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US Nuclear Forces and Conventional Force Alternatives

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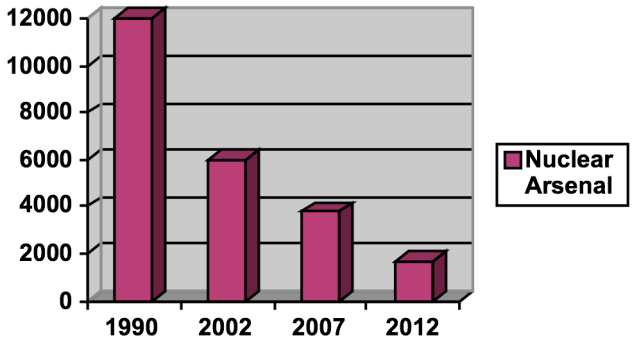
In their January 2007 op-ed, George Shultz, William Perry, Sam Nunn, and Henry Kissinger advocated "A World Free of Nuclear Weapons." To imagine a world without nuclear weapons means that the United States and the other nuclear powers can find a way to get rid of them. In other words: "Getting to zero." But, how to reach "zero" is usually where the debate stalemates. With characteristic candor, Shultz himself admits he does not know how to get to zero, and doubts if his colleagues do.

Nevertheless, even without the newly invigorated debate that Shultz *et al* have engendered, the total number of operational US weapons has been declining. In 2002, the United States counted roughly 6,000 nuclear weapons as operational. In 2007, the number of operational US nuclear weapons had been reduced to about 3,800. In 2012, in accordance with the Moscow Treaty, the United States will be permitted to have a force in the range of 1,700 to 2,200 operational weapons, as shown in the figure below.

Figure 1: Approximate and Projected US Nuclear Weapons Stockpiles



Although under the Moscow Treaty many weapons will be held in reserve, nuclear strategists have been fairly comfortable adjusting to lower figures and have not raised significant resistance. However, it is also important to note that a substantial part of the reductions under the treaty occur simply by "naming" nuclear weapons as being in reserve, not by actual dismantling. Thus, decision-makers and strategists can argue that they need to maintain a nuclear infrastructure that accommodates a reserve level much higher than the treaty limits.

Notably, for three decades Congress has supported the continuing reductions in the stockpiles of US nuclear weapons regardless of the political party in power.

Going beyond the Moscow Treaty reductions, nuclear strategists are entertaining prospects of lower and lower totals of nuclear weapons. A sum of 500 US nuclear weapons seems to be emerging as a straw man, and various posture proposals with a 500-warhead figure and also 1000 are being advocated.[1] The Fiscal Year 2007 Defense

[1] The Drell-Goodby proposal is of 500+500 force "of 500 operationally deployed nuclear warheads, plus 500 in a responsive force." Sidney D. Drell and James E. Goodby, "What Are Nuclear Weapons For?

Authorization Act mandates two separate nuclear posture reviews that may affect future US policy.[2] Yet recent posture proposals still do not persuasively articulate the contemporary missions of the American nuclear forces that might remain after further reductions. If many of the proposed missions for nuclear weapons are inconceivable or irrational, those missions will not justify the retention of nuclear weapons to carry them out.

As continued reductions occur, many long-held assumptions and analytical frameworks that undergird the US nuclear weapons posture become more tenuous. Most critically, as the US stockpile passes below 1,500 nuclear weapons to the next stage of 1,000 or even 500, the notion of a strategic triad may become less meaningful. If the overall force becomes less capable of supporting massive retaliation strategies according to Cold War-style strategic operating plans, it becomes more illusory to contemplate the resilience of the traditional triad against overwhelming attack. If US nuclear forces are to take on a more vague "deterrent" posture directed toward all potential foes, a strategic dyad or a strategic monad might work for a sensible and less accident-prone US strategic construct. Another way to say this is that as the US ICBM force gets smaller, the other two legs of the strategic triad, most especially the SLBM force, become more important. As Congressional Research Service analyst Amy Woolf has pointed out, we currently hear few coherent arguments for the maintenance of a large ICBM force.[3]

The Prompt Global Strike Alternative

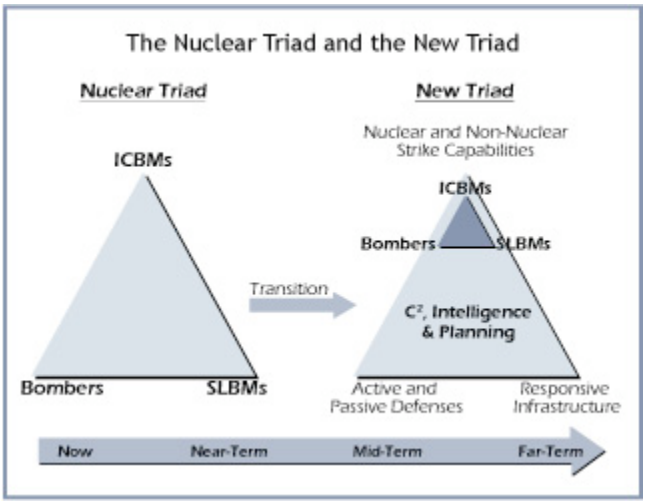
So while dramatically lower stockpile levels are remarkable with figures a fraction of Cold War standards, even lower sums of 500 nuclear weapons—or only 200—still beg important questions about the possible situations for which an American president might order their use.

