What's Wrong with America's Nuclear Hawks?

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President Obama's pledge during an April 2009 speech in Prague to eliminate nuclear weapons from the US arsenal has been condemned by many military strategists. There are legitimate concerns that need to be addressed with any nuclear reduction; unfortunately, many "nuclear hawks" create false, scary-sounding concerns to argue that disarmament is impractical. Dr. Charles E. Costanzo's "What's Wrong with Zero?" in the summer issue of *Strategic Studies Quarterly* is a recent and flamboyant example of this nuclear scaremongering. Dr. Costanzo claims that no other recognized nuclear weapons state (NWS) shares Obama's disarmament goal. He emphasizes other NWSs' modernization plans while ignoring how modest they seem compared to US modernization. He also neglected to observe the work these countries have already done to reduce their reliance on nuclear weapons. In many cases it is more than the United States'. An honest comparison of modernization plans and the history of nuclear disarmament treaties shows that despite President Obama's stated desire to eliminate nuclear weapons, he will find more opposition domestically than abroad.

A common refrain of nuclear hawks is that other countries do not endorse Obama's vision of nuclear disarmament. This is simply not true. The Nuclear Nonproliferation Treaty (NPT)—which the five NWSs (China, France, Russia, the United Kingdom, and the United States) ratified in 1970—mandates these countries to work toward eliminating nuclear weapons. Article VI states, "Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a Treaty on general and complete disarmament under strict and effective international control."

Please see Dr. Costanzo's reply at SSQ online: http://www.au.af.mil/au/ssq/2010/winter/costanzoreply.pdf.

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The debate for the past 40 years has centered on finding the practical steps necessary to achieve this vision. At the 2010 NPT review conference, the NWSs explicitly reconfirmed their continued commitment.[1] Obama's Prague speech did not set a new policy agenda; it simply shifted focus back to a forgotten one.

The Problems with Modernization

"Modernization" is a bad word that fails to communicate effectively. Sometimes modernization means replacing aging equipment with a new but mostly equivalent version. This could more accurately be called maintenance of a country's nuclear arsenal. Sometimes it means developing qualitatively new capabilities. This could more accurately be called an upgrade. It usually serves only to obfuscate the real issues, because the term is used in different ways by different people. For this reason the New America Foundation's Dr. Jeffery Lewis dubbed modernization the "M-word" and recommends people stop using it altogether.[2]

Dr. Costanzo's analysis of modernization plans lacks a clear definition of what he means when using the M-word. This causes him to falsely conclude that the United States is not modernizing its stockpile when other NWSs are. The facts show these countries' modernization plans are really very similar to US plans and in some ways less ambitious.

Not all modernizations of nuclear weapons are equally threatening. Nuclear weapons have both a nuclear component, called the "physics package," and many nonnuclear components. Nonnuclear components can be part of the warhead, the delivery mechanism, or the launch mechanism (airplane or submarine). The development of new nonnuclear components is done regularly. The development of new physics packages, in contrast, is widely considered to be an aggressive move that would set back efforts for arms reductions and nonproliferation. No NWS is thought to have developed a new physics package since the signing of the Comprehensive Test Ban Treaty (CTBT) in 1996, but when nuclear hawks say they want modernization, this is usually what they mean.

There are two good examples of the United States pursuing physics package modernization. The Reliable Replacement Warhead (RRW) program was proposed in 2005. The program would modernize the weapons production complex to produce new physics packages that take advantage of modern manufacturing techniques. RRWs are new designs with no

need for a test detonation, thus making them less controversial. The JASON group is a panel of independent nuclear experts commissioned by the Department of Energy to evaluate the necessity of the RRW. The report concluded that the RRW program was unneeded; the currently used Lifetime Extension Program (LEP) was sufficient to certify the US arsenal indefinitely.[3] Another example was the robust nuclear earth penetrator (RNEP), designed to target hardened underground facilities. The RNEP was pursued despite the fact that the nuclear arsenal already contains the B61-11 bunker buster capable of targeting similarly hardened structures below ground.[4] Congress canceled both the RRW and the RNEP because these projects would undermine not only the controversial goal of disarmament but also the unanimously sought-after goal of nonproliferation. Presumably, the lack of funding for the new physics packages these projects would provide is Dr. Costanzo's basis for determining that the United States is not modernizing its arsenal.

