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## EDITOR'S NOTE

Welcome to Volume 3, Number 1 of the *Journal of Policy & Strategy*—a quarterly, online and peer-reviewed journal. In the “Analysis” section, the reader will be treated to five excellent thought pieces on issues of contemporary importance. Robert Joseph, Robert Collins, Joseph DeTrani, Nicholas Eberstadt, Olivia Enos, David Maxwell, and Greg Scarlatoiu collaboratively offer a national strategy for countering North Korea that features the promotion of the rights and freedoms of the North Korean people in the broader context of unification with South Korea. Gen. Robert Kehler (USAF, Ret.), former Commander of Strategic Command, reflects on the one-year anniversary of Russia’s full-scale, brutal invasion of Ukraine, assessing the unique role nuclear weapons play in U.S. and allied security. Brian Ellison, Dennis Evans, Matthew Lytwyn and Jonathan Schwalbe catalogue weapon developments in Russia, China, and North Korea and consider their implications for the U.S. nuclear forces posture, including different approaches to adjusting in response to contemporary trends. Keith Payne writes that although the basic nature of deterrence endures, the U.S. approach must now hedge against Russia’s and China’s common goal of overturning the classical liberal world order, their use of nuclear coercion to advance that goal, and their formation of a quasi-alliance against the United States. Finally, David Trachtenberg addresses the continuing misperception that U.S. nuclear targeting policy is based on the notion of mutually assured destruction, which would require the deliberate destruction of civilian targets.

This issue also features “Proceedings” from National Institute webinars on: deterrence in a trilateral strategic environment; overcoming the roadblocks to homeland missile defense; deterring China in the Taiwan Strait; and the 2022 *Nuclear Posture Review*. Avid readers will appreciate the “Literature Review” section, which includes Susan Koch’s review of Keith Payne’s new text, *Chasing a Grand Illusion: Replacing Deterrence With Disarmament*, David Trachtenberg’s review of Ashley Tellis’s *Striking Asymmetries: Nuclear Transitions in Southern Asia*, Michaela Dodge’s review of Alexander Lanoszka’s *Military Alliances in the Twenty-First Century*, Matthew Costlow’s review of Toby Dalton, Megan DuBois, Natalie Montoya, Ankit Panda, and George Perkovich’s *Assessing U.S. Options for the Future of the ICBM Force*, and C. Dale Walton’s review of Beatrice Heuser’s *War: A Genealogy of Western Ideas and Practices*.

The “Documentation” section includes selections from a September 15, 2022, Senate Armed Services Committee hearing to consider the nomination of General Anthony J. Cotton (United States Air Force) to become Commander of United States Strategic Command. Last, but by no means least, the editors include in the “From the Archive” section Colin Gray’s 1983 *Information Series* titled *Nuclear Deterrence and the Catholic Bishops*. We hope you will find these items of interest.







## ANALYSIS

### NATIONAL STRATEGY FOR COUNTERING NORTH KOREA\*

*Robert Joseph, the principal author, chaired the group of experts that developed the strategy outlined in this document. The other members of the group included Robert Collins, Joseph DeTrani, Nicholas Eberstadt, Olivia Enos, David Maxwell, and Greg Scarlatoiu. All members of the group provided inputs and share in its authorship. Brief biographies are at the end of this analysis.*

Since the emergence of the nuclear threat from North Korea in the early 1990s, the primary objective of U.S. policy has been to convince Pyongyang to abandon its nuclear weapons program. While successive administrations have adopted different combinations of incentives and disincentives to achieve this end, all have pursued denuclearization through diplomacy and negotiations as the signature component of their North Korea policy. All have failed. Kim Jong-un's New Year's Eve call for an "exponential increase" in the North's nuclear arsenal only underscores the need for a fundamental shift in U.S. policy.<sup>1</sup>

The North's nuclear program has expanded from small-scale plutonium reprocessing, to enriched uranium, to six nuclear tests, to an estimated arsenal of 40-60 weapons and is rapidly growing. The expansion of its weapons stockpile has been accompanied by an equally aggressive expansion of its ballistic missile force, which now includes several generations of short, medium, and long-range missiles, including the ability to hold all American cities hostage to attack.

While denuclearization remains central to U.S. national security interests, it is necessary to undertake a reassessment of the means to achieve this and other goals in the context of the full spectrum of threats from the North. This includes the potential for further proliferation, both from the North selling nuclear materials, and perhaps nuclear weapons, to other rogue states, as well as from threatened regional states deciding that they must have a national nuclear capability to counter North Korea.

To meet this growing security challenge, it is imperative to design and implement a new, comprehensive strategy that incorporates all available tools of statecraft—diplomacy, economic, information and intelligence, military and others. Most important, the strategy must be grounded in a pragmatic understanding of the North's determination to continue its nuclear weapons program which it sees as essential to the survival of the Kim regime. This is not to concede that North Korea is a legitimate nuclear weapon state as doing so would unleash a panoply of unintended consequences inimical to U.S. interests. Rather, it is to

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\* This article is a reprint of Robert Joseph et al., *National Strategy for Countering North Korea*, Information Series, No. 545 (Fairfax, VA: National Institute Press, January 23, 2023), available at [https://nipp.org/information\\_series/robert-joseph-robert-collins-joseph-detrani-nicholas-eberstadt-olivia-enos-david-maxwell-and-greg-scarlatoiu-national-strategy-for-countering-north-korea-no-545-january-23-2023/](https://nipp.org/information_series/robert-joseph-robert-collins-joseph-detrani-nicholas-eberstadt-olivia-enos-david-maxwell-and-greg-scarlatoiu-national-strategy-for-countering-north-korea-no-545-january-23-2023/).

<sup>1</sup> Brad Lendon and Gawon Bae, "Kim Jong Un Calls for Exponential Increase in North Korea's Nuclear Arsenal Amid Threats from South, US," *CNN World*, January 1, 2023.





accept that three decades of U.S. policy under both Democratic and Republican presidents have failed and that a different approach is necessary for U.S. national security.

The new strategy is described below. Although retaining elements of the current strategy—such as alliance relationships, defense and deterrence, containment, and economic sanctions—the new strategy represents a structural shift in the narrative of the past thirty years. It requires a different way of thinking about the complex problem of North Korea. While diplomacy to achieve denuclearization will be encouraged, the central feature of the new strategy will not be negotiations with the North over its nuclear program but rather the promotion of the rights and freedoms of the North Korean people in the broader context of unification with South Korea. This is the envisioned pathway to achieving long-standing U.S. policy and security goals, including denuclearization.

### **Six Strategic Propositions**

- (1) **A fundamental shift in policy toward North Korea is essential to meet U.S. national security requirements. As long as the Kim regime remains in power, Pyongyang will not abandon its nuclear weapons program and will persist with efforts to get the United States to accept the North as a nuclear weapons state.** Its nuclear weapons arsenal will continue to expand in both numbers and sophistication, representing a central threat to U.S. forces and homeland, to our allies, and to the nonproliferation regime. The near certainty that North Korea will sell nuclear technology, likely including weapons, to other rogue states and terrorist entities makes evident the need to adopt a new strategy to achieve U.S. security objectives.
- (2) **The Kim regime's greatest vulnerability is from within, from the alienation of its own people who suffer under totalitarian repression. While insisting on complete and verifiable denuclearization, the foundation of U.S. strategy should be a human rights upfront approach, a comprehensive information and influence campaign, and the advancement of the strategic aim of a free and unified Korea.** This is not the promotion of human rights solely for the sake of human rights. This is the most effective means to achieve U.S. national security imperatives. Only in this way will the nuclear threat, as well as crimes against humanity perpetrated by the Kim regime, be ended. The policy myths that have long asserted that the promotion of human rights conflicts with the goal of denuclearization should be replaced by facts. (See Annex A.) The promotion of human rights is the primary means to achieve denuclearization.
- (3) **U.S. strategy must be based on active containment of the North, including prevention of proliferation, as well as effective deterrence based on both offensive retaliation and credible missile defenses to protect South Korea, regional allies, and the U.S. homeland.** If deterrence fails, and North Korea initiates

a large-scale attack, the United States and its allies will ensure the end of the regime as the strategic end state of the defense plan.

- (4) **U.S. strategy for countering the North Korean threat requires the integration of all tools of statecraft.** Diplomacy is needed for any potential interaction with North Korea and essential to secure support from South Korea, Japan, and other regional and global allies, as well as to counter any resistance from China and Russia. Given the prominence of human rights in the strategy, diplomacy should also be focused on gaining support from the European Union, the European Parliament, and other states supportive of human rights. Economic sanctions and financial tools will be vital to contain North Korea and interdict its illicit proliferation activities. Information and intelligence tools will be essential to empower the people of North Korea and to counter the North's activities abroad. Defense and deterrence capabilities, including defensive and offensive cyber, will be essential for the success of the strategy.
- (5) **The preemptive use of military force by the United States and South Korea should be considered only when there is high confidence that a large-scale attack by the North is imminent, especially if that attack is assessed to include weapons of mass destruction. While not taking the military option off the table, the preemptive use of force to achieve regime change is not a viable option.** South Korea continues to live under the threat of the sheer mass and proximity of the North's military. The costs in lives, civilian and military, and treasure would far outweigh the gains. Although the United States and South Korea must be fully prepared to repel any military provocation or attack from the North, initiating an armed confrontation to end the regime is neither necessary nor acceptable.
- (6) **Placing the promotion of human rights with North Korea at the center of U.S. strategy will be vehemently opposed by Pyongyang, as it was by the Moscow when President Reagan insisted that human rights be a core element of U.S. policy with the Soviet Union. But continuing the current course will result in even greater threats to the U.S. and allies.** A course change in U.S. strategy that facilitates the people of North Korea determining their own future provides the most viable alternative to the failed policies of the past.

### **Flawed Premise of U.S. Policy**

Although each U.S. administration has crafted its own approach to achieve the denuclearization of North Korea, all shared a common flaw: their policies were designed to engage North Korea as they wished it to be, not as it truly is.

The North Korean regime is a heavily ideologized hereditary dictatorship, a deeply revisionist state fundamentally at odds with the existing international order. It shares few interests with the United States and its allies. Its highly racialized official doctrine upholds

the non-negotiable imperative of an unconditional reunification of the Korean peninsula under the absolute rule of Pyongyang.

The regime sees nuclear weapons as critical to survival, and essential for breaking the U.S.-ROK alliance and coercing the democratic South into submission. For these reasons, the North's leadership has never agreed to bargain away its nuclear program; indeed, doing so would be tantamount to treason. Past statements, and even formal commitments, to pursue denuclearization have been made as expedient tactical, and reversible, moves to achieve political and economic concessions. None were made in good faith, and all have been violated. Future commitments, if made, will follow the same pattern.

Despite all evidence to the contrary, Washington has consistently entertained the illusion that nuclear diplomacy with North Korea could work. One administration after another convinced itself that Pyongyang had some reason to agree to come to the table and make the decisions that the United States and the international community wished of it. The reality is that North Korea's leaders have always believed that their own security would be undermined by denuclearization. The DPRK regards its contest with the United States as a zero-sum game. Since the founding of the North Korean state in 1948, Pyongyang's interest has been in challenging U.S. security arrangements on the Korean peninsula and beyond, and there is no reason to expect change.

## History of Negotiations

For over 30 years, through bilateral and multilateral negotiations, the United States and Seoul have sought unsuccessfully to convince North Korea to end its nuclear program. Most recently, the "audacious initiative" announced by President Yoon Suk-yeol to provide massive economic assistance in exchange for steps toward denuclearization has been adamantly rejected by the North.<sup>2</sup>

The pattern of North Korea's negotiating behavior is clear. First, the North creates a perception of a crisis which, in turn, creates urgency on the part of the United States and its allies to provide concessions in exchange for restarting negotiations. Negotiations either lead to no agreement or to agreements—such as the 1994 Agreed Framework, the September 2005 Joint Statement, the 2012 Leap Day agreement, and the 2018 Singapore Joint Statement—that are violated by the North with little consequence, usually resulting in yet another crisis followed by concessions and the resumption of negotiations. At times, the North has been rewarded for just sitting at the table.

By any standard, negotiations have failed. North Korea has employed negotiations as a tactical means to a strategic end. It has skillfully used negotiations to buy time to expand its nuclear program. Even when agreements were reached, the North's program moved forward. Whether the United States and South Korea are talking to the regime or not, the program has continued to advance.

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<sup>2</sup> Reuters, "North Korea Rejects South's Audacious Economic Aid Plan," *The Economic Times*, August 19, 2022.

By contrast, the United States has allowed negotiations to substitute for an effective strategy. This does not mean that, under the proposed new strategy, diplomacy no longer plays a central role. It does. But it is essential to reject the argument that the choice is between war and negotiations. That false dichotomy has only led to a greater threat from the North.

## **History of North Korea's Nuclear Program**

Pyongyang's interest in initiating a nuclear weapons program can be traced to the mid-1950s when the Soviet Union began to train North Korean scientists and engineers on the basics of a nuclear "energy" program. The program moved from "knowledge" to practice with the opening of a research reactor in 1962. By the mid-1980s, the program had expanded to uranium mining, yellowcake production, and the construction of a reprocessing facility to separate plutonium from spent fuel. With the completion of its 5 Mwe reactor in 1986, the North was ready to pursue a national-level nuclear weapons program and, with the fall of the Soviet Union in 1989, Pyongyang had both the means and motive to acquire a nuclear arsenal to ensure, in its view, the survival of the Kim regime.

The nuclear weapons program has consistently moved forward from the early 1990s to the present. The "freeze" of operations at the Yongbyon reactor and reprocessing facility, negotiated in the Agreed Framework, was accompanied by a large-scale covert uranium enrichment program, a material breach of the agreement. When that program was uncovered by U.S. intelligence in 2002, the North moved openly to expand its weapons stockpile, initially with plutonium weapons followed by enriched uranium designs. The first nuclear test took place in October 2006 and was followed by five subsequent tests that have demonstrated continued improvements in yield, including what Pyongyang has described as a thermonuclear weapon. The last test took place in 2017 but the North is reportedly preparing for another test at the Punggye-ri site.

The North has declared itself to be a "nuclear weapons state" and had repeatedly stated that it will never abandon its nuclear weapons. The size of the stockpile has advanced at an ever-increasing pace. In 2020, General John Hyden, then Vice Chairman of the Joint Chiefs, stated that North Korea is "building new missiles, new capabilities, new weapons as fast as anybody on the planet."<sup>3</sup> Most recently, the North enacted a new law stating that there will be "no bargaining over our nuclear power" and establishing as official policy the preemptive use of nuclear weapons ("automatically and immediately") if the Kim leadership is put in danger. This law follows Kim Jung-un's directive to expand the nuclear arsenal "at the fastest possible speed."<sup>4</sup>

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<sup>3</sup> Cited by Barbara Star: @barbarastarcnn. "North Korea is building new missiles, new capabilities, new weapons as fast as anybody on the planet." (Tweet) – via Twitter.

<sup>4</sup> Mia Jankowicz, "Kim Jung Un vows to develop North Korea's nukes at the "fastest possible speed" and suggests he would use them if provoked," *Business Insider*, April 26, 2022.



If the United States continues the policies of the past, the result will be a greatly increased nuclear threat with North Korea expanding its arsenal to hundreds of weapons for tactical and strategic employment. The likelihood the North will sell nuclear weapons to other rogue states and non-state actors will increase as its stockpile grows.

**Figure 3.1**  
**Projecting the North Korean Nuclear Weapon Inventory**

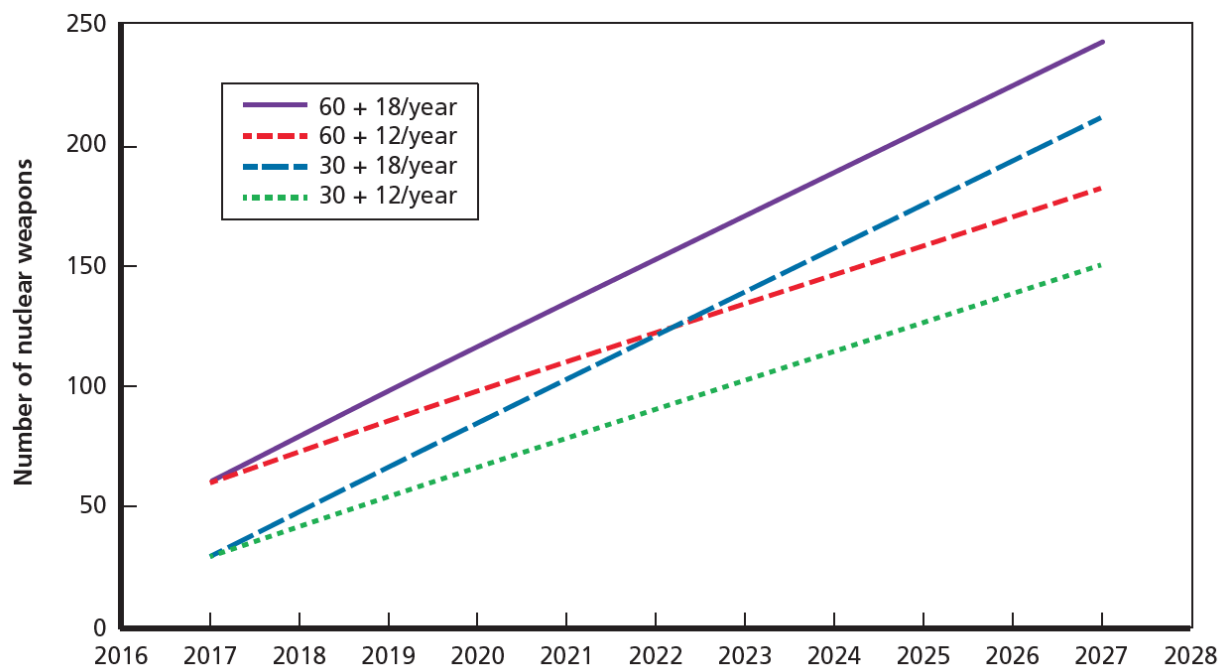


Figure 3.1 from Bruce Bennett et al., *Countering the Risks of North Korean Nuclear Weapons* (RAND, 2021), 37.

## Promotion of Human Rights in North Korea

The survival of the Kim regime is grounded in its nuclear weapons and ballistic missile arsenal, in maintaining the Korean People's Army, and in keeping its key elites content through access to luxury goods and hard currency procured from the outside world, generally through illicit means and in violation of applicable UN, U.S. and EU sanctions. Under the loyalty-based songbun system, by which all North Koreans are assigned a class background to facilitate internal social control, the regime oppresses its people at home and abroad. Most of the 25 million people of North Korea are victims of the Kim family regime's policy of human rights denial. (See Annex B.)

A strategy promoting human rights in North Korea must involve the United States and like-minded democracies, the private sector, in particular IT companies, and international civil society, including U.S. civil society organizations that can generate content, information, and analysis essential to understanding and influencing North Korea's human rights and

information environment. The infusion of information into the country is key to forcing internal change.

*Information Campaigns: The “Three Stories”:* The regime perpetuates itself through overwhelming coercion, surveillance, and strict information control. The principal agent of change in North Korea is its people. Information from the outside world is needed to empower them to enact such change. A coherent information campaign should focus on telling the North Korean people three stories: their abysmal human rights situation; the corruption of their leadership, in particular the inner core of the Kim family; and the truth about the outside world, especially democratic, prosperous South Korea.<sup>5</sup>

*Tailoring the Message:* Messaging should be tailored to all categories and subcategories of *songbun*. The people of North Korea experience various degrees of oppression, from the prisoners held at political prison camps, often together with up to three generations of their families, to the elites experiencing a vicious cycle of privilege and human rights denial. Messaging to the victims of human rights denial should focus on the “three stories.” Messaging to those who are both victims and perpetrators (the three fundamental building blocks that preserve the regime—party, military, and security agencies) should also be told the three stories and emphasize the irreconcilable rift between the regime’s own constitution and its international obligations on the one hand, and its regime ideology on the other, in particular Kimilsungism, the Ten Principles of Monolithic Ideology, and *juche* self-reliance thought.

*Selecting the Information Delivery Vehicles:* Selecting information delivery vehicles will have to be based on an understanding of North Korea’s evolving information environment. Delivery vehicles evolved from VHS tapes to CD-ROMs to DVDs to micro-SD cards. In the near-term, a GSM network deployed on the same satellites as StarLink internet will be at the top of the list. In theory, GSM would work with any phone, including “official” North Korean mobile phones. North Korean open markets, peasant markets and black markets, and the informal supply lines established along such markets will continue to provide a platform for information surreptitiously inserted into the country.

*Spearheading International Diplomacy:* Advancing human rights through multilateral and international diplomacy is another pillar of the human rights upfront approach. The United States must retake leadership and the high ground it once held on North Korean human rights at the United Nations. The United States should revitalize the “coalition of the like-minded” including the EU, South Korea, Japan, Australia, and other UN member states. The United States should also pressure UN member states that have solid U.S. ties, but who continue to protect North Korea at the UN, for example Vietnam and South Africa. Stronger UNGA and HRC resolutions are needed. The North Korean human rights issue should be placed back on the agenda of the UN Security Council. The United States should spearhead

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<sup>5</sup> Greg Scarlatoiu, “The Power of Information: Telling Three Stories to the North Korean People,” *HRNK Insider*, August 13, 2022. Last accessed December 18, 2022. <https://www.hrnkinsider.org/2022/08/the-power-of-information-telling-three.html>.

new efforts to seek accountability, ideally a special international prosecutorial mechanism, despite opposition by China, Russia and their allies.

*Exposing the Connection between the Nuclear Program and Human Rights:* To procure the hard currency needed to develop its ballistic missile and nuclear programs, North Korea exploits its own people. According to the Korea Institute for Defense Analyses (KIDA), North Korea has spent up to \$1.6 billion developing nuclear weapons since the 1970s.<sup>6</sup> Those funds would have sufficed to buy up to 2.05 million tons of rice or 4.1 million tons of corn, the equivalent of four years of food for the entire North Korean population.

For thirty years, U.S. North Korea policy have sacrificed human rights for the sake of addressing nuclear weapons. Both the North Korean nuclear and missile programs have thrived. Sidelining human rights to appease the North Korean regime is not the answer, but a fundamental flaw in U.S. policy.

## Challenges to Change

Overcoming bureaucratic interagency inertia and status quo complacency will require skill and determination. Fundamental shifts in policy are always difficult to achieve, even when established policy has been proven to fail. This will require convincing U.S. executive and congressional leadership and non-government opinion shapers of the need for change and the need for promoting human rights as a central component of a new strategy. While advancing human rights has been a consistent talking point for every administration, it is most often given little actual weight in policy formulation and implementation.

U.S. adversaries will seek to undercut the above human rights upfront approach. As its economic and political relationships with North Korea expand, Russia likely favors a continuation of the failed U.S. approach to North Korea. In its thinking, a greater North Korea threat to U.S. security interests is seen as a win for Moscow. More importantly, China will oppose the promotion of human rights in North Korea as a threat to its own internal legitimacy. Beijing will also oppose Korean unification with a dominant South Korea allied to the United States.

\* \* \* \* \*

## Annex A: Myths and Facts

Myths—not facts—about the efficacy of incorporating human rights into negotiations inform past and current U.S. policy. This has impeded progress in denuclearizing North Korea, as well as alleviating the suffering of the North Korean people. To make progress, these falsehoods must be exposed and corrected with an accurate understanding of the role human rights can play in dealings with the Kim regime.

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<sup>6</sup> Associated Press, “Explainer: How impoverished N. Korea finances testing spree,” November 4, 2022.

*Myth #1: Raising U.S. concerns with North Korea over the Kim regime's human rights violations will prevent negotiations over its nuclear program.*

Fact: Human rights have rarely been raised with North Korea during negotiations. This approach results in human rights concerns being raised, if at all, in the lead-up to negotiations (most recently by the Trump administration before the Singapore summit) and then dropped during negotiations. There has never been an effort to tie improvements on human rights to U.S. willingness to negotiate. The premise that adversaries will refuse to negotiate if concerns over human rights are raised is inconsistent with past U.S. policy. Despite Moscow's objections, President Reagan insisted on including human rights in the diplomatic agenda with the Soviet Union—a process that led to successful arms control agreements including the INF and START treaties.

*Myth #2: The United States should resolve security challenges with North Korea before any progress can be made on human rights.*

Fact: Putting security concerns first has been tried repeatedly in negotiations with North Korea and has never resulted in denuclearization or progress on human rights. Future negotiators should raise national security considerations in tandem with concerns over human rights violations. The decision to make human rights an afterthought in negotiations with rogue regimes sends the message that the United States does not view progress on these issues as a top priority. Failure to incorporate human rights into negotiations with North Korea also reveals a lack of understanding about the premium the regime places on violating human rights in its strategy for survival.

*Myth #3: Undermining the North Korean people's human rights is not an essential part of the Kim regime's plan to maintain power.*

Fact: The Kim regime sees its weapons programs and human rights violations as two essential pillars of the regime and strongly believes that it needs both to maintain its grip on power. The regime's human rights violations ensure its power domestically, while the weapons program ensures its survival in the international community.

*Myth #4: North Korea is too closed for international actors to effectuate meaningful change in alleviating the plight of the North Korean people.*

Fact: The United States and the international community have many tools to combat the Kim regime's human rights violations. Sanctions, refugee resettlement and other forms of humanitarian relief, information access efforts, atrocity determinations, and diplomatic coordination are just a few of the available tools. Many of these are already used by the U.S. national security community to address the threat from North Korea's



nuclear program, but efforts to counter North Korea's human rights violations are further behind. Better cooperation between the United States and South Korea to address North Korea's human rights violations are much needed.

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## **Annex B: Promoting Human Rights in North Korea**

*A "human rights up front" approach would demand international access to North Korean political prison camps and other detention facilities; transparency and the ability to conduct unimpeded in-country fact-finding human rights and humanitarian missions; and providing humanitarian assistance to the most vulnerable groups, in particular children, women, the elderly, and people in detention.<sup>7</sup>*

North Korea joined the UN in 1991 and assumed certain international obligations as a member state, including observing the Universal Declaration of Human Rights. North Korea acceded to the two human rights covenants in 1982: the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social, and Cultural Rights. It has also joined the Convention on the Elimination of All Forms of Discrimination Against Women, the Convention on the Rights of Children, and the Convention on the Rights of People with Disabilities. North Korea's own Constitution includes protection of fundamental human rights. And yet, every conceivable human right is violated in North Korea.<sup>8</sup>

The Department of State's latest country report on human rights practices in North Korea notes that there continue to be "significant human rights abuses" under an authoritarian regime, including "unlawful or arbitrary killings by the government; forced disappearances by the government; [and] torture and cruel, inhuman, and degrading treatment and punishment by government authorities." There is no evidence to suggest that the situation has improved since the UN Commission of Inquiry (COI) on North Korean human rights found in 2014 that "systematic, widespread and gross human rights violations have been and are being committed," and that "crimes against humanity have been committed...pursuant to policies established at the highest level of the State." The COI noted in its report that an estimated 80,000 to 120,000 North Koreans were being held in political prison camps, and recent satellite imagery reports by HRNK indicate that these detention facilities are still operational.

Under Kim Jong-un, the North Korean regime has also intensified its crackdown on the inflow of outside information into the country. The regime has not only revised the Criminal Code's provisions regarding the consumption and distribution of foreign media, but it has

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<sup>7</sup> Greg Scarlatoiu, "Long Overdue Paradigm Shift: A Human Rights up Front Approach toward North Korea," *HRNK Insider*, November 2, 2022. Last accessed December 18, 2022. [https://www.hrnkinsider.org/2022/11/long-overdue-paradigm-shift-human.html?\\_ga=2.207244817.342912562.1671362954-601215942.1649336599](https://www.hrnkinsider.org/2022/11/long-overdue-paradigm-shift-human.html?_ga=2.207244817.342912562.1671362954-601215942.1649336599).

<sup>8</sup> Greg Scarlatoiu, "The Power of Information: Telling Three Stories to the North Korean People," *HRNK Insider*, August 13, 2022. Last accessed December 18, 2022. <https://www.hrnkinsider.org/2022/08/the-power-of-information-telling-three.html>.

also deployed technological means to restrict access of unauthorized content on electronic devices. Recognizing that younger North Koreans have been widely exposed to foreign media, the Supreme People's Assembly adopted in September 2021 a law specifically aimed at tightening ideological control over North Korea's youth. There have also been reports of a targeted crackdown on the use of Chinese-made cellphones along North Korea's border. These devices have been and continue to be an important conduit for information to flow into and out of North Korea.

To empower the people of North Korea, it is essential to step up efforts to provide them with information from the outside world, information telling them the "three stories" noted earlier: their abysmal human rights situation, the corruption of their leadership, and the reality of the outside world, especially democratic, prosperous South Korea. Information campaigns must also enable North Koreans to understand that there is a deep rift between their Constitution and the regime's ideology and practice. The DPRK Constitution and its other laws claim to protect rights such as the freedom of religion and freedom of assembly. None of these rights are observed in practice.<sup>9</sup>

Many North Koreans know today much more about the outside world, including South Korea, than they did 10 or 20 years ago. K-pop, K-drama, and anything "K-" are powerful drivers of interest in South Korea's success. The North Korean people need to understand that South Korea is a viable alternative to the Kim family regime. They need to understand that the formula for Korean success is not the preservation of the totalitarian dictatorship, but unification under the Republic of Korea.

### About the Contributors

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<sup>9</sup> Greg Scarlatoiu, "The Power of Information: Telling Three Stories to the North Korean People," *HRNK Insider*, August 13, 2022. Last accessed December 18, 2022. <https://www.hrnkinsider.org/2022/08/the-power-of-information-telling-three.html>.

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## ANALYSIS

### OBSERVATIONS ON U.S. NUCLEAR POSTURE AND THE WAR IN UKRAINE

By General C. Robert Kehler, USAF (retired)

The war in Ukraine will soon be one year old with no end in sight. The much-anticipated lightning-quick Russian operation to neutralize the Ukrainian armed forces, overthrow the elected Ukrainian government, and install a puppet regime aligned with Moscow has been a stunning tactical and strategic failure. Over the months of war, significant combat losses have forced Russia to de-scope its objectives and reorient its forces in an attempt to secure the southeast corner of Ukraine (the Donbas area) and control the Black Sea. Despite a partial mobilization ordered by President Putin to offset his enormous losses of men and material, Ukrainian operations have forced the Russians to retreat from occupied areas in the north and from important positions in the south. However, the Russians still hold significant territory in the Donbas and the war has become a stalemate where both sides are reconstituting their forces for renewed offensive operations in the spring.

Nuclear weapons are playing a significant role in this conflict. While Russia has not employed nuclear weapons in combat, it has actively and publicly used its nuclear weapons in an influence campaign designed to fracture the NATO alliance and coerce its leaders into inaction and acceptance of a new status quo. This influence campaign began long before the invasion. Russia's investment in modern and novel nuclear capabilities has been the hallmark of Putin's tenure. He has personally participated in highly visible nuclear exercises, has overseen tests of nuclear delivery systems, and approved a new Russian nuclear doctrine that includes the potential use (perhaps first use) of nuclear weapons to compel the outcome of a regional conflict in Russia's favor (perhaps the very scenario unfolding in Ukraine). Within days of the start of the invasion, Putin placed Russian nuclear forces on a previously unheard level of high combat alert ("special regime of combat duty") and within weeks followed that with the high-profile test launch of a new nuclear-capable ICBM. As the invasion unfolded, Russian media and some senior Russian officials issued bellicose warnings threatening the potential combat employment of nuclear weapons and pointed to NATO's support for Ukraine as the possible trigger for such an action. Russian denials to the contrary were tepid and unconvincing, almost lending credence to the warnings. Despite some change in tone over the ensuing months, Russian leaders and media personalities continue to raise the specter of nuclear war growing from the U.S and NATO's support to Ukraine.

As with other aspects of the Ukraine invasion, Russia's nuclear coercion campaign has also failed to achieve its main purpose. Ukraine continues to fight. Western governments have levied unprecedented economic sanctions on Russia and continue to resupply Ukraine with a vast number of modern and increasingly sophisticated weapons. In a remarkable show of resolve and despite Moscow's dire warnings (to include the threat of deploying nuclear weapons near the Baltic States), NATO is expanding its membership with the addition of Sweden and Finland on Russia's northern flank. Russia is increasingly isolated



and criticized on the world stage. Most importantly, Russia has not crossed the threshold for the combat employment of nuclear weapons.

It's premature to draw lessons or, worse, conclusions from this unprecedented conflict on NATO's borders where nuclear armed powers are directly and indirectly involved. Beyond a coercion campaign, we cannot dismiss the possibility that Putin will at some point "escalate to de-escalate" and order the employment of nuclear weapons out of a sense of desperation. But to date, the NATO alliance remains strong, the United States and NATO have taken critical support measures in the face of Russia's nuclear threats, and the threshold for the combat employment of nuclear weapons has not been crossed. In my estimation, that's not an accident; on the contrary, I believe the Ukraine war is validating the foundational importance and continued effectiveness of U.S. nuclear policies, alliance commitments, force structure, and force posture and offer six observations to support that view.

### **Observation 1**

#### **No Other Weapons Have the Same Deterrent Effect as Nuclear Weapons**

While it's impossible to know all the factors that went into Putin's decisions regarding the invasion and subsequent war, hints from open sources suggest the unpredictable risks and fear of nuclear escalation were a significant factor that limited Russia's initial tactical and operational goals and continue to constrain ongoing operations. Similarly, public statements from U.S. and NATO leaders suggest the risk of nuclear escalation is a significant factor shaping NATO's careful responses as well. Each side is well aware of the nuclear capabilities possessed by the other and the inconceivable destruction and unpredictable escalation that would likely occur if those weapons were used in combat.

Nuclear weapons do not prevent all conflicts; however, nuclear weapons have prevented direct conflict between the major nuclear powers since 1945. As ugly as it is, the war in Ukraine remains a limited conventional conflict being fought for limited aims. Russia is going to extraordinary lengths to avoid direct conflict with the United States and NATO; NATO is going to similar lengths to avoid a direct military conflict with Russia while, as President Biden has stated, drawing a line around "every square inch" of NATO territory.

Without question, the poor performance of Russia's conventional military has been a major factor that forced Putin to de-scope his war objectives and restrain from escalating the conflict beyond Ukraine's borders. U.S. and NATO conventional forces have always played a major deterrent role in Europe and at this point it is clear Russia can ill afford a conventional conflict with NATO that it is unprepared to fight and likely to lose. However, what was true through the decades of the Cold War remains true today—the unique risks posed by nuclear weapons still cause leaders to pause and ponder the potential for and consequences of escalation before they act.

## **Observation 2**

### **U.S. Nuclear Policy Serves Contemporary Deterrence Objectives**

Deterrence exists when adversary leaders calculate they will not be able to achieve their objectives, will suffer unacceptable consequences if they try, or both (and, in some cases, when leaders calculate that the benefit of restraint outweighs the advantages of using the weapons). U.S. nuclear declaratory policy presents Russian leaders with a conundrum in their decision calculations. While U.S. policy sets a credible threshold for considering the combat employment of nuclear weapons (i.e., extreme circumstances involving vital national interests) and the manner in which they might be employed (i.e., flexibility and adaptability), the policy remains intentionally ambiguous regarding the exact scenarios that would lead to their use (i.e., primarily to respond to adversary use of a nuclear weapon but including the potential for nuclear use in certain other extreme cases).

Assessing U.S. and NATO political will to use nuclear weapons is a difficult task for any adversary. Russian leaders may believe the United States and NATO lack the political will to employ nuclear weapons in a conflict; but rational decisionmakers cannot overlook the extraordinary risk of acting on that belief in the face of U.S. declaratory policy and a continued nuclear commitment to NATO backed by ready and capable forces. During the Ukraine conflict U.S. and NATO leaders have reinforced policy with clear public and, reportedly, private statements that Russian use of nuclear weapons would be a grave mistake with severe consequences. Nuclear weapons remain the “elephant in the room” that introduces significant risk that a conventional war between nuclear-armed adversaries could quickly escalate into the combat use of those weapons. To date, Russia’s behavior in Ukraine suggests that the risk of uncontrollable nuclear escalation has kept Russia’s use of those weapons to overheated rhetoric.

Contrast this situation with the potential difference in Russia’s risk calculations if the United States had adopted “sole use” or “no first use” policies as some advocates proposed. Such policies would have made Russian calculations of conventional war with the United States and NATO far less risky, with unintended consequences for deterrence.

## **Observation 3**

### **The U.S. Nuclear Deterrent Force Presents Russia With Insurmountable Planning and Defense Problems While Preserving U.S. Presidential Decision Space**

Imagine if the United States had arrived at February 24, 2022, with a significantly different nuclear force structure and posture: ICBMs removed from readiness (de-alerted) or completely retired; SSBN patrols reduced or confined to one ocean; nuclear forces unilaterally reduced to levels well below those permitted by New START; theater nuclear weapons removed from Europe and, perhaps, completely de-committed from NATO;



presidential authority to order the employment of nuclear weapons limited or eliminated; and an aged deterrent force and command and control system with no modernization programs underway. All of these possibilities have been seriously proposed by a handful of U.S. policymakers and anti-nuclear advocates over the last decade or more.

