vulnerable to a U.S. attack—alerted or not.

#### HOW MUCH IS ENOUGH FOR A ROBUST NUCLEAR DETERRENT?

Sauer and Wirtz argue that nuclear primacy will have little effect on international politics because the kind of attack we model could be easily deterred—even by a small nuclear arsenal. For Sauer, deterrence requires only “one accurate and invulnerable nuclear weapon,” because it is hard to imagine a crisis over such important stakes that a country would risk the loss of one major city. For Wirtz, the threshold for robust deterrence is even lower: “Even a remote possibility of retaliation” will deter “all but the most risk-acceptant individuals.” We believe that history offers little justification for such optimism about the low risk tolerance of decisionmakers.

More research on the threshold for nuclear deterrence is needed,<sup>15</sup> but a substantial body of evidence—from the prenuclear and nuclear eras—calls into question the view that minimal nuclear forces are sufficient for robust deterrence, and that countries will not risk losing a single city to achieve ambitious foreign policy goals.

The beginning of both world wars saw several countries accept staggering risks. By invading France in 1914, German leaders gambled much more than the loss of a single city. By war's end, more than 2 million Germans were dead, their political system was in turmoil, and the nation had been saddled with enormous reparations. But Germany was not the only country to take an enormous gamble: Russia and Britain could have opted out of the war when Germany invaded France, but they elected to fight. Britain suffered more than 3 million casualties, Russia more than 9 million, as well as a revolution and civil war.

The beginning of World War II teaches the same worrisome lesson. Germany abandoned caution by attacking Poland and France, and its subsequent invasion of the Soviet Union was perhaps the most enormous military gamble of all time. By the end of the war, many German cities were in ruins; a generation of German men was dead; and the country was occupied and divided. But the Nazis were not the only risk takers in the 1940s: the British gambled by refusing to make peace with the Germans after the French had been knocked out of the war, and they suffered through the Blitz as a result.

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14. With a range of 7,200–8,000 kilometers, the DF-31 could target the continental United States only from a small sliver of Chinese territory, due north of Korea. This limitation would significantly reduce the search area for these missiles and reduce their survivability. The 12,000-kilometer-range DF-31A will be the first relatively survivable Chinese missile that effectively targets the United States.

15. The literature on nuclear deterrence is enormous, but many analyses are purely deductive or rely principally on evidence drawn from former government officials' memoirs and interviews. Relatively few studies use declassified evidence from the Cold War to evaluate theories of nuclear deterrence.

The Americans gambled by abandoning a strong offshore position to enter the fight against Germany on the European continent.<sup>16</sup> Japan attacked the United States—a country with several times its gross domestic product and population. That gamble cost Japan dearly; by the end of the war, it had lost all of its overseas possessions, and the United States had firebombed more than sixty Japanese cities, dropped atomic bombs on Hiroshima and Nagasaki, and occupied the country.

Evidence from the nuclear age also should undermine faith in the “minimalist school” of deterrence. During the only prior period of nuclear primacy (during the 1950s), the U.S. strategy of massive retaliation called for an enormous nuclear attack on the entire Communist bloc if a Soviet invasion of Europe appeared imminent. This was no bluff; the strategy was debated and approved at the highest level. The nuclear weapons and delivery systems for the mission were built and deployed, and military personnel were trained accordingly. Although U.S. leaders believed that the United States could probably win the war without suffering nuclear retaliation against the U.S. homeland, they were never certain. Nevertheless, they stuck to this strategy and accepted the risk of nuclear retaliation until U.S. primacy eroded. War plans changed not because of the fear that a single bomb or two could possibly hit the United States, but when U.S. leaders concluded that a portion of the Soviet force was expected to survive and destroy several U.S. cities in response.<sup>17</sup>

The notion that deterrence will hold as long as countries face the mere possibility of losing a single city—or even a few—is comforting, but it is not well supported by historical evidence. Major wars always begin with at least one country taking a tremendous risk, and these gambles are often bigger than the terrible prospect of losing a city.

#### WHY IS THE UNITED STATES BUILDING NUCLEAR PRIMACY?

We argued in our article that the nature of U.S. nuclear improvements strongly indicates that nuclear primacy is an intentional policy goal. Sauer and Lantis believe that we mischaracterize U.S. motives. Sauer claims that the emergence of U.S. nuclear primacy is the result of bureaucratic politics within the U.S. government, rather than a strategic decision to acquire nuclear primacy. Lantis, on the other hand, agrees with us that the United States is acquiring nuclear primacy through a set of “systematic and purposeful” policies. He argues that nuclear primacy has not been a general goal of the United States per se, but is a specific goal of key members of the George W. Bush administration.

We are puzzled that Sauer sees no connection between U.S. efforts to build nuclear primacy and the official U.S. foreign policy goal of locking in military primacy. Not only has the Bush administration publicly declared that the United States seeks to maintain military primacy over any peer competitor, but these words are matched by deeds. Over the past decade, the United States has begun a major modernization of its conventional military forces to expand its lead over all other countries. Why should we assume that the parallel effort to improve U.S. nuclear capabilities is not part of the overall national security strategy?

