THINKING ABOUT GLOBAL ZERO

Working paper (related to similar book project by O'Hanlon), not for wide circulation

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Can mankind un-invent the nuclear bomb, and rid the world of the greatest military threat to the human species and the survival of the planet that has ever been created? Logic might seem to say of course not. But the president of the United States and a number of key foreign policy dignitaries are now on record saying yes.

Since George Schultz, Henry Kissinger, Bill Perry, and Sam Nunn wrote a newspaper column in January of 2007 advocating a nuclear-free world, a movement has gained in strength to attempt just that. It has drawn inspiration from the recent grass-roots effort to craft a land-mine treaty, and from the important work of several wealthy and influential private individuals in spearheading global antipoverty campaigns. Of course, it is built on earlier work, including the 1996 report of the Canberra Commission on the Elimination of Nuclear Weapons.[1] Ideas about eliminating the bomb are as old as the bomb itself, and there have also been bursts of energy devoted to the disarmament cause at various other moments in the past such as the early to mid 1980s.[2] But the pace of activity, and the organization of a movement, have accelerated greatly in recent years. The movement now has a serious strategy for moving forward—not at some distant time when miraculous new inventions might have made nukes obsolete, but by 2012, when a treaty might be written, even if it would take at least another decade to put it into effect.

[1] Richard Butler, *The Greatest Threat: Iraq, Weapons of Mass Destruction, and the Growing Crisis of Global Security* (New York: Public Affairs, 2000), pp. 32-33.
[2] See for example, Jonathan Schell, *The Fate of the Earth* (New York: Alfred A. Knopf, 1982), pp. 181-184.

Will President Obama really pursue such an idea, beyond the idea of giving an inspiring speech in Prague about it early in his first year in office—when on other national security matters, such as Iraq and Afghanistan, he has been extremely pragmatic and deferential to military commanders? Won't the global financial crisis, and his other priorities such as health care and energy policy, preclude any serious White House attention to this nuclear issue for years to come? Incremental cuts in offensive arsenals with Russia are one thing; abolishing nuclear weapons from the planet is something else.

Perhaps Obama will in effect drop Global Zero. But nuclear crises in Iran and North Korea, among other things, may bring the issue to a head soon whether we like it or not. As this American president realizes, the real motivation for the idea of nuclear weapons abolition is not utopian or futuristic. It is the very pragmatic, immediate need to deny extremist countries such as those mentioned above the excuse of getting the bomb because others already have it. With leaders in Teheran and Pyongyang, and elsewhere, bent on getting nuclear weapons, and charging Americans with double standards in our insistence that we can have the bomb but they cannot, Mr. Obama's ability to galvanize a global coalition to pressure Iran and North Korea (and perhaps others) into walking back their weapons programs may depend on regaining the moral high ground. And that in turn may require an American commitment to work towards giving up its own arsenal—that is, once doing so is verifiable, and once others agree to do the same.

TABLE 1: GLOBAL NUCLEAR WEAPONS INVENTORIES (estimated, late 2009)

Russia:	13,000
United States:	9,400
France:	300
China:	240
Britain:	180
Israel:	90
Pakistan:	80
India:	70
North Korea:	8

Source: Robert S. Norris and Hans M. Kristensen, "Nuclear Notebook: Worldwide Deployments of Nuclear Weapons, 2009," *Bulletin of the Atomic Scientists* (November/December 2009), p. 87, available at www.thebulletin.org [accessed December 15, 2009]; and Larry A. Niksch, "North Korea's Nuclear Weapons Development and Diplomacy," Congressional Research Service, Washington, D.C., May 27, 2009, available at http://italy.usembassy.gov/pdf/other/RL33590.pdf [accessed December 22, 2009].

But how to rid the world of nukes? And how to do so safely? Perhaps a nuclear abolition treaty could constructively contribute to global stability if done right. But it could be hazardous if done wrong. Among other things it could make countries that currently depend on America's military protection decide they should seek nuclear weapons of their own. If the Turkeys and Saudi Arabias and Japans and Taiwans of the world interpret the U.S. debate over Global Zero to imply that they can no longer rely on America as a dependable ally, because it no longer takes deterrence seriously, the "Global Zero" movement could wind up sparking the very wave of nuclear proliferation and instability it was designed to prevent. Sam Nunn uses the image of nuclear disarmament as a mountain—with the summit beyond our current grasp and perhaps even out of sight. He advocates moving to a higher base camp than our current position (meaning much deeper disarmament and related measures) to determine if we can later reach the summit.[3] That image makes sense—but we must also be safe on the way to base camp, and avoid committing ourselves to a certain route to the top too soon.