Instead, the United States entered the Ukraine crisis with up to 400 responsive ICBMs and a portion of the survivable SSBN fleet on daily alert backed by flexible long-range bombers that commanders can use with great effect for conventional missions or which the president can return to nuclear duty if needed. Additional SSBNs can also be deployed to patrol areas, if necessary (generated in nuclear parlance), and more weapons beyond New START limits can be uploaded over time as a hedge against technical failure or geopolitical change. In essence, today's force structure and posture (and the men and women at the tip of the nuclear spear) provide the credible capabilities U.S. leaders rely on to implement U.S. policy. Perhaps most importantly, when Putin announced an increase in Russian nuclear alert levels, the president was not forced to make any similar dire pronouncements about using nuclear weapons or make difficult choices regarding changes to the daily force commitment or posture (e.g., returning bombers to nuclear alert or putting more ballistic missile submarines to sea) that could have proved escalatory in and of themselves. Instead, U.S. leaders were able to remain calm and keep their rhetoric cool.

The U.S. nuclear deterrent force—that is, the Triad of delivery systems and the manner in which it is operated—continues to make sound strategic sense; there is not a more effective way to meet our deterrence objectives. ICBMs and SSBNs can be immediately retargeted from broad open ocean areas to hold the most important Russian targets at risk, with the promise of a prompt assured response if ever needed; at the same time, long-range dual capable bombers are being deployed in a non-nuclear role as a visible signal of U.S. commitment to allies and offensive capability in either role.

#### **Observation 4**

### **NATO's Nuclear Sharing Arrangements Have Important Deterrence and Assurance Values of Their Own**

The United States has remained committed to NATO as a nuclear alliance despite calls from some U.S. political quarters to either remove U.S. weapons from Europe or eliminate the U.S. nuclear commitment to NATO altogether. The United States has also remained committed to the NATO alliance despite some suggestions for the United States to completely withdraw from the alliance in favor of an isolationist doctrine.

Credible deterrence can never be based on a bluff. The Ukraine conflict has validated the importance of retaining visible, forward-deployed nuclear weapons and dual-capable aircraft in Europe. More importantly, the conflict has validated the criticality of allies, alliances, and mutual defense in the 21<sup>st</sup> Century. Again, in the face of Putin's nuclear threats the president would have been faced with far different decisions if NATO were no longer a nuclear alliance or U.S. weapons and dual capable fighters were no longer deployed there; a

situation that would have been even worse if NATO had dissolved or the U.S. commitment to the alliance had not remained strong. Without NATO, I daresay it is not a stretch to imagine Russia conducting a series of Ukraine-like invasions around its periphery undeterred by unconvincing conventional or nuclear options, especially if deterrence was based on nuclear weapons as the only option. The United States made the isolationist mistake twice in the 20<sup>th</sup> Century with grave consequences.

### **Observation 5**

#### **The U.S. Deterrent Will Not Remain Credible Without Improvements in Policy and Capabilities**

Doubts about U.S. political will and force capabilities can lead an adversary to make dangerous miscalculations that create the potential for unintended escalation in a crisis or conflict. U.S. nuclear policy and capabilities are credible today, but the Ukraine war has provided a glimpse of the lethality and intensity of warfare involving drones, hypersonic weapons, global information campaigns, artificial intelligence, persistent surveillance, social media, and other modern capabilities that create significant complexity and uncertainties for the future. Other nations are investing heavily in these capabilities and the cost of entry is often low enough to ensure proliferation.

The United States will never again have the luxury of time to prepare and benign sanctuaries from which to fight. Nuclear weapons will continue to provide unique challenges while offering deterrent benefits that we cannot ignore. Numerous studies and assessments in the United States have proven that we must continue to invest in and modernize both conventional and nuclear forces. Of particular concern: China is fast becoming a nuclear peer with the United States and the “two nuclear peer” problem presents new dynamics that could invalidate some key U.S. strategic assumptions and policy tenets. A number of issues deserve attention to ensure adversary deterrence and allied assurance remain credible and nuclear weapons are never used in combat in Ukraine or elsewhere:

- U.S. policymakers must continuously re-emphasize the continued importance and enduring role of U.S. nuclear weapons for deterrence and assurance.
- The United States must proceed with the bi-partisan nuclear modernization program (weapons, delivery systems, command/control/communications), including the critical industrial complex that maintains the weapons and stockpile, without delay.
- The United States should accelerate the nuclear certification of the F-35 and B-21, and production of the B-61/12 nuclear weapon and Long Range Stand Off cruise missile.
- The United States should build and deploy nuclear-capable cruise missiles (SLCM-N) on selected attack submarines as a clear signal of allied assurance.
- While USSTRATCOM remains the central focus of U.S. nuclear capabilities, nuclear planning must be restored across the U.S. combatant commands and within NATO.

- The United States must ensure its conventional forces, missile defenses, space, and cyberspace capabilities remain strong and capable of confronting 21<sup>st</sup> Century threats.

### **Observation 6 Deterrence Could Fail**

While I remain confident in the effectiveness of the U.S. nuclear deterrent, history teaches that wars are dangerous and unpredictable. The United States, NATO, and our allies and partners must be realistic and prepare for the possibility that Russia could use its nuclear weapons in an attempt to resolve the Ukraine conflict in its favor. Along with intense diplomacy, the United States and NATO must plan and realistically train and exercise for such an eventuality. In this way we will enhance deterrence effectiveness and make a nuclear eventuality less, not more, likely.

### **Conclusion**

Although the conflict in Ukraine remains fraught with uncertainty and far from resolved, I believe U.S. nuclear strategy and posture have been shown to be sound by this war. Nuclear weapons have helped to safeguard allied interests, to limit the war, and to reduce the risks of escalation. The experience has demonstrated the wisdom of all recent administrations in rejecting the calls for “bold action” in the name of risk reduction or total elimination of nuclear weapons. However, the risk of nuclear escalation (intended or unintended) will remain as long as this war continues. It is vitally important to keep the nuclear employment threshold high by bringing U.S. policies up to date with modernized capabilities to carry them out.

*General C. Robert Kehler, USAF (retired) is the former Commander of United States Strategic Command. The opinions expressed in this article are those of the author and do not reflect the official positions of the United States Government, Department of Defense, United States Air Force, or United States Strategic Command.*



# ANALYSIS

## WITHOUT PRECEDENT: GLOBAL EMERGING TRENDS IN NUCLEAR AND HYPERSONIC WEAPONS

By Brian Ellison, Dennis Evans, Matthew Lytwyn and Jonathan Schwalbe

### Introduction

Going back to the days immediately after the breakup of the Soviet Union, the United States has apparently made several assumptions—some more explicit than others—about the nature of the emerging world security environment. These assumptions, overly optimistic in retrospect, relate to the role of Russia, the rise and role of China, the role of nuclear weapons in the world, and the role of new categories of weapons that did not exist in 1992. First, while the United States was probably never confident that Russia would evolve into a Western-style democracy and somewhat of an ally, the current situation probably exceeds the worst-case expectations from the 1990s. Second, the United States apparently expected—for at least 20 years—that capitalism, rising living standards, integration into the world economy, and (at least since the turn of the century) the Internet and the information age would cause China to evolve in the direction of more democracy and better relations with the West. Instead, China has become more authoritarian and more hostile to the West, while evolving into a near peer in terms of gross domestic product, conventional military power, and in terms of science and advanced technology. Third, the United States has expected a gradual reduction in the role of nuclear weapons in the world and a gradual reduction in the risk of real or threatened nuclear use. These favorable trends have not emerged, and this paper discusses nuclear developments of the three countries in detail. Finally, while no one expected military technology to stand still, most observers expected that the United States would be a world leader, if not *the* world leader, in any new category of weapons that grew to assume major military importance. Again, this has not been the case, and this paper discusses one key example in detail.

Across all of these adverse trends, three items affecting the U.S. deterrence posture stand out:

- The Chinese nuclear buildup and Chinese world leadership in hypersonic weapons (to include factors such as the number of flight tests, the number of facilities and personnel involved in hypersonics research and testing, and likely deployed inventories by 2030);
- Russian nuclear modernization, expansion of Russia's inventory of nonstrategic nuclear weapons (NSNWs), amplified by Russian aggression in Ukraine, and an increase in Moscow's nuclear alert status during the Ukraine war; and



- The North Korean buildup in intercontinental ballistic missiles (ICBMs) and U.S. challenges in defending against these ICBMs without provoking undesired reactions by Russia and China.<sup>1</sup>

These three issues lead to vexing questions about the adequacy of U.S. programs for strategic forces, ballistic missile defense (BMD), hypersonic weapons, and defenses against hypersonic weapons.<sup>2</sup> These major developments might also affect long-standing assumptions in deterrence theory, arms control, and nuclear strategy.

## Chinese Nuclear and Hypersonic Weapons

### *Chinese Weapons*

As noted earlier, China has become more internally repressive and apparently more assertive about its role in the world in the last decade, contrary to most expectations from the early 1990s through the Obama Administration. The risk of Chinese aggression against Taiwan is hard to quantify but appears to be higher than at any prior point. Such aggression, if successful, would open the door to a variety of crises afterwards. Moreover, President Biden has publicly stated that the United States would intervene militarily in the event of such Chinese aggression. In other words, the risk of military conflict between the United States and China is probably at its highest level in more than 50 years. These adverse geopolitical developments emphasize the importance of increasing Chinese military power and technological prowess. China's conventional military buildup and modernization dates back many years and is well documented. Two more recent developments, however, are alarming and probably were not expected.

Until recently, the Chinese nuclear arsenal was of modest size, which apparently influenced how the U.S. government has addressed China's nuclear weapons in official documents.<sup>3</sup> The 2018 NPR Report devoted less than a page to Chinese nuclear forces (versus two pages for North Korea). The Defense Department's (DOD's) annual report entitled *Military and Security Developments Involving the People's Republic of China* made no mention of a major Chinese nuclear buildup in reports from the early 2000s through 2019. The 2020 report stated that China was in the initial stages of a major nuclear buildup, and the 2021 edition provided more details. The discussion here draws mainly from the 2021 edition of that report.<sup>4</sup>

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<sup>1</sup> There is also a risk of nuclear proliferation to Iran and other countries, but this paper does not address that issue.

<sup>2</sup> U.S. Department of Defense, *2022 Nuclear Posture Review* (Washington, D.C.: Department of Defense, 2022), available at <https://www.congress.gov/116/chrg/CHRG-116shrg42239/CHRG-116shrg42239.pdf>.

<sup>3</sup> For example, see U.S. Senate, *Advancing U.S. Engagement and Countering China in the Indo-Pacific and Beyond, Hearing before the Committee on Foreign Relations* (Washington, D.C.: Government Printing Office, September 17, 2020), available at: <https://www.congress.gov/116/chrg/CHRG-116shrg42239/CHRG-116shrg42239.pdf>.

<sup>4</sup> U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China, 2021*, (Washington, D.C.: U.S. Department of Defense, 2021), available at <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>.

Over the next decade, China aims to modernize, diversify, and expand its nuclear forces. China is also enhancing its command-and-control systems, its early warning systems, and its capacity to produce plutonium. China will likely have at least 1,000 deliverable warheads by 2030, and this number could greatly exceed 1,000 by 2035.<sup>5</sup> Further, China has already established a “nuclear triad” with the development of a nuclear-capable air-launched ballistic missile (ALBM) carried by the H-6N bomber and the improvement of its ground- and sea-based nuclear capabilities.

Recent developments further suggest that China intends to move to a launch-on-warning (LOW) posture for its silo-based ICBMs and is investing in improved early warning capabilities that could support this. Such a posture could increase the risk of unwarranted nuclear escalation. As noted in the 2021 edition of DOD’s China report (page 93):

The PRC has also made advances in early warning needed to support a LOW posture. China already has several ground-based large phased-array radars—similar in appearance to U.S. PAVE PAWS radars—that could support a missile early warning role. ... As of 2021, the PRC has at least one early warning satellite in orbit. In 2019, Russia offered to assist China in developing a missile early warning system.

### ***Sea-Based Systems***

China has six *Jin*-class nuclear-powered ballistic missile submarines (SSBNs), with two more under construction. (China is also developing the next-generation *Tang*-class SSBN, and the lead ship is under construction.) Each *Jin*-class SSBN carries 12 JL-2 submarine-launched ballistic missiles (SLBMs). The JL-2 has an estimated range of 7,200 to 9,000 kilometers. With this range, a Chinese SSBN would have to transit a considerable distance away from China to attack the 48 contiguous states, but a Chinese SSBN could attack Hawaii from launch points close to China. Open-source articles suggest that a JL-2 can carry a megaton-class nuclear warhead or multiple warheads of lower yield.<sup>6</sup> China is developing the longer-range JL-3 SLBM to provide a capability for their SSBN fleet to operate more closely to China while threatening the contiguous United States. Additionally, the *Tang*-class SSBN, currently in development, will have 16 launch tubes, putting its strike capability on par with the U.S. *Columbia*-class SSBN, whose first keel was laid recently and is planned to start deploying in 2028.<sup>7</sup>

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<sup>5</sup> Ibid., p. 90.

<sup>6</sup> Matthew P. Funaiole, Joseph S. Bermudez Jr., and Brian Hart, “A Glimpse of Chinese Ballistic Missile Submarines,” *CSIS*, August 4, 2021, available at <https://www.csis.org/analysis/glimpse-chinese-ballistic-missile-submarines>.

<sup>7</sup> John Grady, “Keel Laid For Nuclear Ballistic Missile Submarine District of Columbia,” *USNI News*, June 4, 2022, available at <https://news.usni.org/2022/06/04/keel-laid-for-nuclear-ballistic-missile-submarine-district-of-columbia>.



## Land-Based Systems

China has approximately 100 ICBMs, including the silo-based DF-5A and DF-5B and the solid-fueled, road-mobile DF-31, DF-31A DF-31AG, and DF-41. More worrisome, China is constructing at least three new bases for silo-launched ICBMs, and this could lead to a Chinese force of several hundred ICBMs by 2030.<sup>8</sup> It is likely that most of the silo-based ICBMs are equipped with multiple warheads.<sup>9</sup> China also has both nuclear and conventional versions of the land-based DF-21 medium-range ballistic missile (MRBM) and the DF-26 intermediate-range ballistic missile (IRBM). The DF-21 can threaten Okinawa and Japan, while the DF-26 can reach Guam. Except for silo-based ICBMs, all Chinese ground-launched missiles are mobile.<sup>10</sup>

## Airborne Systems

China unveiled the H-6N bomber in 2019. The H-6N is the first H-6 variant capable of aerial refueling, and it can carry an ALBM that probably has a nuclear variant. The huge CH-AS-X-13 ALBM is limited to external carriage, and the maximum number of missiles per bomber is probably only one under the fuselage (possibly plus smaller weapons under the wings).<sup>11</sup> This ALBM is expected to have a maximum range of approximately 3,000 kilometers. China is also developing the next generation H-20 stealth bomber.<sup>12</sup> The availability date for the H-20 is unknown.

Table 1 provides an estimate of current Chinese missile forces, excluding purely conventional air-launched weapons. The ICBM forces are purely nuclear, while the IRBMs and MRBMs have both nuclear and conventional versions. It is uncertain whether any of the short-range ballistic missiles (SRBMs) are nuclear-capable. The ground-launched cruise missiles (GLCMs) are probably conventional, but they may have enough payload volume for a nuclear warhead. Further, DOD's 2021 China report suggests that the number of Chinese weapons is likely to grow dramatically in the next decade.

To summarize, China appears intent on becoming a great nuclear power, perhaps even a peer of the United States. The United States has long counted on facing only one peer or

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<sup>8</sup> U.S. ICBM bases have 150 silos per base and one of the three bases used to have 200 silos. Unless the new Chinese ICBM bases are much smaller than U.S. ICBM bases, three new bases plus the one existing base would add up to several hundred silos. The 2021 China report does not provide an exact estimate for the size of the future Chinese ICBM force.

<sup>9</sup> CSIS Missile Defense Project, "Missiles of China," *CSIS*, April 12, 2021, available at <https://missilethreat.csis.org/country/china/>.

<sup>10</sup> Loc cit., and, U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China*, 2021, op. cit., p. 61.

<sup>11</sup> H. I. Sutton, "China's New Aircraft Carrier Killer Is World's Largest Air-Launched Missile," *Naval News*, November 1, 2020, available at <https://www.navalnews.com/naval-news/2020/11/chinas-new-aircraft-carrier-killer-is-worlds-largest-air-launched-missile/>.

<sup>12</sup> Sakshi Tiwari, "Two Distinctive Models Of China's H-20 Stealth Bomber Surface Online; Experts Decode The Mysterious Images," *Eurasia Times*, August 24, 2022, <https://eurasianimes.com/two-distinctive-model-of-chinas-h-20-stealth-bomber-surfaces/>.

near peer in nuclear forces. Further, the United States has probably counted on having major superiority over China in nuclear forces well into the future, if not permanently. In any conflict or crisis between the United States and China, overwhelming U.S. nuclear superiority might well serve as a disincentive for China to use, or even threaten to use, nuclear weapons. This favorable situation may be a thing of the past in another decade. Indeed, China's ability to combine its geographical proximity to potential flashpoints in Asia, a possible advantage in its asymmetry of stakes over these flashpoints, and the coercive leverage derived by more numerous and capable nuclear forces poses major deterrence and escalation management issues for the United States. At the same time, the United States now needs to contend with the implications of a Chinese nuclear force posture which could require a larger number of U.S. nuclear forces to hold at risk, thereby complicating U.S. deterrence posture vis-à-vis Russia.

**Table 1. Chinese Missiles Today<sup>13</sup>**

Type of System	Launchers	Missiles	Range (kilometers)
ICBM (some with multiple warheads)	~100	~100	7,000 to 12,000+
IRBM	80	80 to 160	>3,000
MRBM	150	150 to 450	>1,000 but less than 3,000
SRBM	250	750 to 1,500	300 to 1,000
SLBM (possibly some with multiple warheads)	72 now and 96 soon (Jin class), larger numbers with future Tang class	At least 72	At least 7,200
ALBMs	Unknown	Unknown	3,000 or less
CJ-10 GLCM*	40 to 60+	250 to 350+	At least 1,500
All types combined	>600	>2,000	Not applicable

\* There is also a bomber-launched version of the CJ-10 (an air-launched cruise missile, or ALCM)

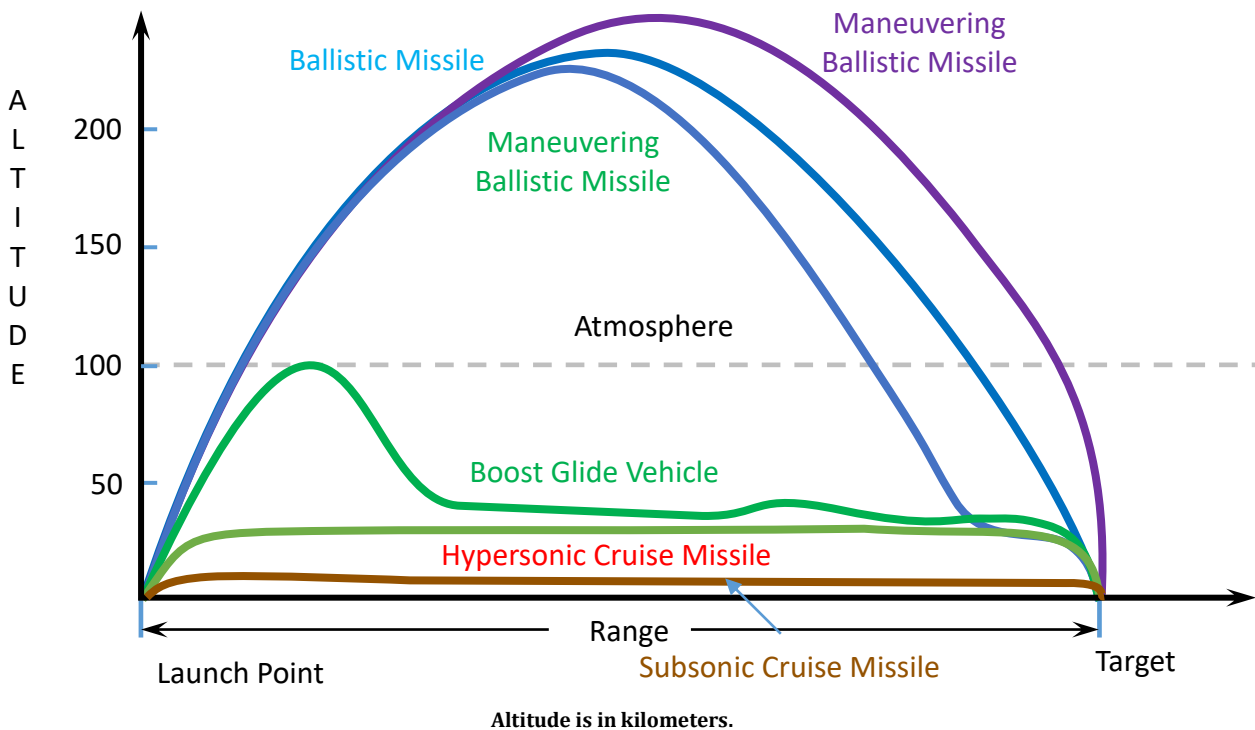
### ***Hypersonic Missiles***

China is also investing heavily in hypersonic weapons of several types (boost-glide, maneuvering ballistic missiles, and cruise missiles). A boost-glide weapon uses a rocket to launch a hypersonic glide vehicle (HGV) to a high altitude, where the HGV then dives to an altitude with sufficiently thick atmosphere to enable the HGV to glide the rest of the way to

<sup>13</sup> Data compiled from U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China, 2021*, op. cit.; and, CSIS Missile Defense Project, "Missiles of China," op. cit.; and, Anthony Cordesman, *Chinese Strategy and Military Forces in 2021*, CSIS, August 3, 2021, available at <https://www.csis.org/analysis/updated-report-chinese-strategy-and-military-forces-2021>.

the target. This altitude is not fixed and depends on the vehicle design, reentry velocity and flight path angle, and the ballistic coefficient of the HGV. Figure 1 (which is illustrative and not to scale) compares several types of hypersonic weapons, plus subsonic cruise missiles.

**Figure 1. Ballistic Missile versus Boost-Glide Missile versus Cruise Missile<sup>14</sup>**



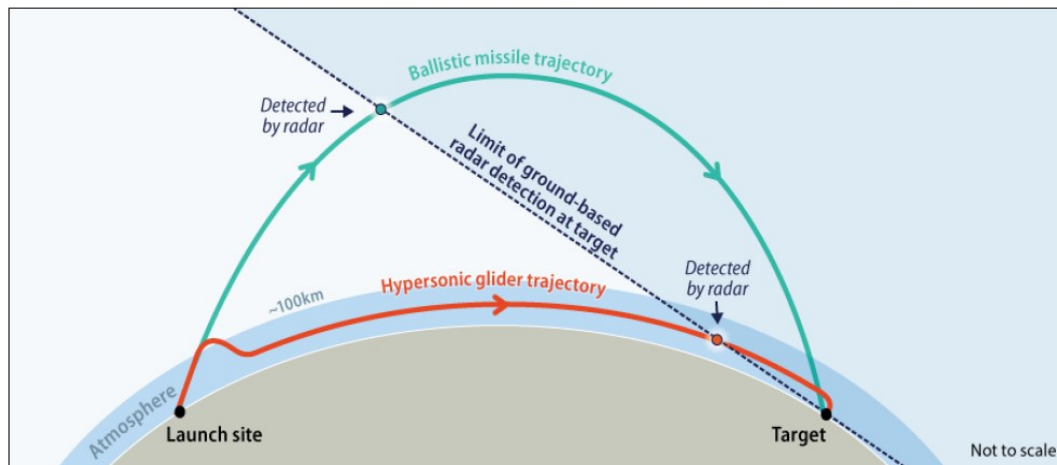
A boost-glide weapon has several *potential* advantages over a ballistic missile that does not possess a large amount of terminal maneuverability, especially for longer-range weapons:

- A ballistic reentry vehicle (RV) would be at a very high altitude for most of its trajectory, which might allow enemy radars to track the RV for a long time. By contrast, radar would have a much shorter line of sight to an HGV. Figure 2 illustrates this phenomenon.
- An HGV could control its angle of impact at the target, whereas a purely ballistic RV could not. Such an ability could increase the lethality of a warhead—especially a conventional one but also a nuclear one.

<sup>14</sup> Figure created by authors from data compiled from Dennis Evans, *Strategic Arms Control Beyond New Start: Lessons from Prior Treaties and Recent Developments*, National Security Report (Johns Hopkins University Applied Physics Laboratory, LLC), 2021, available at <https://www.jhuapl.edu/sites/default/files/2022-12/BeyondNewStart.pdf>.

- Many BMD interceptors have a minimum intercept altitude exceeding the altitude at which the HGV would glide and would be ineffective against a boost-glide weapon.
- A boost-glide weapon would often have a longer range than a ballistic missile of the same size and payload weight.

**Figure 2. Terrestrial Radar Detection of HGVs and Ballistic RVs<sup>15</sup>**



Relative to a typical cruise missile, the primary advantages of a hypersonic weapon would be a shorter time of flight (useful for time-critical targets) and better survivability.

Current and near-term U.S. defenses are oriented towards BMD against traditional ballistic missiles and air-defense against aircraft and traditional cruise missiles. The U.S. ability to defend against hypersonic weapons are uncertain and possibly weak. The United States has programs underway to address hypersonic weapons, but major fielded capabilities are unlikely before the end of the decade.<sup>16</sup> Hence, an adversary that has a sizable inventory of HGVs, maneuvering ballistic missiles, and/or hypersonic cruise missiles would pose severe challenges to U.S. defenses, with effects that could easily be harshly adverse.

Unfortunately, China has robust research and development efforts on hypersonic weapons. In 2018, then Under Secretary of Defense for Research and Engineering Michael Griffin stated that China has conducted 20 times as many hypersonic tests as the United States. Also in 2018, John Hyten—the Vice Chairman of the Joint Chiefs of Staff—stated that China has conducted a hundred or more flight tests for hypersonic weapons compared to

<sup>15</sup> Figure in public domain, as seen in Kelley M. Saylor, *Hypersonic Weapons: Background and Issues for Congress* (Washington, D.C.: Congressional Research Service, May 5, 2022), p. 3, available at <https://crsreports.congress.gov/product/pdf/R/R45811/25>.

<sup>16</sup> U.S. Department of Defense, "Official Describes DOD Hypersonics Development, Strategy and Opportunities," *Defense.gov*, February 24, 2021, available at <https://www.defense.gov/News/News-Stories/Article/Article/2514498/official-describes-dod-hypersonics-development-strategy-and-opportunities/>; and, John Sawyer, *Missile Defense: Better Oversight and Coordination Needed for Counter-Hypersonic Development* (Washington, D.C.: Government Accountability Office, June 16, 2022), available at <https://www.gao.gov/assets/gao-22-105075.pdf>.

“single digits” for the United States. For example, China has used the Lingyun Mach 6+ high-speed engine test bed to research various hypersonic cruise missile technologies.<sup>17</sup> According to *Jane's Defence Weekly*, “China is also investing heavily in hypersonic ground testing facilities.”<sup>18</sup>

Since 2014, China has tested the DF-17 boost-glide weapon more than seven times.<sup>19</sup> Although there is little information about the capabilities of the DF-17, the speed of the missile is reportedly around Mach 10.<sup>20</sup> The DF-17 is operational and equipped with a conventional warhead, but a future nuclear variant is possible. Mounting the same HGV on a larger booster would extend its range.<sup>21</sup>

A recent Chinese missile test, first reported in the *Financial Times* on October 16, 2021, has attracted considerable attention. According to the *Financial Times*, China launched an HGV on a space-launch vehicle that performed one complete orbit of the Earth before striking the ground in a Chinese test range.<sup>22</sup> If deployed on an ICBM booster stack, and still capable of reaching the United States on a trajectory over Antarctica, this weapon could pose two potential threats to the United States: a surprise attack and the ability to negate U.S. defenses at the planned sites. This missile could fly over Antarctica and approach the United States from the south, thereby avoiding detection by any U.S. ballistic missile early warning radar. U.S. satellites could detect the launch of such a missile, but the boost-phase track of the missile would provide little information about its intended target.

The U.S. Ground-based Midcourse Defense (GMD) system has two sites—one in Alaska and one in northern California. The GMD interceptor is limited to exo-atmospheric interceptions and is therefore ineffective against HGVs. However, even with an interceptor that works against HGVs, and a good ability to track weapons approaching from the south, interceptors at the current sites could not engage threats approaching the United States on that azimuth. The United States would need additional interceptor sites in the southern United States.

The magnitude of the threat from a Chinese boost-glide ICBM would depend on the yield of the warhead and accuracy of the missile. We cannot yet assess these factors.

To sum up, China may field sizable numbers of hypersonic weapons in this decade, and these Chinese weapons would likely pose severe challenges to U.S. defenses for a long time

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<sup>17</sup> Jeffrey Lin and P.W. Singer, “China’s Hypersonic Military Projects Include Spaceplanes and Rail Guns,” *Popular Mechanics*, June 26, 2018, available at <https://www.popsci.com/chinas-hypersonic-work-speeds-up>.

<sup>18</sup> Andrew Tate, “China conducts further tests with hypersonic vehicles,” *Janes Defence Weekly*, October 2, 2018, available at [https://customer.janes.com/DefenceWeekly/Display/FG\\_1120806-JDW](https://customer.janes.com/DefenceWeekly/Display/FG_1120806-JDW).

<sup>19</sup> CSIS Missile Defense Project, “DF-17,” *CSIS*, August 2, 2021, available at China conducts further tests with hypersonic vehicles. The ability to achieve an increased range by mounting the same HGV on a larger rocket would depend on the quality of the thermal protection system on the HGV.

<sup>20</sup> “DF-ZF (formerly WU-14)” *GlobalSecurity.org*, no date, available at <https://www.globalsecurity.org/wmd/world/china/df-21d.htm>.

<sup>21</sup> Ajey Lele, *Disruptive Technologies for the Militaries and Security* (Singapore: Springer, 2019), pp. 71-74. It may be that the term WU-14 refers to the HGV whereas DF-17 refers to the overall missile system.

<sup>22</sup> Demetri Sevastopulo and Kathrin Hille, “China Tests New Space Capability With Hypersonic Missile,” *FT*, October 16, 2021, available at <https://www.ft.com/content/ba0a3cde-719b-4040-93cb-a486e1f843fb>.

to come. Meanwhile, the number of U.S. flight tests of hypersonic weapons has been small, there are no developmental efforts on either nuclear or intercontinental hypersonic weapons, and no hypersonic weapons are likely to be produced in significant numbers for several years to come. In other words, hypersonic weapons have emerged as an important part of military technology, and China appears to be ahead of the United States—perhaps substantially so. No such situation has existed in the last 40 to 50 years, at least not in anything as important as hypersonic weapons. Further, the United States needs to, but may not, understand how these hypersonic weapons fit into overall Chinese strategy. How would China use such weapons? Against which targets? How early in a conflict? As it seeks to answer these questions, the United States should also address how hypersonic systems specifically fit into its own approach to deterrence and warfighting. Acquisition driven by adversary programs is an insufficient justification for the expense and effort associated with hypersonic offense and defense development. Fully exploiting the advantages of speed and maneuverability offered by hypersonic systems starts with the thoughtful application of these systems against U.S. operational problem sets, rather than by tit-for-tat attempts to maintain pace with adversary developments. From there, the United States can begin to consider how to remedy apparent weaknesses in the ability to develop and field systems that prevent it from ceding the military advantages offered by hypersonic to other countries.

### ***Chinese Rationale for these Efforts***

As previously discussed, China is engaged in a major nuclear buildup and is the world leader in hypersonic weapons—a worrisome combination. The key question for U.S. policy is: why has it done this? In addition, why has it done this *now*? China had the technology and economic resources to start a major nuclear buildup 15 years ago but did not do so. There is a range of possible rationales for China's strategic force activities, which includes:

- Growing concern about India's nuclear forces and rising geopolitical power;
- A desire to negate U.S. regional and national BMD systems;
- Fear of U.S. superiority in nuclear weapons;
- A perception that China will never be recognized as a true superpower until it has the nuclear arsenal of a superpower;
- A desire for world-class nuclear forces to deter actual or threatened U.S. nuclear escalation if China engages in regional aggression and the United States intervenes;
- A fear that a Chinese attempt to force reunification with Taiwan might bog down and fail without actual or threatened use of nuclear weapons;



- The growing perception of Chinese leaders that, in the event of a conflict, the United States might need to use nuclear weapons in defense of Taiwan;<sup>23</sup>
- A desire to obtain a range of nuclear escalation management capabilities;<sup>24</sup>
- A drive to achieve a damage limitation capability against U.S. nuclear forces; and
- Bureaucratic dynamics within China's nuclear weapons enterprise that are competing with one another to develop and offer novel weapons to decision makers.

The Chinese nuclear weapons program, on the other hand, cannot be viewed as a response to a U.S. nuclear buildup, because there is no such buildup. Current U.S. strategic nuclear programs of record are intended to replace aging systems, not quantitatively expand the U.S. nuclear arsenal or field new types of weapons. The U.S. nuclear program of record is discussed in detail later.

Further, this buildup, diversification, and modernization may lead to major changes in how China would use nuclear weapons. Until recently, the small numbers, poor accuracy, and high yields of Chinese nuclear weapons confined these weapons to use against cities and other counter-value targets. As the number of Chinese weapons increases, their accuracy improves, and low-yield weapons become available, China could make major changes in its nuclear strategy. To be specific, China may have a full counter-force capability in the 2030s that allows it to threaten U.S. nuclear force survivability in ways it previously could not. This is a fundamental shift in the balance of military utility and deterrent value of Chinese forces. As a result, a key challenge for U.S. deterrence policy is to shape a U.S. strategic force structure based upon an improved understanding of the rationale for Chinese actions, manifested in the numbers of weapons and delivery systems, the number of tests (especially successful ones), posture, and alert status. The full range of possibilities should be considered, to include the potential that China views its nuclear buildup as a valuable coercive tool to support offensive operations in service of regional expansion. Finally, U.S. nuclear force development needs to be conducted in light of the deterrence requirements imposed by Russia's legacy and emerging nuclear force posture. This force is discussed in detail in the following section.

## Russian Behavior and Nuclear Weapons

Recent years have seen several worrisome trends in Russian behavior and nuclear force structure. Russia has been engaged in a full-scale modernization of its nuclear forces, fields a robust number of non-strategic nuclear weapons, and in 2022 demonstrated a

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<sup>23</sup> Luo Xi, "Construction of all-domain winning strategic deterrent system by the U.S. and Sino-U.S. strategic stability," *Foreign Affairs Review*, Vol. 3, (2018), pp. 1-40. Also, see "Low-yield Nuclear Weapons May Change 'Nuclear Principles,'" *Xinhua News Agency*, August 01, 2019.

<sup>24</sup> Tong Zhao, "China's Silence on Nuclear Arms Buildup Fuels Speculation of Motives," *The Bulletin.org*, November 12, 2021, available at <https://thebulletin.org/2021/11/chinas-silence-on-nuclear-arms-buildup-fuels-speculation-on-motives/>.

willingness to employ conventional military forces in Russia's near-abroad, augmented with nuclear threats and signaling. The diversity of Russian nuclear systems, along with its hypersonic weapons, also raise questions about the adequacy of the existing bilateral strategic arms control regime to capture capabilities that give Russia the ability to inflict extensive damage on the U.S. homeland.

### ***The Impact of Recent Weapons on Arms Control and Military Capabilities***

Russia is modernizing its nuclear forces, including expanding its nonstrategic nuclear forces (and possibly even its total nuclear inventory). In terms of treaty-accountable strategic weapons (limited by the New Strategic Arms Reduction Treaty [New START]), Russia likely has slightly fewer warheads and delivery vehicles than the United States.<sup>25</sup> However, Russia has major qualitative and numerical advantages over the United States in NSNWs and probably has more nuclear weapons overall than does the United States. Figure 3 shows U.S. and Russian warhead levels over time. China—not shown in the figure—is currently at several hundred warheads, with a rapidly growing inventory.

