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Op-Ed Paper

Re-Arming America: The Urgent Need to Recapitalize the Nuclear Triad and Ensure a Stable Nuclear Deterrent for the 21st Century

The nuclear deterrent has been the backbone of military strategy in the United States for the better part of a century and continues to remain the bedrock on which all strategic plans are built today. During the Cold War, the United States engaged in an arms race with the Soviet Union that required constant investment in the existing nuclear triad and in the development of increasingly better weapons and delivery systems as a means of ensuring the deterrent was credible and capable. When the Cold War ended, the United States began a drawdown[i] of its weapon systems due to arms agreements that reflected the belief that such large nuclear arsenals were no longer necessary. Russia, it was presumed, would join the liberal world order after the failure of its communist experiment, and the Chinese would also liberalize as they were welcomed more and more into international markets. Francis Fukuyama called it the "end of history" and the notion that there should be any urgency around maintaining and continuing to innovate the U.S. nuclear deterrent was dismissed as a Cold War relic.

This unfounded optimism about the straight-line progression of history towards democracy and peace continued well into the 21st Century, and American policymakers are only belatedly realizing the error of this post-Cold War nuclear strategy. As then-Secretary of Defense James Mattis put it in the introduction to the 2018 Nuclear Posture Review (NPR), "it is not possible to delay modernization of our nuclear forces if we are to preserve a credible nuclear deterrent – ensuring that our diplomats continue to speak from a position of strength on matters of war and peace[ii]." The American nuclear force is

at a low ebb – the stockpile of available weapons has been reduced by more than 85 percent since its Cold War peak and no new capabilities have been developed in over two decades[iii]. All three legs of the triad are aging – the Minuteman-III ICBM has been in service since 1970, the B-52 bombers have been in service in some form since 1955, and the newest Ohio-class submarine was commissioned in 1997 and is firing Trident missiles first deployed in 1990[iv]. The Nuclear Command, Control, and Communications systems (NC3) that ensures these systems can be used has not received significant upgrades since the 1980s[v]. While plans exist for the replacement of all of these systems, the time horizons for development, testing, and implementation are long, and subject to political gridlock in Washington. At a time when the Chinese and Russians are rapidly modernizing existing capabilities and deploying new ones, the United States must act quickly to ensure its nuclear deterrent remains both credible and capable of meeting these new challenges.

To put the current state of the U.S. arsenal into proper context, consider the modernization and expansion efforts currently being undertaken by Russia and China. Valery Gerasimov, Chief of the Russian General Staff, claimed in 2017 that 75 percent of Russia's "ground, air, and sea strategic nuclear forces had been modernized[vi]." The modernization effort has included expansion and upgrade of existing forces as well as the development of "exotic" capabilities like the hypersonic glide vehicle[vii]. Public statements by leading Russian defense officials prove that they no longer respect the U.S. deterrent capability in the same way their Cold War counterparts did. When asked about the prospects of future arms control or reduction agreements between Russia and the United States, Russian Presidential Chief of Staff Sergei Ivanov said, "I would like to

say to [the Americans who want reductions], 'Excuse me but what we have is relatively new.' They have not conducted any upgrades for some time. They still use Trident [missiles.]"[viii] These Trident missiles are the newest in the U.S. arsenal, and while some of this can be chalked up to typical Russian bluster, it belies the fact that Russia may not take American nuclear capabilities as seriously as they ought to – a dangerous potential failure of deterrence that could be resolved in part by an effort to publicize the effectiveness of America's current capabilities despite their age paired with an obvious commitment to the development and deployment of more modern systems tailored to deter Russian aggression.

China has similarly been deploying new nuclear capabilities at a rapid pace and are expected to have doubled the size of their nuclear arsenal by 2030[ix]. On the 70th anniversary of the founding of the People's Republic of China, the Chinese military unveiled its newest ICBM, the Dongfeng-41 (DF-41), which Chinese military leaders have said was developed specifically to deter American action in Asia[x]. The DF-41 reportedly has the longest range of any Chinese missile yet developed, and is equipped with 10 multiple independently targetable reentry vehicles (MIRVs) which can include dummy weapons designed to bypass U.S. ballistic missile defense systems. Additionally, the Chinese are rapidly developing hypersonic glide vehicle delivery systems, and some observers suggest that the Chinese have even surpassed American capability in this space[xi]. The Chinese have also developed and tested anti-satellite weapons designed to hold space-based portions of the U.S. NC3 at risk.[xii] In 2018 China conducted more missile tests than all other nations on the planet combined, and is reportedly planning to operate its test site year-round[xiii] – clear indication that China

will continue to modernize and expand its forces. In the face of this growing threat from the Chinese, American triad modernization is more important than ever, as the triad serves as the backbone of our extended deterrent commitment to Australia, South Korea, and Japan. These allies remain vital to American national interests in the region, and so providing assurance of this U.S. commitment will be critical to facing down China in the years to come.

