NATIONAL INSTITUTE FOR PUBLIC POLICY

INFORMATION SERIES

Issue No. 623 April 15, 2025

Nuclear Deterrence vs Nuclear Warfighting: Is There a Difference and Does it Matter?

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Introduction

Nuclear weapons are having a "moment."

Russia is threatening nuclear strikes on the West for its support to Ukraine.[1] China is the fastest growing nuclear power on the planet.[2] North Korea continues to expand and advance its nuclear and missile programs. And there is active discussion about the nature of—and what to do about—Iran's nuclear weapon program.[3] Meanwhile, the United States, facing major industrial base issues, is modernizing its strategic deterrent at what seems to many to be a glacial pace.[4]

All of this may seem of a piece; that all the nuclear powers or nuclear aspirants are updating their arsenals. However, there are significant differences between what the United States is doing and what its potential enemies are doing. Specifically, while the United States is focused

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on modernizing an arsenal that is designed to deter strategic attack, America's adversaries are quietly fielding and expanding nuclear arsenals that are not only designed to deter a strategic attack on their homelands but also are optimized for nuclear warfighting in military theaters of operation. Conversely, this is an area the United States has neglected since the Cold War ended decades ago.

Given Moscow's and Beijing's apparent emphasis on preparing to fight a regional nuclear war, the United States needs to understand that we – by misunderstanding what Moscow and Beijing are doing—may be inviting the risk of deterrence failure and the risk of limited, theatre nuclear use by our adversaries in the context of a conventional conflict

Put another way, while the current U.S. strategic modernization program of record is necessary, it was established 15 years ago, prior to when Moscow's and Beijing's manifest expansionism and related nuclear war fighting orientation were wholly obvious. That U.S. modernization program, largely unchanged since its establishment, is now likely insufficient to deter adversary theater nuclear employment.

First Principles

To understand the qualitative differences and distinctive goals between the United States on one side and the People's Republic and Russia on the other, it is important to define the key terms of art, areas of overlap, and distinct approaches of the various arsenals.

Definitions

Deterrence has many definitions. Some define it as convincing a specific actor not to take a specific course of action through the threat of inflicting an unacceptable response (deterrence by punishment) or by increasing the chances that they will not achieve the aims which they seek (deterrence by denial).[5] In either case, deterrence includes the implicit and explicit threat of withheld escalation during a conflict.[6] In the end, deterrence is about having the ability to influence opponents' perceptions by holding at risk what they value such that they conclude that restraint is their "least-bad" course of action.

For U.S. deterrence to work, the enemy leadership must believe that U.S. threats are credible. Credibility relies upon the opposing leadership's' perception of America's will. Enemies need to understand that, "no matter how skillful or ingenious" is their aggression, there is "a very high risk if not certainty" that the United States will carry through on its deterrence threats.[7] When pursuing a deterrence by threat of punishment strategy, necessary U.S. capabilities include conventional weapons as well as nuclear weapons. Additional capabilities may include cyber defense and resilience, missile defenses, civil defense measures, or personal protective equipment if one pursues a deterrence by denial strategy.

Next, it is useful to define the term "warfighting." In this essay we use the term, "warfighting" to refer to the ability to destroy sufficient levels of opponents' fielded military forces and associated support infrastructure such that they are unable to operate effectively on the field of battle, therefore leaving one free to impose one's political will upon opponents or

force them to accept a cessation of hostilities. In this context, weapons designed for warfighting are those optimized to engage and destroy military forces like adversary troop formations, bases, aircraft, naval forces, command and control, and logistics infrastructure.

We contrast this "warfighting" role with that of "strategic weapons" for deterrence, which are meant to deter a large-scale or otherwise significant attack that has national-level impact upon the American homeland. In one sense, all nuclear weapons are "strategic" in that they demonstrate one's resolve and stake; but generally speaking, the nuclear community differentiates between "strategic" and "non-strategic" nuclear weapons, the latter pertaining more to regional conflict scenarios. U.S. strategic weapons are nuclear weapons that can directly threaten what an enemy leadership values most within the opponent's homeland, such as the ability of the leadership to maintain control over its society, strategic and conventional forces, critical infrastructure, or the civilian population.[8] Such weapons usually are intercontinental in range and therefore are able to reach most any target on the planet and are capable of delivering a high-explosive yield that can destroy large area targets.