### ***Missiles***

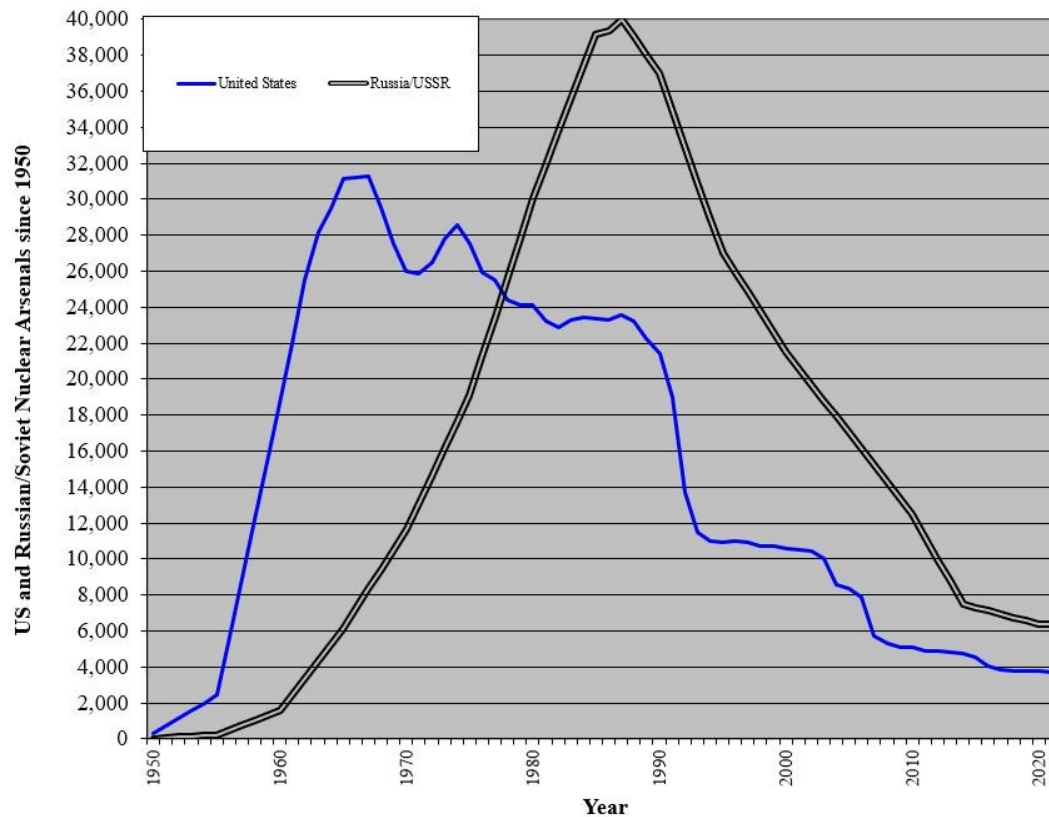
Russia has fielded and is developing new and potentially important weapons of types that the United States does not have and is not developing.<sup>26</sup> For example, Russia has recently fielded the Avangard boost-glide ICBM. This missile uses the booster stack from an existing silo-based ICBM and carries a nuclear HGV.<sup>27</sup> Corresponding U.S. efforts on boost-glide weapons are limited to intermediate-range conventional weapons. The impact of this probable U.S. disadvantage (relative to both Russia and China) on the balance of power and strategic stability warrants further consideration. In this case, a system capable of delivering a maneuvering glide vehicle at intercontinental ranges would likely be detected by U.S. sensors at launch but could pose challenges to the U.S. ability to track its full flight path and determine possible impact points. U.S. leaders could be presented with an incoming attack of uncertain objective with very limited time to take responsive actions.

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<sup>25</sup> U.S. Department of State, *Report to Congress on Implementation of the New START Treaty* (Washington, D.C.: Department of State, April 2021), available at <https://www.state.gov/wp-content/uploads/2021/04/Annual-New-START-Report.pdf>.

<sup>26</sup> U.S. Department of Defense, *Nuclear Matters Handbook 2020 (Revised)*, op. cit.; and, Amy Woolf, *The New START Treaty: Central Limits and Key Provisions* (Washington, D.C.: Congressional Research Service, July 30, 2021), available at <https://sgp.fas.org/crs/nuke/R41219.pdf>; and, Dennis Evans, *Strategic Arms Control Beyond New START: Lessons from Prior Treaties and Recent Developments*, (Laurel, MD: JHU/APL, December 2021), available at <https://www.jhuapl.edu/Content/documents/BeyondNewStart.pdf>.

<sup>27</sup> CSIS Missile Defense Project, "Avangard," CSIS, July 31, 2021, available at <https://missilethreat.csis.org/missile/avangard/>.

**Figure 3. U.S. and Soviet/Russian Warheads Levels over Time<sup>28</sup>**

Russia has also fielded an ALBM with a range of perhaps 2,000 kilometers (according to Russian open-source literature)—called the Kh-47M2 Kinzhal (or Killjoy)—on Mig-31 fighters. Further, Russia has used this missile in combat against Ukraine. Russian open-literature articles also mention the Kinzhal in connection with the Su-34 fighter and the Tu-22M3 Backfire medium bomber, but the Mig-31 is the only confirmed delivery aircraft. The Kinzhal has a conventional version and may have a nuclear version.<sup>29</sup> With a nuclear version and a range of 2,000 kilometers, the Kinzhal would pose a major threat to NATO countries in Europe, and it could reach all of Alaska and parts of northwest Canada from

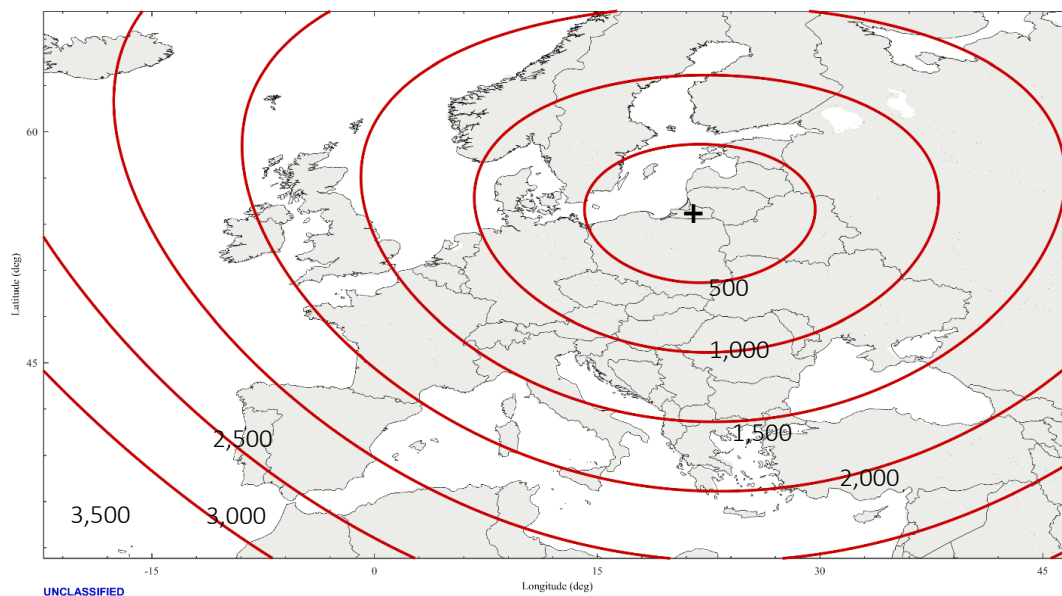
<sup>28</sup> Data concerning U.S. levels are from, U.S. Department of Defense, OSD DASD Nuclear Matters, *Nuclear Matters Handbook 2020 (Revised)* (Washington, D.C.: Department of Defense, 2020), available at <https://www.acq.osd.mil/ncbdp/nm/NMHB2020rev/index.html>. Data concerning Russian/Soviet levels are highly uncertain, but drawn from, Federation of American Scientists, “Status of World Nuclear Forces,” *FAS.org*, no date, available at <https://fas.org/issues/nuclear-weapons/status-world-nuclear-forces/>. Chinese warhead levels have historically been small by comparison but are growing rapidly.

<sup>29</sup> CSIS Missile Defense Project, “Kh-47M2 Kinzhal,” *CSIS*, March 19, 2022, available at <https://missilethreat.csis.org/missile/kinzhal/>.

bases in eastern Siberia. If carried by the Backfire bomber, the Kinzhal could threaten much of North America.<sup>30</sup>

Russia is developing an intercontinental nuclear-powered, nuclear-tipped GLCM called the Burevestnik or Skyfall. The United States briefly fielded a few SM-62 Snark intercontinental GLCMs from 1958 through the early 1960s, but no country has fielded such a weapon since retirement of the Snark.<sup>31</sup> The lack of intercontinental GLCMs for decades was probably due to the perceived superiority of ICBMs, but technical loopholes on GLCMs in New START, combined with Russian concerns about U.S. BMD, may have provided incentives to revive such weapons.<sup>32</sup>

**Figure 4. Geographic Coverage for SSC-8 GLCMs in Kaliningrad<sup>33</sup>**



Ranges from the launch point appear as red rings, measured in kilometers. The CSIS estimate is 2,500 kilometers.

Russia has also fielded a GLCM, known as the SSC-8, which violated the Intermediate-range Nuclear Forces (INF) Treaty of 1987.<sup>34</sup> This missile led to the U.S. withdrawal from

<sup>30</sup> Woolf, *The New START Treaty: Central Limits and Key Provisions*, op. cit.; Amy Woolf, *Nonstrategic Nuclear Weapons* (Washington, DC: Congressional Research Service, July 15, 2021) available at <https://sgp.fas.org/crs/nuke/RL32572.pdf>; and, Evans, *Strategic Arms Control Beyond New START: Lessons from Prior Treaties and Recent Developments*, op. cit.

<sup>31</sup> David E. Sanger and Andrew E. Kramer, "U.S. Officials Suspect New Nuclear Missile in Explosion That Killed 7 Russians," *The New York Times*, August 12, 2019, available at <https://www.nytimes.com/2019/08/12/world/europe/russia-nuclear-accident-putin.html>

<sup>32</sup> Evans, *Strategic Arms Control Beyond New START: Lessons from Prior Treaties and Recent Developments*, op. cit.

<sup>33</sup> Figure created by authors from data compiled from Dennis Evans, Barry Hannah and Jonathan Schwalbe, *Nonstrategic Nuclear Forces: Moving Beyond the 2018 Nuclear Posture Review, National Security Perspective* (Johns Hopkins University Applied Physics Laboratory, LLC), 2018, available at <https://www.jhuapl.edu/sites/default/files/2022-12/NonstrategicNuclearForces.pdf>.

the INF Treaty in 2019. According to a briefing by then Director of National Intelligence, Dan Coats, the SSC-8 has both conventional and nuclear versions and a range “significantly in excess of 500 kilometers” (but not stated).<sup>35</sup> The Center for Strategic and International Studies (CSIS) assesses that the SSC-8 has a range of 2,500 kilometers.<sup>36</sup> With a range of 2,500 kilometers, a missile based in Kaliningrad could reach all of France, Italy, and the United Kingdom, plus parts of Spain and Iceland. Figure 4 shows target coverage for a Russian SSC-8 based in Kaliningrad, with the range varied parametrically from 500 kilometers (the INF limit) to 3,500 kilometers. The U.S. Government has not issued an unclassified range estimate for the SSC-8; thus, the figure treats its range parametrically, despite the CSIS estimate. If based in eastern Siberia, the SSC-8 could reach all of Alaska if its range is at least 1,700 kilometers. Strategic targets that the SSC-8 could probably attack from Siberia include the BMD radars at Clear, Alaska; the BMD interceptor site at Fort Greely, Alaska; and the Cobra Dane radar on Shemya Island. Because the United States has little ability to detect or defend against low-flying cruise missiles like the SSC-8, the SSC-8 might be able to knock out the U.S. GMD system before it could fire any interceptors.<sup>37</sup>

### Sea-Based Systems

Russia is developing a nuclear-powered unmanned underwater vehicle (UUV). This UUV has intercontinental range, with autonomous navigation, and reportedly has a multi-megaton warhead. It may also be fast enough that it would be difficult for the United States to intercept it. Open literature articles refer to this weapon by several names, including Poseidon, Canyon, and Status-6.<sup>38</sup> Canyon is a new-in-principal weapon with no Cold War analog, although its range-yield combination places it squarely in the category of strategic weapons.<sup>39</sup>

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<sup>34</sup> Amy Woolf, *Russian Compliance with the Intermediate Nuclear Forces (INF) Treaty: Background and Issues for Congress* (Washington, DC: Congressional Research Service, August 2, 2019), available at <https://crsreports.congress.gov/product/pdf/R/R43832/38>. Russia admits developing a new GLCM but denies that its range exceeds 500 kilometers. Russia also accuses the United States of violating the INF Treaty. Russia claims that the vertical launch system at the Aegis Ashore missile defense site in Romania can launch Tomahawk cruise missiles and not just missile defense interceptors.

<sup>35</sup> Office of the Director of National Intelligence, “Director of National Intelligence Daniel Coats on Russia’s INF Treaty Violation,” *DNI.gov*, November 30, 2018, available at <https://www.dni.gov/index.php/newsroom/speeches-interviews/item/1923-director-of-national-intelligence-daniel-coats-on-russia-s-inf-treaty-violation>.

<sup>36</sup> CSIS Missile Defense Project, “9M729 (SSC-8),” *CSIS*, March 31, 2022, available at <https://missilethreat.csis.org/missile/ssc-8-novator-9m729/>. The CSIS website did not specify whether the range estimate of 2,500 kilometers was for the nuclear version, the conventional version, or both.

<sup>37</sup> Evans, *Strategic Arms Control Beyond New START: Lessons from Prior Treaties and Recent Developments*, op. cit.

<sup>38</sup> The Diplomat, “Canyon UUV,” *TheDiplomat.com*, March 11, 2019, available at <https://thediplomat.com/tag/kanyon-uuv/>; and Kyle Mizokami, “Pentagon Document Confirms the Existence of Russian Doomsday Torpedo,” *Popular Mechanics*, January 16, 2018, available at <https://www.popularmechanics.com/military/weapons/a15227656/pentagon-document-confirms-existence-of-russian-doomsday-torpedo/>.

<sup>39</sup> Evans, *Strategic Arms Control Beyond New START: Lessons from Prior Treaties and Recent Developments*, op. cit.

Russia is also developing, and may have fielded, a ship-launched hypersonic missile known as Tsirkon. It is uncertain whether Tsirkon is a cruise missile, a boost-glide weapon, or a maneuvering ballistic missile. It may have both conventional and nuclear variants, and the range may be 1,000 kilometers or more.<sup>40</sup>

The threat to the United States from Russian submarine-launched cruise missiles (SLCMs) is more speculative than that from the SSC-8 but could be significant. Russia has several attack submarines that can carry Kalibr cruise missiles. The CSIS assesses that Russia's Kalibr SLCM has a conventional version, with a nuclear version being possible, and that the range of the missile is anywhere from 1,500 to 2,500 kilometers. The Federation of American Scientists (FAS) assesses that the Kalibr has both conventional and nuclear versions, and that the conventional version has a range of 2,000 kilometers.<sup>41</sup> If the Kalibr has a range exceeding 2,200 kilometers, then two Russian SSGNs could reach all 48 contiguous states from plausible launch points. It would require an implausibly large number of conventional SLCMs to achieve major strategic effects against the United States, whereas a few dozen nuclear SLCMs could have a major impact. A particularly worrisome application for nuclear SLCMs might be to destroy U.S. bombers on ground alert during a crisis. Bombers on ground alert might be able to take off fast enough to survive a first strike by Russian ICBMs or SLBMs, but submarines with SLCMs might be able to get very close to the U.S. coast (and many bases) before being detected.<sup>42</sup> This potential application highlights the ways in which different types of nuclear capabilities increasingly threaten the survivability of U.S. strategic forces.

### ***Strategic Arms Control Overview***

New START places limits on U.S. and Russian strategic forces without banning any particular types of weapons; it uses the following definitions to determine which weapons count against treaty limits:<sup>43</sup>

- *Ballistic missile* means a weapon-delivery vehicle that has a ballistic trajectory (an undefined term) over most of its flight path.
- *Cruise missile* means a self-propelled (an undefined term) weapon-delivery vehicle that sustains flight by using aerodynamic lift over most of its flight path.<sup>44</sup>

<sup>40</sup> Mark Episkopos, "What is Behind Russia's Hypersonic Tsirkon Missile?," *The National Interest*, January 29, 2022, available at <https://nationalinterest.org/blog/reboot/what-behind-russia%E2%80%99s%C2%A0hypersonic%C2%A0tsirkon%C2%A0missile-200043>.

<sup>41</sup> Hans M. Kristensen, "Kalibr: Savior of INF Treaty?" *FAS.org*, December 14, 2015, available at <https://fas.org/blogs/security/2015/12/kalibr/>.

<sup>42</sup> Evans, *Strategic Arms Control Beyond New START: Lessons from Prior Treaties and Recent Developments*, op. cit.; and, CSIS Missile Defense Project, "3M-54 Kalibr/Club (SS-N-27)," CSIS, March 31, 2022, available at <https://missilethreat.csis.org/missile/ss-n-27-sizzler/>.

<sup>43</sup> These observations are derived from the full text of the treaty and its appendices, U.S. Department of State, "New START: Treaty Text," *State.gov*, available at <https://2009-2017.state.gov/t/avc/newstart/c44126.htm>.

<sup>44</sup> Based on a discussion between JHU/APL personnel and the head of the division at the Pentagon that handles treaty compliance (Office of the Secretary of Defense – Acquisition and Sustainment – Strategic Warfare).



- *Submarine-launched ballistic missile (SLBM)* means a ballistic missile (nuclear or conventional) with a range exceeding 600 kilometers, of a type that has ever been carried by or launched from a submarine.
  - A ballistic missile on a surface ship would not automatically count against New START limits unless a submarine had also carried the same type of missile.
- *Intercontinental ballistic missile (ICBM)* means a land-based ballistic missile (conventional or nuclear) with a range exceeding 5,500 kilometers.
- *Heavy bomber* means a nuclear-capable aircraft with a one-way range exceeding 8,000 kilometers (without aerial refueling) or any aircraft that carries a nuclear ALCM with a range exceeding 600 kilometers.
  - A nuclear-capable aircraft with a range of less than 8,000 kilometers can carry conventional weapons of any range without counting against treaty limits if that bomber does not carry nuclear ALCMs with a range exceeding 600 kilometers.
  - An aircraft could carry a nuclear weapon of very long range without counting against New START limits if that aircraft has a one-way range of less than 8,000 kilometers and the weapon is not an ALCM.

New START limits the United States and Russia to 700 “deployed strategic delivery vehicles,” 800 “total (i.e., deployed plus non-deployed) strategic delivery vehicles,” and 1,550 “deployed warheads.”<sup>45</sup> Each operational heavy bomber, ICBM, or SLBM counts as one deployed strategic delivery vehicle. Each usable, but empty, ICBM silo counts as one total delivery vehicle. Each empty SLBM tube on an SSBN in long-term overhaul also counts as one total delivery vehicle. (ICBMs and SLBMs in storage do not count.) Each heavy bomber in long-term maintenance counts as one total delivery vehicle. Each operational heavy bomber counts as one deployed warhead. An operational ICBM or SLBM with  $N$  warheads counts as  $N$  deployed warheads. New START places no limits on the number or nature of weapons carried by heavy bombers or on nuclear cruise missiles of any type.

In addition to their utility, boost-glide weapons do not meet the definition for either a ballistic missile or a cruise missile in New START; therefore, the United States and/or Russia could potentially field long-range boost-glide weapons while circumventing New START limits. The Russian Avangard boost-glide ICBM does count against New START limits, but only because it uses the booster stack from a weapon already declared to be an ICBM.

If the Russian Kinzhal ALBM has a nuclear version, it exploits a loophole in New START. Any aircraft that carries a nuclear ALCM with a range exceeding 600 kilometers counts against New START limits as a heavy bomber, without regard for the range of the aircraft or the number of weapons it can carry. Hence, if an aircraft were equipped with a nuclear

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<sup>45</sup> U.S. Department of State, “New START: Treaty Text,” op. cit.

ALCM having even one-third the postulated range of the Kinzhal, these aircraft would be heavy bombers under New START counting rules.<sup>46</sup> If all Mig-31 fighters were to count against New START limits, this would place Russia slightly in violation of the New START limit on deployed warheads.

Similarly, the Russian Skyfall GLCM and Kanyon UUV could function like a single-warhead ICBM or SLBM (albeit limited to coastal targets for the Kanyon) but without counting against New START limits. Although it has strategic importance—if it has a nuclear variant—the SSN-30 SLCM would never have counted against the limits in any arms control treaty. The SSC-8 GLCM violated the now-defunct INF Treaty but does not count against New START limits and would not have counted against the limits in any earlier strategic arms treaty.

Lastly, although it is not new and not an offensive threat to the United States, Russia has a potent BMD system that defends a small area around Moscow. This system consists of nuclear-tipped endo-atmospheric interceptors linked to a large Pill Box phased-array radar and various early warning radars.<sup>47</sup> Russian expansion of this system, replication of something like it at other locations, or augmentation of its BMD by integrating other types of capabilities (such as the future S-550) are all credible possibilities. Future Russian BMD improvements could affect U.S. requirements for strategic offensive capabilities, to include both force structure and in-flight survivability of U.S. reentry vehicles.<sup>48</sup>

*In summary: Russia violated the INF Treaty and is aggressively exploiting loopholes in New START to field “strategic” weapons that do not count against New START limits. Some of these weapons pose a significant threat to NATO and the United States. In the near term, the Kalibr SLCM, the SSC-8 GLCM, and the Kinzhal ALBM represent significant risks, at least if the Kinzhal and Kalibr have nuclear versions (which is plausible or even likely). On the other hand, there is little threat to Russia from U.S. weapons that do not count against New START. This asymmetry operates strongly in Russia’s favor, potentially enabling it to threaten U.S. and allied targets using systems that can be difficult to detect while being difficult for the United States to develop a proportionate response. Moreover, the United States cannot afford to ignore Russian BMD, meaning that a robust technology research and development effort is needed to ensure the long-term capability of U.S. systems in the face of potentially evolving threats.*

### ***The War in Ukraine***

The Russian invasion of Ukraine that began February 24, 2022, has highlighted the continuing utility of hard military power in how states attempt to resolve disagreements.

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<sup>46</sup> CSIS Missile Defense Project, “Kh-47M2 Kinzhal,” op. cit.

<sup>47</sup> “Don-2NP Pill Box,” *GlobalSecurity.org*, no date, available at [https://www.globalsecurity.org/wmd/world/russia/pill\\_box.htm?msclkid=a6b6986ea2ff11ec938140aa3980a913](https://www.globalsecurity.org/wmd/world/russia/pill_box.htm?msclkid=a6b6986ea2ff11ec938140aa3980a913).

<sup>48</sup> Sebastian Roblin, “Russia’s New Mobile Missile Defense System Will Intercept Nuclear ICBMs,” *The National Interest*, January 7, 2022, available at <https://nationalinterest.org/blog/reboot/russias-new-mobile-missile-defense-system-will-intercept-nuclear-icbms-198905>.

Furthermore, this invasion demonstrated reliance on nuclear signaling as a central element of Russia's strategy to deter Western involvement in the war. Only two days after the initial invasion, former president (and current deputy chairman of Russia's Security Council) Dmitri Medvedev threatened Russian withdrawal from the New START Treaty in response to U.S./Western economic sanctions. On February 27, President Vladimir Putin ordered Russian strategic forces to a special state of enhanced combat readiness. It is unclear how Putin's words relate to established Russian nuclear alert levels or to the U.S. DEFCON system. It is also unclear what changes actually occurred in the readiness or disposition of Russian nuclear forces after Putin's statement. Nonetheless, this was an alarming development. Despite the shocking nature of Russia's nuclear threats, such statements were in line with previous Russian behavior. Indeed, Russia previously relied on nuclear threats against the United States during the 2014 Ukraine crisis and the 2008 Georgia crisis/conflict.<sup>49</sup> Nevertheless, Russian battlefield setbacks in September and October suggest that the risk of Russian nuclear usage in Ukraine may be higher than was expected earlier in the war when Russian forces were performing better.<sup>50</sup>

The ongoing war in Ukraine has situated nuclear weapons at the center of great power relations and highlighted a number of implications for future deterrence consideration. First, this crisis is likely to exacerbate further the rift between the United States and Russia over how to proceed in negotiations over a New START follow-on treaty.<sup>51</sup> Political dynamics in both countries may preclude serious negotiations for a long while, in addition to the possibility that Russian actions and Western counteractions continue to destroy any remaining ability for the U.S. and Russian governments to find common ground on arms control. Second, the crisis has highlighted the disparity between Russian and U.S. NSNWs and the U.S. ability to match Russian nuclear escalation at lower levels of conflict. Russia possesses over a dozen types of NSNWs, numbering around 2,000, compared with the United States' single type of nuclear gravity bomb, the B61.<sup>52</sup> Lastly, the war in Ukraine may reinforce international perceptions of how the United States views the utility of its nuclear forces. Throughout the war, the United States has been clear in its intention to avoid escalation to a direct U.S.-Russia confrontation over Ukraine. This stands in contrast with U.S. treaty obligations to NATO collective security. By drawing a clear line between the interests of the United States in Ukraine versus those in NATO, the United States indirectly highlights that its nuclear weapons are reserved for certain interests and not others. The effect of this dynamic on U.S. deterrence against China, vis-à-vis Taiwan, is less

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<sup>49</sup> Jonathan Cosgrove, *The Russian Invasion of the Crimea Peninsula, 2014-2015: A Post-Cold War Nuclear Crisis Case Study* (Laurel, MD: JHU/APL, 2020), available at <https://www.jhuapl.edu/Content/documents/RussianInvasionCrimeanPeninsula.pdf>.

<sup>50</sup> Jorge L. Ortiz, John Bacon, "Nuclear 'Armageddon' at highest risk since 1962, Biden says; Russia blames NATO for rhetoric: Live updates," *USA Today*, October 6, 2022, available at <https://www.usatoday.com/story/news/world/2022/10/06/ukraine-russia-war-live-updates/8194683001/>.

<sup>51</sup> New START will expire on February 5, 2026, and negotiations on treaties of this type can take years.

<sup>52</sup> U.S. Department of Defense, *U.S. Nuclear Weapons: Claims and Responses* (Washington, D.C.: Department of Defense, April 1, 2019), available at <https://media.defense.gov/2019/Apr/01/2002108036/-1/-1/1/U.S.-NUCLEAR-WEAPONS-CLAIMS-AND-RESPONSES.PDF>.

straightforward. Although the United States has a long-standing interest in Taiwanese security, it has no formal commitment to defend Taiwan as it does for nations that are part of NATO. President Biden recently made public comments indicating the United States would help Taiwan defend itself militarily, but this does not rise to the same level as a formal treaty of mutual defense, and the President did not extend the U.S. nuclear umbrella to the defense of Taiwan. This ambiguity – a commitment to Taiwan’s security greater than to that of Ukraine but less than to NATO, Japan, or South Korea – can be useful as a way of inducing additional caution in Chinese decision makers but could also drive risk-taking by China if it believes the United States fears escalation more than China. The United States has run significant risks and absorbed costs to help Ukraine defend itself and to punish Russia’s actions. These U.S. actions were consistent with U.S. threats against Russia before the start of the war in Ukraine, a fact that U.S. leadership could use to highlight China’s need to take U.S. deterrent threats seriously.

### ***Russia’s Rationale for New Weapons and Their Recent Actions***

Russia has at least three apparent rationales for developing the weapons mentioned above: to field weapons of strategic importance that evade New START limits;<sup>53</sup> to negate U.S. BMD systems, especially GMD; and to compensate for perceived U.S. superiority in conventional weapons. The first rationale could be part of a general drive for nuclear superiority (quantity, quality, and diversity). As for the second rationale, GMD is too small a system to have much utility against a Russian attack, but Russia may fear that the United States could conduct a first strike against them and rely on GMD to protect against a weak Russian counterattack.

Of the Russian weapons described previously, the rationale for the Avangard missile is the most confounding. A Russian attack could easily overwhelm GMD without Avangard. If Russia is concerned that GMD could negate a Russian counterattack after a U.S. first strike, it is not enough for the Russian system to be immune to U.S. BMD. The Russian system has to survive the U.S. first strike, and silo-based ICBMs like Avangard are not optimal for surviving a first strike. This raises a key question: could Avangard be a first strike weapon instead? If so, there are a number of issues that the United States needs to consider, including how to limit the number of such systems, how to detect and track the system before and during flight, and potential ways of defending against the system.

The SSC-8 GLCM, Skyfall intercontinental GLCM, Kanyon UUV, and SSN-30 SLCM satisfy both rationales, if the SSN-30 has a nuclear variant. All four weapons would be hard for the United States to destroy in a first strike, and all four could negate U.S. BMD.

Because of Russia’s concerns over its strategic depth, its aggressive intentions, and a conventionally superior NATO positioned on its borders, regional nuclear weapons make a

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<sup>53</sup> The Kinzhal ALBM is operational now. If Kinzhal has a nuclear variant, then it exploits a loophole in New START. The Kanyon UUV may be operational before New START expires. If so, it would also exploit a loophole in New START. It is uncertain whether the intercontinental GLCM will be deployed by 2026.

lot of sense as a way to deter NATO involvement, manage escalation, and achieve objectives in a limited war. Both the Tsirkon and the SSC-8 are major threats to NATO bases in Europe.

As for Vladimir Putin's belligerent statements about nuclear weapons, and the increased alert posture of Russian forces, the motive is uncertain. Did he think that nuclear posturing will get NATO to agree to a list of demands he sent to NATO shortly before starting the war? If so, he has surely been disappointed. Does he really fear NATO military intervention (beyond providing arms to Ukraine)? If so, is this an attempt to deter such an act? Is he willing to use nuclear weapons in a medium-scale conventional war if Russian aggression appears to be failing? Whatever the motivation, Putin's recent actions are concerning, and a better understanding of their drivers is required.

### **North Korea and the BMD Conundrum**

The North Korean nuclear program has long been a source of concern (as have the as-yet unsuccessful efforts in Iran). However, North Korean nuclear forces have continued to grow in the last five years at a rapid rate. In particular, North Korean ICBMs pose more of a threat to the U.S. homeland than was probably expected a few years ago, and this threat is growing steadily. This has resulted in a shift away from credible nuclear threats directed primarily against North Korea's neighbors toward direct threats to the U.S. homeland. Because Kim Jong Un has stated that North Korea would not give up its nuclear forces under any circumstances, no matter what inducements the United States and its allies offered, the United States is likely to continue prioritizing missile defense capabilities against regional powers such as North Korea. This results in a continuing dilemma, where U.S. missile defense programs intended to ward off threats from smaller nuclear powers are interpreted by its great power adversaries as threats to the viability of their deterrent forces.

North Korea probably has several dozen nuclear weapons and has fielded ICBMs that can reach the 48 contiguous states; these ICBMs are purely focused on nuclear missions.<sup>54</sup> North Korea also recently tested a boost-glide missile of theater range, although it is uncertain whether this missile is nuclear-capable. Table also summarizes North Korean land-based missiles that may have enough range to reach Guam. It is not certain which, if any, of the theater-range missiles have nuclear variants. North Korea also has one or two diesel-powered ballistic missile submarines, but the lack of nuclear propulsion and the apparently short range of the North Korean SLBM mean that these submarines are only a regional threat.<sup>55</sup> North Korea also has a sizable inventory of missiles that can reach Japan but not Guam. These missiles are not included in Table 2.

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<sup>54</sup> Mary Beth D. Nikitin, *North Korea's Nuclear Weapons and Missile Programs* (Washington, D.C.: Congressional Research Service, April 8, 2022), CRS Report No. IF10472, available at <https://crsreports.congress.gov/product/pdf/IF/IF10472/22>.

<sup>55</sup> CSIS Missile Defense Project, "Missiles of North Korea," *CSIS*, November 22, 2022, available at <https://missilethreat.csis.org/country/dprk/>.

**Table 2. North Korean Ballistic Missiles and Boost-Glide Weapons<sup>56</sup>**

Name of System	Type	Range (kilometers)	Status
Hwasong-7	Boost-glide MRBM or IRBM	Uncertain	Development
BM-25 Musudan	IRBM	2,500 to 4,000	Possibly fielded
Hwasong-12	IRBM	>4,000	Development
Hwasong-13	ICBM	>5,500	Probably canceled
Hwasong-14 (KN-20)	ICBM	10,400	Fielded
Hwasong-15 (KN-22)	ICBM	>11,000	Development
Pukguksong-1 (KN-11)	SLBM	1,100	Possibly canceled
Pukguksong-3 (KN-26)	SLBM	1,900	Fielded

### ***The BMD Conundrum***

The U.S. GMD system is intended to protect against a North Korean attack. GMD consists of 44 interceptors (40 in Alaska, with 20 more planned, and 4 in California), plus a complex command and control system integrated with missile warning satellites and multiple ground-based radars. There have been no physical tests of multiple interceptors fired against multiple incoming missiles. (There have been simulated tests of such engagements and a test of multiple interceptors against a single target.)<sup>57</sup> Hence, there is no way to be certain how well GMD would function against a real attack with a sizable number of enemy missiles approaching simultaneously. Further, the faster-than-expected growth in North Korean ICBMs may necessitate expansion of GMD beyond currently planned numbers.

The United States expects Russia and China to realize that GMD is not focused on negating their nuclear strike capability—but they do not, or at least they claim they fear GMD as a threat to their secure retaliatory capability. It is uncertain whether these concerns are genuine or just posturing. The size of the GMD system has not increased since President George W. Bush left office and, even with the planned expansion to 64 interceptors, the number of interceptors will be small relative to the number of Russian or Chinese ICBM/SLBM RVs today. Nevertheless, fears that the United States will expand GMD

<sup>56</sup> Data synthesized from Nikitin, *North Korea's Nuclear Weapons and Missile Programs*, op. cit.; and, CSIS Missile Defense Project, "Missiles of North Korea," op. cit. The KN-22 ICBM is of particular concern. The KN-22 can likely reach all 50 states, and it may be able to carry multiple warheads. Further, the missile is mobile despite its large size, making it harder for the United States to locate it in advance of a launch.

<sup>57</sup> Alex Hollings, "U.S. Mainland Missile Defense System Successfully Intercepts ICBM in Test," *FighterSweep.com*, March 31, 2019, available at <https://fightersweep.com/12318/us-mainland-missile-defense-system-successfully-intercepts-icbm-in-test/>.



beyond 64 interceptors may have contributed to the Chinese decision to beef up their nuclear forces and Russia's development of strategic weapons that are immune to U.S. BMD. Future expansion of GMD may lead to additional adverse actions by Russia or China. Unfortunately, the North Korean threat is real and growing. How can the United States protect itself without provoking undesirable responses by Russia or China? Once again, a better understanding of how U.S. missile defenses influence Russian and Chinese decisions concerning their nuclear forces would be helpful. That being said, it may be impossible for the United States to field any system for defense against North Korean missiles that is not used self-servingly by Russia or China as justification for programs they were otherwise intending to pursue.

## **Implications for Deterrence Theory, Arms Control, and U.S. Capabilities**

### ***Deterrence Theory***

Since the end of the Cold War, deterrence theory has been advanced by key scholars such as Keith Payne and Brad Roberts. A body of work has evolved that seeks to understand how crises could escalate, driven by emerging technologies, and how deterrence theory could apply to challenges like transnational terrorism. However, at its core, deterrence does still rely on the idea of denying benefits, imposing costs, and encouraging restraint between multiple parties. The legacy models of first strike stability and other deterrence measures need continued advancement to address the possible impact from new types of weapons, potential improvements in missile defenses, the impact of small but hostile nuclear powers, or a world where the United States must simultaneously deter two major nuclear powers, who are increasingly aligned with one another. This last point is particularly salient today, as the United States faces the prospect of deterring a Russian nuclear force replete with new capabilities (including dangerous new systems that do not count against New START limits but pose a threat to NATO and the U.S. homeland) and a Chinese nuclear force growing in size far beyond historical precedent and perhaps rivaling planned U.S. forces. A simplistic application of some legacy approaches to deterrence might suggest a need for the United States to exit the New START treaty and undertake a rapid nuclear buildup to ensure sufficient numbers of survivable nuclear forces available for the coming decades. While the United States may very well need to undertake a nuclear buildup of some kind in response to current trends, it is not clear that this is politically feasible. What approaches could be developed instead? Further work is needed in this area, and theories and models need to evolve to account for the trend towards a tripolar world, nuclear threats from smaller countries, and the full range of modern weapon types. In particular, the United States needs a better understanding of how to integrate capabilities across domains and to account for the roles of nuclear weapons, long-range conventional weapons (especially hypersonic weapons), and missile defense in

reinforcing or undermining deterrence and strategic stability. As Alexander George points out in his classic study of presidential decision making, the limits of classical deterrence theory lie in its inability to “provide a more comprehensive formulation of the various means of influencing other states and an analysis of how they can be combined to achieve foreign-policy goals under different conditions.”<sup>58</sup> Going forward, the application of these various means, together with judicious and prudent application of resources for new deterrence capabilities, is likely to enable a more effective U.S. response to the international geopolitical situation than simply relying on a long-term nuclear build-up of great difficulty.

