For the last half century, the task of limiting nuclear arsenals has been viewed as being related to but different from preventing proliferation. Nuclear arms restraints are “fostered” through nuclear weapons negotiations, agreements, and norms as well as by states deploying “stable” strategic weapons forces—i.e., ones that can readily survive even if they are struck first and that are themselves incapable of totally destroying a key opponent’s nuclear forces in a first strike. In contrast, one “fights” or “combats” the further spread of nuclear weapons by imposing export controls, economic sanctions, international inspections, or conducting preventative and preemptive military strikes and covert intelligence and military operations. The most significant nuclear arms control efforts historically have been undertaken by the most heavily nuclear-armed states—principally the United States and Russia. Preventing nuclear proliferation, in contrast, is generally a global undertaking.

The Obama administration is noteworthy among recent presidencies for trying to integrate U.S. nuclear arms control efforts with nonproliferation. Following President Barack Obama’s 2009 appeal to eliminate nuclear weapons presented in Prague, the U.S. gov-

9. Sometime, roughly in the early 1990s, it became fashionable to talk about “combating” proliferation. A Google search of “combating proliferation” as of May 21, 2018, yielded 1,700,00 results.

ernment made reducing nuclear arms a prerequisite for preventing their further spread. If we expect other nations to repress their own nuclear weapons aspirations, administration officials argued, the nuclear superpowers had to demonstrate a greater willingness to disarm themselves. Such disarmament was feasible, they insisted, because nuclear weapons were, in their view, only useful to deter other hostile nuclear weapons states. This basic mission could be accomplished with a relatively small stockpile of nuclear weapons. On the other hand, maintaining large stockpiles of nuclear weapons and nuclear weapons-usable fuels, they argued, only increased the prospects for instability, nuclear terrorism, and accidental or illicit use.

Hawkish supporters of nuclear weapons have a different view. They argue that reducing American and Russian nuclear arms has little or no impact on reducing others’ nuclear weapons activities or holdings (e.g., North Korea and Iran). Instead, reducing America’s nuclear arsenal might only entice China to build up to America’s current nuclear numbers and encourage America’s key nonnuclear allies and friends—e.g., South Korea, Japan, Saudi Arabia, and Turkey—to hedge their bets against increasingly credible U.S. nuclear security guarantees by developing nuclear weapons options of their own. Finally, they argue, nuclear weapons, especially in U.S. and allied hands, have helped keep the peace, whereas letting...

11. The term “hawk” and “hawkish” in this book is used as shorthand for hawkish supporters of nuclear weapons. This is a concession to popular usage. It is hardly concise. The first use of the term “hawk” was made during the War of 1812. It referred to those who saw war as being the solution to America’s troubles with the United Kingdom. Today, however, there are many that support America’s maintenance of its nuclear arsenal who are anything but eager to go to war. There also are many security advocates and experts that may be willing to go to war in many cases but who hardly favor relying heavily on nuclear weapons for U.S. security.
U.S. and allied nuclear arsenals decline quantitatively or qualitatively only increases the prospects for war.  

A group of academic skeptics, who identify themselves as neorealists, also question if eliminating nuclear weapons is critical to assure peace. Further nuclear weapons proliferation may be inevitable they argue, but it’s unlikely to be destabilizing. A credible nuclear deterrent force that holds several major cities at risk, they insist, can keep the peace and need only be a relatively small, “finite” force. The earliest proponents of such “finite deterrence”—Pierre Gallois, his French colleagues, Admiral Arleigh A. Burke, and other original supporters of the U.S. Polaris nuclear missile submarine fleet—


and, much later, Kenneth Waltz and his academic associates— all emphasized what they saw as the virtual automaticity of nuclear deterrence between any two rival nuclear-armed states. Because of this, French proponents of finite deterrence argued that the further proliferation of nuclear weapons to smaller states was more likely to prevent military aggression than to prompt it. Central to their thinking was the disturbing notion that credibly threatening to destroy an adversary’s major cities (what Charles de Gaulle referred to as “tearing off an arm”) would deter hostile actions by other states both large and small.

A more recent version of such thinking has been made popular by scholars such as John Mueller. Mueller takes a different tack but reaches similar conclusions. He argues that nuclear weapons actually do a poor job of deterring small or major wars. Citing the popular scholarship of Ward Wilson, supporters of this view


17. See Mueller, Atomic Obsession.

contend that nuclear weapons were unnecessary to secure Japan’s surrender in 1945\textsuperscript{19} or to deter World War III since North Atlantic Treaty Organization (NATO) and Warsaw Pact nations were haunted by fears of suffering a yet deadlier conventionally-armed version of World War II (WWII).\textsuperscript{20} Also, smaller wars—e.g., the Israeli War of ’73 and the Korean and Vietnam wars—Mueller notes, clearly were not deterred by anyone’s nuclear weapons. Nor were the terrorist attacks of 9/11 in 2001 or the terrorist attacks on Mumbai in 2008. The implication is that nuclear weapons are so ineffective at deterring aggression and their use is so unlikely that their further spread is not all that consequential.\textsuperscript{21}

\textsuperscript{19} Such revisionist views about the nuclear bombing of Japan, which now find favor with liberal opponents of nuclear weapons, are oddly adaptations of arguments made from 1945 through the 1960s by some of the most hawkish and conservative of Americans. See Barton J. Bernstein, “American Conservatives Are the Forgotten Critics of the Atomic Bombings of Japan,” \textit{San Jose Mercury News}, August 2, 2014, available at http://www.mercurynews.com/opinion/ci_26253535/barton-j-bernstein-american-conservatives-are-forgotten-critics.