In contrast, non-strategic nuclear weapons (NSNWs) generally have a much smaller yield than strategic weapons and are thus able to have much more discrete effects. Further, they usually have shorter ranges and can only reach targets within a specific theater of operation, generally those adjacent or proximate to their own homelands.[9]

Different Roles and Functions of Strategic vs. Non-Strategic Nuclear Weapons

Strategic and non-strategic nuclear weapons serve different functions that nevertheless have some overlap. To begin with, U.S. nuclear strategies of the Cold War emphasized large scale employment of low-yield non-strategic nuclear weapons to blunt Soviet conventional capabilities, particularly when Moscow had quantitative force advantages. This was the case with various NATO nuclear strategies, in which NATO decided to threaten to employ nuclear weapons against Warsaw Pact forces during a large-scale invasion of Western Europe. Both Eisenhower's "New Look" strategy of the 1950s and Kennedy's "Flexible Response" strategy emphasized low-yield, relatively short range or medium range theater nuclear capabilities that could blunt, and ultimately roll-back, Warsaw Pact forces should they strike at NATO.[10]

Fundamentally, therefore, the deployment of theater and short range NSNW to Europe provided NATO an explicit *warfighting* response against the quantitatively superior Warsaw Pact forces. At the time, many policy makers, elected officials, and military commanders then believed that open conflict between NATO and the Warsaw Pact was inevitable. Therefore, theater NSNW were required if NATO was going to be victorious on the battlefield…which itself contributed to NATO's ability to deter a Warsaw Pact attack in the first place.

Augmenting the local deterrent effect of the NSNW, by the 1960s strategic nuclear weapons were in place largely to deter either side from carrying out a strategic—likely, nuclear—attack on the other's homeland. These systems included nuclear-armed intercontinental ballistic missiles (ICBMs) capable of reaching the adversary's homeland, bombers that could overfly

the adversary's homeland and deliver nuclear munitions as needed, and ballistic missile submarines that were undetectable.

Overtime, the two types of nuclear weapons were seen as performing two separate functions: NSNWs, while highly valuable to deter a regional attack, were seen as tools more useful for warfighting, while strategic weapons were tools of deterrence.

The Conflation of Non-Strategic with Strategic Nuclear Weapons

With the end of the Cold War, how the two types of weapons were perceived in the popular consciousness changed. Nuclear weapons and the threat of an inevitable nuclear cataclysm, so prevalent in the Cold War, largely became an anachronism of an earlier time in popular imagination.[11] Many people today, when asked about the difference between strategic and non-strategic nuclear weapons, deterrence versus warfighting, would not understand the question. Certainly, in the minds of many in the West, nuclear weapons are nuclear weapons, capable of and designed for destroying cities--the single use of which would trigger a third world war on a cataclysmic scale that would bring civilization to an end. This is not the case, however, in Moscow or Beijing, where the leaderships understand that different types of nuclear weapons have different effects, functions and missions—and therefore may support very different strategies to achieve different goals. And the prevalence of different weapons within a nation's nuclear arsenal may tell very different things about how and why that nation intends to employ those weapons.

Moscow and Beijing are Fielding Arsenals Optimized for Nuclear Warfighting Arsenals

For decades, the United States has not anticipated a need to use nuclear weapons in a NATO or Pacific military campaign, nor to date has it sought to acquire a specific capability to do so. Indeed, for three decades the United States has emphasized the priority of reducing the role of nuclear weapons in its strategies, most recently in the 2022 *Nuclear Posture Review*. However, these are exactly the capabilities continuing to be fielded by Russia, which maintains roughly 2,000 non-strategic nuclear weapons, and increasingly by China.