When nuclear hawks talk about other countries' modernizations, what they really mean is the deployment of new delivery systems. But the United States is modernizing its delivery systems in this way as well. For all countries, including the United States, this is the routine replacement of aging equipment and would more accurately be called maintaining nuclear arsenals. Calling these replacements modernization blurs the distinction between nuclear and nonnuclear components. Dr. Costanzo uses the ambiguous M-word to apply different standards to the US program and those of other NWSs. Using the same standard of modernizing only the delivery systems, we find similar programs in all countries.

Dr. Costanzo claims modest, routine improvements in foreign nuclear-armed ballistic-missile submarine (SSBN) programs show that other NWSs are not as serious as the United States about reducing nuclear stockpiles. He fails to compare other countries' modernizations to those of the United States, which are much more extensive. The four other NWSs are simply replacing aging equipment that is already obsolete when compared to the US fleet. Take Russia as an example; unlike the United States, it does not constantly have an SSBN on patrol. Russians do not see a continuous at-sea deterrent as vital to their defense now that the Cold War has ended.[5] Even if the Russian OPTEMPO were to increase significantly, the new Russian SSBNs are less capable than the current US fleet. The Russian *Borei*-class SSBN can carry 16 submarine-launched ballistic missiles (SLBM), while the American *Ohio*-class can carry 24. Each of the

new Russian *Bulava* SLBMs can carry six MIRVs, whereas each American Trident II D5 carries eight. Furthermore, the *Bulava* is widely considered a failure; of 12 test flights so far, seven have been unsuccessful.[6] Compare this to the American Trident II D-5 SLBM, which has conducted 134 consecutive successful test flights since 1989. This is the longest-running set of successful tests by any nuclear delivery system. Despite the frightening rhetoric of nuclear hawks, the United States remains the uncontested leader in SSBN technology, and we remain similarly uncontested in air- and land-based nuclear forces.

The United States intends to maintain this technological lead. It has started the design process for the *Ohio* replacement SSBNs and has already awarded contracts to Electric Boat and Newport News Shipyard.[7] These SSBNs will be procured from 2028 to 2040 and will have a nominal service life of 40 years.[8] By Dr. Costanzo's standard, this development makes it appear the United States is not serious about pursuing the "zero" policy.

The last point to make on the M-word is how the United States is modernizing its nuclear production complex. According to a White House fact sheet on the New START, "The President requested $7 billion in FY 2011 for stockpile sustainment and infrastructure investments, a nearly 10% increase over FY 2010. . . . The Administration intends to invest $80 billion in the next decade to sustain and modernize the nuclear weapons complex."[9]

How will this funding in the nuclear infrastructure be spent? Although the United States has observed the informal international moratorium on nuclear weapons tests since 1992, it has continued to make significant upgrades to its arsenal, even since the start of the Obama administration. The process began in 1994 with the Stockpile Stewardship Program (SSP), which was tasked with maintaining the stockpile of aging nuclear weapons without nuclear tests. The US nuclear labs are continuing to conduct research into new types of weapons systems. In 2010, Sandia National Laboratory developed 16 major new advances in nuclear weapons engineering,[10] while Los Alamos National Laboratory has completed the first production unit for the W76-1 warhead for submarines.[11] Lawrence Livermore National Laboratory continues to conduct plutonium and uranium subcritical tests,[12] and a major new operational site is being built for the Kansas City branch of the National Nuclear Security Administration.[13] Many more projects are underway. It will be difficult for foreign

powers to conclude that the United States is serious about a long-term reduction in nuclear weapons while we are modernizing our infrastructure so dramatically.

Based on the fact the United States is modernizing as much if not more than other NWSs, military commanders should stop making the M-word comparison. The American emphasis on modernization undermines our antiproliferation efforts, which should form the heart of nuclear security policy in the twenty-first century.

International Treaties

To best infer a country's attitude toward nuclear disarmament, we must look at the international treaties it has ratified. The role of these treaties is unfortunately often overlooked. For a country to ratify a treaty means it has the overwhelming support of its leaders. A treaty "enters into force" and becomes legally binding only after all parties to the treaty have ratified it.[14] The United States has too often prevented nuclear treaties from entering into force. In this area, the other NWSs have made more progress toward reducing the role of nuclear weapons in their security posture than the United States.