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16. We are not implying that the U.S. and British decisions to fight Nazi Germany were ill advised. We simply note that the United States and Britain had other strategies available to defend themselves, yet they accepted enormous likely costs to fight Germany.

17. Daryl G. Press, *Calculating Credibility: How Leaders Assess Military Threats* (Ithaca, N.Y.: Cornell University, 2005), pp. 85–94, 121–127.

Sauer implies that he is drawn to the bureaucratic politics explanation for the U.S. achievement of primacy because it “also explain[s] the irrational overkill capacity developed by both superpowers during the Cold War.” But Sauer—like others—is led astray in his analysis of current U.S. intentions because he misunderstands U.S. nuclear doctrine during the Cold War. The U.S. nuclear force was structured to carry out several potential missions during the Cold War, including: (1) retaliate against enemy cities after an enemy first strike; (2) attack military targets in Europe to support NATO defensive operations; and (3) destroy enemy nuclear forces in a U.S. preemptive strike. Claims that the United States built an irrational “overkill” arsenal during the Cold War are typically based on the false assumption that the first mission—retaliating against Warsaw Pact cities—was the only mission, and hence a few hundred nuclear weapons were more than sufficient. In fact, the third mission required so many weapons in the latter stages of the Cold War that neither the United States nor the Soviet Union had enough weapons to carry out a successful disarming attack. The point is that the enormous Cold War arsenals, which are frequently presented as *prima facie* evidence for the irrational nature of nuclear arms races, and which are used to argue that today’s nuclear policies are driven by bureaucratic battles, were not examples of “overkill” at all. Strategic factors drove nuclear force requirements during the Cold War, and they appear to do so today as well.

Lantis’s effort to pin the pursuit of nuclear primacy on the ideas and individuals of the Bush administration is contradicted by nearly six decades of U.S. strategic thought. Two aspects of that history are important. First, there has been great continuity in U.S. nuclear strategy since the dawn of the nuclear age, even though individuals and administrations have come and gone. In the 1940s and 1950s, the United States strove to acquire and then maintain nuclear primacy. After the United States lost its advantageous position in the early 1960s, it spent the remainder of the Cold War striving—albeit fruitlessly—to reacquire nuclear primacy. During the era of mutual assured destruction, every U.S. administration authorized the pursuit of better counterforce weapons and strategies, searching in vain for a way to prevail in strategic nuclear war.<sup>18</sup>

Second, the most significant change in U.S. nuclear policy during the Cold War was caused by a shift in the nuclear balance of power, not the emergence of new actors or ideas. U.S. national security strategy throughout the 1950s held that nuclear forces would be the military tool of choice if vital U.S. interests were attacked. In the early 1960s, however, the United States abandoned its massive retaliation doctrine. The new doctrine, which took on different labels over the subsequent decades of the Cold War, was that the United States would respond to various levels of aggression with a range of both conventional and nuclear options; an all-out nuclear attack would be launched only as a last resort.

The shift in U.S. nuclear doctrine occurred just as the United States was losing its position of nuclear primacy. This was no mere coincidence. Since the mid-1950s, senior officials in Dwight D. Eisenhower’s administration grappled with the need to change U.S. nuclear doctrine because the U.S. homeland was becoming vulnerable to Soviet nuclear retaliation. Interestingly, when John F. Kennedy took office and explored his nuclear options at the peak of the Berlin crisis in 1961, the key question he asked the

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18. See Keir A. Lieber, *War and the Engineers: The Primacy of Politics over Technology* (Ithaca, N.Y.: Cornell University Press, 2005), chap. 5; and John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: W.W. Norton, 2001), pp. 225–229.

Joint Chiefs of Staff was whether the United States still possessed nuclear primacy—that is, whether it could still launch a surprise nuclear disarming attack on the Soviet Union without suffering nuclear retaliation.<sup>19</sup> Indeed, the nail in the coffin of the massive retaliation doctrine was not the rise of a new way of thinking about nuclear weapons, but Kennedy's September 1963 briefing on U.S. nuclear war plans, which revealed the end of the first era of U.S. nuclear primacy.<sup>20</sup>

Of course, individuals and their ideas affect policy decisions. Even if objective shifts in the balance of power carry the greatest causal weight in shaping national security policy (as we believe they do), actors and institutions are a necessary transmission belt—a belt that can be smooth or rough, rigid or elastic. The elevation of ideational variables and individual actors as primary explanations for the course of U.S. nuclear policy, however, is unsupported by the empirical record. Actors and ideas have come and gone, but the pursuit of nuclear primacy has endured.