\textsuperscript{21} There, are, of course, more moderate views among those that might be pushed into this camp. This includes several prominent academics, such as Stephen M. Walt and Robert Jervis, who have challenged the assumed high value of nuclear weapons in deterring attacks but do not believe their value is necessarily zero and, therefore, are not entirely comfortable with their further proliferation. See e.g., Stephen M. Walt, “Rethinking the ‘Nuclear Revolution’” \textit{NPR}, July 6, 2014, available at http://www.publicbroadcasting.net/kbia/artsmain/article/1/1338/1684234/Columns/Foreign.Policy.Rethinking.The."Nuclear.Revolution and Robert Jervis, “Why Nuclear Superiority Doesn’t Matter” \textit{Political Science Quarterly} 94, no. 4, Winter 1979-80, pp. 617-633. Peter Lavoy has labeled this group as proliferation relativists, but they are still a subgroup
Each of these schools—arms control, hawkish, and academic—also differ on the impact and desirability of sharing dual-use nuclear technology for civilian applications. Arms control proponents insist that nuclear supplier states have an NPT obligation to transfer as much “peaceful” nuclear technology to nonweapons states as possible so long as it is for a declared civilian project that is internationally inspected. Failure to do so “without discrimination,” in their eyes, risks unraveling the NPT.22

Most hawks, on the other hand, object to civilian nuclear cooperation with hostile states (e.g., Iran and North Korea) but otherwise support the global expansion of civilian nuclear power. They certainly are willing to share such technology with close friends even if such transfers might enhance existing or potential weapons options (e.g., India, Saudi Arabia, South Korea, or Japan). As for the neorealists, some have faulted nuclear nonproliferation policies for unnecessarily inhibiting nuclear power’s beneficial development domestically and overseas, but most have no set view.23 Several have argued that letting nuclear weapons spread to selected countries or sharing “nuclear capabilities” with them might bolster U.S. security.24

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22. See note 5.


For arms control advocates, then, the superpowers must reduce their arsenals (“vertically”) to encourage nonweapons states not to proliferate (“horizontally”). Failure to make such reductions risks instability or, worse, nuclear use. Hawkish critics, meanwhile, believe that reducing U.S. nuclear weapons capabilities is more likely to risk nuclear proliferation and war than otherwise would be the case if one augmented U.S. and allied strategic weapons capabilities or, at least,
kept them from declining. Finally, academic skeptics deny vertical reductions and horizontal nonproliferation are all that closely linked and suggest that more nuclear weapons in more hands may actually reduce the prospects for war or, at the very least, that nuclear weapons and their proliferation are not all that significant (see Figure 1 on page 14 and 15).
## Figure 1. Nuclear Proliferation: What We Think

<table>
<thead>
<tr>
<th>View</th>
<th>Selected Representatives</th>
<th>Favor Relying on Nuclear Weapons for Security</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arms Control Perspective</strong></td>
<td>Most Western governments</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>International forums (e.g., IAEA, NPT Review Conference)</td>
<td></td>
</tr>
<tr>
<td><strong>Hawkish Supporters of Nuclear Weapons</strong></td>
<td>Nuclear weapons enthusiasts</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Reagan-era Hawks (e.g., Donald Rumsfeld, Dick Cheney)</td>
<td></td>
</tr>
<tr>
<td><strong>Academic Skeptics/Finite Deterrence Enthusiasts</strong></td>
<td>French Proponents of Force de Frappe &amp; early backers of U.S. SLBM force (e.g., Pierre Gallois, Arleigh Burke)</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Neorealists (e.g., Ken Waltz)</td>
<td></td>
</tr>
<tr>
<td><strong>Academic Skeptics/Finite Deterrence Critics</strong></td>
<td>Post-neorealists (e.g., John Mueller)</td>
<td>No</td>
</tr>
<tr>
<td>Believe Nuclear Weapons Deter</td>
<td>Willing to Go to Zero</td>
<td>Support Sharing Civil Nuclear Energy</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
<td>No (for friends)</td>
<td>No (for enemies)</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td>Unclear</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Reservations

These three views on how nuclear weapons reductions and non-proliferation relate are clear, plausible, and popular. They dominate the current debate over nuclear weapons policies. There is only one problem: In practice, none of them make nearly as much sense as their supporters think.

One can see this most readily by examining how each school addresses the simplest and most popular of policy questions: Should one be for or against nuclear weapons? Add to this question (for the purposes of this inquiry) the matter of nuclear weapons proliferation, and the query admits to two simple answers—yes (in support of nuclear weapons and additional proliferation) or no against both.