The Pentagon is clearly shifting away from nuclear options in almost all its war plans. One alternative option is Prompt Global Strike (PGS), that is, the rapid delivery of conventional weapons at intercontinental range. The continuing development of the PGS program and framework demonstrates that US military planners desire *conventional* options when it is desirable to attack targets at long ranges on short notice. By definition, such situations call for swift action or response, using conventional—not nuclear—warheads. Dramatically, the Pentagon has illustrated the desire to incorporate conventional alternatives by refashioning the traditional nuclear triad into a "New Triad" that incorporates non-nuclear strike capabilities, as illustrated below.

Recommendations for Restructuring US Strategic Nuclear Forces," *Arms Control Association*, revised and updated October 2007, http://www.armscontrol.org/pdf/20071104_Drell_Goodby_07_new.pdf, p. v.

[2] Congress has mandated a special Congressional Commission on Strategic Posture, which is scheduled to release its public report December 1, 2008. However, its current progress indicates this may be delayed significantly. The regular Nuclear Posture Review is mandated to release its report to Congress "not later than March 1, 2010."

[3] Amy Woolf, "US Strategic Nuclear Forces: Background, Developments, and Issues," updated January 24, 2008, Order Code RL33640, pp. 26-27.



http://www.acq.osd.mil/ncbdp/nm/nuclearstockpile.html

Indeed, the US military has never preferred nuclear options, and gradually over the past 50 years military planners have moved away from options that involve nuclear forces. Such changes are often prompted within the US military itself: first with the Army giving up its tactical nuclear weapons and then with the Navy and the Air Force doing likewise. Today, US nuclear capabilities are centered in the "Nuclear Navy" of ballistic missile submarines and in the Strategic Air Force. Increasingly, these outposts appear more isolated from the rest of the DOD.

Institutionally, the push away from nuclear options is strong, but there are still difficulties with conventional alternatives. Conventional Prompt Global Strike (PGS) is now itself a presidential level decision requiring integrated system-of-systems solutions involving only conventional weapons. This means that before using conventional weapons in a PGS mode, the White House requires an integrated picture of the accuracy, timeliness, effectiveness, and collateral damage that would be produced as a result.

The mistaken Chinese Embassy bombing during the Kosovo War reiterated the obvious: increasingly accurate targeting systems still cannot negate intelligence weaknesses. The combination of all sources of uncertainty can make the decisions to use even conventional weapons platforms problematic.

However, these same concerns also apply to the contemplated use of nuclear weapons, as likely collateral damage and other effects to US forces and innocent civilians are even more difficult to assess. Contemporary norms against nuclear testing make the physical evaluation of these options impracticable.

Today, however, the trend with precision strike weapons is that as they become more accurate and powerful they can perform soft and medium-hard target missions that might have once been considered for nuclear weapons. These could include destroying an enemy ICBM being readied for launch or other highly destructive enemy weapon systems massing for an attack. Notwithstanding gaps in overall systems integration, conventional

weapons—not nuclear weapons—are the choice weapons for such targets. It is now inconceivable that an American president would use nuclear weapons against soft or medium-hard targets given the many and growing conventional options at hand.

If nuclear weapons are considered for any mission at all, they could only be contemplated for medium-hard to hard targets which conventional weapons would be too weak to destroy, or for a set of widely dispersed targets which must be neutralized completely all at once. Even if new proliferators like Iran were to create hard targets, they might be few enough in number that conventional forces would be preferable. Controversial commando raids by US Special Forces would almost certainly have fewer political and environmental costs than the use of nuclear weapons.

The premises behind contemplated use of PGS are that time is of the essence, no other action suffices, and the use of PGS is justified by the urgent, extreme nature of the crisis. Thus, to be acceptable to the American public, any use scenario would require that the president had no better option, had to act quickly, and failing to act would have been strategically and politically unacceptable. In addition to cruise missiles launched by naval platforms, the newly developed conventional systems under PGS could fulfill these criteria in most circumstances.