At the same time, the United States needs to improve its approach to assessing military threats posed by great power competitors and determining how best to prioritize and maintain focus on deterring those threats over long periods. Given the challenging nature of today’s tripolar nuclear world, this may require significant strategic decisions in order to continue deterring Russia and China in the best manner, tailored for the unique strategic threats they each pose.

### **Arms Control**

All treaties limiting the size and nature of nuclear forces have been bilateral agreements between the United States and Russia (formerly the Soviet Union). However, continued Chinese nuclear expansion may render bilateral U.S.-Russian treaties irrelevant or undesirable before long. A key question for future U.S. policy consideration revolves around when Chinese and Russian nuclear force levels reach a tipping point. In other words, when does the United States focus need to shift from pursuing stability and predictability through arms control to embarking on its own nuclear buildup? <sup>59</sup> If China continues its nuclear buildup and Russia continues to field strategically important weapons that are exempt from arms control (such as the SSC-8, Kalibr, Kinzhal, Poseidon, and Tsirkon), arms control as practiced in the last few decades may not be the best approach to stability. This question should be answered in tandem with considerations around how theoretical concepts surrounding deterrence need to evolve. It may be that the various tools available to the United States to deter Russia and China allow it to continue indefinitely with roughly the same quantitative nuclear force capabilities while relying on modernization to ensure a sufficient qualitative edge. That being said, the sheer number and diversity of weapons being developed by Russia and China highlight the need to think critically about the ways in which the United States could credibly deter Russia and China at various levels of crisis escalation.

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<sup>58</sup> Alexander L. George, *Presidential Decision-making in Foreign Policy: The Effective Use of Information and Advice* (Boulder, CO: Westview Press, 1980), p. 255.

<sup>59</sup> Opinions vary on the extent to which arms control has enhanced stability and predictability in the past. However, arms control has reduced expenditures on strategic weapons by capping force levels.

Additionally, there should be continued thought given to ways the United States can induce China to participate in future arms control-related activities. Even if China agrees to participate, it may be difficult to construct an acceptable treaty—limits, definitions, counting rules, and so on. For example, each participant might worry, or at least claim to worry, about having the other two countries unite against it. More broadly, how can the United States respond to the Chinese buildup without abandoning constraints on Russian forces, and without abandoning requirements for Russia to report on its strategic forces and allow U.S. inspections of those forces? These requirements on reporting and inspections are important even without limits on U.S. and Russian force levels.

That being said, the United States is entering a period where new arms control agreements may need to depart in novel ways from those of the past (for example, agreements that include China, that address supposed Russian concerns over U.S. BMD, or that address U.S. concerns over Russian NSNWs).<sup>60</sup> Unfortunately, such agreements are probably unattainable in the coming decade unless U.S.-Russian relations improve, and China achieves its desired nuclear weapons force structure or otherwise shows a willingness to negotiate. As a result, the United States needs to begin hedging for a world in which there are greater demands on its nuclear forces, not fewer. This will also mean increased demands on other national capabilities, such as intelligence resources to monitor Russian and Chinese nuclear developments that would normally have been illuminated (at least for Russia) by treaty-required inspection and verification regimes.

### ***U.S. Needs for Missile Defense, Nuclear Forces, and Long-Range Strike***

The Chinese, Russian, and North Korean developments described previously may drive requirements for U.S. forces beyond what is in the program of record—both numerically and in terms of capabilities. All U.S. decisions on force structure objectives for strategic systems date back to the Obama Administration, with the exceptions of the W76-2 and SLCM-N. Hence, these decisions predated the Chinese nuclear buildup, the recent developments in Chinese hypersonic weapons, and Russian fielding of weapons such as the Poseidon, Kinzhal, and Tsirkon.<sup>61</sup> Further, U.S. decisions on offensive force structure also date back to a time when the North Korean threat to the U.S. homeland was much less severe than it is likely to be later in this decade, although North Korean forces are not a key driver for the size of U.S. nuclear forces. However, North Korea could drive U.S. capability needs in ways that are not obvious.

The next few paragraphs describe the U.S. program of record.

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<sup>60</sup> One possibility might be to have a treaty that counts strategic BMD interceptors for homeland defense and strategic offensive weapons against one overall limit. This concept has many complexities, but further examination may be warranted. This approach would avoid explicit, low limits on U.S. BMD.

<sup>61</sup> Kalibr and the SSC-8 may have been fielded in small numbers by the end of the Obama Administration, but the threat from these two weapons is greater than it was in 2017.

Currently, the United States plans to procure 12 *Columbia*-class SSBNs, each with 16 Trident D5 SLBMs. On the average, 11 of these 12 SSBNs would probably be operational at any time. The United States currently has 14 *Ohio*-class SSBNs, of which 12 are usually operational. Each *Ohio*-class SSBN can carry 20 Trident D5 SLBMs. Due to the late start of the *Columbia* program relative to the projected retirement dates for *Ohio*-class SSBNs, the number of SSBNs will drop to ten for several years, even with no delays in projected deliveries for new SSBNs (160 deployed SLBMs compared to 240 today).<sup>62</sup> The United States is keeping the nuclear SLCM that the 2018 NPR endorsed, but only at modest research and development funding levels, although it has deployed a low-yield W76-2 warhead on submarine-launched ballistic missiles.<sup>63</sup>

The United States currently has 400 deployed single-warhead Minuteman III ICBMs.<sup>64</sup> The United States is developing the Sentinel ICBM and plans to deploy 400 in existing silos, but it would be possible to deploy 450 ICBMs without building additional silos (because there are 50 empty but usable silos). There has been no announcement on whether any of the future ICBMs will carry multiple warheads. Production of the Sentinel ICBM may begin in 2026.<sup>65</sup>

The United States has 60 deployed nuclear-capable bombers (44 B-52s and 16 B-2s) and 66 total nuclear bombers (47 B-52s and 19 B-2s). The United States also has 29 B-52s and 45 B-1s that are not nuclear-capable. The United States is developing the B-21 Raider stealth bomber, with a stated procurement objective of “at least 100” aircraft. The United States has not announced whether all B-21s will be nuclear-capable or whether any B-21s will have nuclear weapons in 2030. Deliveries of the B-21 are expected to begin in the middle 2020s. DOD plans to retire the B-2 (and the non-nuclear B-1) in the early 2030s. The United States is developing the Long-Range Standoff (LRSO) nuclear ALCM for use by the B-52 and the B-21. The LRSO is expected to begin replacing the current AGM-86 ALCM around 2030.<sup>66</sup> The B61-12 nuclear bomb is in early production for use by the B-2, the F-35A, and (in a few years) the B-21.<sup>67</sup> On the other hand, the United States recently decided

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<sup>62</sup> Office of the Chief of Naval Operations, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2023* (Washington, D.C.: Office of the Chief of Naval Operations, April 2022), available at <https://media.defense.gov/2022/Apr/20/2002980535/-1/-1/0/PB23%20SHIPBUILDING%20PLAN%2018%20APR%202022%20FINAL.PDF>.

<sup>63</sup> John Rood, “Statement on the Fielding of the W76-2 Low-Yield Submarine Launched Ballistic Missile Warhead,” *Defense.gov*, February 4, 2020, available at <https://www.defense.gov/News/Releases/Release/Article/2073532/statement-on-the-fielding-of-the-w76-2-low-yield-submarine-launched-ballistic-m/>.

<sup>64</sup> The number of nuclear-capable bombers is 66. The United States declared 60 of them to be deployed, but the number of operational bombers is typically about five-sixths of the total (that is, about 55).

<sup>65</sup> Northrop Grumman, “Sentinel – The Ground Based Strategic Deterrent,” no date, available at <https://www.northropgrumman.com/space/sentinel/>.

<sup>66</sup> Greg Hadley, “Raytheon Receives \$2 Billion EMD Contract for LRSO Missiles,” *Air and Space Forces Magazine*, July 1, 2021, available at <https://www.airandspaceforces.com/raytheon-receives-2-billion-emd-contract-for-lrso-missiles/>.

<sup>67</sup> U.S. Air Force, “B-21 Raider,” *AF.mil*, no date, available at <https://www.af.mil/About-Us/Fact-Sheets/Display/Article/2682973/b-21-raider/msclkid/b-21-raider/>. This document describes the B-21 as being nuclear-capable, but the United States could not accommodate 100 nuclear-capable B-21s and 47 nuclear-capable B-52s within

on prompt retirement for its highest-yield nuclear bomb, the B83-1, instead of keeping it as long as practical without a major life-extension program.<sup>68</sup>

The United States has 700 deployed delivery vehicles—compared to about 820 in 2010. If the Air Force fields the Sentinel ICBM rapidly enough for the ICBM force to stay at 400 missiles continuously, and the number of deployed nuclear-capable bombers stays at 60 through 2040, then the number of U.S. delivery vehicles will drop to 620 in the 2030s before building back up to 652 in the early 2040s. The United States has not initiated any new nuclear weapon program since the Obama administration, has decided not to continue with the nuclear SLCM that was envisioned in 2020, and has decided to retire the B83-1 bomb promptly.<sup>69</sup> In other words, there is no U.S. nuclear buildup, although the Sentinel ICBM will presumably have some technical advantages over the Minuteman III. It is hard to compare the B-21 to the B-2, but the B-21 will reportedly be smaller than the B-2, with a possible adverse effect on payload and/or range.<sup>70</sup>

Due to the various adverse developments described earlier in this paper, the United States may need additional measures to account for a tripolar nuclear world. These measures might include an expansion in force structure, steps to make a force of the planned size more survivable, improved capabilities, or some combination thereof. Hence, the United States needs to examine the advantages, disadvantages, and costs of various approaches that could make U.S. forces more robust in a tripolar nuclear world, including:

- Deploying more than 400 ICBMs and/or carrying more than one RV on some ICBMs;
- Replacing the current silos with harder silos and/or adding BMD systems at ICBM bases, to improve ICBM survivability;
  - Russian modernization and the Chinese ICBM buildup suggest that the threats to U.S. ICBMs may be increasing. This provides impetus for measures to improve pre-launch survivability.
  - BMD at an ICBM base can be useful without being nearly 100-percent effective, unlike BMD for defending cities or SSBN bases. This is not to say that imperfect defenses are desirable, but ICBM bases provide a case where leaky defenses may be good enough.
- Steps to improve the survivability of bombers on ground alert;
  - The Kalibr SLCM may pose a threat to bombers on ground alert if it has a nuclear version. This provides impetus for such steps.
- Improving the in-flight survivability of U.S. ICBMs and SLBMs;

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New START limits, in combination with 400 or more ICBMs and 192 SLBMs. As noted earlier, however, New START limits may be irrelevant by 2026.

<sup>68</sup> Bill Gertz, "Pentagon to Scrap Nuclear Gravity Bomb as Part of Biden Review," *The Washington Times*, April 4, 2022, available at <https://www.washingtontimes.com/news/2022/apr/4/pentagon-scrap-nuclear-gravity-bomb-part-biden-rev/>.

<sup>69</sup> The low-yield Trident D5 employs a simple modification to an existing warhead, not a new weapon per se.

<sup>70</sup> "Comparing Stealth Bombers," *Air and Space Forces Magazine*, December 2019, available at <https://www.airandspaceforces.com/app/uploads/2019/12/Comparing-stealth-bombers-1.pdf>.

- Procuring more than 12 *Columbia*-class SSBNs, and/or accelerating procurement of the third *Columbia*-class SSBN from 2026 to 2025 (if practical);
- Increasing the number of nuclear-capable B-21 bombers and/or increasing the nuclear weapon inventory for bombers;
  - Increasing the weapon inventory for bombers without expanding the bomber force would have no effect on U.S. compliance with New START but might have merit.
  - It would be desirable to increase the number of bomber bases and reduce the number of bombers per base. This would increase the number of bombers that could take off under attack during an enemy first strike.
  - Maximizing the utility of an expanded bomber force might also require steps to improve the survivability of bombers on ground alert.
- Expanding and improving GMD (beyond the planned 64 interceptors) because of the growing North Korean threat;
- Keeping the B83-1 longer than currently planned (possibly including an unfunded life-extension effort) and/or pursuing other ways to improve capabilities against hard and deeply buried targets;
- Deploying nuclear weapons of types not in the current program of record, including ones that might not count against arms-control limits similar to those in New START; and
  - No such new weapons could be operational before New START expires but having acquisition programs for such weapons could provide leverage in negotiations for a successor treaty (if any such negotiations occur). Moreover, having effective weapons that are exempt from arms control could be beneficial in the 2030s if there is a successor treaty with definitions and other provisions similar to New START.
- Having more robust programs for conventional hypersonic weapons, and/or deploying defenses against such weapons, especially in the Pacific.<sup>71</sup>

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<sup>71</sup> Space does not permit a robust discussion on U.S. hypersonic weapons or defenses against such weapons. Interested readers should consult three reports from the Congressional Research Service, all of which may be found at <https://crsreports.congress.gov/>. Kelley Sayler and Stephen McCall, *Hypersonic Missile Defense: Issues for Congress* (Washington, D.C.: Congressional Research Service, January 26, 2022).; and, Andrew Feickert, *The U.S. Army's Long-Range Hypersonic Weapon* (Washington D.C.: Congressional Research Service, December 8, 2021).; and, Kelley Sayler, *Hypersonic Weapons: Background and Issues for Congress* (Washington, D.C.: Congressional Research Service, May 23, 2022).; and, John Sawyer, *Missile Defense: Better Oversight and Coordination Needed for Counter-Hypersonic Development* (Washington D.C.: Government Accountability Office, June 16, 2022), GAO 22-105075, available at <https://www.gao.gov/assets/gao-22-105075.pdf>.



## Conclusion

Russian, Chinese, and North Korean developments suggest a fundamental, adverse change in the world security environment. This is evident in the increased numbers of strategic weapons and delivery systems, the diversity of options (e.g., China will have at least three different kinds of silo-based ICBMs capable of reaching the United States), each country's approach to nuclear posture, and the alert status of each country's weapons. These developments represent a security environment without precedent. Unlike in the Cold War, the United States could be faced with needing to deter two or more major adversaries at a time, but with fewer options and a decreased number of overall weapons. The United States needs to give fresh thought to all aspects of strategic force structure and strategy, to include efforts to rethink deterrence theory and arms control for a tripolar world with additional risks from North Korea.

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# ANALYSIS

## RETHINKING DETERRENCE: HOW AND WHY\*

Dr. Keith B. Payne

I am often asked about the emerging “trilateral deterrence” threat environment. This refers to the simultaneous deterrence engagement of three great nuclear powers, the United States, Russia and China. In the United States, there has been little interest in questions of nuclear deterrence for over three decades, but it is back with a vengeance.

Newly-minted commentators and experts now observe gravely that this trilateral context is different, and we must rethink U.S. deterrence policy. No-kidding; that much is painfully obvious.

*The question is how is it new, why does that matter, and what do we need to do about it?* Those are the key questions that demand serious attention.

### A New Deterrence Context: New Challenges

My first comment in this regard is that there is no change in the basic principles of deterrence; they endure. And, what is significant about the emerging deterrence context is *not* primarily technical, nor the obvious fact that there will soon be three great nuclear powers involved. The most significant developments for deterrence are the following three *political* conditions:

1. the leaderships of Russia and China have the common purpose of overturning the classical liberal world order. This includes expansionist goals that each leadership defines as existential;
2. Moscow and Beijing are forming a quasi-alliance against the United States to achieve their goals; and
3. In pursuit of their goals, both Russia and China are building expansive conventional and nuclear arsenals with which to challenge long-standing U.S. *defensive* deterrence redlines.

In short, we now confront opponents’ threatened use of nuclear and conventional weapons to advance their expansionist, existential goals. Russia’s and China’s coercive nuclear first use threats are here and now. These threats backstop their respective efforts to overturn a U.S.-led world order they find *intolerable*.

If you have not read the text of Mr. Putin’s partial-mobilization speech in this regard, you should. He has set up a comprehensive rationale for the employment of nuclear weapons in Ukraine, and has added that he is not bluffing. His rationale for nuclear employment may

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\* These prepared remarks were delivered at the August 30, 2022 Strategic Forces Seminar held at the Hudson Institute and are drawn from Keith B. Payne and David J. Trachtenberg, *Deterrence in the Emerging Threat Environment: What Is Different and Why it Matters*, available at <https://nipp.org/papers/deterrence-in-the-emerging-threat-environment-what-is-different-and-why-it-matters/>. See also, Keith B. Payne, *Rethinking Deterrence: How and Why*, Information Series No. 533 (Fairfax, VA: National Institute Press, September 7, 2022), available at [https://nipp.org/information\\_series/keith-b-payne-rethinking-deterrence-how-and-why-no-533-september-7-2022/](https://nipp.org/information_series/keith-b-payne-rethinking-deterrence-how-and-why-no-533-september-7-2022/).





sound absurd to us in this room; but he appears to sincerely believe it. If so, we are in an unprecedentedly dangerous time.

I should add here that surveys show that 71 percent of the Russian public *supports* Putin's war on Ukraine. We in the U.S. should be so lucky to get that type of consensus on anything.

The nuclear first-use threats we face are not part of the familiar Cold War defensive deterrence dynamic—the so-called balance of terror. Much of our past thinking derived from a balance of terror concept of deterrence is now suspect.

For example, based on the balance of terror narrative, we generally convinced ourselves that only *irrational* leaderships could consider the first use of nuclear weapons. Very recently I heard a senior NATO official express that claim with absolute confidence.

There is great comfort in projecting onto opponents, including Putin, the Western notion that only an irrational leader would resort to nuclear weapons. It means that unless Moscow has gone mad, Putin's current nuclear threats *must be a bluff*; no sane leadership would actually risk employing nuclear weapons to change borders; doing so would be irrational. What a relief!

References to Putin being “unhinged” given his nuclear threats follow the enduring U.S. tradition of labeling opponents who engage in shocking behavior as irrational. Obviously, we define what is reasonable by our own standards. So, if opponents deviate from our norms, they must be irrational.

Such comments usually reflect only our own lack of understanding of how differently opponents can define what is reasonable. The combination of Russia's and China's commitment to revanchist goals, nuclear weapons, and nuclear first-use threats now demand that we rethink what opponents may dare to do and how best to deter in contemporary conditions. It is important to understand in this regard that all leaders likely fear nuclear war; but not all leaders appear to fear nuclear war equally.

U.S. deterrence threats now must not simply be fearsome. Just brandishing a big, ugly threat is *not* deterrence. U.S. deterrence strategies must compel opponents to conclude on their own that the violation of U.S. redlines is a *more miserable option* than their continuing to accept a world order they define as *intolerable*. In short, our deterrence threat must be tailored to be *more fearsome*, as opponents calculate alternative moves, than their continuing to accept a world order they find intolerable. Knowing how to do that demands serious analysis and is a tall order.

The priority deterrence question that now follows from this discussion is new; I can put it plainly: How do we simultaneously deter two revanchist, expansionist, great powers, and at least one smaller, eccentric, revanchist nuclear power, when they are driven by the common belief that their goals are of *existential* importance, and that limited nuclear threats and possibly employment are the ways to defeat defensive U.S. deterrence policies?

## Problem No. 1: Deterrence Literacy

A problem with regard to rethinking U.S. deterrence policy is the generally modest level of U.S. deterrence literacy in every quarter of the United States; a problem that can be traced to the general lack of interest in nuclear deterrence for three decades.

To risk understatement, the extreme consequences of whether we can make deterrence work, or not, do not match the general lack of serious attention to the question.

Decades ago, Thomas Schelling, Herman Kahn, Bernard Brodie, Albert Wohlstetter, James Schlesinger, Robert Jervis, Colin Gray, Alexander George and other greats worked on this subject full time. I recall those days vividly. Nothing like that has existed for many years.

As a society, we have great apparent trouble simply understanding the realities of our past and present approaches to deterrence—much less rethinking it in new conditions. Much has been lost, and we need to relearn quickly.

There is some hope for improvement; U.S. Strategic Command is furiously rethinking deterrence theory. But the general debate on the subject at all levels of society is shockingly immature. It is far less informed than it was in the mid-1970s. That must change.

## Inconvenient Truths About Deterrence Prognostication

An inconvenient truth about deterrence is that it is an uncertain business in most circumstances—these uncertainties can be reduced, but not eliminated. The most persistent myth about deterrence is that we can predict its functioning with confidence. I recently wrote an article entitled, *Deterrence is Not Rocket Science: It is More Difficult*. The validity of that title is provided by Emanuel Derman, a physicist turned Wall Street quant, in his book on financial modeling, entitled *Models Behaving Badly*. Derman says:

In physics you're playing against God, and He doesn't change His laws very often. In finance [I add, as in deterrence] you're playing against God's creatures, agents who value assets based on their ephemeral opinions.

The problem in predicting the functioning of deterrence in any detail is that there are few reliable laws. Leadership decision making can be driven by an extremely wide range of "ephemeral opinions"—some of which may be well-known to us, others may be somewhat obvious, and others may be completely obscure or seemingly irrational. And, we do not know the importance of what we do not know.

This was so in the Cold War's bilateral context, *but increasing deterrence uncertainties now follow from an expanded range of "ephemeral opinions" in the emerging multilateral deterrence context*. With every new hostile entry into a deterrence context, the uncertainties and unknowns are multiplied.

Think about that truth the next time someone claims to *know* that deterrence will work just fine *without* ICBMs, the LRSO, the B83-1, or a new SLCM-N. In truth, they do not know

whether their claims are correct, wrong, or somewhere in between. The existential question is, how much risk are you willing to accept on the basis of their speculation about deterrence requirements—knowing that it *cannot* be backed by confident analysis because deterrence is never so predictable?

We are moving deeper into the world in which the words “deterrence stability” continue to be thrown around, but their meaning is unclear, as is our capacity to predict with confidence what in practice will help or hinder it. The question we face is how to act most prudently in this context.

### The Analytical Challenge Ahead

So, how do we rethink deterrence policy in this emerging multilateral deterrence context? The most basic task is to reduce uncertainties by understanding, as well as possible, the factors that will drive multiple opponents’ relevant decision making, including their perceptions, assumptions, goals, values, motivations, attention, determination, risk tolerances, and their levels of devotion to the stakes in contention. The functioning of deterrence will depend on the answers to these questions, but none of those answers are self-evident, and they will vary depending on the opponent, time and context.

In short, there are no all-purpose deterrents; we need to understand what individual opponents *will dare to do*, based on their own interpretation of what is necessary and tolerable. This need for understanding is not new, but anticipating deterrence outcomes is now complicated by the fact that we are not simply deterring expansionist China, revanchist Russia, and eccentric North Korea *sequentially or in isolation*. No, we must deter each simultaneously, and with each opponent watching our every move; events in one theater likely will affect the deterrence dynamics in other theaters.

During much of the Cold War, we focused on deterring a single opponent, the Soviet Union, and assumed that we could predict Moscow’s basic deterrence calculations because they would largely mimic our own, i.e., mirror imaging. We also assumed that all other opponents were “lesser included cases.” These Cold War conveniences made our deterrence calculations relatively easy, even simplistic. But those conveniences now are gone and wholly imprudent.

Our deterrence expectations will fail at some point if we assume that opponents define rational thought and behavior as we do, and thus we can predict how they will calculate deterrence and act. The need is to know how to hedge against the mounting uncertainties in our application of deterrence in this new context.

This is the analytical challenge we face; it is *extreme* politics, and it was Albert Einstein who said that politics is harder than physics.

## Deterrence Policy and Practice: Hedging in the Emerging Multilateral Deterrence Context

Given this emerging deterrence context, it is important to emphasize the need now to hedge against:

1. coordinated Sino-Russian actions;
2. the increased uncertainty in deterrence requirements; and,
3. the increased uncertainties regarding the potential for surprising deterrence failure.

I will elaborate briefly on each in order.

**First. Hedging Against Prospective Sino-Russian Coordination.** The United States must consider the possibility that Russian and China will coordinate their actions to advance their goals. This danger of a coordinated Sino-Russian “entente” appears to be real and growing. It presents the possibility of Russia and China confronting the United States with two simultaneous and coordinated regional wars. This is a deterrence contingency that U.S. conventional and theater nuclear capabilities may be unprepared to meet given the great reduction in U.S. forward-deployed forces since the end of the Cold War and the apparent near elimination of U.S. forward-deployable theater nuclear weapons.

History has repeatedly demonstrated that revisionist powers can be provoked by the perceived weakness of status quo powers, and this has led to deterrence failure. A perceived lack of U.S. preparation for two simultaneous regional wars now could embolden both Moscow and Beijing to aggression that otherwise could be deterred—undercutting U.S. extended deterrence goals.

U.S. conventional and nuclear capabilities together must provide Russia and China, together and separately, with seamless and overwhelming disincentives to their *initiating* attacks or engaging in *nuclear escalation* in the event of a conflict.

## The Two-War Standard Left Behind

For years, U.S. military planners designed a strategy that called for the capability to fight two major regional contingencies (MRCs) simultaneously. Yet, by 2010, the United States had shifted from the two-MRC force-sizing construct to focus on counter-terrorism and irregular warfare. That may have made sense at the time, but no longer.

Restoring the two-war force-sizing standard now appears to be logical and prudent for deterrence and extended deterrence purposes. Doing so would be prudent, but likely insufficient.

Why insufficient? Because opponents’ threats of nuclear use will hang over any U.S. conflict with Russia and China. Establishing the U.S. conventional capability to counter a two-front conventional war could compel Moscow and Beijing to accept the risk of engaging in nuclear escalation, if needed, to paralyze U.S. support for allies and thereby secure Russian and Chinese “existential” goals. The United States must be able to deter coercive nuclear

escalation threats, and that means our nuclear arsenal must backstop our conventional capabilities for defensive deterrence purposes. In short, *regional* stability cannot be separated from U.S. nuclear deterrence.

For decades, I have heard that adding to our conventional capabilities will reduce our reliance on nuclear deterrence. That probably was not true in the past; it certainly is not true now. Strengthening our conventional forces is necessary, but our reliance on nuclear deterrence will remain. There is no logical basis for thinking otherwise.

***Second. Hedging Against Sino-Russian Coordination at the Strategic Force Level.***

Working hard to ensure that U.S. strategic nuclear forces are *manifestly* survivable is a fundamental, on-going priority of U.S. deterrence policy. But, in the foreseeable future, Beijing's and Moscow's combined strategic nuclear and advanced conventional capabilities may expand to present a new challenge for the continuing survivability of U.S. strategic retaliatory forces. The challenge is to pace the requirements for U.S. strategic force survivability not against Russian or Chinese strategic forces separately, but against combined Sino-Russian capabilities.

If you think the threat of Sino-Russian joint action is far-fetched, recall that in 1969 the Soviet Union reportedly invited the United States to engage in a joint strike against China's nuclear facilities.

Many commentators dismiss out of hand the likelihood of a strike against U.S. strategic forces; that supposedly is Cold War thinking. But, three developments suggest otherwise:

1. the increasing potential for Sino-Russian coordination;
2. their expanding nuclear force numbers; and,
3. their extreme dedication to expansionist, revanchist goals and the related potential for acute crises.

These three developments together compel us to think anew about the threat we use to pace our survivability and deterrence considerations.

***Third. Hedging Against Sino-Russian Coordination: U.S. Deterrence Threat Options.***

A corresponding concern involves the threat options that the United States can credibly brandish simultaneously against Russia and China—each of which has an expansive number of targets the United States may need to hold at risk for effective deterrence.

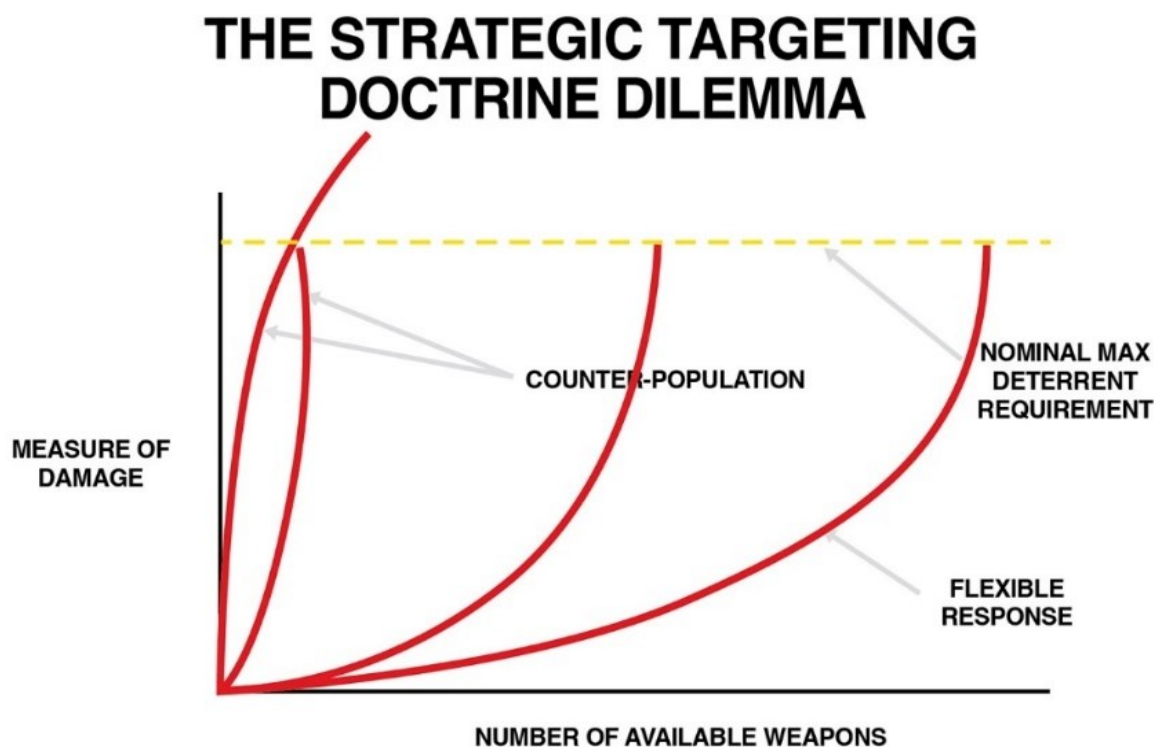
The question is whether that portion of the U.S. strategic force posture that could survive a combined Sino-Russian strategic attack would have sufficient capacity and flexibility to provide credible U.S. deterrence and extended deterrence threat options against both countries simultaneously or sequentially.

For example, if a sizable number of the U.S. warheads on ballistic missile carrying submarines were to survive a Sino-Russian strategic attack, would that level of U.S. retaliatory potential be sufficient to deter a Sino-Russian attack in the first place, or to deter follow-on Sino-Russian strikes if deterrence fails to prevent an initial Sino-Russian first strike?

If U.S. retaliatory capabilities were to be reduced substantially by a Sino-Russian counterforce attack, the U.S. strategic deterrent could be seen as limited to an incredible and morally repugnant “counter-city” deterrent option. The critical question is whether that is now an acceptable measure of retaliatory capabilities for U.S. deterrence purposes. I suggest strongly that it is not an acceptable measure.

For good reason and on a fully bipartisan basis, the United States has rejected a counter-city deterrent for decades. Washington has instead pursued a “flexible response” deterrence policy intended to brandish graduated threat options and to hold at risk a range of opponents’ critical assets, while avoiding intentional city targeting to the greatest extent possible. For this approach to deterrence, the U.S. force posture must include diverse, flexible options, including the capability to hold at risk opponents’ military capabilities, command and control capabilities, and civilian leadership.

But such a deterrence strategy depends on the combined size, diversity, and survivability of the U.S. force posture. A graphic by former Commander of Strategic Command Commander, ADM Richard Mies offers a notional illustration of this challenge:



This graphic illustrates that as the number of available retaliatory weapons and options decline, the United States moves further away from “Flexible Response” and towards a “Counter-Population” deterrent. That is not a road we want to travel.



The bottom line here is that the United States must now hedge against being in a position of having such limited retaliatory threat options that our *de facto* deterrence policy is incredible, morally intolerable and legally problematic.

***Fourth. Hedging Against Sino-Russian Coordination at the Theater Nuclear Level.*** Given the potential for Sino-Russian coordination, the United States must also now hedge against the opponents' simultaneous regional nuclear first use threats. Our extended deterrence goals demand this hedging. This is not a trivial detail; it is critical. Recall that past great power wars—from the Peloponnesian and Punic Wars, to World Wars I and II—were triggered by disputes over allies and regional hegemony.

Should Moscow or Beijing calculate that the United States lacks either the will or the capability to respond *in a limited and discriminant way* to their regional nuclear first use, extended deterrence will likely be undermined, and the risks of regional aggression will grow.

Is the United States currently prepared to deter Sino-Russian regional nuclear threats, without unduly risking escalation to a potentially suicidal strategic nuclear level? The significant imbalance in theater nuclear capabilities suggests otherwise.

To hedge against this deterrence challenge, a reconsideration of the size, characteristics, and deployment of U.S. theater nuclear forces is warranted. The prospective SLCM-N is an obvious step in that direction. But it may not survive the U.S. political process based on the argument that SCLM-N would reflect a rejection of deterrence in favor of “war-fighting.” This vapid argument has been resurrected from the 1980s and fails Deterrence 101. It misses the likely deterrence credibility requirement for such U.S. forces in the emerging threat environment.

***Fifth. Hedging Against Expanded Uncertainties Regarding Deterrence Requirements.*** Defining the adequacy standard for deterrence means answering the question “how much is enough?” Answering that question has always been more art than science. But, it is even more problematic in the emerging multilateral context because deterrence requirements will be different and uncertain across time and place.

There can now be no single measure that defines the adequacy of the U.S. strategic force posture, as was declared U.S. practice for more than a decade during the Cold War. That old convenience is now gone.

The narrower our measure of deterrence adequacy, the greater is the presumption that opponents' future decision making is known and will not vary, and that the future will unfold as expected. If you are confident you can predict the future in this way, then you can confidently predict the functioning of and the minimal requirements for U.S. deterrence; if not, then not, and our measures of deterrence adequacy must be broad and flexible.

The uncertainties of deterrence increase the difficulty of identifying well-informed adequacy measures for deterrence. These uncertainties drive the great need to hedge as best we can against setting deterrence adequacy standards *too narrowly*.

The need now to hedge against intense Russian and Chinese hostility and *expanded deterrence uncertainties* suggests the corresponding need to rethink whether the measures

of deterrence adequacy from over a decade ago remain sufficient for defining “how much is enough?” The underlying conditions have shifted dramatically since the New START Treaty, so must our measures of adequacy. The implications of this harsh reality are profound.

In short, needed now are multiple, simultaneous measures of adequacy that take into account the variation in deterrence requirements across opponent, time, and place.

This is not a plea for more nuclear weapons, per se. But we must address “how much is enough?” for deterrence in the emerging, dynamic threat environment. Answering that question anew must *precede* many other moves, including any resumption of arms control negotiations.

***Sixth. Hedging Against the Possibility of Deterrence Failure.*** Finally, the expansion of uncertainties applies both to *how* and *whether* deterrence will work as we hope. Pointing to the need to prepare for the possibility of deterrence failure sounds extraordinary *only* because we are so accustomed to the comforting belief that a nuclear balance of terror works predictably, reliably, even easily vis-à-vis any rational opponent.

That comforting belief is problematic on so many levels. We can, with serious effort, greatly reduce deterrence uncertainties, but they cannot be eliminated, and those factors that have led to deterrence failure over the course of centuries are likely to be more pronounced in the emerging deterrence context.

To the extent that the United States does not now hedge against the possibility of deterrence failure, it is unprepared for the realities of the multilateral deterrence context. The implications of this harsh reality are profound.

The most obvious implication, perhaps, is the potential value of even limited active and passive strategic defenses to help reduce the prospective destruction from limited nuclear attacks, and to help mitigate the debilitating effects of Russian, Chinese, and North Korean coercive threats to launch such attacks.

This is a significant departure from the still-prevalent policy notions that: 1) unmitigated U.S. societal vulnerability to Russia and China is a necessary component of strategic stability; 2) defenses are destabilizing; and, 3) they can provide no meaningful protection against attack. Each of these Cold War maxims is now likely wrong. The question is: what will we do about that?. My guess is very little, but time will tell.

## Conclusion

The basic principles of deterrence are enduring and unchanged, but the application of deterrence must adjust to different opponents and contexts.

The emergence of a multilateral deterrence context in which two great nuclear powers share existential revisionist goals and intense hostility toward the United States presents some unprecedented challenges. This context expands the uncertainties and unknowns regarding the functioning of deterrence—which remains essential for U.S. and allied security. When deterrence is essential but also uncertain, we are in a rough place; we must work to hedge against those uncertainties as best we can.

Identifying the many ways in which the multilateral deterrence context is different from the past and what that means for U.S. deterrence policy is likely to be a generational process. A significant element of this serious work is to understand opponents, and to hedge against the challenges presented by the evolving deterrence context I have described here today.