In seeking a nuclear warfighting capability, a nation would likely build a variety of nuclear capable short or theater-range nuclear land-attack capabilities. These systems would include a combination of maneuverable cruise missiles (which present challenges to enemy air defenses and are highly effective against mobile and fixed targets) and ballistic missiles, which are designed to hit targets rapidly following a launch.

One could argue that Russia and China are not fielding these forces because they seek to engage in nuclear warfighting—and that may be a correct argument. Russia and China may both seek a 21st century coercive variation on Cold War-era NATO nuclear strategy, by which they attempt to offset American or coalition qualitative and potentially quantitative conventional advantage by deploying numerous low-yield nuclear warfighting capabilities. By

making such capabilities public, Moscow and Beijing may seek only to deter American conventional response to their offensive military actions against our allies. If so, it must be recognized that such a strategy is not comparable to NATO's Cold War era deterrence strategy, which was designed to deter attacks on NATO territory, not to support NATO military expansion into the Soviet Union. NATO's Cold War strategy was clearly defensive, whereas this possible interpretation of Moscow's and Beijing's strategies involves the coercive use of nuclear threats to support expansionist goals and military actions.

However, there are two inescapable caveats to the argument that the Russian and Chinese NSNW arsenals are not intended for actual warfighting purposes. The first is that the NSNW arsenals they have fielded (in Russia) or are actively fielding (in China) are indistinguishable from an arsenal that is built for purposes of actual nuclear warfighting. In that sense, even if the arsenals are meant to deter a U.S. response to their aggression, the existence of these capabilities give leaders in Moscow and Beijing multiple options to initiate a theater nuclear war.

Further, statements by the Kremlin and individuals associated closely with the Kremlin suggest that Russia should employ NSNW in Ukraine explicitly to achieve operational advantages on the battlefield or to degrade NATO capabilities (particularly, key logistics hubs) that are directly or indirectly supporting Ukraine as it defends itself from Russian aggression.[12] If anything, the Russians themselves are making the case that their NSNW arsenal is by design a nuclear warfighting arsenal. Even prior to Moscow's 2022 invasion of Ukraine, the 2018 *Nuclear Posture Review* stated, "Russia demonstrates the perception of the advantages these systems provide through numerous exercises and statements."[13]

This fact is made more worrisome in that Russia's and China's NSNW growth is taking place in the absence of any comparable American, NATO, or allied NSNW arsenals. Indeed, open sources indicate that today NATO only has a few hundred or so NSNW deployed in Europe and none in Asia—a far cry from when the United States had 7,000 NSNW deployed to Europe in the Cold War and far fewer than the 2,000 NSNW that Russia deploys today.[14] Most compellingly, almost 35 years after the last American NSNW left the Western Pacific,[15]China is expanding its strategic nuclear and its NSNW forces in the absence of American theater nuclear deployments.

Expanding the U.S. Nuclear Deterrent Modernization Program

Until the United States changes its force structure and arsenal to include the specific, capabilities needed to deter adversaries from using low-yield, theater range nuclear weapons, the United States and allies will be challenged when confronted by an opponent capable of threatening or conducting regional nuclear warfighting. Relying solely on U.S. strategic, intercontinental systems for this purpose, i.e., the threat to engage in strategic nuclear war, appears to lack the needed deterrence credibility in the view of opponents and some allies.

This means that the United States must continue with the SLCM-N program of record so as to address some of the above shortfalls. But SLCM-N, even when fielded, will not provide the

number of diverse capabilities likely required to deter America's adversaries from engaging in nuclear warfighting. The U.S. lack of proportional non-strategic, non-ballistic, theater range systems that are capable of influencing opponent perceptions and decision calculus could cause autocrats in Beijing, Moscow, or even Pyongyang to conclude they cannot only threaten to use their NSNW for coercive purposes, but can employ NSNW to achieve operational advantage and ultimately victory in a conflict.

