Oral Remarks by Dr. Brad Roberts Senate Armed Services Committee Strategic Forces Subcommittee April 28, 2021

Thank you for the opportunity to appear before you again to discuss questions of nuclear policy and posture. Let me begin by underscoring that I am participating in my private capacity and thus the views I express are my own.

My core argument today is that the United States should have the nuclear forces its strategy requires and not the strategy its forces require.

U.S. nuclear deterrence strategy has been remarkably constant over the decades. To be sure, there have been many changes to the U.S. practice of deterrence and to the associated forces, especially since the end of the Cold War, as the role of nuclear weapons has become much narrower. But the fundamentals of deterrence strategy have remained intact. US nuclear deterrence strategy seeks to:

- 1. Deter threats to the vital interests of the United States by putting at risk those assets most valued by adversary leadership
- 2. Respond if deterrence fails to restore deterrence at the lowest possible level of damage and in a manner consistent with U.S. political objectives
- 3. Extend deterrence protection to allies and partners
- 4. Hedge against surprise, both technical and geopolitical

Especially since the end of the Cold War, the case has often been made for major changes to U.S. nuclear deterrence strategy. That case is usually made by those who see the current U.S. practice of nuclear deterrence as dangerously trapped in cold war concepts and forces and who thus advocate instead for a different strategy, sometimes called minimum deterrence or "deterrence only." The regular process of reviewing the U.S. nuclear posture provides a valuable opportunity to revisit these questions and re-test policy assumptions in a changing context.

The latest version of the argument for major change comes from former Secretary of Defense William Perry, who (with his co-author Tom Collina) argues that:

- "The United States has been prepared for a surprise Russian nuclear attack that never arrived and, in all likelihood never will."
- "The greatest danger is not a Russian surprise attack but a US or Russian blunder—that we might accidentally stumble into war."
- "If there is no significant risk of a disarming first strike, then there is no need to launch nuclear weapons first, preemptively, or quickly, no need for presidential sole authority

other than for retaliation, no need for weapons on high alert, no need to launch weapons on warning of attack, and no need for ground-based missiles at all."

- "There is every reason to believe that, once attacked with atomic weapons, a nation...would respond with everything they've got."
- "The Obama administration started an excessive program to rebuild the nuclear arsenal...The Pentagon took over the project and developed a plan to rebuild all parts of the arsenal as if the Cold War had never ended."

Thus, they argue in favor of retiring the ICBM leg of the triad, shrinking the SSBN leg, and adopting no first use.

I disagree with this analysis and thus with the recommendations. Let me offer four counterarguments.

First, the threat of nuclear attack on the US and its allies did not go away with the cold-warvintage threat of a Bolt-from-the-Blue. The threat changed. Today's threat arises principally from the possibility of regional wars at the conventional level that escalate to nuclear attacks. Such wars present three nuclear risks:

- of very limited adversary use to demonstrate resolve and/or gain operational advantage
- of expanded use within the theater for counter-escalation and war termination purposes, and
- of homeland attacks that are not Bolts from the Blue.

Minimum deterrence offers no answer to these problems. "Responding with everything they've got" might only put a country into deeper jeopardy. The threat of such a U.S. "nuclear spasm" (to cite Herman Kahn) is not credible in the three contingencies. Deterrence would be weakened. So too assurance.

Second, I disagree that an "accidental stumble" into war is "the greatest danger." I've just described what I think of as the greatest nuclear danger. To be sure, the risk of miscalculation cannot ever be ruled out. But I am satisfied that this problem attracts the needed high-level focus from DoD leadership and agree with a recent DoD statement that "the U.S. alert system prioritizes surety over speed." Moreover, in the decades since the end of the Cold War a variety of features have been designed into nuclear weapons to ensure they fail safe unless clear indicators of military intent are present, and a layered approach to security essentially precludes unauthorized use.

Third, minimum deterrence has no answers to the problems of extended deterrence, multipolarity, and hedging. With minimum deterrence, the United States cannot "reinvigorate and modernize its alliances," respond to China as "the pacing threat," or "head off costly arms races"—all priorities set by the Biden administration. Credible answers are essential in a security environment that is increasingly challenging on all these fronts.