Presidential Criteria for Nuclear Use

Taking our logic to the next step, we can develop criteria under which nuclear use by an American president might be considered. These criteria are a necessary, but not necessarily sufficient, set, as other factors might further pertain against nuclear use. For an American president to choose to use nuclear weapons, the following would be required:

1) A unique mission or crisis situation that is extremely unlikely to be solved by other means.
2) A mission that cannot be accomplished as well or with the required decisive finality if conventional weapons had been used.
3) A mission whose benefits must outweigh the inevitable backlash, recriminations and criticisms that would follow, and
4) A mission that has to put an end to the crisis situation that motivated the use of nuclear weapons in the first place. If the end result is unchanged or the problem is essentially ongoing, no US president could justify the use of nuclear weapons.

There are few missions that would meet these requirements. US conventional capability offers other ways to accomplish many of the missions tested by the first criterion. Under the second criterion, although conventional weapons strikes might not be able to eliminate the threat as conclusively, they could probably do so if their deployment level was increased. Hard targets that could not be conclusively destroyed with conventional bombs might be taken out by ground forces.

The third criterion is also significant. Using nuclear weapons would have enormous costs; only removing an extraordinarily immediate and severe threat to US security would

justify their use. This will likely remain the case unless there is some shift that eliminates the nuclear taboo. The United States didn't use nuclear weapons against North Korea in the 1950s when—compared to today—the US military had many fewer options, and when it might have been more politically acceptable to do so. As time has passed, the nuclear taboo has only become stronger, and it remains despite the confusion and uncertainty of the post-Cold War period.

Also, the unique cost of nuclear use suggests that any proposed use should have some finality in addressing the threat. Nuclear weapons use against individual nuclear installations or individual terrorist bases would not eliminate the overall problem. The demonstrated use of nuclear weapons might alter the threat perceptions of some US foes, but, given the motivations of conceivable future adversaries, it could also enhance their commitment. The difficult fourth criterion of finality symbolizes why we still hear inchoate threats of nuclear retaliation to a hypothetical major terrorist attack.

The "Uncertain Future" Argument

One often hears the argument that the United States needs nuclear weapons for an "uncertain future," which is so difficult to imagine today that we just can't appreciate how important nuclear weapons might be. The "uncertain future" argument is open-ended in that its premise is that the world has become unstable in surprising and unpredictable ways that will extinguish our very existence if we do not act. The crisis is so severe that moral arguments about the use of nuclear weapons are thrown out the window. "If a few million of the enemy's people die, and that's the price to protect the United States from annihilation, it would be regrettable but necessary," the argument might go. "Worldwide 50 million people die every year anyway."

At present, the Russian military views nuclear elimination as a uniquely American notion. Their view is that the only reason the US is willing to discuss getting rid of nuclear weapons is because of US conventional military superiority. And if Russia would actually get rid of their nuclear weapons, then the US would be superior militarily without a doubt. Russians see nuclear weapons as more necessary than ever for them as they are the only way they could respond to our large conventional military advantage.

Of course, this is exactly the argument that the United States made during the Cold War; America felt it needed a "flexible response" to stop the vast Soviet Army from coming through the Fulda Gap.

Thus if restraint is not exercised in the number of deployments of PGS Weapons, their sheer numbers could prevent progress in further reducing the US and Russian nuclear weapons stockpiles. While reductions in the nuclear weapons stockpiles of all nations will be a necessary part of "getting to zero," such steps will not be sufficient. Ultimately, "getting to zero" will require moral leadership and recognition that the use of nuclear weapons will not be a politically tenable choice for a US president or for any other world leader.

Nevertheless, further reductions are a necessary part of the process because as the

numbers come down, it becomes easier to work with other countries to build confidence and envision even smaller nuclear stockpiles.

Conclusions

The new wave of nuclear posture literature that recommends 500 or 1,000 US nuclear weapons notably lacks detail when it comes to articulating the future missions that would justify those levels. As the Pentagon works to create more precise conventional alternatives, policymakers should consider whether those conventional weapons might fulfill missions that were once considered only for nuclear weapons.

Nuclear weapon stockpiles in the United States and Russia are coming down, and new proposals would reduce them even more. Getting to zero will not be easy. Steps taken to reduce nuclear weapons stockpiles further may enable more concrete discussions about "getting to zero," but ultimately moral leadership will be required to reach that goal. However, whatever the size of the US nuclear weapons stockpile, nuclear weapons should not be retained for missions that are inconceivable or lack credibility.

Prompt Global Strike (PGS) is an example of a conventional weapons program that could carry out some current nuclear weapons missions, especially those that involve soft and medium-soft targets. Yet, even conventional PGS requires presidential level decisions and confidence in the expected outcome.

The possible uses of nuclear weapons must be considered in the framework of the four presidential criterion listed earlier. Considering these criteria, the scenarios under which the use of nuclear weapons might be considered can probably be dealt with using conventional weapons, to the extent that those scenarios would have been credible for nuclear weapons in the first place. Proposals for retaining nuclear weapons should be justified by believable, credible missions that can meet those presidential criteria.