We do not know precisely how deterrence will be tested in the future; we can only hedge as best we can against a wide range of plausible contingencies. That hedging becomes much more complicated and demanding in the new multilateral context. For that reason, I find it very troubling that the 2022 NPR eliminates hedging as a formal role for nuclear weapons.

I will close by noting that the “greatest generation” of deterrence scholars did the heavy lifting of thinking through deterrence issues for their time—I identified them earlier. Their work—no kidding—helped to preserve peace throughout the Cold War.

As much as we hoped that nuclear weapons and deterrence issues were a distant memory of the Cold War, they are again front and center. As distracted by other matters as we may be, it is time for a new generation to get back to this serious work.

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## ANALYSIS

### **MISCHARACTERIZING U.S. NUCLEAR DETERRENCE POLICY: THE MYTH OF DELIBERATE CIVILIAN TARGETING**

**By David J. Trachtenberg**

#### **Introduction**

As the debate over the proper role for nuclear weapons in U.S. national security strategy heats up, commentators and analysts continue to mischaracterize U.S. nuclear deterrence policy as one based on the deliberate targeting of cities and urban areas—consistent with the policy of “Mutual Assured Destruction” (MAD) espoused by former Secretary of Defense Robert McNamara in the 1960s. For example, one analyst recently wrote, “Today, MAD remains at the core of strategic deterrence,” noting that both the United States and Russia can “destroy at least 150 urban centers in each country.”<sup>1</sup>

In an attempt to determine the appropriate size and configuration of the U.S. nuclear arsenal vis-à-vis the Soviet Union, Secretary McNamara developed a series of quantitative metrics that were thought to be sufficient to ensure the effective and credible functioning of deterrence. Though the actual numbers varied over time in subsequent statements made by McNamara, the basic belief was that as long as the United States possessed the nuclear capacity to destroy 25-30 percent of Soviet population and 50-75 percent of the Soviet Union’s industrial capacity, deterrence would be assured, as no Soviet leadership would risk that level of destruction. To accomplish this goal, McNamara postulated that the United States required the equivalent of 400 megatons of nuclear destructive power. This would result in the “assured destruction” of the Soviet Union as a functioning, viable society. Anything beyond this would simply be “overkill” and was unnecessary for effective deterrence.<sup>2</sup>

McNamara’s Assured Destruction criteria became the basis for U.S. nuclear planning throughout the 1960s and formed the foundation of a theory of deterrence that came to be known as “Mutual Assured Destruction.” The principle of Mutual Assured Destruction (or “MAD” as it was called) assumed that because both the United States and Soviet Union could cause such massive devastation to each other’s society, neither side would ever contemplate striking the other first with nuclear weapons. The resulting “balance of terror” was therefore deemed sufficient to ensure the successful functioning of deterrence in perpetuity and became the definition of deterrence “stability.”

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<sup>1</sup> Tom Nichols “We Have No Nuclear Strategy,” *The Atlantic*, July/August 2022, available at <https://www.theatlantic.com/magazine/archive/2022/07/us-nuclear-strategy-cold-war-russia/638441/>.

<sup>2</sup> As McNamara argued, “Such a level of destruction would certainly represent intolerable punishment to any industrialized nation and thus should serve as an effective deterrent.” *Draft Memorandum for the President*, December 3, 1964, cited in Keith B. Payne, *The Great American Gamble: Deterrence Theory and Practice From the Cold War to the Twenty-First Century* (Fairfax, VA: National Institute Press, 2008), pp. 96-108.



## Lingering Misperceptions

Over the subsequent decades, despite significant changes to U.S. nuclear strategy and targeting doctrine, analysts who have an insufficient understanding of the evolution of U.S. nuclear policy have continued to suggest that U.S. nuclear weapons strategy is still based on the principle of Mutual Assured Destruction—namely, that the essence of deterrence is the ability (and presumably willingness) of the United States to engage in “countervalue” strikes that target Russian “soft targets” such as urban areas and industrial capacity with its nuclear arsenal (as opposed to “counterforce” strikes that target military assets).

For example, a recent BBC commentary declared that mutual assured destruction is “[a] Cold War creation that still applies today: the assumption that if one side launches nuclear weapons, the other side will respond in kind and everyone dies.”<sup>3</sup> A retired Marine Corps officer and former Department of Defense employee recently wrote, “The US retains faith in the doctrine of mutual assured destruction (MAD). MAD contributed to its Cold War victory, and it is assumed to still be effective today.”<sup>4</sup> Another commentary explained, “It is this fear that our destruction would be mutually assured (MAD—mutual assured destruction—military doctrine), that has kept militaries in check throughout the Cold War up until today.”<sup>5</sup> Yet another analyst declared, “The U.S. has a huge nuclear stockpile...which is designed to deter nuclear attacks on America via the doctrine of mutually assured destruction, or MAD. Any country that launches a nuclear weapon at the U.S. can expect a swift and overwhelming response in kind, that it would find impossible to block.”<sup>6</sup> And, as yet another commentator suggested, “Deterrence stability...rests on the prospect of Mutually Assured Destruction (MAD), as explained by cold war nuclear strategist Schelling, ‘[If] two powers show themselves equally capable of inflicting damage upon each other by some particular process of war so that neither gains an advantage from its adoption and both suffer the most hideous reciprocal injuries, it is not only possible but it seems probable that neither will employ that Means.’”<sup>7</sup>

The notion of Mutual Assured Destruction assumes that the United States *deliberately* plans to target cities in order to *maximize* the number of casualties in a nuclear exchange, thereby making such an exchange too horrendous to contemplate. Ironically, this notion—that the best way to prevent nuclear war is to make it as destructive as possible—was seen during the Cold War as the morally superior position. Any movement to reduce the level of

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<sup>3</sup> Steve Rosenberg, “Putin pins Ukraine hopes on winter and divisive US politics,” *BBC News*, October 29, 2022, available at <https://www.bbc.com/news/world-europe-63414324>.

<sup>4</sup> Franz Gayl, “Note to the US – a nuclear war can be won by rivals,” *Global Times*, October 7, 2022, available at <https://www.globaltimes.cn/page/202210/1276613.shtml>.

<sup>5</sup> Alex Gatopoulos, “High stakes gamble: Putin’s tactical nuclear options,” *Aljazeera*, October 15, 2022, available at <https://www.aljazeera.com/news/2022/10/15/ukraine-war-russia-putin-turn-to-nuclear-weapons>.

<sup>6</sup> James Bickerton, “Is the U.S. Safe From Nuclear Attack?,” *Newsweek*, October 19, 2022, available at <https://www.newsweek.com/us-safe-nuclear-attack-1753288>.

<sup>7</sup> Arooj Fatima, “Analyzing the US-Russia Deterrence Stability,” *Global Village Space*, November 4, 2022, available at <https://www.globalvillagespace.com/us-russia-deterrence-stability/>.

potential destructiveness of a nuclear conflict or to develop effective defenses that could protect at least a portion of the American population in the event of a nuclear conflict, was considered to be “destabilizing” and morally repugnant.

For example, in the 1980s, the Episcopal Diocese of Washington rejected making “nuclear weapons increasingly discriminating in their effects, perhaps even to make them less powerful than some conventional ordnance.”<sup>8</sup> And a 1988 report of the National Conference of Catholic Bishops rejected deployment of the Reagan Administration’s proposed Strategic Defense Initiative (SDI) on the grounds that it would cause deterrence instability, noting that critics of the SDI program had “the more compelling moral case.”<sup>9</sup>

Some believe that MAD is a fact of life, similar to an immutable law of physics—a reality that cannot be escaped. For example, Graham Allison, a political scientist and Harvard professor, stated, “We still live in what strategists called a MAD world, a world of mutual assured destruction. So if we ended up in a full-scale nuclear war between Russia and the U.S. both nations could be destroyed. That reality is constant across the spectrum.”<sup>10</sup>

## The Evolution of U.S. Nuclear Targeting Strategy

The reality, however, is that U.S. nuclear strategy since the mid-1970s has sought to deliberately *avoid* targeting cities—consistent with the Law of Armed Conflict and “Just War” principles that date back centuries and preclude the intentional targeting of civilian populations.<sup>11</sup> This has been evident in official bipartisan policy pronouncements from the Nixon to the Biden administrations. It is also a key principle behind the development of conventional precision munitions intended to minimize inadvertent civilian casualties.

For example, in 1974, *National Security Decision Memorandum (NSDM) 242*—dubbed the “Schlessinger Doctrine”—stated that “options should be developed in which the level, scope, and duration of violence is limited in a manner which can be clearly and credibly communicated to the enemy.”<sup>12</sup> NSDM-242 also called for “a wide range of limited nuclear

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<sup>8</sup> Report of the Committee of Inquiry on the Nuclear Issue, Committee on Peace, Episcopal Diocese of Washington, *The Nuclear Dilemma: A Christian Search for Understanding* (Washington, D.C.: Episcopal Diocese of Washington, 1986), p. 66.

<sup>9</sup> National Conference of Catholic Bishops, *Building Peace: A Report* (Washington, D.C.: United States Catholic Conference, June 1988), pp. 67-72. Also see United States Conference of Catholic Bishops Inc., *Strategic Defense Initiative: Moral Questions, Public Choices*, 1988, available at <https://www.usccb.org/issues-and-action/human-life-and-dignity/war-and-peace/nuclear-weapons/upload/statement-strategic-defense-initiative-moral-question-public-choices-1988.pdf>.

<sup>10</sup> Interview conducted with Fyodor Lukyanov, “Graham Allison: ‘Time to Search for an Off-Ramp’ in Ukraine,” *Russia Matters*, October 21, 2022, available at <https://www.russiamatters.org/analysis/graham-allison-time-search-ramp-ukraine>.

<sup>11</sup> As the *Department of Defense Law of War Manual* notes, “The law of war has recognized that the population of an enemy State is generally divided into two classes: the armed forces and the civilian population, also sometimes called, respectively, ‘combatants’ and ‘civilians.’ .... However, because the ordinary members of the civilian population make no resistance, it has long been recognized that there is no right to make them the object of attack.” See *Department of Defense Law of War Manual* (Volume 1: Chapters 1-9, December 2016), Section 4.2, “The Armed Forces and the Civilian Population,” pp. 112-113.

<sup>12</sup> National Security Council, *National Security Decision Memorandum 242*, January 17, 1974, available at [https://irp.fas.org/offdocs/nsdm-nixon/nsdm\\_242.pdf](https://irp.fas.org/offdocs/nsdm-nixon/nsdm_242.pdf).



employment options which could be used in conjunction with supporting political and military measures (including conventional forces) to control escalation.”<sup>13</sup> This policy guidance led to the development of limited nuclear options (LNOs) intended to provide the United States with credible response options short of all-out strategic nuclear war in order to limit the scope and extent of any potential nuclear conflict. The desire to control escalation and limit the damage caused by nuclear use was the antithesis of the mutual assured destruction policy that was predicated on maximizing potential casualties and the level of destruction.

*Presidential Directive (PD) 59*, signed by President Jimmy Carter in 1980, outlined U.S. nuclear weapons employment policy. This “countervailing strategy” called for flexible capabilities that could hold at risk “a full range of [Soviet] military targets,”<sup>14</sup> to include both nuclear and conventional military forces, with “the major weight of the initial response on military and control targets.”<sup>15</sup> The guidance explicitly stated that “Methods of attack on particular targets should be chosen to limit collateral damage to urban areas, general industry and population targets....”<sup>16</sup> Air Force General Jasper Welch, the former Deputy Director of the Joint Strategic Target Planning Staff, subsequently noted that the United States “took residential areas off the target list explicitly—and provided even for residential area avoidance under certain circumstances, where one would reduce the effectiveness of the strike in order to avoid residential areas.”<sup>17</sup> This clearly represented a further repudiation of the notion that U.S. retaliatory forces should initially and deliberately target civilian population centers as part of a policy of Mutual Assured Destruction.

More recently, the notion of flexible response options that seek to avoid targeting civilian population centers and other “soft” targets has been embedded in various U.S. strategy documents approved by multiple U.S. administrations on a bipartisan basis. For example, the Obama Administration’s 2013 *Report on Nuclear Employment Strategy of the United States* explicitly notes:

The new guidance requires the United States to maintain significant counterforce capabilities against potential adversaries. The new guidance does not rely on a “counter-value” or “minimum deterrence” strategy.

The new guidance makes clear that all plans must also be consistent with the fundamental principles of the Law of Armed Conflict. Accordingly, plans will, for example, apply the principles of distinction and proportionality and seek to minimize collateral damage to civilian populations and civilian objects. The

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<sup>13</sup> Ibid.

<sup>14</sup> The White House, *Presidential Decision Memorandum/NSC-59*, July 25, 1980, p. 2, available at <https://nsarchive2.gwu.edu/nukevault/ebb390/docs/7-25-80%20PD%2059.pdf>.

<sup>15</sup> Ibid., p. 3.

<sup>16</sup> Ibid., pp. 3-4.

<sup>17</sup> Keith Payne and Jill Coleman, “Christian Nuclear Pacifism and just War theory,” *Comparative Strategy*, Vol. 7, No. 1 (Winter 1988), p. 79.

United States will not intentionally target civilian populations or civilian objects.<sup>18</sup>

Subsequently, the Trump Administration's *Report on the Nuclear Employment Strategy of the United States—2020* acknowledged, "The United States has for decades rejected a deterrence strategy based on purposely threatening civilian populations, and the United States will not intentionally target civilian populations.... U.S. nuclear weapons employment guidance directs minimizing civilian damage to the extent possible consistent with achieving U.S. objectives and restoring deterrence."<sup>19</sup> And the Biden Administration's recently released *Nuclear Posture Review* notes that "longstanding U.S. policy is to not purposely threaten civilian populations or objects, and the United States will not intentionally target civilian populations or objects in violation of LOAC [the Law of Armed Conflict]."<sup>20</sup>

Nevertheless, the myth that U.S. nuclear strategy—unlike conventional war plans—sanctions the deliberate targeting of vulnerable civilian populations endures.

## A Double Standard

For years, a double standard has existed regarding the desirability of minimizing civilian casualties in combat. When it comes to the employment of conventional forces in U.S. military operations, there is little debate or argument over the importance and legal necessity of reducing inadvertent civilian casualties and damage to property (often referred to as "collateral damage") to the maximum extent possible. In wartime, innocent civilians often suffer as a result of military operations, but the United States has consistently sought to adhere to the law of armed conflict and avoid the deliberate targeting of civilians. Moreover, the United States has often refrained from taking military actions against an enemy if doing so would risk creating inadvertent civilian casualties.

During two decades of counterterrorism operations in Afghanistan, Iraq, and the Middle East, there are numerous instances where U.S. military forces withheld firing on enemy targets because of the risk of injuring or killing civilian noncombatants. Recognizing this, U.S. adversaries frequently sought to attack U.S. forces from locations that deliberately exposed innocent civilians to risk, expecting this would place U.S. forces at a disadvantage. Enemy combatants hiding behind "human shields" or operating from religious or cultural sites whose deliberate destruction could be considered a war crime under international law often placed U.S. forces in a situation where they could not engage militarily in accordance with the law of armed conflict. The need to avoid killing innocents was acknowledged by General

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<sup>18</sup> Department of Defense, *Report on Nuclear Employment Strategy of the United States Specified in Section 491 of 10 U.S.C.*, June 2, 2013, available at [https://uploads.fas.org/2013/06/NukeEmploymentGuidance\\_DODbrief061213.pdf](https://uploads.fas.org/2013/06/NukeEmploymentGuidance_DODbrief061213.pdf).

<sup>19</sup> Department of Defense, *Report on the Nuclear Employment Strategy of the United States – 2020 Specified in Section 491(a) of Title 10 U.S.C.*, November 30, 2020, pp. 6-7, available at [https://www.esd.whs.mil/Portals/54/Documents/FOID/Reading%20Room/NCB/21-F-0591\\_2020\\_Report\\_of\\_the\\_Nuclear\\_Employment\\_Strategy\\_of\\_the\\_United\\_States.pdf](https://www.esd.whs.mil/Portals/54/Documents/FOID/Reading%20Room/NCB/21-F-0591_2020_Report_of_the_Nuclear_Employment_Strategy_of_the_United_States.pdf).

<sup>20</sup> Department of Defense, *2022 Nuclear Posture Review*, October 2022, p. 8, available at <https://s3.amazonaws.com/uploads.fas.org/2022/10/27113658/2022-Nuclear-Posture-Review.pdf>.

David Petraeus, the commander of the International Security Assistance Force in Afghanistan, who issued a directive stating:

We must continue - indeed, redouble - our efforts to reduce the loss of innocent civilian life to an absolute minimum. Every Afghan civilian death diminishes our cause. If we use excessive force or operate contrary to our counterinsurgency principles, tactical victories may prove to be strategic setbacks.<sup>21</sup>

In addition to doctrinal guidance, the United States has also sought to develop technological solutions that would mitigate the risk of inadvertent civilian casualties. These include significant investments in more accurate precision munitions and conventional precision strike capabilities that are more discriminate, and which lessen the risk of collateral damage. They also include investments in non-lethal technologies that can be employed in a targeted manner to disrupt adversary operations without causing unwanted fatalities. Directed energy non-kinetic systems that use high-powered microwave and radio frequency technology to disrupt engine electronics, dazzling lasers, and acoustic hailing devices are some of the non-lethal capabilities have proven useful in military operations.<sup>22</sup> In addition, the millimeter wave Active Denial System (ADS) is one such technology that—if size, weight, transportability and power concerns can be successfully addressed—“could prove useful in a counterinsurgency operation where avoidance of civilian casualties is essential to mission success.”<sup>23</sup>

The development of these kinds of advanced conventional capabilities has enjoyed strong bipartisan support and is generally seen as consistent with the desire to limit unnecessary noncombatant casualties in U.S. military operations. When it comes to nuclear weapons, however, the approach taken by those who still appear to endorse MAD stands this paradigm on its head.

Nuclear weapons are clearly the most destructive weapons ever invented by man, and it is that destructiveness that has fostered a belief in their disutility for military purposes; however, the magnitude of the consequences depends on a range of variables, including numbers, types, yields, targets, environmental conditions, and a host of other known and unknown factors.

While deterrence is the fundamental mission of the U.S. nuclear arsenal, recent events suggest the prospect of adversary use of nuclear weapons is not unthinkable to them. Indeed, both Russia and China have engaged in brazen nuclear threats against the United States and its allies, including the threat of nuclear first use, and have conducted military exercises

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<sup>21</sup> Press Release, International Security Assistance Force – Afghanistan, “Afghanistan: GENERAL PETRAEUS ISSUES UPDATED TACTICAL DIRECTIVE: Emphasizes Disciplined Use of Force,” August 4, 2010, available at <https://reliefweb.int/report/afghanistan/afghanistan-general-petraeus-issues-updated-tactical-directive-emphasizes>.

<sup>22</sup> A description of these technologies developed by the Department of Defense Joint Intermediate Force Capabilities Office as part of the DoD Non-Lethal Weapons Program can be found here: <https://jnlwp.defense.gov/Press-Room/Fact-Sheets/>.

<sup>23</sup> David J. Trachtenberg, “An Opportunity Missed,” AEI Center for Defense Studies, August 30, 2010. Also cited in Rick Smith, *The End of Killing* (Vancouver, Canada, Page Two Books, 2019), p. 125.

simulating nuclear strikes against the West. Such events have exceeded in scope, magnitude, and frequency similar actions that occurred during the Cold War.

Russia poses a particularly worrisome challenge as it has sought to employ nuclear threats as a coercive tool to prevent stronger Western actions in support of Ukraine—a democratic, independent country whose sovereignty and territorial integrity was flagrantly violated by Russia’s occupation of Crimea in 2014 and its subsequent brutal aggression and invasion of Ukraine in February 2022. Consequently, in the face of Russian military setbacks in Ukraine, there is growing concern that Moscow may see the limited use of “tactical” nuclear weapons as a viable option to restore its military advantage on the ground and to further message the United States and NATO to stay out of more direct involvement in the conflict or, as Vladimir Putin himself warned, “the consequences will be such as you have never seen in your entire history.”<sup>24</sup>

Russia’s significant advantage over the United States in non-strategic nuclear weapons (the Biden Administration’s *Nuclear Posture Review* notes that “Russia has an active stockpile of up to 2,000 non-strategic nuclear warheads that is not treaty-limited,”<sup>25</sup> a figure some analysts say is an order of magnitude larger than comparable U.S. systems<sup>26</sup>) may lead Moscow to conclude that it enjoys an exploitable advantage that allows it to credibly threaten nuclear escalation. As a consequence, the prospect of nuclear conflict may loom larger than even during the height of the Cold War. Indeed, President Biden has ominously warned that “We have not faced the prospect of Armageddon since Kennedy and the Cuban Missile Crisis.”<sup>27</sup>

Therefore, the question that needs to be asked is: Because U.S. policy is to avoid civilian casualties and minimize societal damage as much as possible, shouldn’t the United States have weapons that enable that goal? This was the rationale behind the Trump Administration’s support for the low-yield ballistic missile warhead and the sea-launched nuclear cruise missile (SLCM-N). Yet, opponents of these programs argue that anything that seeks to reduce the level of destruction caused by nuclear weapons makes nuclear use more “thinkable” and nuclear war more likely. Such reasoning is contrary to the goal of minimizing the taking of innocent lives, which, as noted above, has been a consistent and bipartisan element of U.S. nuclear policy for decades.

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<sup>24</sup> Max Fisher, “Putin’s Case for War, Annotated,” *The New York Times*, February 24, 2022, available at <https://www.nytimes.com/2022/02/24/world/europe/putin-ukraine-speech.html>.

<sup>25</sup> Department of Defense, *2022 Nuclear Posture Review*, October 2022, p. 4, op. cit.

<sup>26</sup> See, for example, Peter Brooks and Patty-Jane Geller, “Russia’s Small Nukes Are a Big Problem,” The Heritage Foundation, February 2, 2022, available at <https://www.heritage.org/missile-defense/commentary/russias-small-nukes-are-big-problem>.

<sup>27</sup> Justin Gomez and Elizabeth Schulze, “Biden warns Putin is ‘not joking’ about nuclear weapons,” ABC News, October 7, 2022, available at <https://abcnews.go.com/Politics/biden-warns-putin-joking-nuclear-weapons/story?id=91157281>.

## Why Mischaracterize U.S. Targeting Policy?

Many who mischaracterize U.S. nuclear targeting policy as relying on massive countervalue strikes appear to do so in order to generate opposition to the U.S. nuclear modernization program. By focusing on the immense horror that the deliberate destruction of cities and urban populations would bring, the intent is to foster a belief in the minds of the public that the size and capability of the U.S. nuclear arsenal is excessive and that because the level of destruction that would result from any nuclear exchange is “overkill,” arms control is necessary to reduce the size of (and eventually eliminate) nuclear arsenals. Indeed, those who promulgate such misinformation appear to have a broader political agenda in mind; namely, to rally public opinion against continued reliance on nuclear weapons for deterrence and to undermine support for modernizing the ageing U.S. nuclear arsenal.

For example, former Secretary of Defense William Perry and Tom Collina argue that “The US nuclear-armed submarine force alone is sufficient for assured deterrence and will be so for the foreseeable future.... just one boat can carry enough nuclear weapons to place two thermonuclear warheads on each of Russia’s fifty largest cities.” Therefore, they conclude, “The United States should build only the weapons it needs for second-strike deterrence and should not go beyond that for obvious reasons: the weapons are expensive and dangerous.”<sup>28</sup> In their view, this means that the U.S. ICBM force should be eliminated, as “ICBMs are simply not needed for an effective response, which would be carried out by submarine-based weapons.”<sup>29</sup> And it means that the low-yield ballistic missile warheads deployed on strategic submarines—an initiative undertaken by the Trump Administration and supported by the Biden Administration<sup>30</sup>—are unnecessary and “dangerous,” even though they would lessen collateral damage in the event of a nuclear exchange. As Perry and Collina state with remarkable yet unwarranted certainty, “The United States can deter the unlikely Russian use of its low-yield bombs with its current arsenal. There are no “gaps” in the US deterrent force, and there can be no doubt in Russia’s mind that the United States is serious about maintaining an unambiguously strong nuclear deterrent.”<sup>31</sup>

Others have made similar calls for nuclear disarmament based on what they portray as a continuation of the Cold War policy of mutual assured destruction. As one activist and Nobel Peace Prize winner put it:

Instead of a world free of the terror of nuclear weapons, we continue to naively believe that the world is made secure through “nuclear deterrence.” That possessing nuclear weapons protects a nation from nuclear attack, through

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<sup>28</sup> William J. Perry and Tom Z. Collina, “The Atomic Titanic: an excerpt from “The Button,”” *Bulletin of the Atomic Scientists*, June 19, 2020, available at <https://thebulletin.org/2020/06/the-atomic-titanic-an-excerpt-from-the-button/>.

<sup>29</sup> Ibid.

<sup>30</sup> As the Biden Administration’s 2022 *Nuclear Posture Review* concluded, the low-yield submarine-launched ballistic missile warhead provides “flexibility” and is “an important means to deter limited nuclear use.” See Department of Defense, 2022 *Nuclear Posture Review*, October 2022, op. cit., pp. 11, 20.

<sup>31</sup> Ibid.

the threat of “mutually assured destruction.” In other words: I have my nukes, you have yours. Neither of us could survive a nuclear war, ergo the threat will remain always at the ready, in the background — a nuclear insurance policy against actually using the deadly weapons....

Rather than be glad that we have nukes to “defend” ourselves, I believe that now is not only the time to remember how close to nuclear war we have come, but also to revive efforts to rid the world of nuclear weapons....

...a safe and secure world must rest on nuclear disarmament and not on deterrence through the possibility of mutually assured destruction.<sup>32</sup>

The International Campaign to Abolish Nuclear Weapons (ICAN) has also argued that a 100-kiloton airburst nuclear weapon, detonated over 10 international capitals—including Washington, DC, Beijing, Moscow, London, and Paris—would kill or injure more than 9 billion people.<sup>33</sup> As the study notes, “While modern nuclear weapon targets are not public information, de-classified targets from the Cold War indicate that major cities have been the target of nuclear weapons and so it is not unreasonable to conjecture that they may still be targets.”<sup>34</sup> Apparently, the authors of the study are either unaware or deliberately dismissive of the fact that U.S. nuclear targeting policy has since the early days of the Cold War evolved away from strictly countervalue attacks against soft targets. However, the shock value of estimating casualties from such countervalue attacks is intended to generate support for the nuclear disarmament movement. As ICAN concludes:

It is clear that there is no mitigation strategy or response capacity that could adequately respond to a nuclear attack on a city: even a single moderately sized bomb over a single city would be a humanitarian catastrophe.... The only solution is to prevent the risk to any city by eliminating nuclear weapons.<sup>35</sup>

As one nuclear disarmament advocate recently wrote, “a handful of weapons could devastate” an opponent and, therefore, “a modest nuclear force is more than adequate to deter a nuclear attack or even a risk of a conventional war....” Consequently, “Proceeding to zero nuclear weapons” should be the U.S. goal.<sup>36</sup>

Such statements are clearly intended to increase public opposition to the nuclear modernization program of record—a program initiated by the Obama Administration and

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<sup>32</sup> Jody Williams, “Essay: Will Russia use tactical nukes? It’s time to abolish nuclear weapons,” *Houston Chronicle*, November 6, 2022, available at <https://www.houstonchronicle.com/opinion/outlook/article/Russia-tactical-nuclear-weapons-nobel-peace-prize-17558465.php>.

<sup>33</sup> International Campaign to Abolish Nuclear Weapons, *No Place to Hide: Nuclear Weapons and the Collapse of Health Care Systems*, February 2022, available at <https://d3n8a8pro7vnm.cloudfront.net/ican/pages/2544/attachments/original/1644334250/NoPlacetoHide-ICAN-Report-Feb2022-web.pdf?1644334250>.

<sup>34</sup> *Ibid.*, p. 31.

<sup>35</sup> *Ibid.*, p.30.

<sup>36</sup> John Isaacs, “‘Old Think’ Is Driving U.S. Nuclear Weapons Policy,” *The National Interest*, December 17, 2022, available at <https://nationalinterest.org/feature/%E2%80%98old-think%E2%80%99-driving-us-nuclear-weapons-policy-206024>.



supported by both the Trump and Biden Administrations. Yet, despite clear evidence that U.S. nuclear targeting policy avoids large-scale retaliatory attacks against populated urban-industrial areas, such mischaracterizations endure—apparently for their political effect.

## **Conclusion**

There is no question that U.S. nuclear targeting policy has, for decades, rejected the MAD Cold War metrics outlined by then-Secretary of Defense Robert McNamara, who suggested deterrence could be assured through the capability to hold a certain percentage of the adversary's population and urban-industrial capacity at risk. This "assured destruction" criteria, based on the ability to cause unacceptable damage to an opponent's civilian population, contradicts basic principles in the Law of Armed Conflict and no longer serves as the basis for U.S. nuclear deterrence planning. Yet, it continues to be portrayed as such by those who oppose nuclear weapons in general, current plans for nuclear modernization, and theories of deterrence based on anything other than the "balance of terror" standard that was the hallmark of Cold War thinking.

Moreover, those who cite the "inhumanity" of nuclear weapons and the devastating human consequences of their use are also the most vocal opponents of any efforts to make U.S. nuclear capabilities more accurate, more discriminate, and less destructive. Such views stand in stark contrast to the major bipartisan support for more accurate and more discriminate precision-guided conventional munitions that are less likely to cause unintended collateral damage.

The issue of nuclear weapons and nuclear war is understandably an emotional one. However, those who seek to play on the abhorrence of nuclear war by deliberately mischaracterizing U.S. nuclear targeting policy in ways that suggest it is immoral are playing on fear to advance public support of their preferred disarmament agenda. Such mischaracterizations do a disservice to the need for informed and honest public debate on such a critical issue.

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# PROCEEDINGS

## DETERRENCE IN A TRILATERAL STRATEGIC ENVIRONMENT

*The remarks below were delivered at a symposium on “Deterrence in a Trilateral Strategic Environment” hosted by National Institute for Public Policy on May 24, 2022. The symposium discussed the deterioration in the international security environment and highlighted the challenges of deterring two major nuclear powers in two theaters simultaneously.*

**David J. Trachtenberg**

***David J. Trachtenberg is Vice President of the National Institute for Public Policy and served as Deputy Under Secretary of Defense for Policy from 2017-2019.***

There has been much commentary of late suggesting that the United States has entered a new phase of post-Cold War deterrence. As USSTRATCOM Commander Adm. Charles Richard has stated, “We have never before in our history faced two peer nuclear capable, potential opponents that we have to deter at the same time, that we have to deter differently.”<sup>1</sup>

This is a profound statement. But the questions that flow from this simple statement are even more profound: Why must they be deterred differently? What does that entail? How are we to do this? And what is the relationship between these different deterrence modalities and the efficacy of our extended deterrent and the assurance of allies and partners facing different nuclear threats across multiple regions?

For some time, the United States has understood the importance of tailoring deterrence to specific adversaries, yet that tailoring becomes more complicated and complex when the number of peer adversaries we face increases, when they are peer nuclear powers, when they may combine their forces to challenge us, and when our efforts to deter one may impact the decision-making processes and behavior of the other. Deterrence is no longer two-dimensional checkers but three-dimensional chess. These challenges are highlighted in Keith Payne’s recent *Information Series* article, *Multilateral Deterrence: What’s New and Why it Matters*, which was published last week and is available on our website at [nipp.org](https://nipp.org).

While there appears to be a general recognition that the current situation requires new ways of thinking about deterrence, the literature and public commentary to date is mostly devoid of any serious or detailed explanation of how deterrence should work in this new trilateral strategic environment, why and how Russia and China need to be deterred differently, and what specifically the United States requires to ensure success in this endeavor.

These are some of the issues I hope our discussion today will explore.

But let me start by acknowledging up front a few of the things that are different today than during the Cold War and the immediate post-Cold War period, and that will likely affect the conditions for effective deterrence going forward.

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<sup>1</sup> Rebecca L. Heinrichs, “Transcript: A Conversation with Admiral Richard,” The Hudson Institute, September 14, 2021, available at <https://www.hudson.org/research/17264-transcript-a-conversation-with-admiral-richard>.



For example:

- Russia is now developing a range of new and exotic strategic systems, a number of which are unaccountable under New START, and which are intended to overcome U.S. missile defenses and to serve as a backstop to its own aggressive actions and a deterrent to potential U.S. responses.
- Russian foreign policy is now admittedly oriented toward overturning what the Russian Ambassador to the United States has described as the U.S. and NATO-led “world order.”<sup>2</sup> Russia’s brazen aggression against Ukraine is a manifestation of a broader Russian agenda to reclaim lost glory and influence at America’s expense.
- China’s nuclear modernization program is extensive and has been called “breathtaking” and a “strategic breakout.”<sup>3</sup>
  - Indeed, the discovery of more than 250 new missile silos means that China is abandoning its self-declared policy of “minimum deterrence” and—if those silos are loaded, for example, with MIRVed DF-41 ICBMs—China’s total number of ICBM warheads could potentially far exceed the total number of deployed U.S. strategic nuclear weapons under New START.
  - The deterrence implications of this alone are significant.
- China’s development of hypersonic technology is now said to be years ahead of the United States.<sup>4</sup>
- China and Russia are increasingly working together to replace the existing rules-based international order with one more to their liking, and they have participated in a growing number of joint military exercises, including joint naval drills and an extensive joint military exercise in China last year.
  - In February, Vladimir Putin and Xi Jinping announced that Moscow and Beijing had agreed to a “friendship” with “no limits.”<sup>5</sup>

<sup>2</sup> Natalie Colarossi, “Putin Using Ukraine Invasion to Change ‘World Order’: Russian Ambassador,” *Newsweek*, April 18, 2022, available at <https://www.newsweek.com/putin-using-ukraine-invasion-change-world-order-russian-ambassador-1698657>.

<sup>3</sup> John Vandiver, “‘Breathtaking expansion’: US Strategic Command leader expects further revelations of China’s nuclear weapons advancement,” *Stars and Stripes*, October 18, 2021, available at <https://www.stripes.com/theaters/europe/2021-10-18/china-us-russia-nuclear-weapons-hypersonics-stratcom-3283272.html>.

<sup>4</sup> Sakshi Tiwari, “F-22 Raptor: China Says Can Shoot-Down World’s Top Stealth Jet ‘Within Seconds’ With New Heat-Seeking Hypersonic Missile,” *The Eurasian Times*, January 2, 2022, available at <https://eurasianimes.com/china-shoot-down-f-22-raptors-within-seconds-hypersonic-missiles/>.

<sup>5</sup> *Joint Statement of the Russian Federation and the People’s Republic of China on the International Relations Entering a New Era and the Global Sustainable Development*, February 4, 2022, available at [https://fm.cnb.com/applications/cnbc.com/resources/editorialfiles/2022/03/31/Joint\\_Statement\\_of\\_the-Russian\\_Federation\\_and\\_the\\_Peoples\\_Republic\\_of\\_China\\_on\\_the\\_International\\_Relations\\_Entering\\_a\\_New\\_Era\\_and\\_the\\_Global\\_Sustainable\\_Development\\_President\\_of\\_Russia.pdf](https://fm.cnb.com/applications/cnbc.com/resources/editorialfiles/2022/03/31/Joint_Statement_of_the-Russian_Federation_and_the_Peoples_Republic_of_China_on_the_International_Relations_Entering_a_New_Era_and_the_Global_Sustainable_Development_President_of_Russia.pdf).

- DIA Director Lt. Gen. Berrier has called the level of cooperation “their deepest since any time before the Sino-Soviet split” and an effort “to maximize their power and influence.”

Should Russia and China set aside historical differences and join forces as part of an anti-U.S. coalition, their combined arsenals could significantly exceed that of the United States.

This could call into question the adequacy and deterrent value of current U.S. nuclear force levels and the relevance of continued adherence to New START limitations that were agreed to in a bilateral deterrence context.

Keep in mind that the New START Treaty locks the United States into a static and inflexible ceiling on deployed strategic nuclear weapons and delivery systems until 2026. In a trilateral deterrence environment, having greater flexibility to deal with the potential challenges posed by two peer nuclear adversaries—operating either independently or in concert—seems like a more prudent approach to minimize the chances of deterrence failure.

Those who argue that numbers do not matter should consider that numbers DO seem to matter to our adversaries—otherwise there would be little rationale for the massive expansion in both Russia’s and China’s strategic arsenals.

The existence of this new strategic situation also has implications for extended deterrence, as the United States considers how to deter two peer adversaries in two major theaters without appearing so reluctant to risk direct confrontation that it calls into question the credibility of U.S. extended nuclear guarantees in either.

In addition, in the context of a trilateral strategic environment, the deterrence value of strategic defenses may need to be reassessed and Cold War theories of “strategic stability” may need to be reevaluated and possibly replaced with an approach more aligned to contemporary deterrence realities.