So far, most advocates of the Global Zero idea are not addressing, or even truly acknowledging, such complexities and complications. My research attempts to do so. It does not oppose the notion of nuclear abolition. But it introduces a healthy dose of skepticism into the idea. It also explains conditions and caveats that would have to accompany any such treaty regime—including clear rules for how major powers might consider rearming themselves with nukes in the event of a future violation of the treaty regime, even after weapons had supposedly been "abolished."

[3] Sam Nunn, "Taking Steps Toward a World Free of Nuclear Weapons," *Daedalus* (Fall 2009), p. 155.

THE MOTIVATION OF THE ABOLITION MOVEMENT

Twenty years after the Cold War ended, those favoring the elimination—or at least the legal abolition—of nuclear weapons often point to three main motivations.

First, the basic logic of the nonproliferation treaty seems unsustainable. The NPT was always built on double standards, with nuclear haves and have-nots. But when negotiated in the 1960s, after a period of intense Cold War arms racing, it was unrealistic to believe the United States and the Soviet Union would disarm. The only realistic goal for the superpowers seemed to be that they curb their nuclear competition. So the NPT was in that sense a practical response to the world in which it was negotiated. With the Cold War over, the logical inconsistency, and political unfairness, of an NPT regime in which some countries are seemingly allowed nuclear weapons into perpetuity while others are denied them categorically seems increasingly unsustainable. (It is true that the NPT calls for complete disarmament, but that part of its preamble reads like utopianism because the language implies an end to all armed conflict and all organized military forces, not just nuclear abolition.[4] As such few take it seriously.)

Second, abolitionists argue that "loose nukes" remain a serious worry. During the Cold War, when the states possessing nuclear weapons were very few in number and typically quite strong in their internal controls, this worry was not so great. But with at least nine nuclear powers today, three or four of them subject to possible internal strife, the danger of theft or confiscation is very high. We should not hyperventilate over the imminence of the threat, as academic John Mueller has rightly pointed out.[5] But to trivialize the destructive force of these weapons, or to think that because there has been no nuclear accident or other disaster in half a century there will not be one in the future either, would be to make a major mistake in the opposite direction of complacency. The dangers seem

[4] See for example Fred C. Ikle, "Nuclear Abolition, A Reverie," *The National Interest*, no. 103 (September/October 2009), p. 6.
[5] John Mueller, *Atomic Obsession: Nuclear Alarmism from Hiroshima to al-Qaeda* (Oxford, England: Oxford University Press, 2010), pp. 129-158.

destined to keep growing as the nuclear club expands further—a development that may accelerate with the world's renewed interest in nuclear power, since preparation of nuclear fuel inherently involves many of the same technologies as are used to produce fissile materials for weapons. We should consider ourselves lucky that a loose nuclear weapon or mass of plutonium or enriched uranium has not harmed anyone yet, and not grow complacent.

Third, the domestic politics of this "big idea" could be transformative in engaging the public on the issue. Tired of incrementalism, the American public has long since lost its real interest in arms control. So has much of the rest of the world. As such, when accords such as the Comprehensive Test Ban Treaty come up for Senate ratification, there is little popular engagement, and treaty opponents can carry the day. Only a revolutionary proposal can break this logjam. A similar logic may apply to the internal politics of numerous other nuclear nations.

COUNTERARGUMENTS

All of these abolitionist arguments have some merit. But there are also strong counterarguments. This raises the stakes in the debate to a very high level. In short, we may not be able to safely live with nuclear weapons, yet it is also not clear how we could possibly live without them—or get rid of them.

Much of the Cold War nuclear literature is full of discussions of "extended deterrence"—devising ways to make it possible, and credible, that a nuclear power like the United States could really convince would-be aggressors not to attack its allies. Nuclear weapons had a large role in this debate when the possible enemy was a hypermilitarized Soviet Union abutting key American allies.

Perhaps the task is easier now that the Soviet Union is gone. And in many ways it surely is—at least for the United States. By contrast, however, Russia may feel an even greater

need for nuclear weapons now than it did during the Cold War, given western conventional military superiority.[6] This is a complicating matter in any pursuit of Global Zero, since without the support of other powers for Global Zero there can be no worldwide elimination of nuclear weapons.

And there are complications even for the United States and its allies, as well, in this more complex period of multiple nuclear powers that some have called the "second nuclear age."[7] To take one example, is Japan really confident it will never need nuclear weapons to deter a rising China? And if Japan gains nuclear weapons, what will South Korea, then surrounded by four nuclear weapons states, choose to do? Worst of all, perhaps, will Taiwan really believe that an already-indirect American security pledge is reliable enough that it can forgo a nuclear capability of its own? Since China has declared repeatedly that Taiwanese pursuit of nuclear weapons would be grounds for war, this scenario is very troublesome.

