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RETHINKING THE ROAD TO ZERO

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Proposals to significantly reduce or even abolish nuclear weapons are as old as nuclear weapons themselves. Over the past several years, however, they have gained considerable momentum and moved squarely into the mainstream of policy analysis and political debate. In large part, this is due to the persistent efforts of high-profile advocates, from former statesmen to current senior officials.

In 2007, for example, Henry Kissinger, George Shultz, William Perry, and Sam Nunn published the first of several articles highlighting the continuing—and, in their view, growing—dangers associated with nuclear weapons, and called for new arms control and disarmament measures to mitigate these threats.¹ Then, in 2009, President Obama expressed his support for these arguments and declared his intention “to seek the peace and security of a world without nuclear weapons.”² The next year, the United States and Russia signed the New START treaty, which prohibits either side from deploying more than 1,550 strategic nuclear warheads and 700 strategic delivery vehicles. According to the president, this was just the first step toward even deeper cuts; in his view, it is possible to “ensure the security of the United States and our allies, maintain a strong deterrent against any threat, and still pursue further reductions in our nuclear arsenal.”³ Following through on this pledge, the president recently announced his willingness to shrink the U.S. inventory of operationally deployed strategic nuclear weapons by up to one-third and decrease the number of tactical nuclear weapons deployed in Europe—if Russia is willing to do the same.⁴

¹ See George P. Shultz, et al., “A World Free of Nuclear Weapons,” *Wall Street Journal*, January 4, 2007; “Toward a Nuclear-Free World,” *Wall Street Journal*, January 15, 2008; and “Deterrence in the Age of Nuclear Proliferation,” *Wall Street Journal*, June 1, 2011.

² “Remarks by President Barack Obama,” Prague, Czech Republic, April 5, 2009, http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered.

³ “Remarks by President Obama at Hankuk University,” Seoul, Republic of Korea, March 26, 2012, <http://www.whitehouse.gov/the-press-office/2012/03/26/remarks-president-obama-hankuk-university>.

⁴ “Remarks by President Obama at Brandenburg Gate,” Berlin, Germany, June 19, 2013, <http://www.whitehouse.gov/the-press-office/2013/06/19/remarks-president-obama-brandenburg-gate-berlin-germany>. So far, Moscow has indicated that it is not willing to pursue additional nuclear reductions unless conventional capabilities like missile defenses and extended-range precision-strike systems are included in any negotiations, and until other nuclear powers become part of the arms control process. Peter Nichols and William Boston, “Obama’s Nuclear Proffer Gets Russian Rebuff,” *Wall Street Journal*, June 19, 2013; and “Russia: Talks on New Nuclear Cuts Must Involve All Nuclear Powers,” *Global Security Newswire*, June 24, 2013.

The long-term goal of a nuclear weapons-free world is motivated by understandable and laudable concerns; namely, a deep appreciation for the immense destruction that these weapons can cause and legitimate fears that they might be used again. It is also a reflection of the very real and profound changes that have taken place in the security environment over the past two decades, including the end of the Cold War, the spread of nuclear weapons to hostile and fragile nations, and the prospect that non-state actors with no interest in deterrence might acquire these weapons or the means to build them. Nevertheless, before the United States moves quickly to another round of nuclear reductions, it is important to reconsider the debate over disarmament, the logic behind the global zero argument, and the potential consequences of a major drawdown in U.S. nuclear forces.

Like many arms control and disarmament proposals, efforts to dramatically reduce or eliminate nuclear weapons are vulnerable to a number of standard criticisms.⁵ For instance, they may not be feasible (unless reductions can be definitively verified) or desirable (because other nations could cheat on agreements or fail to reciprocate unilateral cuts). There is also the inherent paradox that meaningful arms control is most achievable when it is least necessary; that is, a precondition for significant arms limitations is often the resolution of underlying disputes between longtime rivals.⁶ Finally, success is no guarantee of increased stability—the pre-atomic era was far more deadly than the post-atomic world, because the overwhelming destructiveness of nuclear weapons is a powerful deterrent to major war. Moreover, the elimination of nuclear weapons could introduce new sources of conflict and new incentives for escalation. As Thomas Schelling has argued, not only might nuclear-capable nations preserve the ability to reconstitute or develop nuclear weapons during a crisis or war, there would also be considerable pressure on those who succeeded first to blackmail their rivals or preventively destroy an opponent's nuclear infrastructure.⁷

Each of these points has merit. There are, however, more immediate concerns that cast doubt on the supposed benefits of deep nuclear reductions on the part of the United States. First, the underlying assumption that now guides U.S. nuclear policy is fundamentally flawed. In principle, additional cuts beyond the limits outlined in New START will set a positive example and inspire other nations to

⁵ Prominent critiques of the global zero argument include Bruno Tertrais, “The Illogic of Zero,” *The Washington Quarterly* (April 2010); and Josef Joffe and James W. Davis, “Less Than Zero,” *Foreign Affairs* (January/February 2011).