The NPT entered into force in 1970 and is often called the "grand bargain." Article VI of the NPT mandates that NWSs continually work toward eliminating their nuclear weapons, and in exchange Article II prohibits nonnuclear weapons states (NNWS) from acquiring them. This is the only political tool that the United States has to stem the proliferation of nuclear weapons to rogue states such as Iran. If the NWSs do not continue to make progress on this track, then the NNWSs will conclude the treaty is meaningless, withdraw from the treaty, and build their own weapons. We have already seen this happen with North Korea, and many people fear this will happen soon with Iran. Many states (e.g., Iran) have refused the International Atomic Energy Agency's (IAEA) Additional Protocol for more-intrusive inspections for this reason. These states can be expected to oppose any future nonproliferation efforts until the NWSs have made significant progress toward disarming. No one has proposed a way to satisfy the NNWSs if the NWSs cannot eliminate their stockpiles. More so than any other country, the United States is seen as "violating the spirit" of the NPT for its lack of progress toward disarmament and its policies which sometimes encourage proliferation to "friendly" states.

At the 2010 NPT review conference, each of the NWSs reaffirmed its commitment to eliminating nuclear weapons. The 2010 conference was widely seen as a major success in comparison to the failed 2000 and 2005 conferences, and this is widely attributed to President Obama's renewed efforts to honor our obligation to eliminate nuclear weapons. It is also worth noting that the indefinite extension of the NPT in 1995 would not have been achieved without convincing the NNWSs that the NWSs were serious about their commitment to disarm. This was achieved by the simultaneous effort to sign the Comprehensive Test Ban Treaty. The NNWSs currently feel betrayed that the CTBT has not yet entered into force, and the United States is largely to blame for this.

The CTBT provides an excellent test case to show that other NWSs have reduced their reliance on nuclear weapons. The United Kingdom, France, and all 15 former Soviet republics, including Russia, have ratified the treaty, but the US Senate declined to ratify it in 1999.[15] It is widely believed the remaining nuclear powers have not ratified the treaty in response to US inaction.[16]

American nuclear hawks who want continued development of US physics packages prevented the CTBT from being ratified. They frequently claim that nuclear tests may be required in the future to certify the reliability and safety of the nuclear arsenal. If this were really true, the United States should be embarrassed that the other NWSs have managed to achieve this technological capability while we have not. Other critics were skeptical that the treaty could not be verified, but the CTBT organization's provisional body has successfully verified the nuclear tests conducted by North Korea in 2006[17] and 2009.[18] There is no legitimate reason for the United States not to ratify this treaty. Other countries will be unable to take President Obama's efforts to reduce our dependence on nuclear weapons seriously if he cannot get the CTBT ratified. Based on the mixed reception for the New START, we can expect significant opposition from nuclear hawks to future efforts to ratify the CTBT.

In reality, the United States has consistently dragged its feet in terms of international treaties that would reduce the world's dependence on nuclear weapons. The Obama administration has had to severely cripple its Prague vision for nuclear disarmament based on domestic politics. Ratifying the New START is seen as an essential first step toward reducing American dependence on nuclear weapons. Currently, support for the treaty is divided largely along partisan lines, and there is some doubt

as to whether the New START will be ratified. Nuclear modernization and missile defense are seen in the international community as undermining Obama's vision; however, they have been required to gain the necessary support for the New START. The Senate ratification resolution makes these links explicit. It states, "The United States is committed to proceeding with a robust stockpile stewardship program, and to maintaining and modernizing the nuclear weapons production capabilities and capacities." It has three full paragraphs describing missile defense, concluding that the "unilateral statement by the Russian Federation on missile defense does not impose a legal obligation on the United States." These statements were added to appease nuclear hawks both in and out of the military. Based on the perceived need for these concessions, it will be difficult for foreign observers to conclude that the United States is really serious about nuclear reductions. How can a country that increased its spending on nuclear infrastructure by 13.4 percent be serious about getting rid of that infrastructure?