While a more complete military analyses, built in part upon classified data of adversary capabilities and corresponding U.S. force requirements, are necessary, a more credible U.S. nuclear arsenal almost certainly requires a mix of land attack ballistic and non-ballistic capabilities. Such capabilities include those that can be visibly generated as well as those that can be generated non-visibly; variable yield systems; and systems that can be generated from within theater on air, ground, and sea-launched platforms. Nuclear-variants of emerging hypersonic capabilities, such as the Long Range Hypersonic Weapon and/or the carrier-launched Hypersonic Air Launched Offensive weapon would be helpful to penetrate adversary air defenses. In this regard, a theater-range, stand-off, air delivered nuclear capability that can be carried by tactical aircraft such as the F-35 will become more important in the coming years due to the evolution of adversary air and missile defense architectures that can currently challenge U.S. and allied nuclear-capable fighter-bombers. Finally, a nuclear capability that can hold at risk hard and deeply buried targets that can deny adversary leadership sanctuary may well be required for deterrence.

These capability mixes, all designed to conduct different missions through different platforms and with various characteristics, are not meant to enable the United States to engage in nuclear warfighting—but to deter nuclear warfighting and thereby make it less likely. By fielding these capabilities, the United States can demonstrate that our adversaries cannot successfully engage in coercive nuclear threats or initiate nuclear warfighting as a means to achieve military advantage over the United States or its key allies.

Conclusion

Both Russia and China have built nuclear arsenals that are capable of deterring strategic attack, coercing Western capitals, and engaging in nuclear warfighting.

The program modernizing the aging U.S. strategic triad, based on the threat perceptions of 2010, is, as the 2023 Bipartisan Congressional Strategic Posture Commission reported, "necessary but not sufficient" to meet U.S. deterrence requirements in the two peer adversary world in which we find ourselves.[16] We must expand (and accelerate if and where possible) the current nuclear modernization program (which will not otherwise be complete until sometime around 2040), in order to deter Russia and China simultaneously at the strategic level. Even if that expansion is achieved, the current program does not provide the needed deterrence capabilities at the regional level. The U.S. arsenal is today, and will continue to be, particularly poorly constituted to deter an adversary's limited nuclear use in the context of its conventional aggression. Further, it would have very limited warfighting effectiveness given

the yield, range, and posture of America's strategic deterrent even if U.S. policy were to change from one in which the existing arsenal is meant to deter strategic attack to one in which it is meant to engage in nuclear warfighting.

Until the United States fields an arsenal that can deter our adversaries from engaging in nuclear warfighting at the theater level, policymakers and military leaders in Washington must understand that the United States is accepting the increasing risk of deterrence failure by: 1) failing to build and field a force that can deny the adversaries the benefits of employing nuclear weapons on the battlefield, including through robust missile defense systems deployed at home and abroad; and, 2) failing to build and field its own NSNW arsenal that can inflict punishment on adversary fielded forces during a conflict, if the adversary chooses to employ its own NSNW arsenal on the battlefield. The United States must be able to field its own NSNW to deter Russia and China from using theirs either coercively or to achieve battlefield success.

In short, adversaries almost certainly now see a gap in America's post-Cold War deterrent posture and are seeking to exploit it. The United States must close that gap by fielding a credible force that can deter NSNW employment and demonstrate that America's adversaries cannot find victory in nuclear escalation. If Washington fails to do so, the risk of limited, theater nuclear war will increase.

[1] Hanna Notte, "The West Cannot Cure Russia's Nuclear Fever," *War on the Rocks*, July 18, 2023, available at https://warontherocks.com/2023/07/the-west-cannot-cure-russias-nuclear-fever/.

[2] U.S. Department of Defense, "DOD Official Briefs on 2023 China Military Power Report," October 18, 2023, available at https://www.defense.gov/News/Transcripts/Transcript/Article/3562254/dod-official-briefs-on-2023-china-military-power-report/.

[3] Robert Peters and Nicole Robinson, "Iran is Inching Towards a Nuclear Weapons Breakout: What Does This Mean for the United States?," The Heritage Foundation, October 2024, available at https://www.heritage.org/middle-east/report/iran-inching-toward-nuclear-weapons-breakout-what-does-mean-the-united-states.