⁶ Colin S. Gray, *House of Cards: Why Arms Control Must Fail* (Ithaca, N.Y.: Cornell University Press, 1992), pp. 17–24. Michael O’Hanlon, for example, argues that a necessary precursor for nuclear disarmament is the resolution of existing disputes that could give rise to major conflicts, from the Kashmir question to the status of Taiwan. O’Hanlon, *A Skeptic’s Case for Nuclear Disarmament* (Washington, DC: Brookings Institution Press, 2010), p. 8.

⁷ Thomas C. Schelling, “A World Without Nuclear Weapons?” *Daedalus* (Fall 2009).

follow suit, either by decreasing the size of their own nuclear arsenals, forgoing nuclear modernization programs, or abandoning their nuclear aspirations. In reality, past evidence provides little support for this argument. Second, rather than encourage similar measures in other quarters, deep nuclear reductions could actually have the opposite effect: increasing the prospects of horizontal proliferation (the acquisition of nuclear weapons by non-nuclear nations) and vertical proliferation (the acquisition of additional and potentially more destructive nuclear weapons by existing nuclear powers).

Moving toward Zero: Logic and Evidence

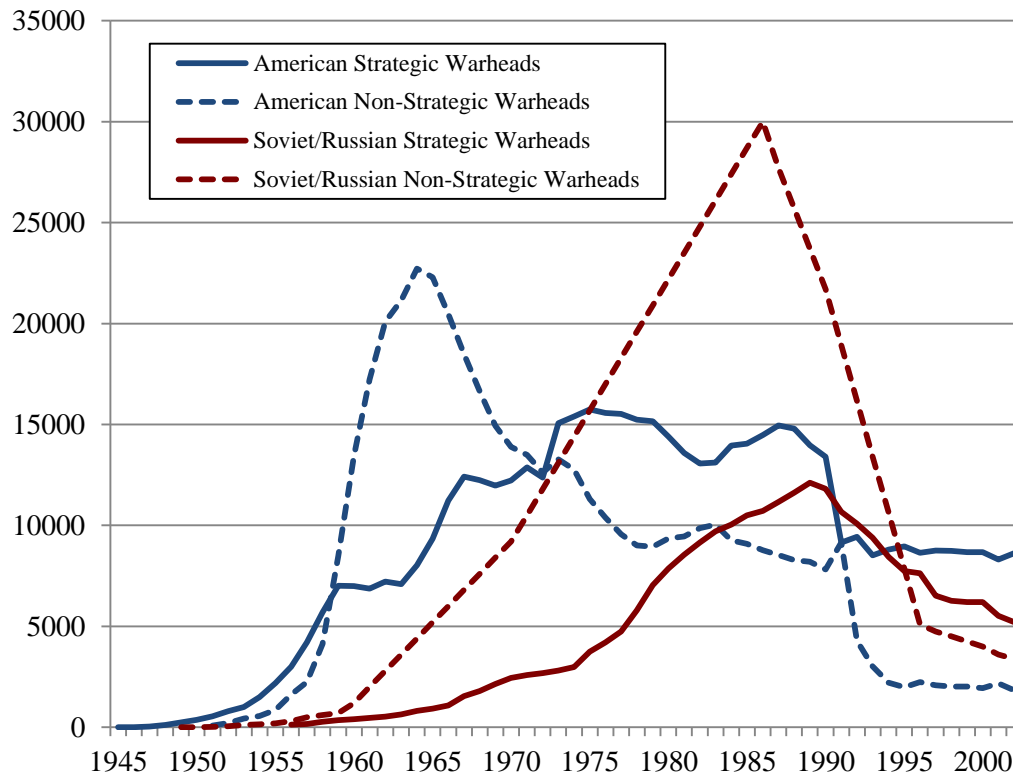
A significant reduction in the size of the U.S. nuclear arsenal is a necessary step toward a nuclear weapons-free world for one obvious reason: the United States, along with Russia, possesses the overwhelming majority of the world's nuclear weapons. Equally important, proponents of nuclear disarmament maintain that by decreasing the size of its arsenal and diminishing its reliance on nuclear weapons, the United States can also help to slow, stop, or even reverse nuclear proliferation.