The situation is also very hard in the Middle East. To be sure, Iran is attempting to exploit the alleged hypocrisy of the NPT regime and the established nuclear powers to justify its own nuclear programs. That would seem to argue in favor of a nuclear abolition treaty, to deprive Teheran of this excuse for its nuclear ambitions. But few countries really seem swayed by Teheran's arguments. Rather, it is their commercial interests in Iran, or their inherent belief in positive diplomacy as a tool for improving other states' behavior, or even a desire to frustrate the United States, that seem to limit their willingness to get tough with the Iranian regime. The world's acute need for Iran's oil further compounds the problem. It is not clear that the double standards of the NPT are the core of the problem.

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[6] Alexei G. Arbatov, "Russian Nuclear Posture: Capabilities, Missions, and Mysteries Inside Enigmas," Paper presented at Stanford conference, "P-5 Nuclear Doctrines and Article VI," Stanford, Calif., October 16-17, 2007, p. 120.

[7] For a discussion of the second nuclear age, see Robert P. Haffa, Jr., Ravi R. Hichkad, Dana J. Johnson, and Philip W. Pratt, "Deterrence and Defense in 'The Second Nuclear Age,'" Northrop Grumman Analysis Center, Arlington, Virginia, 2007, pp. 5-11, available at www.analysiscenter.northropgrumman.com [accessed September 1, 2009]; for another discussion of extended deterrence, see Andrew F. Krepinevich, *U.S. Nuclear Forces: Meeting the Challenge of a Proliferated World* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2009).

Iran has made direct and very grave nuclear threats against Israel in recent years. It has also thrown its weight around quite a bit in the region, in Iraq and Lebanon and the Persian Gulf, even to the point of threatening the stability of ruling regimes. Under such circumstances, American steps towards nuclear disarmament could produce undesired dynamics. Countries like Saudi Arabia that do not even have formal security alliances per se with the United States today could be extremely skittish about facing an Iranian nuclear capability without their own deterrent, should Washington join other key capitals in moving towards a nuclear free world. In fact, in recent work at Brookings, Martin Indyk and others have suggested that in response to Iran's apparent ambitions, the United States might need to *increase* rather than diminish the robustness of its nuclear guarantees to key regional friends if it is to discourage them from acquiring nuclear weapons of their own. In addition, potentially credible reports continue to appear now and again of possible arrangements between Pakistan and Saudi Arabia by which the former would provide the latter with nuclear weapons in a crisis situation if need be.[8]

Some argue that, with the Cold War over and American military preponderance so clear to all, nuclear umbrellas are no longer needed to ensure deterrence. Overwhelming conventional military superiority can suffice, they say. But this argument is facile. It ignores that the United States, while spending nearly half the world's total resources on military capabilities, nearly lost the Iraq war. It forgets that just a short time ago, Americans' purported casual aversion sharply constrained the types of military options available to U.S. presidents in Bosnia, Somalia, Rwanda, Kosovo, Afghanistan, and elsewhere. To be sure, 9/11 changed the basic politics of national security in the United States in this regard. But for how long? In the aftermath of the difficult Iraq and Afghanistan wars, is impossible to know just how willing Americans will be to use force to defend far-away allies—especially if adversaries might have, and use, weapons of mass destruction next time around.

[8] Bruce Riedel, "Pakistan and the Bomb," *Wall Street Journal*, May 30, 2009, available at online.wsj.com/article/SB10001424052970203658504574191842820382548.html [accessed July 2, 2009].

Some also hope that missile defenses may improve enough that offensive nuclear weapons will fade in significance, and defenses become dominant, in many key regions of the world. If that day ever arrives, however, it will be far into the future. At present, missile defenses would do well to intercept a single warhead launched without advanced countermeasures from a predictable location. Larger attacks, surprise attacks, and sophisticated attacks will probably be capable of punching through available defenses for a very long time to come.

Then there is the problem of verification. Today, fissile materials can be shielded well enough that their physical emissions are apparent only to detectors within a few dozens of meters of their locations. In other words, their characteristic signatures are not easily noticed. Even centrifuge facilities, and other possible technologies for uranium enrichment, can be rather well hidden. Arms control protocols allowing suspect-site inspections can help—but they work only if outsiders can articulate their suspicions with enough precision to allow inspectors to target the right locations. This usually requires having defectors or spies inside a country able to develop initial leads on illicit programs. The track record of recent proliferation suggests that the odds of gaining such tip-offs in timely fashion are modest at best.

Biological pathogens are another complicating matter. If a modified form of smallpox, perhaps genetically joined with a very contagious influenza-like organism, could be developed and then employed against populations, millions could die. The country doing the attacking, knowing more about the properties of the pathogen it had developed than anyone else, might have been able to inoculate its own citizens against the disease in advance. How could such an attack be deterred absent nuclear weapons? A conventional response requiring many months of preparation and combat could be tough to execute if many of the soldiers of the retaliating country are falling ill from a disease that their doctors are powerless to prevent or to cure.