Let’s take the against-side first. Those opposed to nuclear weapons and their further proliferation—i.e., those who want to move toward zero nuclear weapons as soon as possible—go to great lengths to explain why a world without nuclear weapons is preferable to our current world. They emphasize Ronald Reagan’s observation that a nuclear war can never be won and so should never be fought. They also detail how a world with zero nuclear weapons might work, and how one might prevent a relapse into a nuclear-armed world once nuclear weapons have been eliminated. This school of thought was also behind the “Global Zero” campaign against nuclear weapons and the 2017 United Nations adoption of the “Treaty on the Prohib-

tion of Nuclear Weapons,” signed by 58 states but boycotted by the United States and the other nuclear weapons states.26

Unfortunately, these same analysts are less articulate on how one might persuade existing nuclear weapons states to give up their weapons or how exactly one would get to zero.

So far, the United States and Russia have reduced their nuclear holdings from over 70,000 deployed nuclear weapons27 to several thousand on each side.28 This begs the question, though: How easy would it be to reduce further to a few hundred warheads if other states (e.g., China, Israel, France, the United Kingdom (UK), North Korea, Pakistan, or India) acquired or deployed as many or more? Would this not encourage increased military competitions, nuclear arms racing, miscalculation, and unnecessary, and potentially disastrous wars?

Securing clear answers to such questions, of course, is difficult. Nonetheless, analysts backing zero nuclear weapons offer a general picture of how things might work. According to their narrative, the more the U.S. government increases its support for nuclear weapons reductions and reduces its own arsenals with Russia, the more likely other nuclear-armed states (e.g., China, India, and Pak-


istan) would be to fall in line. To help promote this more restrained nuclear future, the United States and Russia, it is argued, should also abandon plans to deploy or defend their nuclear strategic forces in any effort to achieve military advantage over one another or other nations. Rather than aim their nuclear weapons against countless military targets, the superpowers should adopt finite nuclear deterrence strategies that would hold each other’s population and industrial centers at risk. Defending these cities and military assets should also be eschewed in order to assure mutual vulnerability. This would reduce the need for ever larger, more accurate, quick-alert nuclear arsenals and make deep cuts in existing nuclear stockpiles more feasible. With increased nuclear restraint by the major nuclear states, states lacking nuclear weapons would become more willing to eschew nuclear weapons and support nuclear nonproliferation.\(^{29}\)

This is the upbeat narrative. The downbeat narrative has us clinging to our bombs. The more we maintain our nuclear stockpiles, we are warned, the more it will undermine our claims that we want to rely less on nuclear arms to assure our security. This, in turn, risks encouraging other states to acquire nuclear weapons (i.e., promoting more North Koreas, Irans, and Pakistan), which will only strain

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existing security relations and tempt America’s friends and allies (e.g., South Korea, Japan, Saudi Arabia, Turkey, etc.) to acquire nuclear weapons options of their own.

Those backing nuclear reductions also offer historical analysis to challenge the presumed security utility of nuclear weapons. Nuclear arms, they note, have failed to deter important conventional wars (e.g., the Korean or Vietnam wars or the Egyptian strike against Israel in ‘73) or terrorist attacks (e.g., 9/11 and the Pakistani-backed terrorist strikes against targets in India and Afghanistan).

Attempts to acquire nuclear weapons, as well as mere possession, also have prompted military strikes (e.g., Iran, Israel, and the United States against Iraq’s nuclear reactor at Osirak in 1980, 1981, 1991, and 2002; Iraq against Iran’s reactor at Bushehr in repeated attacks from 1984-1988; Iraq’s failed Scud missile strike against Israel’s reactor at Dimona in 1991; and Israel’s strike against Syria’s reactor in 2007). In addition, attacks were seriously considered against new nuclear states (e.g., the United States against the Soviet Union in 1949 and the Soviet Union against China in 1969). Bottom line: The possession and spread of nuclear weapons generally undermines security. What, then, are nuclear weapons good for? Only the peculiar task of deterring other states from using their nuclear weapons.

This last reflection, of course, is intended to further demonstrate how little value nuclear weapons add and why their early elimination is desired. This conclusion, though, is triple-edged. Certainly, if nuclear weapons truly are not all that militarily valuable, what is the urgency to eliminate them? Some states held on to their horse

cavalries after the First World War and their battleships long after the Second World War, but that hardly encouraged their rivals to acquire them, and by mid-century these military instruments hardly posed a strategic threat to anyone.

On the other hand, if nuclear weapons can effectively deter other nuclear-armed states, wouldn’t that make their acquisition by non-weapons states all but irresistible? The refrain of many security analysts after the first Gulf War against Iraq was that the United States would never have tried to remove Saddam Hussein if he actually had the bomb. In what way were they wrong?