#### WHAT IS THE UTILITY OF NUCLEAR PRIMACY?

We ended our article with a call for new research on the utility of nuclear primacy.<sup>21</sup> Lantis, however, believes that the answer is already clear. He asserts that U.S. nuclear primacy is worth very little because it yields almost no coercive leverage. Lantis lists several instances in which other countries refused to accede to U.S. preferences despite U.S. nuclear primacy. But his conclusion that primacy produces little benefit is premature.<sup>22</sup>

One reason to expect that nuclear primacy will yield coercive leverage in future crises—particularly those involving high stakes for the United States—is that the prior era of U.S. nuclear primacy gave Washington substantial bargaining leverage over the Soviet Union. For example, U.S. leaders, reassured by the favorable balance of power, forced Nikita Khrushchev to back down repeatedly during a series of crises over Berlin from 1958 to 1961. In 1962 the Soviets were successfully coerced again—this time to remove their missiles from Cuba in humiliating fashion. Indeed, Soviet accounts of the crisis suggest that it was their desire to escape from U.S. nuclear primacy—and the leverage it had given the United States—that drove them to send Soviet missiles to Cuba in the first place.<sup>23</sup>

The United States may gain coercive leverage from nuclear primacy in future crises as well. If the United States intervened militarily in a war between China and Taiwan, U.S. officials might privately caution Chinese leaders against alerting their strategic nuclear forces—warning that any steps to do so could trigger an immediate disarming strike. The purpose of such a threat would be to keep the Chinese nuclear arsenal out of the conflict, allowing the United States to defend Taiwan conventionally. A U.S. strat-

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19. On the debates in the Eisenhower administration, see Press, *Calculating Credibility*, pp. 92–94. On the 1961 Berlin crisis, see the discussion and references in Lieber and Press, “The End of MAD?” nn. 82–83, p. 39.

20. Scott D. Sagan, “SIOP-62: The Nuclear War Plan Briefing to President Kennedy,” *International Security*, Vol. 12, No. 1 (Summer 1987), pp. 22–51.

21. We are agnostic as to whether the benefits of nuclear primacy outweigh the costs and risks. See Lieber and Press, “The End of MAD?” pp. 38–40.

22. At best, Lantis's list suggests that nuclear primacy is a poor tool for influencing international behavior that affects only secondary or tertiary U.S. interests. Only the items on his list that relate to the proliferation of nuclear weapons remotely approach vital U.S. national interests. Nuclear primacy is most likely to pay dividends in high-stakes crises over truly vital interests.

23. Lieber, *War and the Engineers*, pp. 134–140.

egy along these lines would entail great risks, similar in some ways to the risks accepted by the United States during the Cuban missile crisis. But in the future, if U.S. leaders feel that defending Taiwan is a key element in containing China, intervening in the war and issuing nuclear threats may seem as sensible as Kennedy's hard-line stance seemed to U.S. leaders in 1962.

Finally, U.S. nuclear primacy may benefit the United States more directly. America's most likely future adversaries may have nuclear weapons.<sup>24</sup> In a war between the United States and North Korea, for example, both Washington and Pyongyang might be tempted to issue coercive nuclear threats. In the context of ongoing conventional combat and nuclear threats, fleeting intelligence about the location of North Korean nuclear forces, or signs that North Korea was readying its nuclear forces, would compel the United States to consider launching a counterforce strike. Using nuclear weapons would greatly increase the odds of success.

More broadly, it is impossible to know whether the United States will issue nuclear threats during future crises, or whether it will ever attempt a counterforce strike against an enemy's nuclear arsenal. Although Lantis is correct that the United States has not used its nuclear primacy in the post-Cold War world to coerce countries such as Iran or North Korea to give up their nuclear programs, the United States may face even graver threats in the future. In those crises—for example, in the midst of a shooting war with a nuclear-armed Iran or North Korea—it is impossible to know how U.S. leaders will weigh the risks of using nuclear coercion against the risks of not doing so. But given the concerted efforts by U.S. adversaries to acquire nuclear weapons, and given the pressures that may produce increased friction between China and the United States, we do not dismiss the possibility of nuclear threats or nuclear war out of hand.

#### CONCLUSION

None of our critics challenge the central empirical development that we highlight in our article: U.S. counterforce capabilities vis-à-vis Russia and China have soared since the end of the Cold War. Instead they raise important questions about the significance of nuclear primacy for the conduct of international politics.

This is precisely the debate that we intended to trigger, and we hope that this exchange of comments will be merely the first round of that discussion. The results of this extended debate will reveal a great deal about the nature of great power relations in the twenty-first century: most importantly, about the intensity of great power rivalries among nuclear-armed states, especially the United States and China, and the likely role of nuclear weapons in future crises and wars. Our answers to these questions provide a window into whether this century will be more peaceful—or vastly more terrible—than the previous hundred years.

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24. Obvious examples are North Korea and Iran. North Korea reportedly has nuclear weapons; absent a U.S. (or Israeli) preventive war, Iran will likely have them in a decade or so.