Furthermore, the United States does not have the best track record with regards to nonproliferation. For example, it deploys nuclear weapons under NATO command in five European countries. Many NNWSs see this nuclear weapons sharing program as a direct violation of Article I of the NPT, which states, "Each nuclear-weapon State Party to the Treaty undertakes not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices." In 2006, the United States traded nuclear technology to India, seriously threatening the NPT's long-term viability.[19] The NPT forbids giving even civilian nuclear assistance to "rogue" countries, fearing that it may encourage other states to disregard the nonproliferation rules. Pakistan has benefitted from the United States just as much. During the Soviet occupation of Afghanistan, the United States repeatedly certified that Pakistan did not have a nuclear weapons program, despite the fact that it did. It remains unclear the extent to which the United States currently supports the Pakistani nuclear program to obtain support for the fight against terrorism. Certainly it has prevented the United States from blocking the Chinese transfer of nuclear reactors. The United States has been accused of contributing over 200 pounds of U-235 to the Israeli nuclear program.[20] A congressional investigation into the incident was hindered by an uncooperative CIA.[21] And, the presence of Israeli spies in the US nuclear program provides further evidence of this alleged transfer.[22]

Finally, the war in Iraq, the only war ever to have been declared to stop proliferation, may have inadvertently led to the two most recent proliferation crises. North Korea has consistently cited this as the cause of its withdrawal from the NPT and resumption of plutonium production and bomb development. There is widespread concern that Iran will soon do the same, for similar reasons.

These American gaffes are in stark contrast to the nonproliferation successes of other states. After the collapse of the Soviet Union, Belarus, Kazakhstan, and Ukraine inherited some 3,000 strategic and many more substrategic nuclear weapons. By 1996 these weapons had all been transferred to Russia.[23] These three states have now joined the NPT as NNWSs. South Africa remains the only country to have dismantled its indigenously produced nuclear weapons program and is a strong advocate of universal disarmament.

The United States' inability to reduce its dependence on nuclear weapons due to domestic politics and its many nuclear faux pas in the international community have given it a reputation for violating the spirit of the NPT.

Conclusion—The Real Debate on How to Proceed

That other countries are deploying new nuclear delivery systems is not a concern, because they are simply replacing aging parts. The United States is doing the same thing. So what are the legitimate concerns? One comes to mind immediately: How will other countries take US disarmament seriously when its modernization plans and past treaty experience tell them *it* will be relying on nuclear weapons long into the future? The United States must take a sober look not at other countries' nuclear policies but at its own. This will mean making concessions to other countries and addressing their legitimate concerns. Achieving US security does not require expanding US nuclear hegemony.

A fissile material cutoff treaty (FMCT) is widely seen as the next necessary step on the road to disarmament. The FMCT would prevent the production of new weapons-grade uranium or plutonium via a system of international inspections. This would modestly limit US nuclear capabilities but in exchange would greatly reduce the risk of proliferation. If past experience is any indicator, the United States will have difficulty ratifying the treaty because the nuclear establishment will be un-

willing to make this concession.[24] But, the United States simply cannot stem nuclear proliferation in the twenty-first century as long as it continues to strengthen its own nuclear deterrent. This means nuclear hawks need to stop hawking. SSQ

Notes

1. Paragraph 80 of the 2010 NPT review conference final document states, "The conference notes the reaffirmation by the nuclear-weapons states of their unequivocal undertaking to accomplish, in accordance with the principle of irreversibility, the total elimination of their nuclear arsenals leading to nuclear disarmament, to which all States are committed under article VI." All NPT review conference final documents must be adopted by consensus. The ability to find consensus is the main measure in determining whether a conference has failed or succeeded.

2. Jeffery Lewis, "The Kyl Amendment," *Arms Control Wonk*, 30 July 2009, http://lewis.armscontrolwonk.com/archive/2401/the-kyl-amendment.

3. "Lifetime Extension Program (LEP) Executive Summary," 9 September 2009, http://www.fas.org/irp/agency/dod/jason/lep.pdf; and "Reliable Replacement Warhead Executive Summary," 7 September 2007, http://www.fas.org/irp/agency/dod/jason/rrw.pdf.

4. The RNEP would have penetrated farther into the ground before detonation causing the explosion to transfer more energy into the ground. This would allow it to target structures buried deeper underground or to use a lower-yield warhead to target structures that could also be targeted by the B61-11. The lower yield would result in fewer civilian casualties, and thus the RNEP was considered to be a more humane weapon. The exact depths and types of structures these weapons could target remains classified, but for an excellent unclassified discussion, see *Effects of Nuclear Earth-Penetrator and Other Weapons* (Washington: National Academies Press, 2005), http://www.nap.edu/catalog.php?record_id=11282.