Finally, is it reasonable to think that no one will ever use their nuclear weapons first? Don’t states that believe in nuclear deterrence presume that if they lacked a survivable nuclear deterrent, their nuclear adversaries might strike their or their allies’ vulnerable forces in an attempt to gain some clear advantage? If so, wouldn’t they constantly (and naturally) be worried that their or their allies’ nuclear retaliatory capabilities might be knocked out or be seriously degraded in a first strike by their opponents? Wouldn’t failing to attend to these matters and merely making bluffs to retaliate against a few targets of dubious military value (e.g., large population centers versus strategic weapons bases) risk making a hash of the whole notion of deterrence?31

If you allowed, as one should, that the answers to these questions are, at least, unclear, you would expect lengthy, heated debate about what the answers might be. What’s telling, however, is how little debate there is. Instead, if these issues are raised at all, the subject of conversation invariably is shifted to a much less contentious set of concerns: The horrors of nuclear theft, nuclear accidents, unau-

What We Think

Authorized use, sabotage, and terrorism. Focusing on these issues quickly brings one to the desired conclusion (again) that the immediate reduction of nuclear weapons would immediately make for a much safer world.³² In the interim, we need to do all we can to increase security over existing nuclear weapons assets and reduce the readiness and numbers of deployed nuclear forces to head off these possible threats.

Most of these nuclear security concerns are necessarily speculative. Neither accidental nor unauthorized nuclear use has yet occurred. Yet, there is plenty of near history (close calls of Russian, South African, French, Chinese, and American nuclear launches, tests, and thefts, Broken Arrow incidents, provocative nuclear tests, “lost” warheads, and nuclear weapons-usable materials gone unaccounted for).³³ As for preventing acts of nuclear terrorism, though, such


efforts are entirely anticipatory: Specific, validated intelligence regarding acts of nuclear terrorism has, so far, gone wanting.\(^{34}\)

Despite this (or, perhaps, because of it), addressing these threats has become a public policy cause célèbre. Today, nuclear terrorism is viewed by both Republican and Democratic officials as the “most

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What We Think

immediate and extreme threat facing America and the world. Bills of dollars are appropriated annually on questionable nuclear weapons detection and forensics efforts and nuclear security and cooperative threat reduction programs. Meanwhile, broad intel-


elligence sweeps, including of domestic phone and internet communications, have been justified, in no small part, to prevent possible terrorist use of weapons of mass destruction.\textsuperscript{37}

Far less controversial are the international nuclear security summits President Obama launched in 2009. The fourth, held in Washington D.C. in 2016, allowed scores of nations, including those acquiring or deploying nuclear weapons, to extol the virtues of keeping their nuclear weapons-related assets safe against seizure, sabotage, and illicit use. Details about how they might accomplish this, however, were kept, as with previous summits, to a minimum, lest hostile states learn what might be needed to attack or seize these holdings.

Although this set of nuclear security worries has been spotlighted to maximize alarm, many who voice them are nonetheless convinced that further progress on nuclear arms control, which would eliminate most of these problems, is all but inevitable. They celebrate the New START (Strategic Arms Reduction Treaty) agreement and are enthusiastic about reaching further unilateral and negotiated cuts as well as ratification of the Comprehensive Nuclear-Test-Ban Treaty

They also remain steadfast in their belief that negotiated settlements can roll back Iran’s and North Korea’s “aberrant” nuclear misbehavior. Yet, little is said about other nuclear or near-nuclear weapons states. Instead, there is self-congratulation that President John F. Kennedy’s earlier warnings that there might be 20 or more nuclear weapons states by 1970 proved to be unfounded and insistence that pushing more arms control is our best hope to eliminate the remaining nuclear threat.

What else must be pursued besides more START negotiations and nuclear security summits? Three things, all of which President Obama announced in his 2009 Prague speech: Bring the CTBT and Fissile Material Cut-off Treaty (FMCT) into force and share “peaceful” civilian nuclear technology under appropriate international safeguards. This roughly tracks the now popular “three-pillar” view of the NPT—that to get nonweapons states not to acquire nuclear weapons, the weapons states must reduce their nuclear arms and offer more “peaceful” nuclear energy transfers.

Putting aside the improbability of the U.S. Senate or Moscow backing the ratification of more significant arms control agreements any time soon, accomplishing this agenda is practically impossible without the unlikely support of states such as Iran, North Korea, Paki-


As for sharing “peaceful” nuclear technology and disarming to secure continued nonproliferation, it is difficult to see how such an approach can prevent future Indias, Irans, Syrias, or North Koreas. Even if one ignores how little of the NPT’s diplomatic history actually supports today’s legalistic enthusiasm for the “three-pillar” view,\footnote{See Albert Wohlstetetter, “Spreading the Bomb without Quite Breaking the Rules,” Foreign Policy, no. 25, Winter 1976-77, pp. 88-94, 145-179, available at \url{http://www.npolicy.org/userfiles/file/Nuclear%20Heuristics-Spreading%20the%20Bomb%20without%20Quite%20Breaking%20the%20Rules.pdf}; Arthur Steiner, “Article IV and the ‘Straightforward Bargain,’” PAN Heuristics Paper} promoting this bargain is, at best, problematic.
First, although encouraging nuclear weapons restraint can indirectly support nonproliferation, it is unclear how insisting on making nuclear disarmament a legally binding quid pro quo for adopting sound nonproliferation measures would work. In practice, non-weapons states have held their adoption of nonproliferation measures hostage to the superpowers doing more to disarm while their claim of insufficient progress on this front gives them a diplomatic pretext to threaten to acquire nuclear weapons themselves. From a nuclear control perspective, none of this is helpful. Backing off necessary nonproliferation controls only increases the prospects for more nuclear weapons proliferation. This, in turn, is only likely to increase demand for more nuclear armament.