In other words, as the nuclear threat from both Russia and China manifestly grows, is it in the U.S. interest to remain vulnerable to nuclear threats from either? To rely on nuclear deterrence to protect the U.S. homeland may have been a problematic approach when we were focused on deterring only one peer adversary, but it looks increasingly questionable as a prudent strategy when the United States faces two nuclear peers—each bent on ending what they see as American strategic dominance.

Limiting U.S. missile defenses in exchange for the promise of an arms control agreement that reduces the other side’s nuclear offensive forces is quite simply the triumph of hope over experience and makes little sense when multiple parties have goals and objectives that contrast with U.S. national security interests.

Finally, as Adm. Richard has noted, “we are facing a class of potential adversary that we haven’t had to deal with in 30 years. Both Russia and China have the ability, unilateral, at their own choosing, to go to any level of violence, to go to any domain, to go worldwide with all instruments of national power. We’ve not faced competitors like that in 30 years, which I think we need to re-examine any number of our basic operating concepts, starting with our escalation control.”

It is in this context that the debate over U.S. nuclear policies and programs must be viewed, and the adequacy of U.S. nuclear modernization plans must be considered. The need

to prevent Russia and China—either independently or in collaboration—from believing they have an exploitable military advantage over the United States at any level of conflict requires a reassessment of U.S. deterrence objectives and force posture.

In this new environment, it is difficult to see how scrapping the sea-launched nuclear cruise missile (SLCM-N)—a system similar to what Russia already possesses, canceling a routine test launch of our ageing ICBM force while Russia trumpets the test launch of its new heavily-MIRVed ICBM, and further reducing the role of nuclear weapons in U.S. national security strategy while Russia and China move in the opposite direction can lead to anything other than an increased risk of miscalculation and deterrence failure.

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**Keith B. Payne**

***Keith B. Payne is President of the National Institute for Public Policy, Professor Emeritus in Missouri State University's Defense and Strategic Studies graduate program and former Deputy Assistant Secretary of Defense for Forces Policy.***

Thank you, Dave. It's an honor to participate with this great panel today. My remarks are my personal views.

My brief comments on multilateral deterrence today are divided into two parts: The first identifies some important truths about what we can know about the real-world functioning of deterrence; the second begins the related discussion of how multilateral deterrence is different from the past, and then connects those differences to prospective changes in U.S. deterrence policy.

First, some inconvenient truths about what we can know about real-world deterrence.

We are early in the process of trying to understand deterrence in a very different international structure. Aside from the most obvious points about deterrence, we are in the world of speculation and conjecture. In fact, a pervasive myth in this field is that reliable, detailed prediction about the real-world functioning of deterrence is possible.

In truth, prediction beyond the most obvious points often is out of reach because the functioning of deterrence can be affected by an extremely wide range of factors. On any given occasion, some of these factors will be known, but others will be completely obscure and their significance unrecognized.

Consequently, when planning for deterrence, the first, paramount need is to reduce our ignorance about opponents' goals, will, perceptions, commitments, values, and expectations. Greater understanding allows deterrence tailoring—which is now acknowledged as necessary on a bipartisan basis.

But understanding opponents and tailoring deterrence accordingly is a task made much more challenging by the expansion of the number of opponents to be so understood. The uncertainties, imponderables and unknowns of deterrence multiply with every new party engaged and circumstance, and confident prediction moves further out of reach.

Recognition of this inconvenient truth about deterrence prediction leads to the second part of my brief remarks today, that is: How should the expanded uncertainties of multilateral deterrence affect our thinking about deterrence policy and practice?

The United States is not simply deterring Russia and China sequentially or in isolation, but with each watching each and possibly shifting their calculations based upon what they see in each engagement.

A new analytic task, consequently, is to understand how the developments in one geographic area will affect the decision making of opponents in distant areas, and thereby shape U.S. deterrence goals and practice in all areas. This is the opposite of the Cold War focus on the Soviet Union, with the expectation that Moscow shared fundamental U.S. concerns and values, and that if Moscow could be deterred, all others were “lesser included cases.” Those analytic conveniences simplified deterrence planning, but are no longer prudent, if they ever were.

It is important now to place new or greater emphasis on at least three directions in U.S. deterrence policy and practice: 1) hedging against opponents’ coordination; 2) hedging against uncertainty in deterrence requirements; and 3) hedging against the likely increased potential for deterrence failure.

***First, is the need to hedge against opponents’ coordination.***

The contemporary trilateral context includes the possibility that Russia and China will coordinate their actions in confrontations with the United States. Consequently, the adequacy of U.S. deterrence capabilities must, in at least some circumstances, be measured against the forces of two nuclear great powers—this is a wholly unprecedented condition with enormous implications.

For example, Russia and China may confront the United States with two coordinated, expansionist regional wars. If so, the United States will need to deter theater aggression, including nuclear first-use threats, in two different geographical locations *simultaneously*. This is a deterrence challenge that U.S. theater capabilities may not be prepared to meet given the reported near-elimination of those U.S. forward-deployed and deployable theater nuclear weapons that are proportional to the potential limited nuclear threats we face.

At the strategic nuclear level, the potential for Sino-Russian coordination includes the possibility that their combined counterforce capabilities will present new problems for the survivability of U.S. retaliatory forces, i.e., calculating what is necessary for adequate U.S. force survivability, *not* against Chinese or Russian forces separately, but against combined Sino-Russian force numbers.

These two examples just scratch the surface of this unprecedented problem for U.S. deterrence policy and practice in the emerging deterrence context.

***Second, is the need for increased hedging against the greater uncertainty regarding deterrence requirements.***

The multiplication of deterrence uncertainties increases the challenge of predicting “how much is enough?” for deterrence. This has always been more art than science. But the need



to hedge against setting that standard incorrectly, particularly too narrowly, has become even more acute in a multilateral deterrence context. Simply put, increasing uncertainty increases the requirements for hedging.

During the Cold War, a common civilian, academic analytic practice was the mechanistic positing of non-descript Countries A and B, and then essentially using game theory and deductive logic to project the expected functioning of deterrence in U.S.-Soviet relations. This apolitical, ahistorical methodology simply washes out key factors that are likely to determine if and how deterrence actually functions. It was woefully inadequate in the past; it now is more likely to mislead than to enlighten.

The need now is for the identification and understanding of the many different (and in some cases unique) decision-making drivers of multiple players. Correspondingly, there now can be no single “assured destruction” standard presumed to define the U.S. strategic deterrent, as was U.S. practice for decades during the Cold War. Instead, there must now be multiple, simultaneous measures of adequacy for diverse contingencies. And, once those requirements are agreed upon, it must be recognized that they will likely shift over time as opponents and contexts evolve. As a result, deterrence flexibility was important in the past, but it now is even more so.

A contemporary issue that illustrates this problem is whether the United States should proceed with development of the nuclear, sea-launched cruise missile (SLCM-N). In the emerging multilateral deterrence context, diverse U.S. theater response options that are proportional to opponents’ threats, and available in different theaters rapidly and simultaneously, may be of greatly increased value for credible deterrence. *Prudent* planning for deterrence thus certainly includes the continued development of SLCM-N, as the senior U.S. military leadership has emphasized publicly.

### ***Third is the increasing need to hedge against deterrence failure.***

The expansion of uncertainties applies to both *how and whether* deterrence will function. No one knows if nuclear deterrence will continue to work perfectly as we hope, or even what probability may be assigned to its working. The harsh reality is that, if the United States is unprepared for the failure of nuclear deterrence, it is unprepared for the realities of multilateral deterrence.

After three decades of focusing on rogue states and terrorists, the question now is: how prepared is the United States to operate in a nuclear environment? I fear the answer to that question because, as Admiral Charles Richard recently noted, the U.S. military as a joint force “has not had to seriously consider what competing in an armed conflict with a nuclear armed opponent is like for 30 years.”<sup>6</sup>

The many implications of the answer to this question are significant. For example, as confidence in the predictable functioning of deterrence declines, active and passive defenses

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<sup>6</sup> Jim Steele, “Events require U.S. to refocus on nuclear capabilities, STRATCOM commander says,”

University of Alabama in Huntsville, May 19, 2022, available at <https://www.uah.edu/news/items/events-require-u-s-to-refocus-on-nuclear-capabilities-stratcom-commander-says#>.

become more important for many purposes. This may not be a popular point in many quarters, but it is another inconvenient truth regarding multilateral deterrence.

In summary, identifying the many ways in which multilateral deterrence is different, and the implications of those differences for deterrence policy and practice, is likely to be a generational process; we are just starting. The “greatest generation” of deterrence scholars did the heavy lifting for their time; it is time for us to get to this serious work.

Thank you. I look forward to the panel’s further remarks.

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### **Jennifer Bradley**

***Jennifer Bradley is a Senior Deterrence Analyst in the Plans and Policy Directorate at U.S. Strategic Command.***

Thank you, David for your kind introduction and to the National Institute for hosting this seminar on this important topic. But before I begin let me say that the views presented are my own and do not necessarily represent the views of USSTRATCOM, DoD, or the U.S. government.

Deterrence is, and always has been an uncomfortable proposition. It relies on convincing a decision maker, with unique values, traits, culture, world view and risk-taking propensity not to take an egregious action. When deterrence fails, it can and has been catastrophic. Yet when it is successful, to paraphrase Lawrence Freedman, nothing much happens.<sup>7</sup> This makes it exceedingly difficult to determine why it was successful. But determining the ingredients that enhance deterrence is crucial. Deterrence remains a cornerstone of U.S. national security policy, as it has since the creation of nuclear weapons made preventing wars an imperative. However, unlike the Cold War, we can no longer plan a deterrent for one adversary and assume that it is sufficient to deter a lesser included adversary. We are faced with a more complicated and dynamic security environment. I come here today with more questions than answers.

First, how should we assess this strategic environment? It is tempting to analyze the relationships between the United States and Russia and the United States and China in isolation from each other. But, in fact, it is a Deterrence Triangle. As Therese Delpech noted, “triangles may make a situation more unstable and difficult to control as they introduce more variables into the algebra of deterrence.”<sup>8</sup> What are these variables? Well, first the relationship between Russia and China. Is it cooperative? An alliance? Adversarial? It is clear that both Russia and China are revisionist nations who are dissatisfied with the status quo. But how enduring is the current partnership?

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<sup>7</sup> Lawrence Freedman, Introduction—The Evolution of Deterrence Strategy and Research. In: Osinga, F., Sweijs, T. (eds) *NL ARMS Netherlands Annual Review of Military Studies 2020*. NL ARMS. T.M.C. Asser Press, The Hague, available at [https://doi.org/10.1007/978-94-6265-419-8\\_1](https://doi.org/10.1007/978-94-6265-419-8_1).

<sup>8</sup> Therese Delpech, “Nuclear Deterrence in the 21<sup>st</sup> Century,” RAND (2012) p. 39

The deterrence triangle between the United States, Russia and China is not the only significant trilateral relationship. The relationship between China, India and Pakistan is also an important deterrence triangle. Significantly, it overlaps the deterrence triangle with the United States, Russia and China. Meaning, deterrent actions taken in one triangle have the potential to reverberate in another. Does this increase risk? If so, how? Can it be mitigated?

While I will just mention it here, we must also consider the security requirements and capabilities of the allies protected by the U.S. nuclear umbrella when considering these deterrent relationships. These relationships are an important variable in the deterrence algebra.

Second, how should we adapt our deterrent strategy to account for the change in the security environment? While we await the release of the Nuclear Posture Review, which will articulate the Biden Administration's approach to deterrence strategy, the Department of Defense did release a Fact Sheet on the policy document which contains the broad foundations of the Administration's vision. It includes "reducing the role of nuclear weapons," "emphasizing strategic stability," and "reestablishing [US] leadership in arms control."<sup>9</sup> Further, it amends the U.S. declaratory policy, stating, "As long as nuclear weapons exist, the fundamental role of U.S. nuclear weapons is to deter nuclear attack on the United States, our allies, and partners."<sup>10</sup> While not quite a sole purpose policy, it is a step in that direction. But does this strategy adequately take into account the complexity in the security environment?

Finally, what is the right mix of capabilities to enhance deterrence? This question is complicated by having to consider the capabilities of multiple adversaries in different regions, as well as considering the requirements of our allies. Further, both Russia and China are modernizing their nuclear capabilities, with China increasing both the size and sophistication of its arsenal.<sup>11</sup> This is in addition to investments and advancements in China's conventional capabilities. If the United States is going to rely less on nuclear weapons in the future, what sort of investments in conventional capabilities must we make to close this gap as U.S. conventional superiority is diminished in key areas? Is this a cost-effective strategy? Will conventional capabilities have the same influence over our adversaries' decision making as nuclear capabilities?

The questions I've asked here today only scratch the surface of what we need to consider. It requires a reinvigoration of deterrence assessments, increased intelligence, additional war gaming, and continued cooperation with our allies. We also need to be clear eyed on the value our adversaries place on their nuclear capabilities before making decisions regarding our own nuclear force. Though we may desire our adversaries follow our "good example," historically, that has not been a successful strategy. While deterrence is an uncomfortable

<sup>9</sup> Fact Sheet: 2022 Nuclear Posture Review and Missile Defense Review, The Department of Defense (29 March 2022) available at: <https://media.defense.gov/2022/Mar/29/2002965339/-1/-1/1/FACT-SHEET-2022-NUCLEAR-POSTURE-REVIEW-AND-MISSILE-DEFENSE-REVIEW.PDF>.

<sup>10</sup> Ibid.

<sup>11</sup> U.S. Report to Congress, "Military and Security Developments Involving the People's Republic of China," Department of Defense (2021).

proposition, it is still better than the alternative. I look forward to your questions and today's discussion. Thank you.

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### **Peppino DeBiaso**

*Peppino DeBiaso is a non-resident Senior Associate at the Center for Strategic and International Studies and former Director of the Office of Missile Defense Policy in the Office of the Secretary of Defense*

### **Introduction**

My remarks today focus on the issue of missile defense in a trilateral deterrence context. To help inform this discussion, it's useful to begin with a brief review of where current U.S. policy stands on the matter of missile defense vis-vis the large nuclear powers – Russia and China. This will be followed by an examination of changes occurring in the security environment related to growing prospect of the threat of limited nuclear and limited conventional missile strikes that raise new questions over long-standing U.S. policy which rejects any role for missile defense of the homeland against Russia and China.

### **Foundations of Current Policy**

The foundation of contemporary American missile defense policy is anchored in the 1999 National Missile Defense (NMD) Act. The legislation set a national policy to “deploy as soon as is technologically possible an effective national missile defense system capable of defending the territory of the United States against limited ballistic missile attack, whether accidental, unauthorized, or deliberate.” Since 1999, every administration, including the current one, have elaborated policies within the framework of the NMD Act centered around the defense of the United States against nuclear-armed long range ballistic missiles from so-called “Rogue States.” This reflects the judgment that nuclear deterrence may not be fully reliable in preventing these unpredictable and unstable nuclear states from seeking to threaten a missile attack or employ such weapons in a crisis or conflict.

At the same time, each administration has also pursued a policy seeking to reassure the large nuclear powers that U.S. homeland missile defenses are not designed or intended to counter their strategic forces. The U.S. has consistently affirmed its policy that it relies on nuclear deterrence and the threat of retaliation to address the large and more sophisticated Russian and Chinese nuclear ballistic missile capabilities. The declaratory policy rejecting any role for missile defense against large nuclear powers remains rooted in the Cold War belief that mutual vulnerability provides a basis for stable deterrence and removes incentives to engage in arms racing behavior (which it demonstrably failed to do throughout the Cold War). Moreover, this view was sustained by the arguments made by missile defense

opponents that the technical feasibility and costs associated with countering large missile strikes would, at any rate, prove too difficult to overcome.

For three decades, both Republican and Democratic administrations endorsed this “tailored” approach to homeland ballistic missile defense that treated rogue states differently from the established nuclear powers on the matter of missile defense and deterrence.

American policy shaping the question of regional missile defense has been less contentious. Such defenses are generally viewed as essential to the conduct of modern conventional warfare in light of the large and varied regional missile capabilities of our potential opponents. Yet even here, U.S. policy has been ambivalent with regard to Russia and China. While it has not distinguished states against whom it would or would not build regional missile defenses, as it has done with its homeland strategy, for much of the post-Cold War period the focus was squarely on regional powers and the prospective employment of missile capabilities in regional wars. There is little discussion, for example, within the leading policy and strategy documents over the last three decades (e.g., QDRs, NDSs, BMDRs) on the question of regional missile defenses to deter and defend against Russian and Chinese regional missile attacks.

However, changes are occurring in the strategic environment that have potential implications for the role of both homeland and regional missile defense in American defense and deterrence strategies toward Russia and China.

### **Evolving U.S. Policy: Regional Missile Defense and Large Powers**

Let’s look first at regional missile defenses. Most official U.S. post-Cold War assessments did not conclude that either Russia or China posed a regional missile threat to U.S. interests warranting policy recognition as a military problem to be addressed by missile defense. However, the assessment of the security landscape began to shift in 2018 with the NDS and the acknowledgement of the reemergence of long-term great power competition with Russia and China.

One significant aspect of this competition has been an increased understanding of the substantial strides Russia and China are making in developing a new generation of long-range weapons, to include advanced ballistic missiles, cruise missiles, and hypersonic weapons, to support anti-access/area denial (A2/AD) strategies to disrupt, degrade and ultimately defeat the ability of the U.S. to project military power, sustain combat operations, and support alliance security commitments in Europe and Asia. In this context, a policy role for missile defense in responding to the rise in prominence of Russian and Chinese regional missile forces in their respective warfighting strategies was explicitly identified for the first time in the 2019 MDR. It declared that the U.S. would strengthen its air and missile defenses to deter and defend against the regional offensive missile capabilities of both Russia and China, in addition to rogue states.

## **Homeland Defense and Large Powers: Issue and Considerations**

Concerning homeland missile defense and the large powers, important changes are occurring that also pose new questions about the desirability of retaining the policy trajectory of the past rejecting any missile defense against Russia or China within our defense and deterrence strategy. Two developments stand out as especially consequential. The first is related to development of Russia's policy, doctrine and capability which now envisions the prospective escalation to limited nuclear strikes against either the U.S. homeland or its forces abroad in order to coerce or otherwise compel the United States to de-escalate or halt any further action and terminate its involvement in order to salvage an otherwise failing or stalemated Russian conventional regional attack. As the Director of DIA described it in 2017, Russia is "...the only country that I know of that has this concept of escalate to terminate or escalate to deescalate... they have built this into their operational concept, we've seen them exercise it..." While this doctrine remains shrouded in ambiguity, the decision to threaten or conduct such strikes against either the United States homeland or Western forces in a regional conflict is likely to be shaped by the scope and scale of Russia's collapsing efforts in a regional war and what type of political risk it poses to Moscow and its leadership.

In the context of Russia's nuclear de-escalation concept, there is a potential deterrent role for missile defense in addressing this strategic problem. Namely, to deny the coercive and blackmail value of missile backed threats in a crisis or ongoing regional conflict by negating the political and military utility of limited strike options (or "cheap shots"). Under conditions of a rapidly deteriorating regional conflict, U.S. nuclear deterrence may be insufficiently reliable to prevent a threat of limited nuclear escalation with Russia calculating, or miscalculating, that the political-military benefits of a limited strike in a conflict going badly for them outweigh the risks of possible U.S. retaliation. Under these circumstances, missile defenses sized to defeat limited nuclear coercive threats or attacks would reinforce the credibility of broader U.S. deterrence threats.

Such defenses, to be clear, would not be capable of coping with larger nuclear strikes, nor sized to do so, but rather focused on deterring Moscow's resort to its policy of escalate to de-escalate. This may apply to China as well—especially as they continue to build out their nuclear posture. The steady expansion of China's long range nuclear missiles will soon provide it options to conduct similar coercive/limited nuclear strikes to shape the escalation process in order to deter or otherwise blunt any U.S. military response in a major crisis, e.g., Taiwan.

In light of these emerging changes in the strategic context, the United States should be prepared to re-examine the extent to which missile defense presents new opportunities to both strengthen deterrence of such limited threats/attacks and if deterrence fails, limit the scope and scale of destruction to the United States.

A prospective policy shift along these lines raises two significant issues. The first is the technical challenge of developing missile defenses against the more advanced long range missile threats posed by Russia and China. For the last two decades the U.S., as a matter of



policy, has chosen not to design or develop its homeland missile defenses against Russian or Chinese ICBMs. A shift in policy likely requires an adjustment in our approach in the types of technologies, systems and platforms to counter, even on a limited basis, more advanced missiles.

The second issue that arises is related to the concern that this change in U.S. policy will undermine strategic stability and lead to a new arms race. This contention is problematic for a number of reasons. First, Russia possesses an unquestioned capability to overwhelm U.S. missile defenses, even in a modestly expanded form, given its large, diverse, and advanced strategic air-breathing and missile platforms. Second, the United States has long accepted Russian homeland missile defenses which are larger and more capable than those the U.S. currently possesses—and yet this has not led to U.S. “arms racing” behavior or concerns over crisis stability. Third, with a limited defense against Russia, the United States would be doing nothing more than moving towards an active defense posture essentially equivalent to that long operated by Russia which, incidentally, views its own active defense/damage limitation capabilities as wholly consistent with its conception of strategic stability.

The second development that raises important questions about retaining the policy of the past rejecting homeland missile defenses is connected to the growing prospect of Russian and Chinese limited non-nuclear strategic attacks against the United States.

The Biden Administration’s *2022 National Defense Strategy Fact Sheet* calls attention to this new risk: “Recognizing growing kinetic and non-kinetic threats to the United States’ homeland from our strategic competitors, the Department will take necessary actions to increase resilience—our ability to withstand, fight through, and recover quickly from disruption.” One area in particular associated with “growing kinetic threats” is Russia’s and China’s pursuit of advanced long range cruise missiles that can launch from the air, land or sea intended to destroy critical targets within the United States in order to disrupt and degrade the U.S. ability to project military power, sustain combat operations, and support alliance security commitments across Europe and the Indo-Pacific. The long standing American operating model that assumes it can project military power globally from a safe and secure homeland is eroding, according to the Commander of NORTHCOM, Gen. VanHerck. Russia and China are now moving towards an ability to bring their A2/AD strategy to the homeland.

The United States is beginning to recognize this shift in the military posture of Russia and China to conduct conventional strikes, likely combined with other kinetic and non-kinetic attacks, below the threshold of nuclear weapons use, against the homeland. The scope of these attacks, while limited, would seek to undermine U.S. political resolve and military capability to either respond to or halt aggression in a regional crisis or conflict while exploiting what they perceive, either correctly or incorrectly, as the American leadership’s fear of taking any action suggesting the initiation of nuclear escalation. Consequently, a more serious examination would appear to be warranted of the contribution homeland cruise missile defenses (CMD) can provide to strengthen deterrence of such attacks in the first place by complicating our opponents’ military plans, in turn eroding or otherwise denying their confidence in the successful execution of those plans. Along these lines, Gen. VanHerck noted

recently that the NDS endorses developing capabilities to deter and defeat specific threats to the homeland, including Russia's growing long-range cruise missile threat, with priority given to improving the ability to detect and track these threats. While important questions will have to be addressed over the ultimate scope and scale of homeland CMD, the benefits of some defense capability here to deny Russia and China an unchallenged pathway to threaten the United States would appear to be growing.

## **Conclusion**

In light of changes in the strategic context that are generating new vulnerability pathways to the United States, it seems prudent to revisit the core assumptions regarding the role of missile defense for the homeland against missile threats from large powers. The existing approach which reflexively rejects any active defense for the nation increasingly appears to lag behind the onset of an increasingly worrisome set of strategic dilemmas Russia and China are creating for the United States. Washington should be prepared to re-examine the extent to which missile defense presents new opportunities to both strengthen deterrence of limited missile threats by degrading the adversary's ability to successfully conduct such strikes and, if deterrence fails, limit the scope and scale of destruction which could be inflicted upon the nation.





# PROCEEDINGS

## DETECTING CHINA IN THE TAIWAN STRAIT

*The remarks below were delivered at a symposium on “Deterring China in the Taiwan Strait” hosted by National Institute for Public Policy on June 21, 2022. The symposium highlighted the rollout of National Institute’s recent report on the topic, which was printed as a special issue of the Journal of Policy & Strategy and is available on the Institute’s website at <https://nipp.org/wp-content/uploads/2022/05/Special-Issue-final.pdf>.*

### **Keith B. Payne**

***Keith B. Payne is President of the National Institute for Public Policy, Professor Emeritus in Missouri State University’s Defense and Strategic Studies graduate program and former Deputy Assistant Secretary of Defense for Forces Policy.***

We have a great set of speakers today and I look forward to their remarks. I should start by observing that my remarks are my personal views alone.

The need to tailor U.S. deterrence strategies to particular opponents and contexts is now widely accepted. This may seem like a recent development, but it took 35 years to get to this understanding of deterrence. U.S. deterrence strategies must take into account opponents’ worldviews in the context of a particular deterrence engagement, e.g., their:

- unique goals and values,
- determination,
- willingness to inflict and absorb hurt in pursuit of their goals,
- reliable communication channels,
- perceptions of power relations, and many other factors.

As this list suggests, the basic principles of deterrence are relatively simple, but the real-world application of deterrence is extremely complex. And speculation without understanding the opponent and political context is more likely to mislead than enlighten. Uninformed approaches to deterrence have failed to prevent war in the past and will likely do so again.

For the deterrence study we are discussing, the first step was to recognize the specific realities of the deterrence challenge in the Taiwan Strait. The second step was to identify how the United States may best approach this challenge, in cooperation with allies and partners.

In line with the need to tailor deterrence, we first sought to understand the key political decision-making factors pertinent to this opponent and context, e.g.:

- China’s goals and worldview?
- China’s dedication to its goals?
- The value China attaches to the unification of Taiwan: Absolute or discretion?
- The cost China attaches to the Status Quo on Taiwan?



- The flexibility (or not) of China's goal and timeline?
- If there is a tolerable alternative to the unification of Taiwan?
- China's willingness absorb cost and inflict cost to achieve its goal?

To help gain this understanding, this study included extensive interviews with 21 outstanding Sinologists and regional area experts. This investigation of China's views led to three key conclusions:

- First, China deems the status-quo on Taiwan to be intolerable;
- Second, in this case, the fundamental deterrence question is not simply identifying a U.S. deterrence threat that is costly for China. If the perpetual political independence of Taiwan is an intolerable future for China, then the deterrence sanction needed to prevent China from "solving" its Taiwan problem forcefully must be more intolerable for China than enduring the status quo. The basic U.S. deterrence challenge in this case follows from the existential value China appears to attach to incorporating Taiwan, by force if necessary.
- Third, given the above two points, the deterrence policy question is: Can the United States credibly present China with the consequences for a decision to conquer Taiwan that are more intolerable than enduring a continuation of the status quo on Taiwan? This is a deterrence challenge beyond our Cold War experience.

As all here know, for decades, the general U.S. policy has been "strategic ambiguity," which entails a contemporary deterrence problem for the United States.

In the absence of some form of U.S. deterrence advantage there is no logical reason whatsoever to believe that China will be any more deterred by uncertainty than is Washington. Ambiguity with regard to commitment may be an adequate approach to deterrence for the side with significant advantages in manifest power and position—which was the case for the United States regarding the Taiwan Strait for past decades.

However, strategic ambiguity no longer may serve U.S. deterrence needs because China appears to have shifted the correlation of forces over the past two decades in its favor in many ways. Past U.S. deterrence advantages are going or gone. The United States now faces an opponent with both local conventional force advantages and a nuclear first use escalation threat in the event of conventional conflict over Taiwan. There now is no apparent reason for China to be more cautious than is the United States in a Taiwan crisis. Indeed, there are reasons to expect China to be less cautious than the United States.

There is some past precedent for the United States in this regard. During the Cold War, as the Soviet Union pursued massive increases in its conventional and nuclear capabilities, the U.S. extended deterrent for NATO countries appeared increasingly problematic. The shifting correlation of forces meant that the U.S. deterrence commitment was increasingly risky for the United States, and its credibility increasingly open to question.

In response, the United States took extensive and expensive steps to shore up the credibility of its extended deterrence for NATO, including many thousands of forward

deployed U.S. forces in Europe, and thousands of nuclear weapons. Comparable steps do not appear on the horizon to restore the U.S. deterrence position in the Taiwan Strait.

In addition, for deterrence to function in any context the opponent must decide that some level of conciliation to U.S. interests is tolerable. Yet, China's officials have stated openly that the incorporation of Taiwan is an existential matter for China, and they have no room to conciliate on the Taiwan Question, i.e., the status quo is intolerable.

These are the harsh deterrence realities imposed by the context in this case. If these realities are ignored or dismissed, the United States will not be able to mount a realistic deterrence policy.

The question that follows from a recognition of these harsh deterrence realities is: What to do? In this, I believe there is a glimmer of good news. In concert with allies, there are potential denial and punitive deterrence tools that could help restore for the United States what Herman Kahn called a "not incredible deterrence" position in the Taiwan Strait. Those potential deterrence tools are: diplomatic, economic and military, and can be pursued simultaneously. Doing so would give real meaning to the title "integrated deterrence."

I will close by identifying the overall approach to deterrence we recommend in this study. We refer to it as a victory denial deterrence policy. This approach to extended deterrence is not new, per se. It harkens back to the basic U.S. extended deterrence policy against Moscow in Europe for much of the Cold War.

A victory denial deterrence in this case is based on five political realities:

- 1) China has resorted to nationalism as a primary rationale for its rule.
- 2) China has elevated successful unification with Taiwan as an element of nationalism and an existential goal.
- 3) If China attempts to unify Taiwan forcefully, failure for China would be a wholly intolerable repudiation of the legitimacy of CCP rule.
- 4) This political reality may provide great motivation for China to escalate to win any such conflict, but it also carries tremendous potential leverage for U.S. deterrence via victory denial.
- 5) U.S. deterrence policy can exploit the CCP's vulnerability that being denied victory in a conflict over Taiwan would be an immediate existential threat to the CCP's legitimacy to rule.

These are the five fundamental points underlying this study's recommended victory denial approach to deterrence.

In summary, recall that the U.S. deterrence task now is to identify a potential deterrence sanction against China that is more intolerable than the existing status quo on Taiwan. For the CCP, the prospect of losing legitimacy to rule in a failed or stalled war in the Taiwan Strait may be more intolerable than continuing to endure the status quo on Taiwan year after year. The prospect of a victory denied may be sufficient to lead China to decide, now is not the time to move.

This potential U.S. approach to deterrence demands, among other requirements, that Washington finds a way to counter China's coercive threats of limited nuclear first use. The



debilitating effects of regional coercive nuclear threats can already be seen in the West's cautious reaction to Russia's extensive use of them in its invasion of Ukraine.

With that, I am happy to conclude and invite my colleagues to elaborate on this recommended approach to deterrence in the Taiwan Strait.

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**David J. Trachtenberg**

***David J. Trachtenberg is Vice President of the National Institute for Public Policy and served as Deputy Under Secretary of Defense for Policy from 2017-2019.***

As our report notes, the implementation of a “victory denial” deterrent strategy requires an integrated approach using all elements of state power—including military, diplomatic, and economic measures...and it's the economic piece of this that I would like to address for a few minutes.

As our study makes clear, the use of economic tools can be valuable for strengthening America's deterrence position in the Taiwan Strait. The United States has a plethora of economic, financial, trade, and investment tools, including the use of sanctions, that can be used to apply pressure in those areas where China's economy is vulnerable and to penalize China for aggressive behavior.

Now the study recognizes that the economic situation with respect to China today is markedly different than the situation we faced with the Soviet Union during the Cold War. For example, China has the world's second largest economy<sup>1</sup> and produces a multitude of consumer goods that it exports around the world, including to the United States. By contrast, the Soviet economy was a basket case and produced virtually nothing of commercial value. So, it may be more challenging to impose the same level of economic hardship on China today than was possible against the Soviet Union during the Cold War. In addition, China is taking measures preemptively to insulate its economy from any potential Western sanctions that may be imposed on it.

However, economic prosperity is one of the imperatives for the Chinese Communist Party to maintain legitimacy. Therefore, if properly applied and coordinated in advance with the international community, economic tools can be valuable elements of an integrated victory denial approach to deterrence. Because China's export economy is highly dependent upon the U.S. market, our study argues that this dependency should be leveraged as part of a coordinated strategy to help bolster the U.S. deterrence position.

The Russian invasion of Ukraine has sparked renewed debate over the impact and effectiveness of sanctions, both as a deterrent and as punishment should deterrence fail. And while the United States has the ability to implement sweeping sanctions on China

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<sup>1</sup> “China's economy is now the world's second largest,” *BBC News*, February 14, 2011, available at <https://www.bbc.com/news/av/business-12445925>.

unilaterally, our report emphasizes that the effect of sanctions will be magnified if U.S. allies and partners join in this approach.

For sanctions to have a deterring effect on China's decision making, they will likely need to be in effect for a prolonged period of time, most likely years. We recognize this could lead to U.S. and allied "sanctions fatigue" and a desire to avoid extensive economic disruptions by abandoning them. But we argue that China's leaders must be convinced of U.S. seriousness and must not perceive threatened sanctions to be a transitory phenomenon that will be reassessed, eased, or lifted by subsequent U.S. administrations.

We recognize this may be difficult given the ease of sanctions waivers and China's perception of the United States as unwilling to absorb significant economic hardship over the long term on behalf of Taiwan. However, if China's leaders believe they face an indefinitely long sanctions campaign, one in which the United States can adjust the supply chain away from China, they may grudgingly weigh the long-term impacts to China's economic growth and prosperity.

Now, our report also highlights the fact that the United States relies on China for pharmaceuticals, animal feed, and other products. China also has a near monopoly in some rare earth minerals, which are key components of electric vehicle motors, consumer electronics like smartphones, and military equipment, including missile defense systems. Therefore, we recommend an economic strategy that seeks to overcome these supply chain vulnerabilities so that the prospect of Chinese economic retaliation is less detrimental to the U.S. economy than the costs we can impose on China.

I would note that just last week, the United States, in coordination with nine other countries and the European Commission, established a Minerals Security Partnership to counter China's dominance in the supply of critical minerals such as nickel, lithium and cobalt.<sup>2</sup> And the Senate version of this year's National Defense Authorization Act supports increasing the national stockpile of strategic minerals in order to reduce dependency on China.<sup>3</sup>

In addition, because China imports more semiconductor chips than any other country, its reliance on external sources of supply—including Taiwan—may be an exploitable vulnerability for deterrence purposes. Denying China access to semiconductor chips as part of a cost-imposition strategy to deter Chinese aggression against Taiwan would be devastating to China's high-tech industries and would impose severe, long-term economic costs on China.

Our report also makes a number of other recommendations for employing economic tools to bolster deterrence. These include:

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<sup>2</sup> "U.S. and partners enter pact to secure critical minerals like lithium," *Reuters*, June 14, 2022, available at [https://www.reuters.com/markets/commodities/us-partners-enter-pact-secure-critical-minerals-lithium-2022-06-14/?mc\\_cid=10951e2eb9&mc\\_eid=46ef2d16d1](https://www.reuters.com/markets/commodities/us-partners-enter-pact-secure-critical-minerals-lithium-2022-06-14/?mc_cid=10951e2eb9&mc_eid=46ef2d16d1).

<sup>3</sup> Bryant Harris, "Congress wants to double rare earth mineral fund to free defense supply chain from China," *Defense News*, June 17, 2022, available at <https://www.defensenews.com/congress/2022/06/17/congress-wants-to-double-rare-earth-mineral-fund-to-free-defense-supply-chain-from-china/>.

- Considering measures to reduce investments in China's economy, punish China's intellectual property theft, and map the economic interests of those who are part of the Chinese Communist Party (CCP) leadership and tailor sanctions and economic tools to those individuals and their personal economic interests.
- Offsetting China's "Belt and Road Initiative" by encouraging greater U.S. trade and economic ties with countries that currently have strong economic ties with China.
- Adopting a sanctions strategy that provides disincentives for Western companies to invest in China's market while offering prudent alternatives that cause greater economic discomfort to China than to Western companies.
- And working with private sector entities in the United States and American companies abroad to mitigate in advance the impact of China's potential retaliatory actions directed against U.S. economic interests. Minimizing U.S. economic vulnerabilities can help strengthen the credibility of overall U.S. deterrent threats.

These are just some of the recommendations for integrating an economic component into an overall victory denial deterrent strategy.

The bottom line is that the United States has multiple options for employing a variety of economic tools to deter China from military aggression against Taiwan. Such an approach carries risks, and there is no guarantee of success, but we believe incorporating these tools into a comprehensive plan of action is the best approach for maximizing the prospect of deterrence success.