According to this view, further reductions could provide existing (and prospective) nuclear powers greater latitude to pursue their own reductions (or to forgo the development of nuclear weapons) by taking away the argument that doing so would imperil their security. Alternatively, additional U.S. nuclear cuts could have a powerful symbolic impact by demonstrating an American commitment to disarmament, which could in turn provide the United States with greater leverage as it attempts to convince nations like North Korea and Iran to give up their nuclear weapons or accept greater limitations on their nuclear capabilities, respectively. As Michael O'Hanlon explains, the real goal behind the nuclear disarmament movement "is to put significant pressure—more so than is possible today—on rogue countries if they pursue such weapons anyway," in particular by helping the United States regain "the moral high ground."⁸

Yet the evidence fails to support these arguments. Over the past two decades the United States and Russia have dramatically reduced the size of their nuclear arsenals, yet horizontal proliferation and vertical proliferation have both continued. Even more worrisome, however, is that some nuclear powers are actually increasing their reliance on nuclear weapons to compete with local rivals and compensate for their conventional military weakness.

⁸ O'Hanlon, *A Skeptic's Case for Nuclear Disarmament*, p. 3.

Figure 1: American and Soviet/Russian Nuclear Arsenals, 1945-2002⁹



The overall size of the U.S. nuclear arsenal has been declining for more than 40 years after reaching its apex of more than 32,000 warheads in 1967, and has shrunk dramatically since the end of the Cold War through a series of highly publicized unilateral and bilateral measures. Today, there are approximately 5,000 warheads in the U.S. arsenal, a figure that includes both strategic and tactical warheads, as well as deployed warheads and warheads held in reserve.¹⁰ Moreover, the United States no longer maintains the wide variety of nuclear weapons it once did, abandoning capabilities such as nuclear-armed artillery, short- and intermediate-range ballistic missiles, sea-launched cruise missiles and torpedoes, and air defense missiles. In comparison to other nuclear powers, the United States has also been engaged in extremely modest modernization efforts during this time period—mainly extending the lifespan of decades-old nuclear warheads and making incremental improvements to existing weapons and delivery systems.

⁹ Source: Natural Resource Defense Council Nuclear Data, <http://www.nrdc.org/nuclear/nudb/datainx.asp>.

¹⁰ Robert S. Norris and Hans M. Kristensen, “U.S. Nuclear Warheads, 1945-2009,” *Bulletin of the Atomic Scientists* (July/August 2009); and Hans M. Kristensen and Robert S. Norris, “U.S. Nuclear Forces, 2013,” *Bulletin of the Atomic Scientists* (March/April 2013).

Yet this does not appear to have slowed nuclear proliferation in other quarters. Since the end of the Cold War, India, Pakistan, and North Korea have all joined the nuclear club—testing weapons, building up their arsenals, and improving their capabilities. Other nations seem intent on joining them. Iran, for example, continues to expand its nuclear infrastructure and is widely suspected of having ambitions to become a latent, virtual, or overt nuclear-armed power.¹¹ For its part, Syria was building a nuclear reactor capable of producing significant quantities of plutonium until Israel destroyed the facility while it was still under construction in 2007. Established nuclear powers like China and Russia also continue to modernize their nuclear weapons. Beijing, for instance, is building additional road-mobile intercontinental ballistic missiles (ICBMs) as well as submarine-launched ballistic missiles (SLBMs) to equip its new Jin-class ballistic missile submarines (SSBNs).¹² Likewise, Russia is building new ICBMs, SLBMs, and SSBNs.¹³