Second, it is unclear how supplying nonweapons states with the benefits of truly “peaceful” nuclear technology could assist in promoting more or tighter nonproliferation controls. If the technology in question is genuinely benign, by definition, it ought to be easy

to safeguard effectively against military diversions and so be safe to share free of any apprehensions it might be diverted to make bombs. If, furthermore, the nuclear item in question is profitable to sell, it is difficult to understand why nuclear supplier states would need additional incentives, much less nonproliferation ones, to share it.

On the other hand, if what was being sold is proliferation-prone (i.e., close and essential to bomb-making) and, therefore, dangerous to share, it is unclear why any state eager to promote nuclear nonproliferation would think it had an NPT obligation to transfer it. Again, effective nuclear nonproliferation presumes the sharing of only truly “peaceful” nuclear goods and technologies—i.e., of nuclear items and know-how that are so far from making bombs that attempts to divert them for this purpose could be detected early and reliably enough to intervene effectively to prevent any weapons from ever being built. The alternative would be that there is an NPT obligation to share dangerous nuclear technologies and goods that can bring a nonweapons state to the very brink of acquiring bombs. But how much nonproliferation sense would that make? The answer is all too clear.

This, then, brings us to hawks who object to such wishful thinking—those who are “for” nuclear weapons. Their brief essentially is that nuclear weapons have kept the peace. If you push for deeper nuclear reductions, they argue, it will do nothing to slow determined proliferators from acquiring nuclear weapons.42

More important, it could undermine our security alliance system, which, in turn, would increase the risks that our friends and allies might go nuclear.\textsuperscript{43} All of this, in turn, would only increase the prospects for war and the possible use of nuclear weapons.

This line of argument, like that of the zero nuclear weapons crowd, makes a number of sensible points. Yet, it too is imperfect. First, as has already been noted, we know that nuclear weapons have not deterred all wars. Both North Korea and North Vietnam took the United States on in long-fought wars. Nor did U.S. nuclear weapons deter China and Russia from lending Hanoi and Pyongyang substantial military support.\textsuperscript{44} Then there’s the Israeli war of 1973. Israeli possession of nuclear arms may have changed the way the war was fought (some contend the United States came to Israel’s aid at the last moment for fear that the war might go nuclear). But Israeli nuclear weapons did not prevent the war.\textsuperscript{45} Finally, it is


\textsuperscript{45} See Shlomo Brom, “Utility of Nuclear Deterrence in the Middle East,” and
unclear how, if at all, nuclear weapons might deter nonstate actors from engaging in terrorism—nuclear or nonnuclear.\textsuperscript{46}

Perhaps the point is nuclear weapons have prevented some “major” (nuclear) wars or “major” defeats rather than all forms of military aggression. This seems plausible. Certainly, the number of war casualties as a percentage of the world’s population has declined significantly since Hiroshima and Nagasaki.\textsuperscript{47} Yet, any “proof” of why something didn’t happen can never be known with scientific certainty. As we have discussed, a good number of security experts question if nuclear deterrence ever really “worked” during the Cold War.\textsuperscript{48} Nor is the threat of nuclear escalation the only possible expla-


46. In the case of nonnuclear terrorism, Pakistani-backed terror strikes against India suggest nuclear deterrence against such threats is hardly effective. Hawkish defenders of nuclear deterrence insist that given the heavy state sponsorship of nonstate actors, though, nuclear threats properly focused could, in some cases, help deter WMD terrorism. See, e.g., Brad Roberts, “Deterrence and WMD Terrorism: Calibrating Its Potential Contributions to Risk Reduction,” IDA Paper P-4231, Institute for Defense Analyses, Alexandria, VA, June 2007. That said, no act of terrorism involving the detonation of a nuclear weapon has yet been seriously attempted.


nation for why post-WWII war casualties declined so much (smaller wars usually follow large ones; post-war alliances were created and kept strong; military science improved; with lower aiming inaccuracies, indiscriminate damage in war declined, etc.) These other explanations certainly cannot be discounted.

This, then, brings us to the second problem—this argument’s lack of qualification. If one allows that nuclear weapons have deterred major wars, what is one to make of the observation? If some nuclear weapons have deterred some wars, wouldn’t more deter more and wouldn’t more advanced (or, at least, an ability to produce them quickly) deter even more?49 Wouldn’t this recommend

49. On the desirability of being able to “adapt” the size and character of one’s nuclear weapons force quickly and of redeploying U.S. tactical nuclear weapons overseas, see Keith B. Payne, et al., _Nuclear Force Adaptability for Deterrence_
increasing nuclear production capacities and resuming nuclear testing?50 Also, what of other states that lack such arms? Wouldn’t their acquisition of nuclear forces help deter wars as well? Might the further proliferation of weapons, at least to our friends, then, be a good thing? Vice President Cheney argued that if China failed to get North Korea to eliminate its nuclear weapons capabilities, it might well prompt Japan to acquire nuclear weapons of its own. President Donald Trump has argued that Japan and South Korea will eventually go nuclear and this may be good; Boris Johnson that helping Iran get the bomb might bolster peace. One also hears hawkish American support for Israel maintaining its nuclear forces until there is peace in the Middle East and for India to build its nuclear capabilities up to counter China’s nuclear forces.51