Fourth, the modernization program of record is not excess to requirement or a simple replication of the cold war force. The requirements were largely set in the Obama era in a

strategy-driven review and have enjoyed bipartisan support. The force itself has shrunk substantially and changed in the decades since the Cold War, as it has shed both numbers and types of delivery systems and was largely stripped of its capabilities for extended deterrence. The following three graphics help to make this point. A central question for national discussion is whether the requirements set in 2013 are appropriate and sufficient in a world marked by multipolarity and multi-domain strategic competition.

My bottom lines: The long-standing deterrence fundamentals underpinning U.S. strategy are sound. The strategy is sound. The alternative strategy is not sound. If implemented, it would increase nuclear dangers in various ways. The United States should maintain the forces required by existing strategy. ICBMs contribute something unique to each of the four deterrence objectives set out above. The full triad should be maintained. Such maintenance requires modernization without further delay.

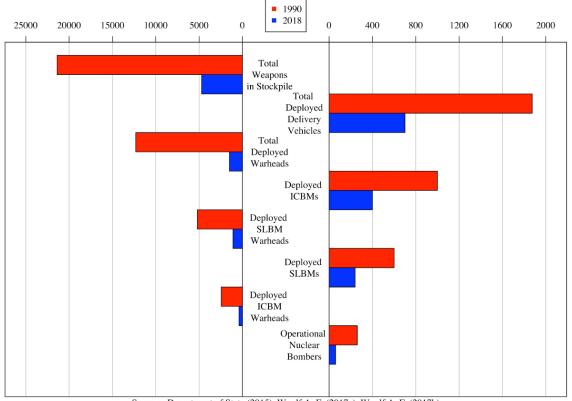


Figure 1: Strategic Nuclear Forces by Nuclear Triad Leg, 1990 and 2018

Sources: Department of State (2015), Woolf A. F. (2017a), Woolf A. F. (2017b)

STRATEGIC, OFFENSIVE

- Intercontinental Ballistic Missiles*
- Strategic Heavy Bombers*
- Submarine-Launched Ballistic Missiles*
- Air-Delivered Bombs*
- Air-Launched Cruise Missiles*

STRATEGIC, DEFENSIVE

- Air Defense Missiles
- Anti-Ballistic Missiles

TACTICAL, OFFENSIVE

- Dual-Capable Aircraft (DCA)*
- Air-Delivered Bombs*
- Free-Flight Rockets
- Surface-Launched Ballistic Missiles
- Surface-Launched Cruise Missiles
- Artillery-Fired Atomic Projectiles

TACTICAL, DEFENSIVE

- Air Defense Missiles
- Atomic Demolition Munitions

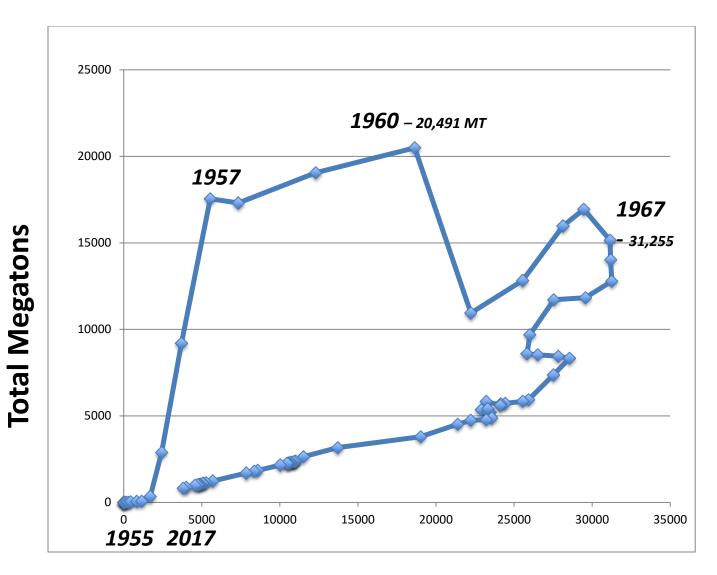
TACTICAL, SEA

- Carrier-Based DCA
- Anti-Submarine Depth Bombs
- Air-Delivered Bombs
- Sea-Launched Cruise Missiles
- Torpedoes
- 16-inch Battleship Guns

* indicates current U.S. nuclear delivery system

Figure 4.10 Cold War Nuclear Weapon Delivery System Categories

Source: Nuclear Matters Handbook 2020



Total Warheads

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