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**Matthew R. Costlow**

***Matthew R. Costlow is Senior Analyst at the National Institute for Public Policy and former Special Assistant in OSD's Office of Nuclear and Missile Defense Policy.***

Everyone who is attending this webinar today has heard how a number of different factors could positively or negatively affect the functioning of deterrence in the Taiwan Strait—everything from material factors like the balance of military forces to the influences of strategic culture and history on CCP decision-making. Even though we all, as analysts of strategic policy, like to make our living by explaining events or decisions—why they happen, why they do not happen—when it comes to deterrence, we simply must accept the base truth that we cannot predict with precision how much one factor contributed to deterrence over another factor, and historic contemporaneous accounts that explain deterrence decisions are rare.

As Dr. Payne likes to say, much of the discussion about the functioning of deterrence is speculation, but there is better informed speculation and poorly informed speculation. On that basis, allow me to present what I hope is better informed speculation concerning the prospect of nuclear proliferation as a potential (and I do stress "potential") factor that could contribute to deterring a Chinese invasion attempt of Taiwan.

First, to reiterate quickly, the term “proliferation” in this context means both the prospect of “horizontal” proliferation in which states that do not currently possess nuclear weapons then pursue them, and “vertical” proliferation, in which states that already possess nuclear weapons either expand their stockpile sizes, add improved capabilities, or somehow modify their force to be more capable. In this study’s chapter on the potential deterrent effect of proliferation, we first had to establish that Chinese leaders did in fact perceive a threat of horizontal or vertical proliferation. And, indeed, as expected, CCP officials have a long history of publicly denouncing the possibility of its neighbors acquiring nuclear weapons.

There are two prominent examples. First, the “red line” the Chinese Communist Party set for Taiwan: should Taiwan ever attempt to acquire nuclear weapons, that would be grounds for military intervention. Second, the CCP regularly denounces the large apparent latent nuclear power of Japan and its stockpile of fissile material. Both of these examples demonstrate that horizontal proliferation enters into the CCP’s threat perception.

The major finding of the chapter is that a successful People’s Republic of China (PRC) invasion of Taiwan would, at the very least, cause a major re-evaluation of security requirements, and the dependability of the U.S.-led alliance, in Tokyo, Seoul, and Canberra. Countries that depend a great deal on the assured capability of naval reinforcement from the United States would suddenly find themselves in an environment where U.S. access is not assured, or, in other words, highly contested.

One “lesson” that states like Japan, South Korea, and Australia could “learn” from a successful PRC invasion of Taiwan is that states without nuclear weapons are at the mercy of a revisionist nuclear power with a growing nuclear arsenal.

The prospect of this scale of horizontal proliferation should, we hope, give CCP leaders pause—and it is interesting from a deterrence perspective because even if China is successful in its invasion of Taiwan, it may ultimately produce a more threatening security environment for itself by causing its neighbors to obtain nuclear weapons. Would China be willing to trade a short-term victory for potential long-term proliferation problems? Perhaps. We cannot dismiss out of hand that CCP leaders anticipate horizontal proliferation after their invasion of Taiwan and that is perhaps one reason why we see their nuclear arsenal projected to quadruple in this decade.

For reasons of time, I will not delve into the possibility of vertical proliferation in the wake of a PRC invasion of Taiwan, except to say that it is a very real possibility, but it does not appear to have the same magnitude of potential deterrence effect as horizontal proliferation.

I will close by noting that we, as the authors of this report, are under no illusions that the prospect of nuclear proliferation will have decisive deterrent effect on CCP leaders. Rather, we believe the deterrence factors you have heard discussed today will work best when combined with each other under the banner of a “victory denial” deterrence strategy. In short, the prospect of diplomatic, information, military, and economic tools, used in conjunction and with the support of allies, provides the best chance for deterrence to succeed. I believe the possibility of nuclear proliferation deserves to be included in the discussion of how best to deter a PRC invasion of Taiwan.

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## **Robert Joseph**

***Amb. Robert Joseph is Senior Scholar at National Institute for Public Policy. He served as Under Secretary of State for Arms Control and International Security.***

First, let me compliment Keith and all the co-authors for providing what I consider to be the most insightful analysis of perhaps the most important national security challenge we face as a nation—deterring the PRC from attacking Taiwan.

We failed in Ukraine to deter Putin, but we can help Ukraine achieve victory over Russia. I believe Taiwan is different. Under current conditions, if we fail to deter Xi, I see almost no prospect for victory. Unless, of course, the PLA proves as hollow as the Russian military proved to be in the early weeks of the war. But hoping for that is not a sound basis for strategy.

And the costs of deterrence failure with China are even greater than in Ukraine—as significant as those costs would be. In Asia, the stakes are much different and even higher. China’s goal is to replace the U.S. as the dominant power in the Asia-Pacific. If Beijing absorbs Taiwan it is well on the way to success. The negative consequences would be devastating for US interests.

As the study points out, the PRC is a determined adversary who has—by design and though the commitment of massive resources—fundamentally changed the deterrence circumstances over the past two decades. In doing so, it has used all instruments of statecraft—economic, political/diplomatic, and military. Its conventional and nuclear buildup is best understood as positioning China to take Taiwan by force.

Other factors—such as the absence of an integrated alliance structure and a formal Article 5 commitment—as noted in the study—make deterrence success even more problematic. Drawing on my own experience with NATO I see very little reason to be confident in our ability to deter China. In 1982, when I first served in government in the nuclear planning position at NATO headquarters, we had hundreds of thousands of US forces stationed in Europe and 7,200 theater nuclear weapons in Europe. Overall, in the Pacific today, the correlation of forces—to use a Soviet term—is much less favorable to us.

For these and other reasons, the authors suggest that Chinese leaders may now believe that US options are limited to retreat or risk escalation to a strategic exchange. At a minimum, China is likely to question the credibility of US red lines. One can only speculate the effect on Chinese leaders of President Biden’s disastrous exit from Afghanistan and President Obama’s failure to respond with force to Syria’s use of chemical weapons.

Perhaps the most valuable contribution of the study is the roadmap it provides for actions to reposition the US in a more advantageous deterrent posture—across the diplomatic, economic, and military fields. Here, as others have highlighted, the report’s victory denial deterrent strategy presents a way forward to increase the prospects for deterrence success. The key is taking those steps that will deny Beijing the expectation of a quick victory and the belief that threats of nuclear use will compel the US to abandon Taiwan.

Regarding threats of nuclear use—Trey Obering and I argue in an op ed that should be out soon that Putin’s sabre rattling worked in Ukraine—a lesson China will no doubt incorporate into its strategy.

Russian officials threatened nuclear employment to coerce Kiev and intimidate countries providing support to Ukraine. In response, the Biden administration withheld vital weapons and targeting assistance that they believed would risk escalation to “World War III.”

This was exactly the intent of Putin’s bullying. By ruling out reasonable support to help Ukraine launch a counter-offensive, and perhaps achieve early victory, the Biden team gave Russia time to consolidate in the east and south where it is now prevailing.

Rather than communicating resolve to demonstrate our nuclear deterrent in the face of Russian threats, the Biden administration cancelled long-planned ballistic missile tests and zeroed out funding for the nuclear sea-launched cruise missile.

While the administration insists that its moves reflect the behavior of a “responsible” nuclear power, they have not impressed Putin. In response, he went forward to test his own. For someone who sees the world in terms of raw power, restraint is seen as weakness.

To increase the credibility of our deterrent requires capabilities both to punish the attacker through offensive retaliation, and to deny his objectives through active defenses.

Given the huge disparity in theater nuclear weapons relative to China, we must expand our options through such means as the low-yield warhead on our strategic submarines and the nuclear sea-launched cruise missile.

In addition, defenses must be an integral component of deterrence and allied assurance. Both theater and homeland missile defenses undermine China’s confidence that it can achieve its policy goals using force.

Let me end with one last point. To deter and defend against missile threats from China, Russia and rogue states, we must deploy space-based capabilities. Ground-based and sea-based systems, while useful, cannot be scaled to meet these growing threats.

A space-based kill capability is the necessary evolution to the layered defense architecture. Moving to space is the only means to provide the boost/ascent phase missile defense capability essential to defeat current and future threats. There is no other feasible option.

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**Christopher Ford**

***Christopher Ford is Director of the MITRE Corporation’s Center for Strategic Competition and former Assistant Secretary of State for International Security and Nonproliferation.***

Thank you to Dave [Trachtenberg] and Keith [Payne] for the chance to discuss the National Institute for Public Policy’s new study on “Deterring China in the Taiwan Strait,” *Journal of Policy and Strategy*, Vol. 2, No. 2 (2022). This study is a real contribution at an important time, and I hope it is widely read.



The NIPP study makes quite a few good points, among them the importance of “tailoring” deterrence to the adversary, and the challenges the United States now faces as a result of its collective drift away from taking great power competitive strategy seriously for an entire generation—during which China has been preparing itself for us. The document also commendably draws attention, to such things as the role that limited missile defenses can play in reducing adversary incentives to engage in nuclear weapons use as a tool of escalation dominance, the importance of more effectively countering CCP propaganda and influence operations, the need to adopt better-coordinated approaches to denying China access to sensitive technologies, the need to expand the United States’ range of forward-deployable nuclear systems (e.g., SLCM-N) in response to China’s build-up, and the imperative of augmenting Taiwan’s capabilities and making it more thoroughly “indigestible” to potential Chinese invaders.

For my own contribution to this discussion—and with the caveat that these are my personal views and I speak here only for myself—I’d like to flag a couple of further points suggested by the NIPP study, and which I think are of significance from the perspective of U.S. alliance and partner relationships.

The study focuses with special emphasis on the idea of denying China its “theory of victory” in the military arena. But such an approach also works well in peacetime competition.

In peacetime competition, we don’t need everyone in the Indo-Pacific to jump to our tune. That’s China’s objective, not ours. The CCP’s ambition is to craft a Sinocentric region—and indeed a Sinocentric world: one in which everyone tips their hat and kowtows appropriately to the CCP in some kind of modernized version of the Middle Kingdom’s ancient tributary system. In such a system, all infrastructural, political, economic, and diplomatic ties are essentially “hub-and-spoke” relationships tying everyone asymmetrically back to a China that sits at the center of everything.

That the CCP’s vision. But we don’t need to dominate the Indo-Pacific like that. We just need to deny China the Sinocentric hegemony it wants, by helping the states of the region—and farther afield—remain independent and autonomous, minimizing their dependency upon and associated risk of coercion by Beijing, and forestalling their tributary subjugation.

China only “wins” if it ties states in the region asymmetrically to itself and exploits that dependency for leverage in making everyone defer reflexively to CCP desires. We “win” merely by helping other states retain their freedom of action, and by building ways in which they can interact with the world and thrive with minimal exposure to Chinese coercion.

The study makes a strong point about how we could help deny China its Sinocentric theory of victory in this aspect of the peacetime competition by promoting the establishment of an ever-stronger “latticework” of cross-cutting relationships between states in the region that have strength and vitality in ways that don’t involve China. I agree with that point, as I made clear in one of NIPP’s Occasional Papers earlier this year.

But here’s what I’d like to stress today: as the “latticework” concept illustrates, success in peacetime competition with China is by definition not something that the United States

can do alone. If we do not cultivate relationships and approach competitive challenges in close collaboration with a wide network of foreign allies and partners, that means “losing.”

To put it another way, if we ignore or cold-shoulder our friends, we do China’s work for it in diminishing the United States’ influence and role in the region and in the world, and in helping pave the way for a new Sinocentric order.

Similar arguments about the importance of working with others, moreover, can be made for peacetime competition in technology and economic power, where “technology diplomacy” will be ever more critical to our success. There, too, despite all the strategic ground Western states have lost over the years through incautious high-technology exports that maximized short-term profits in China at the cost of long-term strategy, we can still be effective in blunting the problematic aspects of China’s advances if and to the degree that we act in concert with other sophisticated technology possessors in the developed world. But even as powerful as we are, we have only a modest chance to do so if we try to act alone.

Needless to say, alliances and partnerships are also crucial in the military context, as the NIPP study makes clear. But their importance goes beyond simply the concrete capabilities that our friends could “bring to the fight” if it came to it. CCP leaders are big believers in “Comprehensive National Power” (CNP) calculations, and they appreciate the degree to which international relationships are an important facet of a country’s power.

The perception that things in the Indo-Pacific are moving China’s way, therefore, is seen not just as a result of China’s rise but also—in a sort of positive feedback loop—as a factor that CCP officials expect to accelerate that rise. Some momentum, in other words, helps beget more momentum.

So far, this “nothing succeeds like success” dynamic is perceived as helping China. Indeed, perceptions of favorable momentum are probably fueling Xi Jinping’s adventurism. But it also follows from such thinking that “nothing fails like failure.” To the degree that our improved engagement with allies and partners can blunt or reverse impressions of Chinese momentum, therefore, this could itself be seen as a shift in trends contributing to the “correlation of forces,” with potential implications in reducing China’s odds of success not only in peacetime competition but in potential conflict as well.

This is thus another way in which good diplomatic relationships contribute to deterrence. Stronger U.S. relationships contribute to American CNP, as it were—and in Chinese strategic thinking, countries with superior CNP tend to win wars, while those with inferior CNP to lose them. (Notably, through the prism of the CCP’s modern legitimacy narrative, China’s failure to elicit awestruck tributary deference in regional states might also be taken to signal some defect in the Party’s virtue—a potentially very dangerous flaw in the pseudo-Confucian narrative of benevolent omniscience the CCP has tried to construct for itself.)

Accordingly, active engagement and diplomacy—working closely with U.S. allies, partners, and friends—are crucial no matter how you slice it.

Don’t get me wrong. One might wish the United States were still in a position in which to some extent we had the luxury of not needing allies and partners all that much: the kind of unquestionably dominant, military, economic, technological, and diplomatic “hyperpower”

position that we enjoyed after the end of the Cold War. But this is no longer that world. In this world, competing effectively with China requires us to have friends, and to work with them.

I know full well how frustrating and challenging alliance and partner relationships can sometimes be, and how even traditionally close foreign counterparts do not always see eye to eye with American officials. Nevertheless, if we want to succeed in our peacetime competition with China and blunt the threats it presents to the free and open international system we prize so dearly, if we want to deter Chinese aggression, and if we want to have the best possible chance to prevail in the event of conflict, we cannot do these things by ourselves. If we want to succeed, real diplomacy is the cost of doing business—and a critical ingredient to denying China its Sinocentric theory of victory.



# PROCEEDINGS

## OVERCOMING THE ROADBLOCKS TO HOMELAND MISSILE DEFENSE

*The remarks below were delivered at a symposium on “Overcoming the Roadblocks to Homeland Missile Defense” hosted by National Institute for Public Policy on July 20, 2022. The symposium highlighted policy, technology, organization, and budget issues related to improving missile defense of the U.S. homeland.*

**David J. Trachtenberg**

***David J. Trachtenberg is Vice President of the National Institute for Public Policy and served as Deputy Under Secretary of Defense for Policy from 2017-2019.***

First, despite the significant growth in both Russian and Chinese nuclear arsenals, their more aggressive behavior in challenging U.S. national security interests, and their growing collaboration—which Presidents Putin and Xi have referred to as a “friendship” with “no limits”<sup>1</sup>—it remains U.S. policy to keep the homeland deliberately vulnerable to Russian and Chinese strategic missile strikes on the apparent presumption that deterrence will work reliably and that active defenses against either nuclear peer competitor are either unnecessary at best or provocative and destabilizing at worst.

Indeed, the FY20 National Defense Authorization Act codifies that, as a matter of policy, the United States will “rely on nuclear deterrence to address...intercontinental missile threats to the homeland” posed by Russia and China.<sup>2</sup> This goes well beyond the Trump Administration’s 2019 Missile Defense Review, which acknowledged that the United States currently relies on the deterrent threat of offensive retaliation vis-à-vis Russia and China but did not establish this as a policy in perpetuity. I hope our panelists today will discuss the implications of congressional actions and whether Congress is likely to reconsider the current policy of deliberate societal vulnerability to potential missile strikes from either Russia or China, or both.

The Biden Administration’s *Missile Defense Review* has yet to be publicly released. But the president’s prior strong opposition to the U.S. withdrawal from the ABM Treaty, his earlier criticism of what he called a “theological allegiance to missile defense,”<sup>3</sup> and his expressed belief that a robust homeland missile defense could spark a new arms race, do not suggest cause for optimism that the current administration will take the lead in proposing to end—or even significantly reduce—U.S. vulnerability to peer adversary nuclear threats and the coercive effect such threats can have on U.S. policies and actions.

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<sup>1</sup> *Joint Statement of the Russian Federation and the People’s Republic of China on the International Relations Entering a New Era and the Global Sustainable Development*, February 4, 2022, available at <http://en.kremlin.ru/supplement/5770>.

<sup>2</sup> Section 1681 of the National Defense Authorization Act for Fiscal Year 2020 (Public Law 116-92), December 20, 2019, available at <https://www.congress.gov/116/plaws/publ92/PLAW-116publ92.pdf>.

<sup>3</sup> Cited in Council for a Livable World, “65 National Security Leaders Urge President Biden to Put Missile Defense on the Table,” June 3, 2021, available at <https://livableworld.org/63-national-security-leaders-urge-president-biden-to-put-missile-defense-on-the-table/>.



Second, our homeland missile defense program today is focused on rogue state threats and essentially consists of the same ground-based interceptors that we first began deploying almost two decades ago—when Russia was no longer considered an adversary and China was far from a nuclear peer competitor. Even adding another 20 interceptors to the 44 currently deployed, as is planned, is hardly adequate to defend against the thousands of warheads Russia and China can potentially target on the United States.

If we are to get serious about defending the homeland from more robust missile threats—including more sophisticated rogue state missile capabilities as well as cruise missile threats from various quarters—it may be time to consider advanced technologies, including space-based assets and directed energy systems. I hope our discussion today will touch on the availability and practicality of advanced technologies to support a missile defense posture more attuned to the current and prospective threats posed by both nuclear peer adversaries and rogue states, as well as the prospects for moving U.S. policies and programs in that direction. I would note that during his trip to Israel this month, President Biden was briefed on Israel’s “Iron Beam,” a directed energy laser system that could revolutionize missile defense and radically change the offense-defense, cost-benefit calculus in the defender’s favor. If this type of technology proves out and can be adapted to the U.S. homeland defense mission, it potentially could be a real game changer.

Finally, there seems to be a “business as usual” attitude when it comes to homeland missile defense, with missile defense programs competing with other priorities for limited resources. The Services appear uninterested in significantly ramping up efforts to defend the homeland from more sophisticated missile threats, as doing so would detract from other Service priorities. Over the past decade, the Missile Defense Agency’s budget has hovered on average at around \$10 billion a year.<sup>4</sup> This year’s MDA budget request is slightly less.<sup>5</sup> This suggests to me a “treading water” approach. To spend less than 2 percent of the overall defense budget on missile defense and a fraction of that on defending the homeland seems wildly out of touch with the current realities of the new global strategic environment facing the United States.

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<sup>4</sup> Wes Rumbaugh and Tom Karako, Seeking Alignment: Missile Defense and Defeat in the 2022 Budget, December 2021, available at [https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/211210\\_Rumbaugh\\_Seeking\\_Alignment\\_0.pdf?FJmZgswXoV.XP9VfjqXkwGJ7RW2lcuLN](https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/211210_Rumbaugh_Seeking_Alignment_0.pdf?FJmZgswXoV.XP9VfjqXkwGJ7RW2lcuLN).

<sup>5</sup> Jen Judson, “Missile Defense Agency seeks \$9.6 billion in FY23 budget,” *Defense News*, March 29, 2022, available at <https://www.defensenews.com/congress/budget/2022/03/29/missile-defense-agency-seeks-96-billion-in-fy23-budget/#:~:text=The%20MDA%20asked%20for%20%248.9,a%20total%20of%20%2410.4%20billion..>

**Matthew R. Costlow**

***Matthew R. Costlow is Senior Analyst at the National Institute for Public Policy and former Special Assistant in OSD's Office of Nuclear and Missile Defense Policy.***

I will focus my short remarks today on one of the major policy obstacles to expanding the size and scope of U.S. homeland missile defenses. The United States expects to increase its homeland ballistic missile defense interceptors to 64, from the 44 today, deployed by 2028. Cruise missile defense of the homeland has growing interest on the Hill, but very little in the way of budget allocation. The Missile Defense Agency is developing an interceptor against hypersonic threats, but it will initially be only for regional threats.

To put it mildly, there is a very large delta between the missile threats to the U.S. homeland and the U.S. ability to counter them kinetically. This is in part due to a deliberate policy choice by U.S. officials, administration after administration. Russia has not followed the U.S. lead, preferring instead to build increasingly capable, and larger numbers, of missile defenses designed to defeat U.S. intercontinental capabilities. If that is not enough, Russia is helping China build its own missile defense network against U.S. capabilities. As Don Brennan and others pointed out over 50 years ago, it is incredibly strange that the United States—which so values the lives of its citizens—is the one which repeatedly rejects missile defenses; while Russia and China—who quite obviously do not value the lives of their citizens as much—are the ones building defenses for their countries.

For 20 years, and likely going back even further, the U.S. Department of Defense has said in nearly every major national strategy-level document that “defense of the homeland is the number one mission.” As Donald Rumsfeld wrote in the 2001 Quadrennial Defense Review, released on September 30th, 2001, “Defending the Nation from attack is the foundation of strategy.”

If defending the homeland is the number one mission, or more fundamentally, the “foundation of strategy” itself, and the threats to the homeland so stark and growing in severity, then why is homeland missile defense so difficult to promote successfully? As the other panelists will no doubt address in their remarks, the answer lies at the confluence of difficult engineering problems and entrenched Cold War orthodoxy that passes for “common sense” these days.

There is no doubt in my mind that anyone who proposes to expand the size and the scope of U.S. homeland missile defense efforts will be criticized for making a radical departure in U.S. defense policy. Let me suggest that one way to overcome this criticism is to respond that an expanded U.S. homeland missile defense system actually corrects a radical discontinuity in U.S. defense policy. As the eminent strategist Colin Gray once wrote, “bureaucratic inertia is hardly a sound foundation for strategy.” Expanding homeland missile defense—beyond all the deterrence and damage limitation benefits—will make the U.S. policy of “defending the U.S. homeland as the number one mission” a far more credible policy. The United States is alone among the great nuclear powers of today as the only state who prizes deliberate vulnerability to a certain class of weapons as a virtue, not a vice.



Let me close by saying that, in my view, one way we can begin to reverse the corrosive effects of the current commitment to vulnerability against Russian and Chinese threats to the homeland is by pointing out to the American voter that the United States can do far more to defend the homeland, but it so far has not. We, as defense analysts, can sometimes get so wrapped up in debates about preemptive first strike incentives, arms racing, and architecture attributes that we forget to make the point explicitly to the American voter, that we can do more to protect them and their families from outside attack, while improving deterrence. It is a simple message, but I believe a powerful one. A Department of Defense that does not support an expanded U.S. homeland missile defense system is a Department that is neglecting its number one mission. That is unacceptable and I think the average American, and their Representative, just might agree.

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**Lt. Gen. Henry “Trey” Obering, III (Ret.)**

***Lt. Gen. Henry “Trey” Obering, III (Ret.) is former Director of the Missile Defense Agency.***

The mission of the Missile Defense Agency (MDA) is to provide an integrated, layered missile defense system to defend the United States, our deployed forces, allies and friends against all ranges of missiles in all phases of flight. This includes long-range, intermediate-range, and short-range missiles in the boost, midcourse and terminal phases of flight.

*Why an integrated defense?* An integrated defense expands dramatically the defended area or launch area denied for the adversary. For example, by integrating a TPY-2 land-based radar to the Aegis SPY radar, it is possible to reduce the number of ships required to provide defensive coverage of Japan from three to one.

*Why a layered defense?* Each phase offers unique advantages and disadvantages. Intercepting a missile in its boost phase maximizes the defended area and kills the vehicle before it can deploy decoys. The downside is that it is a very short period of time of vulnerability of the missile. The midcourse phase offers a much longer intercept window, but typically the missile can deploy decoys to confuse the defense. In the terminal phase, decoys usually have been stripped away by the atmosphere, but you have a short amount of time to engage and a relatively small defended area.

*How has the missile defense climate changed since 2001?* The missile defense climate has changed significantly since the Star Wars ridicule era. The conversation has moved from will it work to how much missile defense capability do we acquire and deploy. This is primarily due to the success of missile defense in its testing programs, the National Reconnaissance Office satellite shootdown in 2008, the performance of “Iron Dome” in Israel and to the more recent successful operational engagement by a THAAD missile in Saudi Arabia. It appears the arguments are no longer “religious” in nature.

*Why was it religious to start with?* For many years, arms control enthusiasts derided missile defense as “destabilizing” and pushed to rely solely on arms control agreements.

They argued that missile defense was unnecessary due to our strategic deterrence posture and contradictory to mutually assured destruction.

Another historical event which changed the environment: the North Koreans were preparing to launch their Taepo Dong-2 long range missile in 2006 and not revealing its purpose or trajectory. Several senior missile defense critics recommended pre-emptively attacking the launch site. Fortunately, President Bush decided to “stabilize” the situation by relying on MDA’s Ground Based Midcourse Defense system to defend U.S. territory if the missile proved to be a threat. This event clearly pointed out how “destabilizing” an offensive attack can be without having missile defense in the President’s toolbox.

*How has the Ukraine War changed this environment?* The world saw the utter destruction which can be wrought by ballistic missiles hitting Ukrainian civilian infrastructure. As a result, I have witnessed an upswell of support for missile defense systems in conversations I have with my colleagues. Unlike during the Cold War, where critics painted missile defense in opposition to strategic deterrence, the Ukraine War has brought into focus what happens when you face a non-deterred enemy and need protection.

Russia demonstrated its first combat use of hypersonic weapons and blackmailed the Biden administration by threatening the first use of nuclear weapons.

For two decades, Russia has been investing heavily in a large and diverse nuclear force and China is rapidly expanding its nuclear arsenal, which the Commander of U.S. Strategic Command has described as “breathtaking.”

Warning policymakers of the looming danger ahead, Admiral Richard, recently said, “We are facing a crisis deterrence dynamic right now that we have only seen a few times in our nation’s history... The war in Ukraine and China’s nuclear trajectory—their strategic breakout—demonstrate that we have a deterrence and assurance gap based on the threat of limited nuclear employment.”

To increase the credibility of our deterrent, we must communicate to our adversaries our confidence in the ability to withstand and counter such attacks. This requires a combination of capabilities, both to punish the attacker through offensive retaliation, and to deny his objectives through active defenses.

Missile defenses, including homeland defenses, must be an integral component of strategic deterrence and allied assurance. This applies to deterrence and defense against not only North Korea and Iran, for whom we have sized our homeland missile defense capabilities, but also for the most likely missile threats to our homeland posed by Russia and China.

Both theater and homeland missile defenses undermine the adversary’s confidence that he can achieve his policy goals using force. No missile defense architecture should require a “zero leak” standard. As with any defensive capability, that is impossible and unnecessary. What is required for deterrence is sufficient capability to disrupt the expected success of the adversary’s planned aggression.

### ***Where do we go from here? Space***

To deter and defend against missile threats from Russia and China as well as the accelerating missile threats from Iran and North Korea, the United States must develop and deploy space-based capabilities, including space-based kill capabilities and other advanced means to defeat missile attack. Ground-based and sea-based systems, while useful, cannot cost effectively be scaled to meet these advanced threats. A space-based kill capability is the necessary evolution to the layered missile defense architecture.

Moving to space is the only way to defeat a growing quantity and quality of adversary threats. It is the only means to provide an effective boost/ascent phase missile defense capability essential to defeat current and future threats. There is simply no other technically feasible option.

Skeptics have tried to argue that space-based defenses constitute the “militarization of space,” but space is already a highly contested environment in which we face growing threats from Russia, China, and others. There is no law or treaty prohibiting the deployment of missile defense to space.

U.S. space-based missile defenses will contribute to protecting existing and planned U.S. space assets, both military and commercial – making another contribution to strategic stability.

Space-based missile defenses are affordable and achievable. Engineers have made major progress in every technological sector needed for deployment. The technologies for space-based capabilities are like those being employed by Uber, Google, SpaceX, and other private sector enterprises.

Significant missile defense capability from space can be provided by swarms of nanosats utilizing integrated sensing, artificial intelligence, peer to peer networks, and low-cost space launch opportunities pioneered by the commercial sector.

Space Force and Space Command have active space control portfolios that can and should be used synergistically with a space-based missile defense capability.

Moving forward with a space test bed is the modern parallel to the previous period when Congress seeded missile defense programs with the policy commitment to build on the progress of those programs. This permitted President George W. Bush to unshackle the United States from the Cold War Anti-Ballistic Missile Treaty and field the Ground-based Midcourse Defense system to defend against rogue state threats in less than four years. Today’s parallel is to begin now to build the infrastructure needed for deployment, such as sensors and command and control.

### ***Where do we go from here? Directed Energy***

Another technology that could be brought to bear in the future is especially suited to space...directed energy.

MDA’s Airborne Laser program, or ABL, successfully shot down both short-range solid and liquid propellant missiles back in 2010 while flying at approximately 35,000 ft. The lesson we learned from that experience to apply to long-range missile defense was that we needed to get out of atmosphere to reduce laser power needed to be lethal and reduce jitter,

which affects laser beam quality and control. By deploying lasers to space, you take advantage of the vacuum and precision control offered by the environment and the satellite platforms. In addition, you can achieve greater ranges through the use of relay satellites, thereby reducing the laser constellation size.

There are several ongoing laser programs which we could eventually deploy to space, with the most promising being the Diode Pumped Alkali Laser System or DPALS at Lawrence Livermore National Labs. We have the technology; we just need the resources and will to develop and deploy such weapons.

Only when the United States adapts to the new and rapidly changing threat environment can we confidently deter our adversaries. This requires a clear-eyed assessment of the dangers, foresight, and a commitment to defend the American people.

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### **Rebecca Heinrichs**

***Rebecca Heinrichs is a Senior Fellow at the Hudson Institute.***

According to U.S. NORTHCOM Commander General Glen VanHerck, “NORTHERN COMMAND and NORAD face the most dynamic and strategically complex environments in our respective histories.”<sup>6</sup>

North Korea continues to test nuclear-capable ballistic missiles. On April 22, 2020, Iran successfully launched its first military satellite *Noor-1* (“light”) into low-earth orbit, and importantly it was the Islamic Revolutionary Guard Corps (IRGC) that took responsibility for the launch.

But those are not the only nations investing in capabilities to hold specific critical infrastructure at risk. Russia and China continue to invest heavily in advanced long-range cruise missiles, hypersonic missiles, and delivery platforms.

Interestingly, General VanHerck has highlighted that Russia’s fielding of long-range cruise missiles has been ongoing throughout its war against Ukraine. (“And as we’ve seen throughout Russia’s unprovoked and irresponsible invasion of Ukraine, Russia has fielded large numbers of long-range cruise missiles, including hypersonic missiles that can cause enormous damage to infrastructure, create strategic effects with conventional warheads. These conventional precision strike capabilities and advanced delivery platforms are designed specifically to hold critical infrastructure in the homeland at risk below the nuclear threshold.”)<sup>7</sup>

And yet there are several major hurdles to improving homeland missile defense that have proven too high for any administration, Republican or Democratic, to keep pace with even the rogue nation threat. I’m going to list just seven.

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<sup>6</sup> Testimony of General Glen VanHerck before the Senate Armed Services Committee Subcommittee on Strategic Forces, May 18, 2022, available at [https://www.armed-services.senate.gov/imo/media/doc/22-48\\_05-18-2022.pdf](https://www.armed-services.senate.gov/imo/media/doc/22-48_05-18-2022.pdf).

<sup>7</sup> Ibid.

- 1) The effect of a general confidence in what U.S. planners and policymakers believe would be our adversaries' rational calculations. Or, put more plainly, the belief that our adversaries simply would not be so irrational as to attack the U.S. homeland.
- 2) A belief held without evidence that the United States could unintentionally provoke an adversary to invest in strategic systems if they believe U.S. homeland missile defense is too strong and tempting us to act offensively.
- 3) Military culture that is not persuaded by the deterrent value of denial—even imperfect denial. Operators want shooters, not shields, if they are made to choose within a limited budget.
- 4) Cost—One senior defense official once said to me: The Missile Defense Agency is a \$10 billion agency, and we have to get used to that. Whatever they want to buy has to fit within that \$10 billion. (Recall, the Bush budget was around \$9 billion, and during a more benign threat environment.)
- 5) Poor leadership decisions meant to affect a single program that set back the entire homeland defense mission and that cause a backup that is very hard to recover from. I'll name three. One, when President Obama cut the Multiple Kill Vehicle (MKV) back in 2009 he prevented the United States from having the kind of capability that we now seek from the Next Generation interceptor (NGI). Perhaps that's an oversimplification and puts too much blame in one place when it should be distributed but I think it is mostly true. I remember that fight and many of us worked very hard in Congress and with the MDA to save MKV and could not. John Kirby penned an Op-Ed in 2017, defending the Obama's legacy on missile defense while conceding: "Of course, Obama's missile defense policy wasn't without flaws. Early on in his administration, he reversed President George W. Bush's decision to deploy air defense systems to the Czech Republic and ballistic missile interceptors to Poland, and he presided over significant cuts to MDA's budget. Those cuts continue to have a deleterious effect on critical research and development."<sup>8</sup> Another example was Trump's cancelation of the Redesigned Kill Vehicle (RKV)—but that wasn't the worst of it; it has been the persistent refusal to go back and try to take what we learned from that and improve the homeland defense capability in the near term, even as we pursue NGI. We should be extending the service life of the Ground-based Missile Defense system, but we should be leveraging technology to improve it right now as well.
- 6) A hesitancy to develop technologies that would give us a space-based kill capability. Many of the arguments about space-based missile defense and against it are playing out in another way—defense of Guam. Some say: the threat is too great; it's too hard to defend against it; building defenses would be provocative,

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<sup>8</sup> John Kirby, "Trump is Wrong: Obama Wasn't Weak on Missile Defense," *CNN*, August 11, 2019, available at <https://www.cnn.com/2017/08/10/opinions/trump-obama-missile-defense-opinion-kirby/index.html>.

etc. Now, there are big differences, too. I'll let Trey handle the piece about what is technologically feasible in space-based missile defense or space-enabled missile defense. But the point is, because something is "hard" is not a reason to eschew it. The space domain is the frontier from which the United States must compete with China and Russia.

- 7) And so, the last one really includes all of these hurdles: it's political leadership. Nothing will advance homeland missile defense without a commitment from the President himself. There are too many ways to slow the program and starve it. There is nothing in law that prohibits us from doing what is necessary to add defenses.

Remaining vulnerable is a choice. We need an administration committed to this mission; indeed, it is imperative.







## PROCEEDINGS

### WHAT TO EXPECT IN THE 2022 NUCLEAR POSTURE REVIEW

*The remarks below were delivered at a symposium on “What to Expect in the 2022 Nuclear Posture Review” (NPR) hosted by National Institute for Public Policy on August 30, 2022. The symposium discussed the upcoming public release of the Biden Administration’s NPR and how it should address great power challenges posed in the new strategic environment.*

**David J. Trachtenberg**

***David J. Trachtenberg is Vice President of the National Institute for Public Policy and served as Deputy Under Secretary of Defense for Policy from 2017-2019.***

The classified version of the Nuclear Posture Review (NPR) was transmitted to the Congress in March. Although an unclassified version has yet to be released, the Under Secretary of Defense for Policy has stated that it will be forthcoming “in the relatively near future,”<sup>1</sup> though that appears to be an increasingly elastic term. Rumors are that it will follow release of the National Security Strategy and National Defense Strategy late next month.

Piecing together what we expect to be in and out of the NPR, based on the brief “Fact Sheet” that was issued in March and the subsequent testimony of administration officials, there appear to be areas of consistency with previous NPRs, including the 2018 NPR.

For example, the administration will not adopt a “No First Use” or “Sole Purpose” nuclear policy because of the “unacceptable level of risk” that would entail.<sup>2</sup> Nevertheless, Under Secretary Colin Kahl stated “we retain the goal of moving towards the sole purpose declaration in the future, and the NPR makes that clear.”<sup>3</sup> It also apparently restates the “negative security assurance not to use or threaten to use nuclear weapons against non-nuclear weapon states that are party to the [Nuclear Nonproliferation Treaty (NPT)] and are in compliance with their nuclear non-proliferation obligations,” along with a declaration that the United States “would only consider the use of nuclear weapons in extreme circumstances.”<sup>4</sup>

In addition, the Assistant Secretary of Defense for Space Policy has testified that “Maintaining a safe, secure, and effective nuclear deterrent—and strong and credible extended deterrence commitments—remains the top priority” for DoD. He also declared that

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<sup>1</sup> Greg Hadley, “‘Sole Purpose’ Policy Didn’t Make It Into Nuclear Posture Review, but Biden Wants It in the Future,” *Air Force Magazine*, August 5, 2022, available at <https://www.airforcemag.com/sole-purpose-policy-nuclear-posture-review-biden-wants-it-future/>.