At the same time, the United States has also decreased its reliance on nuclear weapons (by relying more on its conventional military forces to deter attacks on its territory and its allies) and narrowed the range of scenarios in which it might employ its nuclear arsenal (by declaring that it would not use or threaten to use nuclear weapons against non-nuclear weapons states that adhere to the nuclear Non-Proliferation Treaty).¹⁴ Yet other nuclear powers are taking steps that could lower the barriers to nuclear use. Pakistan, for instance, has not only been expanding its nuclear arsenal in recent years, it has also been developing the battlefield nuclear weapons and targeting doctrine necessary to strike Indian conventional forces if New Delhi launches an invasion—a dangerous way for Islamabad to deter its stronger rival.¹⁵ Likewise, Russia appears to be placing greater emphasis on its tactical nuclear weapons to offset its conventional military weakness relative to NATO in the west and China to the south, and may also calculate that a limited nuclear strike in the midst of a losing war could bring a

¹¹ A “latent” nuclear power has the capabilities, knowledge, and materiel necessary to build nuclear weapons in a relatively short period of time but chooses not to do so (e.g., Japan). A “virtual” nuclear nation develops and deploys nuclear weapons but forgoes conducting nuclear tests or openly acknowledging its arsenal (e.g., Israel). See Avner Cohen and Benjamin Frankel, “Opaque Nuclear Proliferation,” *Journal of Strategic Studies* (September 1990).

¹² Department of Defense/Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2012* (May 2012), pp. 23-24.

¹³ Pavel Podvig, “Russia’s Nuclear Forces: Between Disarmament and Modernization,” *IFRI Proliferation Papers* (Spring 2011).

¹⁴ Department of Defense, *Nuclear Posture Review Report* (April 2010), p. 15.

¹⁵ Vipin Narang, “Posturing for Peace? Pakistan’s Nuclear Postures and South Asian Stability,” *International Security*, 34, No. 3, Winter 2009/10; and Michael Krepon, “Pakistan’s Nuclear Strategy and Deterrence Stability,” *Stimson Center* (December 2012).

conflict to an end rather than trigger escalation.¹⁶

Ultimately, calls for the United States to make deep nuclear reductions in the hope of slowing or stopping proliferation often downplay the fact that the U.S. nuclear arsenal is a small fraction of the size it once was, and ignore the reality that repeated cuts over the past two decades have not achieved the results that nuclear disarmament advocates have sought or predicted. Importantly, considering *why* nuclear reductions have not encouraged similar behavior on the part of other nations sheds light on the troubling disconnect between the goal of a nuclear weapons free world and the steps that the United States is taking to move toward this objective. Put simply, the very reasons why nuclear reductions have not acted as a break on nuclear proliferation suggest that additional reductions might actually accelerate this trend.

The Risks of Deep Nuclear Reductions

One possible reason why substantial nuclear reductions do not seem to have slowed or stopped nuclear proliferation is that they have not been substantial enough. That is, the destructive power of nuclear weapons is so great, and the size of the U.S. nuclear arsenal at its peak was so large, that even the considerable reductions that have been achieved to date have not meaningfully diminished Washington's ability to inflict a devastating attack on other nations. In short, for nations viewing American nuclear capabilities through the prism of their own vulnerability (not, as the United States does, through the lens of multiple adversaries and many different target sets), past reductions have not represented a genuine indication of Washington's claims that it is decreasing its reliance on nuclear weapons and is committed to the vision of global nuclear disarmament. Rather, because the United States still retains a larger and more sophisticated nuclear arsenal than any other nation, these efforts can easily be dismissed as motivated by pragmatism rather than principle—shedding excess weapons that were a legacy of the Cold War but are no longer needed to meet existing or emerging security challenges.

Of course, it is impossible to pinpoint in advance the threshold where U.S. nuclear reductions would suddenly be viewed as meaningful rather than inconsequential in the eyes of other nations; reassurance, like deterrence, is subjective. By this logic, then, only major reductions that significantly narrow the existing gap between the United States and other nuclear powers would be viewed as a true indicator of America's commitment to a nuclear weapons-free world. Unfortunately, such large reductions could create a window of opportunity for smaller nuclear powers to build up rather than draw down, either to attain numerical parity with the United States (e.g., in the case of China) or to avoid a growing relative gap with a neighbor (e.g., an Indian response to a Chinese

¹⁶ See especially the essays in Stephen J. Blank, ed., *Russian Nuclear Weapons: Past, Present, and Future* (Carlisle: Strategic Studies Institute, 2011).

buildup and Pakistani efforts to keep pace with India). Ultimately, a race to the bottom could actually trigger a sprint to the top.