51. See note 24.
As logically consistent as these arguments may be, they ought to cause unease. An unspoken assumption is that nuclear deterrence will work perfectly (as it supposedly did with Russia during the Cold War) and that it can be counted upon to work perfectly forever into the future. This is presumed no matter how many nuclear-armed states there might be, how rash or reckless these countries’ leaders are, or how vulnerable their forces might be to a first strike. It also presumes, *sub silentio*, that the lack of truly disastrous nuclear weapons accidents, unauthorized firings, acts of nuclear terrorism, and thefts that we have experienced so far is a permanent feature. All of this might well be correct in the near and mid-term. But barring the adoption of new, more effective nuclear restraints and security controls that apply not just to the United States, but to other nations, it is difficult to believe such optimism is much more than a bet against the house.

Yet another unspoken premise at play is that smaller nuclear weapons states and states eager to develop a nuclear weapons option are merely “lesser included threats.” The notion here is that if the United States can deter or constrain Russia, the largest nuclear weapons state, the United States and its allies are safe (or much safer) against any other lesser nuclear-armed state. This roughly was the message in the 2012 presidential election campaign when

52. Recent analysis of past U.S. and Soviet nuclear accidents suggests the size of these two states’ arsenals hardly correlated to the number of nuclear accidents. In fact, historically the correlation has been negative. What is unknown, however, is how well other countries have secured their arsenals against theft and accidents, what their history has been and what it and the history of U.S. nuclear weapons accidents will be. In this regard, only one large accident is needed to change history forever. Thus, our experience so far is not necessarily dispositive. Compare note 32 with Keith Payne, et al., *Minimum Deterrence: Examining the Evidence*, Fairfax, VA: National Institute Press, 2013, pp. 52-54, available at [http://www.nipp.org/wp-content/uploads/2014/12/Final-Distro.pdf](http://www.nipp.org/wp-content/uploads/2014/12/Final-Distro.pdf). Also consider “Lost nuclear weapons are an unreported problem,” *NJ Today*, February 24, 2016, available at [http://njtoday.net/2016/02/24/lost-nuclear-weapons-are-an-unreported-problem/](http://njtoday.net/2016/02/24/lost-nuclear-weapons-are-an-unreported-problem/).
candidate Mitt Romney described Russia as America’s number one geopolitical foe and the Obama Administration defended the primacy of working with Russia (versus China or other smaller nuclear states) to limit America’s nuclear arsenal. Russia is our most important strategic competitor.53 Deal with it and you can deal with the others; fail to neutralize Moscow, and you are unlikely ever to prevail.54

But is this true? Russian President Vladimir Putin has yet to explicitly threaten to destroy the United States.55 North Korea, however,


55. Putin, in fact, recently denied that he had any desire to enter in to a nuclear arms race with the United States. See Roland Oliphant, “Vladimir Putin says Russia ‘won’t start an arms race’ at annual press conference that lasts almost four hours,” The Telegraph, December 23, 2016, available at http://www.telegraph.co.uk/news/2016/12/23/vladimir-putin-updates-russia-world-annual-press-conference/. Putin, however, has voiced concerns that the United States may be threatening
has.\textsuperscript{56} If North Korea followed through with its military threats against South Korea or Japan (two states the United States is bound by formal security agreements to defend), would that not threaten a general war that the United States would be loath to wage? What if Iran acquired nuclear weapons and deployed them to deter the United States and its Gulf allies from countering Iranian conventional military aggression and covert actions against its neighbors? Such nonnuclear aggression could drive the international price of oil to levels that could strategically weaken both the United States’ and most of the world’s economies. Would nuclear strategic superiority over Russia enable Washington to counter such concerns?

This set of questions brings us to the views of our academic skeptics. As already noted, this school is split into two groups. The first includes those who think that the further proliferation of nuclear weapons may be beneficial, that upon a state’s acquisition of nuclear arms effective nuclear deterrence is automatically assured. The second includes those who question the deterrence value of nuclear arms but who also believe that preventing their proliferation is generally unnecessary or misguided.

What is appealing about the second group is its willingness to take on those who extol the virtues of nuclear deterrence. Did nuclear weapons force Japan to surrender in WWII? No, Japan’s Emperor only argued they did to save face in surrendering because he knew Japan was destined for defeat by American and Soviet conventional arms. Did they deter the Soviet Union from invading Europe during the Cold War? No, what kept the peace after 1945 was the creation of effective East-West security alliance systems and the very real fears these military alliances fostered of a massive, conventional WWII if Cold War diplomacy failed.