[4] U.S. Government Accountability Office, "Weapons Systems Annual Assessment: Programs Are Not Consistently Implementing Practices That Can Help Accelerate Acquisitions," GAO–23–106069, June 2023, available at https://www.gao.gov/assets/gao-23-106059.pdf.

[5] The classic discussion of the distinction between deterrence by "denial" and deterrence by punitive threat can be found in, Glenn Snyder, *Deterrence and Defense: Toward a Theory of National Security* (Princeton, NJ: Princeton University Press, 1961), p. 15.

[6] Keith B. Payne, "The Great Divide in US Deterrence Thought," *Strategic Studies Quarterly,* Vol. 14, No. 2 (Summer 2020), pp. 16-48, available at https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-14_Issue-2/Payne.pdf.

[7] Herman Kahn, *On Thermonuclear War* (Princeton, NJ: Princeton University Press, 1960), p. 557.

[8] It has been American policy for over 40 years that autocratic dictators do not place highest value on their people and thus for that practical—as well as moral—reason the United States does not deliberately target civilian populations. This has been true since at least the mid-1980s. See, Caspar Weinberger, *Memorandum for the Joint Chiefs of Staff: Collateral Damage Restraint*, November 12, 1985, (declassified, September 6, 2018), available at https://www.esd.whs.mil/Portals/54/Documents/FOID/Reading%20Room/MDR_Releases/FY18/FY18_Q2/Collateral_Damage_Restraint_12Nov1985.pdf.

[9] Indeed, the United States forward deployed a wide variety of ground, air, and naval NSNW during the Cold War (primarily to NATO but also in smaller numbers to South Korea) and still keeps a residual force in Western Europe as part of its NATO commitments. See Walter S. Poole, "Adapting to Flexible Response: 1960–1968," in Glen Asner, ed., *History of Acquisition in the Department of Defense* (Office of the Secretary of Defense: Washington, DC, 2013) and Roger Facer, *Conventional Forces and the NATO Strategy of Flexible Response: Issues and Approaches,* The RAND Corporation, January 1985.

[10] Robert Peters, "NATO in 2024—Can Its European Members Deter Further Russian Aggression?," The Heritage Foundation, July 2024, available at https://www.heritage.org/global-politics/report/nato-2024-can-its-european-members-deter-further-russian-aggression.

[11] See various Cold War era movies about nuclear war and the cataclysmic implications of a general nuclear exchange with the Soviet Union, to include: On the Beach, Failsafe, Seven Days in May during the middle of the Cold War, up through various films up through the late Cold War, to include The Day After, Amerika, and the Hunt for Red October. By the early 1990s, following the dissolution of the Soviet Empire, these films largely ended.

[12] Hanna Notte, "The West Cannot Cure Russia's Nuclear Fever," *War on the Rocks*, July 18, 2023, available at https://warontherocks.com/2023/07/the-west-cannot-cure-russias-nuclear-fever/.

[13] Office of the Secretary of Defense, *Nuclear Posture Review*, February 2018, p. 54.

[14] Gregory Pedlow, "Rapid Progress on a New Strategy: 1966–1967," NATO Strategy Documents: 1949–1969, North Atlantic Treaty Organization, October 1997, available at https://www.nato.int/docu/stratdoc/eng/intro.pdf (accessed April 8, 2024); Robert Norris and Hans M. Kristensen, "Global Nuclear Weapons Inventories: 1945–2010," *Bulletin of the Atomic Scientists*, Vol. 66, No. 4.

[15] Susan Koch, "The Presidential Nuclear Initiatives of 1991-1992," National Defense University, CSWMD Case Study 5, September 2012, available at https://ndupress.ndu.edu/Media/News/Article/718052/the-presidential-nuclear-initiatives-of-1991-1992/.

[16] Madelyn R. Creedon et al., *America's Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States*, The Strategic Posture Commission, October 12, 2023, available at https://www.ida.org//media/feature/publications/A/Am /Americas%20Strategic%20Postur e/Strategic-Posture-Commission-Report.pdf.

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