A REALISTIC PATH TO ZERO—AND REALISTIC DEFINITION OF ZERO

In the end there are extremely strong arguments both for and against Global Zero. How to resolve them?

On balance, I support the Global Zero agenda—but only by recasting it. Rather than think of an absolute end state, in which nuclear weapons are abolished forever, treaty proponents will have to be more realistic. They will have to settle for a vision of a world in which all nuclear weapons are in fact disassembled and destroyed—but in which the ability to rebuild a modest arsenal in extremis is preserved, technically and politically and legally. Ideally, such a reconstitution option would never be invoked, but it is critical that the option be retained. Global Zero should not amount just to de-alerting or dis-assembly of weapons, with stocks of fissile materials at the ready; that would retain nuclear weapons too close to the center of international military planning and global power relationships.[9] But it should generally permit what cannot banned verifiably. As such, *plans* for reconstitution should in fact be fairly robust even if facilities and materials for rebuilding arsenals should not be.

Ruling out the option of reconstitution claims more knowledge about the future than we can have. Some proponents of abolition recognize this, but others do not, and in most cases the mechanisms of planning for reconstitution are not given adequate thought. In fact, a central element of any Global Zero regime must be a way to end that regime—in diplomatic, legal, and military/technical terms.

Hoping otherwise, and assuming that Global Zero means the permanent abolition of nuclear weapons, assumes a favorable international security environment that may not endure permanently. It therefore runs too high a risk of driving security-conscious states to build nuclear arsenals themselves, especially as the U.S. commitment to extend its own

[9] For a concurring view on this point, see Sverre Lodgaard, "Toward a Nuclear-Weapons-Free World," *Daedalus* (Fall 2009), p. 142.

nuclear umbrella over them disappears on the road to Global Zero. It risks worsening the very proliferation problem that it is designed largely to address.

Perhaps the world can aspire to get rid of nuclear weapons—as long as it knows that it can rebuild them if necessary. In other words, a sufficiently grave violation of the regime by an aggressive country might necessitate a reversal of abolition. Under such circumstances, the world will need legal and physical mechanisms for deciding in extremis whether to rebuild a nuclear capability to punish a regime violator. Not only the obvious case of a violating state building nuclear weapons, but other possible actions, need to be woven into the framework. High suspicion that an aggressive state is building a bomb may suffice to justify that others rearm at least temporarily, even without hard evidence or irrefutable proof. Extremely lethal futuristic biological pathogens in the hands of a ruthless regime may also legitimate reconstitution of another country's arsenal, depending on circumstances. Indeed, genocide carried out with conventional weapons may itself be reason enough. Replaying the events of World War II in one's imagination, it is hard to argue that the United States should have eschewed nuclear weapons even if it knew full well that Nazi Germany and Imperial Japan could not get them. (One can admittedly still debate whether the United States should have used its nuclear weapons, but it is hard to argue that it should have made denuclearization a higher priority than ending a war that killed more than 50 million.)

A Global Zero Arsenal world requires a strategy for reconstitution *before* a treaty is even pursued, so as to avoid possibly pernicious and counterproductive dynamics as the treaty is negotiated and implemented. From an American perspective, these include:

- specific clauses in the treaty allowing reconstitution in the event of a direct violation of the treaty by another party (this is probably a given already)
- more controversially, clauses allowing nuclear reconstitution in the event of a particularly lethal advanced biological pathogen
- most controversially of all, perhaps, clauses allowing a state party to bring intelligence information to the U.N. Security Council if it fears that another state

party is in the process of violating the treaty and wants to respond before it is too late. In other words, there must be a mechanism for debating violations *before* they culminate in actual production or deployment or use of a bomb

- A U.S. capacity, including access to dormant facilities at a place such as Los Alamos National Laboratory, to reconstitute a team of nuclear weapons experts so as to rebuild a modest number of warheads within months of a decision to do so. Other countries may of course choose to exercise a similar right
- An American statement to the effect that, even if the U.N. Security Council rejects a hypothetical future argument that another country is believed to be building nuclear or advanced biological agents, it will reserve the right under Article 51 of the U.N. Charter to rebuild a nuclear arsenal itself anyway. This right would have to be invoked only in a truly extreme case—and ideally would never be needed. But absent such a statement, America's role as a guarantor of the security of many other countries would be at risk, and the incentives for others to build their own weapons would increase undesirably. Once again, the proliferation costs could easily outweigh the benefits; more states rather than less might wind up with the bomb.