In spite of the obvious efforts by America's primary geopolitical rivals to expand and upgrade their own strategic nuclear arsenals, there are many in the United States who continue to believe that very little if anything needs to be done to modernize and expand America's deterrent. Some oppose an upgrade to the arsenal for fear of provoking another arms race[xiv] while others make an implicit argument for unilateral disarmament instead of new investment[xv]. Still other critics of modernizing the triad are cost-conscious, either arguing that current systems can simply undergo more life extension programs that would be cheaper than fielding new systems[xvi] or arguing for the elimination[xvii] of a leg of the triad altogether. None of these criticisms are wholly convincing, and none would result in a safer, more secure America.

There is little fear of provoking another arms race – the evidence is clear from Russian and Chinese buildup and development of new capabilities that we are in the midst of an arms race and the United States has been coasting on its past technological advantages and burying its head in the sand rather than seeing reality clearly. Further unilateral disarmament or arms control treaties will do little good unless all the actors are willing to come to the table and be willing to be held accountable for compliance –

something the Russians have proven they are incapable of in recent years[xviii] and something the Chinese have never[xix] been willing to do.

Concerns about fiscal prudence as relates to triad modernization are almost wholly without merit. The Congressional Budget Office's ten-year estimate for modernization costs was $494 billion in 2019 – or $49.4 billion annually during that time[xx]. This accounts for just five percent of the U.S. military budget for FY2019[xxi] and an even smaller percentage of the overall federal budget. To put this spending in context, improper Medicare payments in FY17 were estimated to be $52 billion[xxii] – more than enough to pay for the modernization effort of the nuclear triad. This example is just one that illustrates that there is plenty of money in the treasury that could – if not for the gross misallocation of taxpayer dollars, including within the Pentagon itself[xxiii] – be used to modernize the nuclear deterrent without raising a dime in new taxes.

Finally, there are critics who think that the triad as constituted is redundant and ought to be reduced to a di-ad. However, each leg of the triad serves a specific function and all contribute to an effective deterrent that can work consistently in an ever-changing strategic environment. ICBM's are frequently singled out for elimination, citing the cost and alleged danger the missiles pose due to the "use it or lose is" nature of the weapons and because of the inability to recall them once launched. Critics of the land-based deterrent argue that the air and sea legs are survivable and carry enough payload on their own to act as a credible deterrent. While it is true that a disarming first strike against America's bomber wing and sea-based deterrent is exceedingly unlikely, there is real deterrent value in convincing an opponent that there is no reason to even take that chance – this deterrence by denial role is what the ground-based leg of the

deterrent plays. The fact that there are 400 Minuteman silos spread across low-population areas means potential adversaries must focus on counter-force rather than counter-value targeting, meaning millions of American citizens cannot be held at risk by foreign powers without the threat of massive retaliation. The fact that ICBMs can be launched quickly and in such overwhelming force that they cannot hope to be stopped alters the enemy's calculus, as it becomes totally inconceivable that catastrophic losses can be avoided. And finally, weapons redundancy is not inherently a negative as it allows for greater likelihood of mission success by diluting the impact of potential systems failures, which in this case would instill in the mind of any adversary little doubt of the reliability of American forces.

The United States has neglected its nuclear enterprise for too long and is in need of urgent recapitalization if deterrence is going to continue to be an effective tool in the 21st Century. Russia and China have modernized and expanded their nuclear forces, narrowing or eliminating whatever technical gap the United States had in 1991. The United States has not developed new weapons systems in decades, and its NC3 is potentially vulnerable[xxiv] to Russian or Chinese first strikes – which would in turn render strategic nuclear forces mostly useless. Hardening the NC3 needs to be the top priority, with particular attention paid to cyber threats as the ancient system is modernized. The second priority needs to be a whole of government commitment to modernizing the triad's delivery systems. Predictable funding from Congress would go a long way to achieving a modern nuclear deterrent, as this predictability can allow both the R&D and acquisition processes to proceed smoothly and keep costs lower. Third, investment by the federal government in talent acquisition and retention to the nuclear enterprise, and

reinvestment in nuclear production facilities, will ensure that American nuclear capabilities are being developed by the best and the brightest and that a new generation of scientists and strategists will be thinking about nuclear weapons and deterrence. Finally, the United States must see reality clearly – the Russians of today are not the Soviets of the past, and the Chinese of today are much more outward looking than when they first acquired nuclear weapons. The United States must tailor its deterrent to match each enemy, not look for a one-size-fits-all solution to an existential problem.

Deterrence can only work if America has the proper tools to execute its strategy, and its adversaries truly believe the threat from those tools is credible. Recapitalizing and investing in America's nuclear triad and NC3 systems will achieve these goals, and provide the United States with a credible deterrent for decades to come.

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