This second group of academics also offers thought-provoking rejoinders to the conventional wisdom that nuclear terrorism should be worry number one. Is the threat of nuclear terrorism the most imminent and extreme security threat we face? Not really. There are good reasons why no acts of nuclear terrorism have yet taken place and these are likely to apply well into the future. Building or stealing nuclear weapons is too large and complex an operation for most terrorist organizations. A terrorist team tasked to build or seize such weapons would have to worry about being penetrated and betrayed to authorities. Certainly, the high levels of trust and cooperation needed to pull off such efforts would be difficult to maintain. Nor is it in the interest of states that possess such weapons to let anyone but the most trusted and loyal gain access to them.57

This pushback to what are now the most popular views on nuclear deterrence and terrorism is edifying. Yet, ultimately one counter-
factual on what might have prevented an event (e.g., various post-
WWII wars) can hardly trump another. Nor do negative projections
on nuclear terrorism top positive ones if only because the future
probability of events that have not yet occurred can’t be known
statistically. In the end, all such projections are speculative.

Moreover, what the two skeptical academic camps agree on—that
the dangers associated with nuclear weapons proliferation are exag-
gerated—is rebuttable. First, they gloss over the serious military
risks faced by nations acquiring nuclear weapons. One can see this
most clearly by their inattention to the numerous historical cases of
preventive military actions taken against states attempting to build
their first bomb and to serious plans countries have made to knock
out the nuclear capabilities of new nuclear weapons states.

In the first category are the British campaign against the Nazi-oper-
ated heavy water plant in Norway, Iran’s air strike against Iraq’s
Osirak reactor in 1980, Israel’s attack of the same reactor in 1981,
Iraq’s repeated strikes against Bushehr between 1984 and 1988,
America’s air strike against Iraq’s nuclear facilities in 1991, Sad-
dam’s failed Scud missile strike against Israel’s Dimona reactor in
the same year, an American Tomahawk strike against Iraq’s urani-
um enrichment plant at Zaafaraniyah, British and American strikes
against a variety of suspect Iraqi nuclear sites in 1998, Israel’s air
strike against Syria’s covert nuclear reactor in 2007, and U.S. and
Israeli covert and cyber attacks against Iran’s nuclear program from
2006 to 2010.

Just as numerous are the occasions that states planned or prepared
to knock out the nuclear weapons capabilities of their adversaries.
The U.S. military gave serious thought to using nuclear weapons
to destroy the Soviet Union’s nuclear complex in 1949 and Chi-
na’s in 1964. It also made preliminary military preparations for
attacking North Korea’s nuclear complex in 1994. The Russians,
meanwhile, considered attacking South African nuclear facilities in
1976 after detecting South African preparations to test. They even asked the United States for assistance in making the strike. In 1969, a major border dispute between China and Russia went hot and Moscow gave serious consideration to attacking China’s nuclear complex. Two years before, Egypt threatened Israel’s production reactor at Dimona. Israel and India, meanwhile, cooperated in several schemes in the 1980s (one of which nearly was implemented) to knock out Pakistan’s nuclear weapons facilities at Kahuta.  

Second, while most academic skeptics believe nuclear weapons automatically deter aggression nearly perfectly even in small numbers, yet others believe nuclear weapons are militarily useless even if these weapons are numerous and advanced. Because of this, academic skeptics pay little attention to the security risks that may come with deep nuclear weapons reductions—i.e., the transitions from nuclear plenty to zero—risks which are potentially serious.

Finally, academic skeptics tend to ignore or gloss over the risks “upward” nuclear transitions present. These dangers are three-fold. First, as the number of nuclear weapons players increases, the gravity, complexity, and likelihood of ruinous nuclear incidents may increase within states (e.g., unauthorized or accidental use, terrorist theft, irredentist seizure, etc.) and between them (e.g., catalytic wars, misread nuclear signaling, etc.). Second, and closely related, are the numerous technical and managerial challenges each nuclear state

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faces to make their nuclear forces robust and survivable enough to have any hope of effectively deterring attacks. These challenges are most severe for new nuclear weapons forces but are hardly inconsequential for large, mature forces. Last, as the number of states possessing nuclear forces increases to include nations covered by nuclear security alliance guarantees, the continued viability and coherence of these alliance systems are likely to be tested in the extreme, increasing the prospects for war.

**Optimists All**

Given the various close call nuclear crises of the Cold War (e.g., the Suez Crisis, the Cuban Missile Crisis, the Berlin Crisis, and various Taiwan Strait crises), the nuclear brinkmanship conducted by India and Pakistan, and the nuclear preemption and dares of the Israeli wars of 1967 and 1973, nuclear proliferation hardly seems

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59. For the earliest and most accessible discussion of these technical hurdles, see Albert Wohlstetter, “The ‘Delicate’ Balance of Terror,” RAND Paper P-1472, RAND Corporation, Santa Monica, CA, November 6, 1958, available at [http://www.rand.org/about/history/wohlstetter/P1472/P1472.html](http://www.rand.org/about/history/wohlstetter/P1472/P1472.html). It should be noted that Wohlstetter goes to considerable lengths in his study to spotlight how mastering the technical requirements for securing an effective nuclear deterrent force is essential to prevent preemptive, accidental, and unauthorized nuclear wars as well as nuclear accidents generally. This suggests that attention to these requirements is desirable whatever the merits of nuclear deterrence might be.