5. Hans Kristensen, "Russian Nuclear Missile Submarine Patrols Decrease Again," *Federation of American Scientists Strategic Security Blog*, 28 April 2008, http://www.fas.org/blog/ssp/2008/04/russian-nuclear-missile-submarine-patrols-decrease-again.php.

6. "Russia to overhaul Bulava production if tests fail again—Serdyukov," *Rianavosti*, 17 September 2010, http://en.rian.ru/mlitary_news/20100917/160619849.html.

7. Peter Frost, "New Sub Role Could Buoy Our Economy," *Daily Press,* 24 April 2009, http://articles.dailypress.com/2009-04-24/news/0904240025_1_newport-news-shipyard-northrop-ohio-class.

8. Ronald O'Rourke, *Navy SSBN(X) Ballistic Missile Submarine Program: Background and Issues for Congress* (Washington: Congressional Research Service, 27 July 2010), 8, http://www.fas.org/sgp/crs/weapons/R41129.pdf.

9. "The New START Treaty—Maintaining a Strong Nuclear Deterrent," White House fact sheet, http://www.whitehouse.gov/sites/default/files/New%20START%20section%201251%20fact%20sheet.pdf.

10. "Labs Accomplishments: Nuclear Weapons Engineering," http://www.sandia.gov/LabNews/labs-accomplish/2010/nw_eng.html.

11. "Project Profiles: Los Alamos National Laboratory," http://www.babcock.com/library/project_profiles_lanl.html.

12. Livermore Labs website, https://www.llnl.gov/#labtabs-1.

13. "NNSA National Security Campus," http://www.gsa.gov/portal/content/102613.

14. Technically, this is incorrect. Many treaties specify that they will enter into force on some other condition, such as a certain number of states (but not all) ratifying the treaty. The CTBT requires that 44 specific states must ratify before it enters into force. In practice, US ratification is required for all nuclear treaties to enter into force.

15. "History of Efforts for the CTBT," http://www.projectforthectbt.org/history.

16. Wade Boese, Paul Kerr, and Daryl Kimball, "Interview with Dr. Hans Blix," *Arms Control Today*, 6 June 2006, http://www.armscontrol.org/interviews/20060606_blix.

17. "The CTBT Verification Regime put to the Test: The Event in the DPRK on 9 October 2006," http://www.ctbto.org/press-centre/highlights/2007/the-ctbt-verification-regime-put-to-the-test-the-event-in-the-dprk-on-9-october-2006/page-1/?Fsize=wpupaqsygz.

18. "Overview: DPRK 2009 Announced Test," http://www.ctbto.org/the-treaty/developments-after-1996/2009-dprk-announced-nuclear-test/.

19. "Implications of the US-India Nuclear Deal," *Harvard International Review*, 6 May 2006, http://hir.harvard.edu/implications-of-the-us-india-nuclear-deal.

20. The IAEA defines a significant quantity (roughly defined as enough to make a crude bomb) as 25 kg of enriched uranium.

21. "Nuclear Diversion in the US? 13 Years of Contradiction and Confusion," Report by the Comptroller General of the United States, 18 December 1978, http://www.irmep.org/co1162251.pdf.

22. Grant Smith, "Declassified GAO Report Exposes Fatally Flawed Israel Investigations," *Antiwar,* 10 May 2010*,* http://original.antiwar.com/smith-grant/2010/05/09/declassified-gao-report/.

23. The United States played some role in smoothing this transition process, notably with the Nunn-Lugar program. Most of the work, however, was done by the countries directly affected, and from an international perspective they rightly take all the credit. See the Nunn-Lugar scorecard for more detailed information about the program, http://lugar.senate.gov/nunnlugar/scorecard.html.

24. FMCT negotiations have been ongoing since 1993, with many countries expressing concerns that have stalled the process. Currently, Pakistan is moving to block negotiations on the FMCT, again due to the perceived unfairness in currently proposed solutions. The United States is largely unable to apply political pressure to Pakistan due to the need to maintain Pakistani support for the ongoing war in Afghanistan. See, Zia Mian and A.H. Nayyar, "Playing the Nuclear Game: Pakistan and the Fissile Material Cutoff Treaty," *Arms Control Today*, April 2009, http://www.armscontrol.org/act/2010_04/Mian.