Another possible reason that past U.S. nuclear reductions have not held global proliferation in check is that they have correlated with a period of American conventional military dominance. In general, the assumption that U.S. nuclear reductions will lead others to reciprocate in kind presupposes that the nuclear strategies, capabilities, and postures of other nations are developed largely in response to American actions. Oftentimes, however, the development of nuclear capabilities has been driven by local considerations, from India's need to counterbalance China, to Pakistan's quest for parity with India, to Iraq's search for an advantage over Iran. Moreover, to the extent that other nations (especially weaker nations and prospective rivals like North Korea and Iran) do pursue nuclear weapons with the United States in mind, they almost certainly see these weapons as the best means of deterring a U.S. *conventional* rather than *nuclear* attack.

This creates a dilemma for nuclear disarmament advocates. One of the chief arguments in support of deep nuclear reductions is that conventional precision-strike systems provide a more effective and more credible way to deter or respond to aggression. According to the Global Zero organization, "strong conventional forces and missile defenses may offer a far superior option for deterring and defeating a regional aggressor" in comparison to nuclear weapons, because "Precision-guided conventional munitions hold at risk nearly the entire spectrum of potential targets, and they are useable."¹⁷ Not surprisingly, the Obama administration's 2010 Nuclear Posture Review declared that the United States would "continue to strengthen conventional capabilities and reduce the role of nuclear weapons in deterring non-nuclear attacks, with the objective of making deterrence of nuclear attack on the United States or our allies and partners the sole purpose of U.S. nuclear weapons."¹⁸ There are, of course, a number of very good reasons to develop new offensive and defensive conventional military forces, from long-range precision-strike systems that can counter anti-access/area denial threats to anti-ballistic missile capabilities that can protect both the United States and its allies. Nevertheless, doing so will mean investing in the types of systems

¹⁷ Global Zero U.S. Nuclear Policy Commission Report, *Modernizing U.S. Nuclear Strategy, Force Structure and Posture* (2012), p. 2. This proposition is questionable, however, given the limited ability of conventional munitions to hold at risk wide area, hardened, and/or deeply buried targets. In fact, if this proposition were true, it would lend credence to arguments made by nations such as Russia that certain conventional capabilities should be included in future nuclear arms control measures.

¹⁸ Department of Defense, *Nuclear Posture Review Report*, p. 17.

that less powerful nations fear—and that could drive them to pursue nuclear weapons or expand their nuclear arsenals in response.¹⁹

Conclusion

The logic behind nuclear disarmament rests on shaky ground. There is little reason to believe that nuclear reductions on the part of the United States will incentivize other nations to diminish their own reliance on nuclear weapons, decrease the size of their nuclear arsenals, or abandon their nuclear aspirations. Instead, major reductions appear much more likely to have the opposite effects, particularly if they provide other nations with an opportunity to reach nuclear parity with the United States, or if compensating measures that improve the U.S.'s offensive and defensive conventional military capabilities actually encourage other states to increase their reliance on nuclear weapons for deterrence and warfighting.

Over the long run, these developments could have enormous and very dangerous implications for global stability and U.S. security. For instance, a multipolar nuclear world with several relatively equal nuclear-armed powers might be far different than the bipolar nuclear balance that the United States is accustomed to, in terms of deterrence requirements, escalation dynamics, and crisis stability. Moreover, as weaker nations develop or enhance their nuclear capabilities to offset the United States' conventional military advantages (and to counter their stronger neighbors), the likelihood that these weapons might be used in a conflict or fall into the hands of non-state actors could increase. In the end, these considerations cast serious doubt on the value of deep nuclear reductions, and should lead disarmament proponents to reconsider the road to zero.

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The Center for Strategic and Budgetary Assessments (CSBA) is an independent, nonpartisan policy research institute established to promote innovative thinking and debate about national security strategy and investment options. CSBA's goal is to enable policymakers to make informed decisions on matters of strategy, security policy, and resource allocation. CSBA provides timely, impartial, and insightful analyses to senior decision makers in the executive and legislative branches, as well as to the media and the broader national security community. CSBA encourages thoughtful participation in the development of national security strategy and policy, and in the allocation of scarce human and capital resources. CSBA's analysis and outreach focus on key questions related to existing and emerging threats to U.S. national security. Meeting these challenges will require transforming the national security establishment, and we are devoted to helping achieve this end.

¹⁹ Evan Braden Montgomery, "The Logic and Limitations of the Nuclear Posture Review," *CSBA Backgrounder* (April 2010).

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