“inconsequential,” much less stabilizing. Just the opposite. Of course, until and unless there is nuclear use, there will be no proof in these matters: We can’t predict the future with much certainty and the causes of wars are always complex. All we know is that the United States fired nuclear weapons in anger on Hiroshima and Nagasaki, that the United States and Russia threatened to use them several times during the Cold War, but that, for some reason, since 1945, they never have been used.

It would be nice to believe that they never will. Unfortunately, they might. Russia, Pakistan, and North Korea are quite explicit about the advantages of using nuclear weapons first against their adversaries.62 Some analysts also now believe China’s no first use policies may be undergoing revision.63 All of these states, plus Israel, North Korea, org/books/Pakistans_Nuclear_Worries/Ch5_Lavoy.pdf; and Ori Rabinowitz, Bargaining on Nuclear Tests: Washington and Its Cold War Deals, Oxford: Oxford University Press, 2014, pp. 70-105.


and India are increasing or modernizing their nuclear arsenals. If these states are followed by Iran, South Korea, Japan, Turkey, the United Arab Emirates (UAE), or Saudi Arabia,\textsuperscript{64} the chances for nuclear miscalculations and war would likely go up, not down.\textsuperscript{65}

Again, it may well be, as one recent analysis suggested, that the prospects for war will decline as soon as there is “symmetry” between any two nuclear states. This conclusion, however, begs the question of precisely when and how such “symmetry” might be achieved or perceived by each party. This matters since this same analysis concludes that without such nuclear symmetry, the prospects for conflict will increase.\textsuperscript{66}

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{64} See Kidd, “Nuclear Proliferation Risk - Is It Vastly Overrated?” Kidd, a nuclear power proponent who subscribes to the optimistic view of the nuclear neorealist skeptics, projects that there will “only” be roughly six more nuclear-armed states by 2030. He did not name them and it is impossible to know which states might go nuclear next, but the six listed here are among the most frequently mentioned in the current literature.
\item \textsuperscript{65} See Thomas W. Graham, “Nuclear Weapons Stability or Anarchy in the 21\textsuperscript{st} Century: China, India, and Pakistan,” in \textit{The Next Arms Race}, pp. 262-304, available at \url{http://npolicy.org/books/Next_Arms_Race/Ch9_Graham.pdf}.
\end{enumerate}
\end{footnotesize}
Nor can we assume that the consequences of nuclear use will be minor. Total industrial wars may no longer be likely. But, this hardly precludes the possibility of “limited” nuclear conflicts.\(^67\) Also, with advanced societies’ newfound distaste for protracted wars has come an increased intolerance for violence. America’s security state reaction to 9/11 certainly suggests the public desire for security has reached a new all-time high. A nuclear event almost anywhere, as a result, is likely to prompt even more security (i.e., repressive) governance. Think *Nineteen Eighty-Four*. For governments originally dedicated to the proposition of enlightened self-rule, this should be a worry.\(^68\) At the very least, it ought to inform our thinking about nuclear weapons and their possible use.

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Yet, those eager to go to zero ultimately do not appear to be all that concerned states might intentionally use these weapons. Just the opposite. Most nuclear abolitionists allow that nuclear weapons are only useful to deter nuclear attacks and believe that they do. For them, it would be irrational for states to use nuclear weapons to secure military advantage. Nor do they seriously consider that Russia, Pakistan, North Korea, or China might develop their nuclear forces for purposes other than deterrence. Their worries instead optimistically focus on the yet unrealized threats of nuclear terrorism, accidental detonations, and unauthorized use. Finally, they’re convinced that deeper U.S. nuclear reductions will prompt others to follow suit and insist that despite the not so peaceful past nuclear activities of India, Iraq, Iran, Egypt, Turkey, North Korea, South Korea, Taiwan, and Syria, sharing more dual-use nuclear technology will help yet strengthen the NPT.

Nuclear hawks, meanwhile, fear that our enemies might use nuclear weapons but are cautiously optimistic that the United States and its allies can be made safe against such threats so long as the right number of nuclear weapons of the right kind in the right hands are on the ready and the United States and its friends are willing and able to knockout proliferators’ nuclear projects in a timely fashion through conventional military strikes and covert action. Regarding the nuclear security concerns of the abolitionists, they are similarly upbeat: We have avoided accidental and illicit use so far; with due diligence we can manage this problem into the future.

Finally, academic skeptics are perhaps the most optimistic of all: Further nuclear proliferation is either good or, at least, not a worry. Nuclear weapons deter nuclear wars completely or are so useless they never will be used.

Each of these views serves our highest hopes. The question is: Do they adequately address what we should be most worried about? Do they deal with the possible military diversion of “peaceful” nuclear energy—a dual-use technology likely to spread further? Do they adequately address the perils of making nuclear cuts as other states continue to maintain or increase their arsenals? Do they assume that if we maintain our nuclear weapons force capabilities, we will forever deter the worst? Do they fully consider the military risks states run when they acquire their first nuclear weapon or try to ramp up existing arsenals significantly? Can any of them alone serve as a practical guide to reduce the nuclear challenges we face?