<sup>2</sup> “Statement of Dr. John Plumb, Assistant Secretary of Defense for Space Policy before the House Armed Services Committee Strategic Forces Subcommittee (HASC-SF) on Fiscal Year 2023 Nuclear Forces,” May 17, 2022, p. 5, available at [https://armedservices.house.gov/\\_cache/files/3/c/3c89cba1-e46b-47ac-b468-d6a82728e23a/6844A94FDC92F3C2B6AA0C57DB270EB1.20220517-str-witness-statement-plumb.pdf](https://armedservices.house.gov/_cache/files/3/c/3c89cba1-e46b-47ac-b468-d6a82728e23a/6844A94FDC92F3C2B6AA0C57DB270EB1.20220517-str-witness-statement-plumb.pdf).

<sup>3</sup> Hadley, *op. cit.*

<sup>4</sup> Department of Defense, “Fact Sheet: 2022 Nuclear Posture Review and Missile Defense Review,” March 29, 2022, available at <https://media.defense.gov/2022/Mar/29/2002965339/-1/-1/1/FACT-SHEET-2022-NUCLEAR-POSTURE-REVIEW-AND-MISSILE-DEFENSE-REVIEW.PDF>.



the NPR provides a “clear-eyed assessment” of contemporary security challenges and that its recommendations flow from this assessment.<sup>5</sup>

Where the NPR appears to break from its 2018 predecessor and align itself with the Obama Administration’s 2010 NPR is in its emphasis on “reducing the role of nuclear weapons” in U.S. national security strategy—including cancelling the SLCM-N program—and “reestablishing U.S. leadership in arms control.”<sup>6</sup> These goals appear wildly out of sync with the contemporary security environment, especially in the face of belligerent threats and actions by Russia and China. Indeed, the administration has acknowledged that “The security environment is characterized by an *increased* reliance on nuclear weapons in the strategies and forces of our competitors” (emphasis added).<sup>7</sup> So I’m not quite sure how to square the disconnect between our strategy and that of our adversaries.

Now, while a reversion to the principles espoused in the Obama Administration’s NPR may be considered a “win” by those who feared a more radical departure from long-established bipartisan consensus on nuclear policy, I would suggest that applauding the administration for not succumbing to the more radical demands of the disarmament community is the equivalent of damning with faint praise.

USSTRATCOM Commander Adm. Richard has spoken of the uniqueness of today’s strategic environment and the challenges of deterring two nuclear peer adversaries simultaneously. This requires answering some fundamental questions that the NPR might usefully address, such as:

- 1) Is arms control even possible or prudent given Russia’s previous treaty violations, its refusal to allow on-site inspections per New START Treaty requirements, and China’s refusal to engage in any arms control dialogue despite its massive strategic nuclear buildup?
- 2) Is the current U.S. nuclear modernization program of record sufficient to ensure credible deterrence and assure allies in two theaters against a Russia and China—working independently or in concert—that seek to overturn the established world order?
- 3) Is the nuclear posture recommended by the administration sufficient to maximize deterrence at any level of potential conflict? Or is it time to consider deploying additional non-strategic nuclear capabilities to prevent a theater conflict from escalating to nuclear use or to prevent limited theater nuclear use from escalating to the strategic level?
- 4) And finally, though this may be more relevant to the Missile Defense Review than the NPR, is it time to reconsider a homeland defense posture that increases emphasis on defending against peer adversary nuclear threats?

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<sup>5</sup> Plumb, op. cit.

<sup>6</sup> Department of Defense Fact Sheet, op. cit.

<sup>7</sup> Plumb, op. cit.

Now, while the devil is in the details of the hopefully soon-to-be-released NPR, the current strategic environment—which is much changed from the days of the 2010 NPR—suggests it is only prudent that any new review of U.S. nuclear posture address these fundamental questions.

In addition, the recent National Institute *Occasional Paper* co-authored by Keith Payne and me addresses the issue of “Deterrence in the Emerging Threat Environment: What is Different and Why it Matters.” It outlines various changes in the strategic environment that require a reconsideration of “how much is enough” for deterrence. As we note:

The emerging deterrence context is materially different from a bilateral context. It expands the uncertainties, imponderables and unknowns regarding the functioning of deterrence—which remains essential for U.S. and allied security, while being more uncertain. The basic principles of deterrence are enduring and unchanged, but the application of deterrence must adjust to different opponents and contexts. For U.S. deterrence planning, those differences must be taken into account in planning for deterrence at all levels, in planning for the possible failure of deterrence at all levels, and in planning for any future arms control negotiations.<sup>8</sup>

One can only hope that the considerations highlighted in this report will factor into the administration’s approach to the NPR.

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### **Keith B. Payne**

***Keith B. Payne is President of the National Institute for Public Policy, Professor Emeritus in Missouri State University’s Defense and Strategic Studies graduate program and former Deputy Assistant Secretary of Defense for Forces Policy.***

I appreciate the opportunity to discuss the forthcoming 2022 Nuclear Posture Review. My remarks reflect my own personal views.

I have not seen the 2022 NPR and have no special insight into it beyond what has appeared in the press. That said, at this point I have contributed directly or indirectly to three previous NPRs.

Based on that experience, I can make a few comments on the yet-to-be released, unclassified 2022 NPR.

My remarks today are on how we should judge the forthcoming NPR. What metric should we use?

There likely will be three different metrics used domestically to judge the 2022 NPR. These three different metrics will come from three different domestic constituencies.

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<sup>8</sup> Keith B. Payne and David J. Trachtenberg, *Deterrence in the Emerging Threat Environment: What is Different and Why it Matters*, *Occasional Paper*, Vol. 2, No. 8 (Fairfax, VA: National Institute Press, August 2022), p. xxiii, available at <https://nipp.org/wp-content/uploads/2022/08/OP-Vol.-2-No.-8.pdf>.

These constituencies will have sharply contrasting conclusions about the 2022 NPR because their judgments will be based on their very different measures of merit. Each will be correct in its conclusions given its particular measure of merit.

I will elaborate on each of these constituencies and their different measures of merit.

The first constituency will measure the 2022 NPR based on whether it advances their favored goal of nuclear reductions and disarmament.

This first constituency has had high expectations based on President Biden's past expressed positions, including support for a no-first-use declaratory policy.

This constituency appears to want:

- at least one leg of the Triad eliminated, usually the ICBM leg,
- the LRSO and SLCM-N eliminated,
- the B-83 eliminated,
- a delayed bomber program,
- fewer than the planned number of new SSBNs, and
- a U.S. "no-first-use" or "sole purpose" declaratory policy.

Based entirely on what I have seen in open print, this constituency is likely to be quite disappointed by the 2022 NPR—which apparently will continue much of the nuclear modernization program initiated by President Obama and sustained by President Trump. And it reportedly will not adopt a no-first-use or sole purpose policy.

For this constituency, the glass will be less than half full. A judgement likely warranted given this constituency's particular measure of merit.

I should add that despite this constituency's disappointment, I suspect that its criticism of the 2022 NPR will be muted given its general political affiliation with the current administration, just as the same constituency was disappointed by the Obama Administration's 2010 NPR, but mostly withheld public criticism. This contrasts sharply with its vocal condemnation of the Trump Administration's 2018 NPR despite its general continuity with the past. Go figure.

The second constituency will come from the community that has worked so hard to initiate and sustain the nuclear modernization program of record. It is an understatement to say that the existence and continuation of this modernization program reflects a decade-long, hard-won bipartisan political victory.

This second constituency's metric of goodness will be based on whether the 2022 NPR sustains all or most of the nuclear modernization program the Biden Administration inherited from the Obama and Trump Administrations.

Based on President Biden's past positions, this constituency's understandable fear is that the 2022 NPR could do real damage to its favored modernization program of record. However, given only what has been reported openly, the 2022 NPR appears to leave intact most of those programs. And development of the SLCM-N may survive its reported demise in the 2022 NPR.

For this constituency, the NPR will be deemed quite a success. The glass is more than half full. Given this metric of goodness, this conclusion will likely be warranted.

The third constituency will deem the first constituency's measure of goodness to be imprudent, and the second constituency's metric to be antiquated.

What this third constituency wants to see is whether the 2022 NPR will reflect deterrence business as usual in a shockingly new and different threat environment.

For example, will the 2022 NPR recognize the need for rethinking U.S. deterrence policy, and what does that mean for U.S. conventional and nuclear capabilities? This constituency will focus on this measure of merit that is very different from the first two constituencies.

Adm. Richard has said that USSTRATCOM is "furiously" rewriting deterrence theory given the dramatic changes of the new deterrence environment. Correspondingly, the third constituency will judge the 2022 NPR by whether it continues to express decades-old lines about reducing reliance on nuclear weapons, and advancing arms control in a threat environment that is so altered that our approach to deterrence needs to be rewritten furiously.

This third constituency's metric will include several critical questions about the 2022 NPR:

- Does its measure of "how much is enough?" for deterrence take into account the enormous and rapid expansion of Russian and Chinese nuclear capabilities and their commitments to political goals that demand crossing U.S. deterrence redlines?
- Does it take into account that both Russia and China are continuing to expand their nuclear arsenals and promote aggressive political and military roles for nuclear weapons rather than relying less on them?
- Does it take into account that Russia has violated virtually every nuclear arms control agreement it has signed, and now has reportedly decided to discontinue New START's on-site inspections after a two-year lapse?
- Similarly, does it take into account that China rejects traditional arms control in favor of secrecy and unfettered freedom to expand its forces?

In short, this third constituency wants to see if the 2022 NPR advances old measures of deterrent force adequacy and long-familiar political lines about reducing nuclear dangers that now are out-of-touch with the emerging threat environment.

My strong suspicion is that the heavy lifting in meeting this measure of merit will have to wait until the next review, and this 3<sup>rd</sup> constituency will be seriously dissatisfied by the 2022 NPR. I hope I am wrong in this regard—but will be surprised if I am.

I should note that it is possible to both appreciate the NPR's continuation of the modernization program of record and to be dissatisfied if it does not respond to the realities of the new threat environment. I am drawn to this position, and they are not necessarily mutually exclusive.



The problem is that there is a profound distinction between celebrating the continuation of existing programs, as if we know they now meet the needs of the times, and demanding a deeper dive into what is needed in the emerging threat environment.

In conclusion, based only my past experience and not having seen the 2022 NPR, I believe these three different constituencies will render these three very different judgements. Each will apply a different measure of merit, and each judgement will be correct on its own terms.

The critical key question that follows from this discussion, however, is which measure of merit is most prudent now, and thus which judgement regarding the 2022 NPR will be most reasonable?

I have made my personal views on that pretty clearly elsewhere and am glad to stop here.



# LITERATURE REVIEW

**Keith B. Payne, *Chasing a Grand Illusion: Replacing Deterrence With Disarmament* (Fairfax, VA: National Institute Press, 2023), 99 pages.**

Professor Keith B. Payne is without contemporary peer in the quality and quantity of his analyses of the history and continued need for nuclear deterrence. His latest publication, *Chasing a Grand Illusion: Replacing Deterrence With Disarmament*, has a novel focus—both for his own work and virtually all other studies of nuclear deterrence and disarmament.

Most opponents of nuclear disarmament dismiss the arguments of the other side in just a few sentences, as unworthy of serious analysis. In contrast, Dr. Payne's new study takes advocacy of nuclear disarmament as an important, if basically flawed, position. Thus, he has devoted almost all of this new study to analyzing the stated arguments for the elimination of nuclear weapons and the dangerous impracticality of those ambitions. The title of the study—*Chasing a Grand Illusion*—captures well Dr. Payne's approach; the belief in the possibility of peace through nuclear disarmament is definitely illusory, but important.

Another rare—and perhaps novel—feature of Dr. Payne's study is its foundation in his long years of thorough, careful study and analysis of nuclear deterrence. It is fitting that his acknowledgements section opens with an expression of gratitude to some professors and mentors who had a strong influence on his early professional development. This study could not have been written by someone without Dr. Payne's deep familiarity with relevant historical as well as contemporary analyses—see his discussion of the thoughts of St. Augustine! Perhaps even more important, it could not have been written by someone without Dr. Payne's profound understanding and analysis of the subject. Because he has no peers in that regard, only he alone could have written *Chasing a Grand Illusion*.

An especially noteworthy feature of Dr. Payne's analysis is that, just as he does not dismiss disarmament advocacy as unworthy of serious consideration, he does not condemn its foundational vision. He summarizes well his approach to the subject in the study's Preface:

A century after the publication of *The Great Illusion: A Study of the Relation of Military Power to National Advantage*, Sir Norman [Angell]'s "Great Illusion" appears to have been replaced by a wholly different illusion. That new *Grand Illusion* is the contemporary proposition offered by church-based and secular advocates that nuclear disarmament can replace the need for nuclear deterrence. ... my conclusion that this proposition is an illusion does not reflect any lack of appreciation for the vision of a cooperative world order and nuclear disarmament. It does, however, reflect deep skepticism regarding its plausibility as envisaged, and thus comparable skepticism about the prudence of any U.S. policies that would prioritize that vision over sustaining deterrence.<sup>1</sup>

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<sup>1</sup> Keith B. Payne, *Chasing a Grand Illusion: Replacing Deterrence with Disarmament* (Fairfax, VA: National Institute Press, 2023), pp. 7-8.



The core problem with the “Grand Illusion,” is not the desirability of its vision, but the impossibility of its realization absent fundamental changes in human nature. As Dr. Payne stresses throughout his study, “you can’t get there from here.”

Religious and secular arguments for replacing nuclear deterrence with nuclear disarmament claim that nuclear deterrence is both morally wrong and profoundly dangerous. The history of the past 75 years suggests just the opposite. While it is impossible to prove that nuclear deterrence has prevented major conflict, it is difficult to imagine that the profound U.S.-Soviet hostility of the Cold War and perhaps the renewed contemporary U.S.-Russian hostility would not have resulted in active conflict if it were not for nuclear deterrence. Moreover, the early history of the Nuclear Nonproliferation Treaty (NPT) makes clear that important U.S. allies agreed not to acquire nuclear weapons primarily because of the security provided by U.S. extended deterrence. For example, in January 1969, National Security Council Staff member Spurgeon Keeney informed new National Security Advisor Henry Kissinger that the Johnson Administration had told the West German Government that it “would have adequate reason to exercise its rights under the [NPT] withdrawal clause (Article X) in the unlikely event that NATO should lapse.”<sup>2</sup>

Some disarmament advocates might point to the long, successful history of the North Atlantic Alliance and the European Union (EU) as evidence that it is possible for previously-hostile nation states to transform their relations dramatically. Indeed, the trust, confidence and cooperation that developed among the members of NATO and the European Union could never have been predicted during the first half of the 20<sup>th</sup> century.

However, the experience of the United States, Canada and eventually most of Europe does not suggest that a comparable transformation is possible worldwide. Even if it were, it would still not provide the foundation necessary for global nuclear disarmament.

Those conclusions are based on five closely-related factors that were essential for the creation and success of NATO and/or the EU, whose absence on a global scale is stressed by Dr. Payne. First was the devastation of two world wars in less than 40 years that persuaded France, Germany, Italy and the Benelux countries that they could never tolerate another war among them. Second was the strong, but benign, military and political leadership of the United States whose commitment to strengthening and protecting Western Europe was essential to its partners’ security. Third, especially for NATO, was the existence of a common enemy in the Soviet Union which made collective defense essential. The fourth factor was provided by the common culture, political and ethical values that were shared among the NATO and European Community members despite the past history of conflict among many of them. Finally, NATO and EU membership is entirely voluntarily. France could decide in 1966 to leave the military arm of the Alliance, and then in 2009 to return. Britain could decide in 2016 to leave the EU. Such freedom would be incompatible with the certainty of a new international order that would be required for nuclear disarmament.

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<sup>2</sup> Spurgeon Keeney, “Memorandum for Dr. Kissinger: Provisions of the NPT and Associated Problems,” The White House: Washington, D.C., January 24, 1969, p. 7.

Dr. Payne's thorough analysis of religious and secular arguments for nuclear disarmament provides an essential addition to the literature on the essential nature of the requirement for nuclear deterrence for the foreseeable future, and potentially for all time. The case for continued reliance on nuclear deterrence is made stronger and clearer than ever before by this thorough analysis of the reasons for, and the impracticality and dangers of, nuclear disarmament. This serious treatment of the issue is far more persuasive than simple dismissal of disarmament advocacy.

Reviewed by Susan J. Koch  
former Senior Advisor, Department of State

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**Ashley J. Tellis, *Striking Asymmetries: Nuclear Transitions in Southern Asia* (Washington, DC: Carnegie Endowment for International Peace, 2022), 303 pp.**

The issuance of increasingly brazen nuclear threats by both Moscow and Beijing has again elevated attention on the issue of nuclear deterrence and the risks of potential nuclear conflict. Understandably, analysts and commentators are focused on the possibility that Russia may employ nuclear weapons to avoid defeat in Ukraine and China may resort to nuclear use in a conflict over Taiwan. As both major nuclear powers seek to challenge the United States in this new trilateral nuclear context and overturn the established world order, the prospect of greater global instability grows. Yet, there is another trilateral nuclear balance that is often overlooked, though may prove similarly perilous—that among India, Pakistan, and China.

In his book, *Striking Asymmetries: Nuclear Transitions in Southern Asia*, respected scholar, analyst, and former U.S. government official Ashley Tellis reviews the evolution of nuclear forces and deterrence strategies among the three regional players. With his extensive background and experience in the area and his knowledge of regional dynamics, Tellis is well qualified to offer a thoughtful and comprehensive assessment of this topic. His analysis is shaped by conversations with senior military and civilian decision makers in each country. Although much about deterrence is necessarily speculative, the picture he paints of developments on the Indian subcontinent is comprehensive and informative, though not all readers may share his assessments or conclusions.

Tellis' assessment of China's nuclear posture credits Beijing's long-standing emphasis on a "minimum deterrent" to the fact that China was not a "principal protagonist" in the bipolar Cold War international competition. However, he acknowledges that recent Chinese nuclear developments "prove that China is transforming its nuclear deterrent to meet the demands of a new era that will be defined centrally by U.S.-Chinese rivalry at the core of the international system." Nevertheless, he tends to discount the prospect that China will abandon its No First Use policy or that Beijing is seeking a "sprint to parity" with the United States. His conclusion that China's nuclear arsenal "will remain smaller than the capabilities

maintained by first-rank nuclear powers such as the United States and Russia” seems to downplay the possibility that China’s ICBM force alone—under current expansion plans—could exceed the total number of deployed U.S. and Russian strategic weapons accountable under the New START Treaty. Overall, he concludes that China “does not seem to be aiming for quantitative parity with U.S. nuclear forces,” nor does Beijing seek to make nuclear competition with the United States the “centerpiece” of its nuclear strategy.

To his credit, Tellis acknowledges the uncertainties surrounding Beijing’s nuclear posture. Nevertheless, he concludes that China maintains a “steadfast conviction that the fundamental utility of nuclear weapons lies in deterring nuclear attacks and nuclear coercion rather than nuclear warfighting.” Though India continues to eye China warily, he argues that New Delhi’s approach to nuclear deterrence is similar in that both countries share a “common conviction that nuclear weapons are primarily political instruments useful to deter nuclear attacks and nuclear coercion by other nuclear powers rather than being useable tools of war” and that “their efficacy derives primarily from possession rather than from use.” This conclusion suggests both China and India subscribe to the theory of deterrence popularized by Nobel laureate Thomas Schelling that deterrence relies on a “threat that leaves something to chance.” It also appears to echo the conclusions of the U.S. Catholic Bishops who argued in 1983 against the use of nuclear weapons in their Pastoral Letter but concluded that their possession could contribute to deterrence because even a “centimeter of doubt” regarding their employment would be sufficient to deter. Although both India and China espouse nuclear No First Use policies, India’s official nuclear doctrine clearly states that it will “retain the option of retaliating with nuclear weapons” in the event of a WMD attack.

Tellis cites the ongoing debate in India over its No First Use policy, which he correctly notes is “an assurance that is unverifiable.” Yet he considers this NFU policy “realistic” and “likely to persist” despite growing concerns over Pakistan’s nuclear developments. He argues that India’s leaders believe a nuclear threat to India remains “remote” and that India is capable of responding to any nuclear attack with sufficient force to be a credible deterrent. This may explain, in part, India’s “painfully slow” emphasis on missile defenses, as Tellis contends New Delhi remains focused on “preserving deterrence through the threat of retaliation.” As a former Pentagon official who personally engaged the Indian government two decades ago regarding the possibility of missile defense cooperation with the United States, I find Tellis’ assessment about the relative lack of missile defense progress since then to be reasonable.

India seeks to deter China, and Beijing has helped advance Pakistan’s nuclear program. While “India’s nuclear weapons program remains remarkably placid,” Tellis notes that “The Pakistani military is unfettered by political constraints from its civilian government and enjoys considerable autonomy where nuclear force decisions are concerned.” Pakistan, he explains, “is moving as fast as its resources and its efficiency permit to build the largest, most diversified, and most capable nuclear arsenal possible.”

Tellis argues that—despite public pronouncements of “nuclear restraint” and the desire for “minimum credible deterrence”—Islamabad’s nuclear doctrine is focused more on the

potential use of nuclear weapons, which serve as a counterbalance to India's conventional force dominance. Moreover, Tellis discerns a doctrinal shift from "minimum deterrence" to what he calls "full-spectrum deterrence," leading Pakistan toward an expansive, "open-ended" nuclear arsenal similar to China's approach, along with the desire to develop a triad of nuclear delivery systems on land, at sea, and in the air. (However, he acknowledges Pakistan's assertions that its nuclear program 'is not open ended.') Nevertheless, his characterization of Pakistan's nuclear program as focused on "a large number of diverse and survivable nuclear weapons" bears more resemblance to the deterrence thinking of eminent strategist Herman Kahn than to Thomas Schelling.

In short, Tellis sees significant asymmetries in the nuclear postures of China, India, and Pakistan, concluding that Pakistan "perhaps represents the best exemplar of a country that desperately holds on to its nuclear weapons because they exemplify the indispensable guarantee of its security." In this context, he argues that, unlike India and China, "Islamabad is convinced that its security... cannot be assured either by diplomacy or by conventional military power alone" and is unlikely to ever forego its nuclear capabilities. Yet it is not self-evident that either India or China would agree to nuclear disarmament even under the most favorable of circumstances.

In *Striking Asymmetries*, Tellis reviews the evolution of nuclear forces of the major regional actors in considerable detail, along with their organization, operational posture, and command and control arrangements. He assesses the nuclear postures of each country and their impact on deterrence stability. He challenges the notion that India and Pakistan are engaged in an arms race or that India and China will engage in one as well, despite their historical animosities and nuclear programs. Moreover, he concludes that the likelihood of a nuclear crisis between Beijing and New Delhi is "relatively low." While some of his conclusions are debatable, the research and scholarship he brings to this volume are commendable.

After comprehensively weighing a variety of deterrence factors, Tellis concludes that despite asymmetries in the objectives, capabilities, and nuclear postures of China, India, and Pakistan, "the dangers of nuclear instability may be less acute than many widely voiced fears suggest." Yet he caveats this conclusion by noting that there are "uncertainties" that could change this assessment. This includes potential qualitative changes in their respective postures, such as more robust missile defenses, the development of greater hard-target counterforce kill capabilities, or "asymmetric intelligence transparency" vis-à-vis their rivals.

Finally, Tellis notes that nuclear developments in southern Asia pose challenges for U.S. policymakers and that Russian actions in Ukraine could embolden China in a crisis over Taiwan (or possibly even India). However, his recommendations for U.S. policymakers are short on practical specifics. For example, he notes that "the United States ought to begin thinking now about how nuclear weapons ought to be utilized to prevent any unfavorable outcomes to [U.S.] interests." At a generic level, this clearly makes sense, but the reader might have hoped for something more concrete and useful to those who have the serious responsibility of adapting U.S. nuclear strategy and posture to contemporary international



realities. Nevertheless, *Striking Asymmetries* is well worth the read for the insights it provides on a region whose nuclear politics are often overshadowed by more urgent concerns.

Reviewed by David J. Trachtenberg  
National Institute for Public Policy

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**Alexander Lanoszka, *Military Alliances in the Twenty-First Century* (Cambridge, UK: Polity Press, 2022), 272 pp.**

Alliance politics has been an understudied field of international relations since the end of the Cold War. This could be due to perceptions of diminishing threats, America's unipolar moment, and, until relatively recently, a preoccupation with studying terrorism. These perceptions may have created an impression that alliances are self-sustaining and do not require significant political, military, and diplomatic work beyond the habitual engagement among allies forged in the heat of the Cold War. This impression has come to an end, however, as strategic competition and potential U.S. conflict with Russia and China are back at the forefront of debate. This context gives a new impetus for updating the U.S. understanding of alliance dynamics because allies provide the United States with a distinct advantage over (potential) adversaries, and the U.S.-backed global alliance structure provides an asymmetric source of power. *Military Alliances in the Twenty-First Century* by Alexander Lanoszka, an Assistant Professor in the Department of Political Science and in the Balsillie School of International Affairs at the University of Waterloo, is an excellent source for those seeking to increase their understanding of alliance politics.

The book is divided into six parts that discuss major themes in alliance politics: alliance formation, the logic of entrapment, the logic of abandonment, questions related to burden-sharing, how alliances wage warfare, and how alliances end. In each of the chapters, Lanoszka discusses "conventional wisdom" related to alliances and checks it against empirical evidence. In doing so, the author dispels several myths related to alliance politics. For example, he demonstrates that an alliance dilemma, or a situation in which a guarantor of an ally's security emboldens the ally to pursue bolder foreign policy and potentially entrap the guarantor in a conflict, is not endemic to all alliances. In fact, it is much less prevalent than policymakers may think. Because of concerns over entrapment, policymakers are on the lookout for the danger signs and seek measures to mitigate its risks, e.g., by keeping alliance treaties vague to not automatically commit a state to active military participation in an ally's conflict.

Lanoszka also explores the well-rehearsed debates on why some states contribute more to alliances than others. He notes the tension between the need to sustain investments in technologically advanced (and thus more expensive) weapons and the efficacy of nuclear deterrence, which, in the author's opinion, makes a large-scale conventional war less likely.

This perceived lesser likelihood of war makes investing in conventional military capabilities less pressing and more difficult to sustain amid competing fiscal priorities.

Lanoszka observes that alliances rarely fight their primary adversaries anymore. He also notes that increases in allies' aggregate military capabilities do not automatically translate into increases in an alliance's military effectiveness. One needs only look at a long list of restrictions that some U.S. allies imposed on their forces that operated in Afghanistan to appreciate this aspect of alliance relationships. And while conventional wisdom postulates that alliances are only useful as long as the strategic circumstances that led to their emergence hold, the author notes that alliances often continue despite the diminishment of conditions that gave rise to their existence in the first place. Alliances can and do outlast the original threat they were formed to counter and can adapt to meet changing needs, as the example of the North Atlantic Treaty Organization illustrates.

The book makes a significant contribution to academic and policy discussions by not only succinctly reviewing major scholarship on alliance politics to date, but also applying empirical evidence to different arguments regarding the creation, functioning, and death of alliances. In doing so, the book challenges some of the conventional wisdom regarding alliance politics and identifies factors that are important for alliance dynamics. Due to the increasing importance of alliances and their management in an emerging era of great power multipolarity, the book is a must read for policymakers and scholars alike.

*Reviewed by Michaela Dodge  
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**Toby Dalton, Megan DuBois, Natalie Montoya, Ankit Panda, and George Perkovich, *Assessing U.S. Options for the Future of the ICBM Force* (Washington, D.C.: Carnegie Endowment for International Peace), 28 pages.**

President Biden and the U.S. Congress reportedly agree that the United States should not only retain intercontinental ballistic missiles (ICBMs), but also carry out the plans set in motion by Presidents Obama and Trump to replace the current Minuteman III ICBMs with, what was recently christened, the Sentinel ICBM program. The bipartisan support for modernizing U.S. ICBMs, however, does not mean that the decision is without controversy.

The U.S. Department of Defense awarded a contract to the Carnegie Endowment for International Peace to "consider the relative risks and benefits of options for the future U.S. intercontinental ballistic missile force." The authors of the report are quick to note, however, that the scope of the award did not allow them to "assess *whether* the United States should deploy ICBMs at all or change its nuclear strategy and doctrine." (Emphasis in the original)

To accomplish their task, the report's authors invited a range of experts from across academia, think tanks, and current and former government officials, including this reviewer, to participate in a series of workshops and present their views. The report's focus is not on

summarizing the views of the participants as much as referencing those views in the context of the authors' recommendations and findings. The workshop participants were not, to this reviewer's knowledge, consulted on the authors' findings and recommendations.

The authors center their report around three questions. Are there viable alternatives to the Ground Based Strategic Deterrent (the previous name for Sentinel), including life-extending Minuteman III? Are there any new factors that should make the Department of Defense reconsider its commitment to a new ICBM program? And, which issues should rise to the level of the President regarding ICBMs?

On the first question, the authors, in essence answer "No," there is no viable alternative to the planned new ICBM. Even if life-extending a viable Minuteman III force was technically possible, which, as the authors note, Department of Defense officials provided information that indicated it was not, presidential guidance on the performance requirements for the ICBM force makes the Minuteman III option unacceptable. Nevertheless, the authors argue that the Department of Defense should commission an independent study, with an unclassified report, to grade its homework from the 2014 Analysis of Alternatives on ICBMs. The authors claim this would boost "public confidence" in the DOD approach, but it is far from clear what a retrospective study would accomplish in this regard since the approach has been supported by presidents and Congress on a bipartisan basis for eight years now.

Second, the authors explore the possibility of U.S. ICBMs becoming vulnerable to a large-scale conventional attack via an adversary's hypersonic boost-glide missiles over the next few decades. In the authors' estimation, if this possibility came to fruition, a U.S. president could face the unpalatable choice of launching U.S. ICBMs before they are potentially destroyed, thus initiating a nuclear strike, or riding out the attack and hoping that the missiles survive. They claim that this possibility should throw into question the U.S. commitment to retaining silo-based ICBMs.

The authors are right to point out that DOD should consider silo vulnerability to potential future hypersonic threats, and official commentary on this point would be welcome, but the authors do not subject their hypothetical scenario to some basic critical questions, such as: is it likely that Russia or China will have enough intercontinental-range *conventional* hypersonic weapons to attack every one of the 450 U.S. ICBM silos? Or, if they are air-launched weapons, how many bombers would be necessary to carry what would likely be, at minimum, 900 conventional missiles? Even more fundamentally, what logic would lead an adversary to attempt what amounts to a conventional first strike, but only against U.S. ICBMs? Also, the authors leave unaddressed the possibility of terminal missile defenses to protect U.S. ICBM fields. Admittedly, the authors cannot address all of these points in a small study, but raising the possibility of a conventional first strike on U.S. ICBM fields in the future without discussing its viability is an unforced error. On this point, readers should keep in mind the finding of the President's Commission on Strategic Forces, also known as the "Scowcroft Commission," in 1983, which acknowledged the possibility of silo-based ICBM

vulnerability as “a matter of concern,” but believed that concern would “be far more serious” were it not for the existence of the triad as a whole.<sup>3</sup>

Third, the authors focus on “further factors for high-level consideration”—again, more in the spirit of raising their doubts about the wisdom of relying on silo-based ICBMs versus sticking to the stated purpose of the report, the risks *and benefits* of future ICBM options. In other words, there is little effort in Carnegie’s report to examine ways to bolster the deterrence value and safety of U.S. ICBMs, even if retaining silo-based ICBMs does not appear to be their preferred policy option. Instead, the authors summarize the familiar objections and counters to the issues of ICBM overflight of Russia and launch under attack options. The “Arms Control and Disarmament” section is notable in that the authors claim U.S. ICBMs carrying only one re-entry vehicle are “stabilizing,” and uploading additional warheads should be “seen as something else,” i.e., destabilizing. Two remarks are appropriate here. First, if the authors believe ICBMs with multiple warheads are destabilizing, they should have at least acknowledged that the backbones of Russia’s and China’s strategic nuclear arsenals are ICBMs with multiple warheads. Second, even if the United States uploading additional warheads on its ICBMs was destabilizing, how does that purported risk compare to the risks of keeping the U.S. nuclear force size constant as both Russia and China race upward?

Just before their conclusions, the authors let slip perhaps one of their most fundamental assumptions that permeates the analysis in the report—it is instructive for general readers to understand. They state: “The challenge will then be to redress Russia’s and China’s worst-case assessments that the capabilities the United States deploys to deter *both* countries could or would be used to defeat *either one* of them.” (Emphases in the original) This contrasts sharply with a recent *Occasional Paper* by Keith Payne and David Trachtenberg in which they assess one of the fundamental challenges facing the United States is deterring Russian and Chinese nuclear strikes, whether by one state alone or in tandem, perhaps in two different theaters simultaneously.<sup>4</sup> The former concern is focused on reassuring adversaries while the latter is focused on deterring adversaries. One can argue that both concerns are valid, but the difference in emphasis is instructive and highly consequential for U.S. policy.

The authors end their report with four conclusions. First, that presidential guidance should determine how each nuclear weapon system contributes to a variety of objectives, including “deterrence effectiveness, damage limitation if deterrence fails, mitigation of escalation risks, and the predictability that arms control enables.” (Strangely left out of this list, whether intentionally or not, are two other canonical objectives: assurance of allies and hedging against unexpected developments.)

Second, the authors conclude, “in a strategically and economically rational world, cost-effectiveness should be the decisive consideration.” This is a strange assertion to say the least. Put charitably, the authors may be trying to say that if all other factors are equal between multiple ICBM options (all options will deter effectively, assure allies, hedge, etc.),

<sup>3</sup> President’s Commission on Strategic Forces

<sup>4</sup> Keith B. Payne and David J. Trachtenberg, *Deterrence in the Emerging Threat Environment: What is Different and Why it Matters* (Fairfax, VA: National Institute for Public Policy, August 2022), *Occasional Paper*, Vol. 2, No. 8, available at <https://nipp.org/wp-content/uploads/2022/08/OP-Vol.-2-No.-8.pdf>.

then the deciding factor should be the cost. That, indeed, would be rational. Yet, surely the authors know that other factors are never equal in the real world. Cost cannot, and should not, be granted automatic veto power over decisions about weapon procurement—it is an important consideration to be sure, but it cannot be the ultimate arbiter. The authors leave a parting shot in the section by concluding that “there is little political incentive to reduce defense spending by pushing for the lowest-cost programs.” This will come as news to many in the nuclear policy field who have witnessed firsthand the consequences of cost reduction efforts, such as the decades-long deferred maintenance for the U.S. nuclear infrastructure and successive life-extension programs (not the least of which is the now 50-year-old U.S. Minuteman III).

The authors’ third and fourth conclusions are more defensible: that the U.S. Department of Defense should share more unclassified information pertaining to U.S. ICBMs, and that potential silo vulnerability in the future should inform analyses about alternative ICBM-basing modes.

In truth, if this report had focused on the potential costs and benefits of shifting the U.S. ICBM force to a different (i.e., mobile) basing mode in the future, the resulting product would have been of greater analytic value for the defense community. Regrettably the authors chose a different direction. Instead of focusing on the future, the authors devote too much space to an ultimately futile discussion of an eight-year-old, classified, Analysis of Alternatives document. Given the seismic shift underway in the security environment, U.S. nuclear policy analysts cannot afford to undertake myopic quests for budget savings at the cost of deterrence effectiveness.

*Reviewed by Matthew R. Costlow  
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**Beatrice Heuser, *War: A Genealogy of Western Ideas and Practices* (Oxford, UK: Oxford University Press, 2022), 448pp..**

War is simultaneously a conceptually simple and intellectually overwhelming endeavor. It can be, and on innumerable occasions has been, conducted with stone and bronze weapons by warrior practitioners lacking any meaningful academic theory of war. Indeed, organized violence occurred for millennium after millennium before anyone had the capability to use written language to speculate about fighting. One does not require an extravagantly multifaceted theory of nutrition to eat a piece of fruit, or a similarly sophisticated theory of war to smash a cranium with a club.

An institution that is both monstrous and central to human affairs, however, is not easily overlooked. Most foundationally, societies and individuals place war in a moral framework, incorporating it into their fundamental understanding of fate and justice. The knowledge that one is *vulnerable* to war—that violence may shatter one’s own everyday world, leading

to every conceivable horror—is a terrible burden. Even emperors may be cast down, and the observable reality that mighty polities rise and fall by violence has been a subject of fascination for thinkers throughout the world.

Attempting to analyze how even one small, relatively isolated culture thinks about war is a daunting task; addressing many distinctive cultures over a vast physical space and across a long time is excruciatingly difficult. This makes Beatrice Heuser's *War: A Genealogy of Western Ideas and Practices* a particularly notable work of scholarship. Heuser, who holds the Chair in International Relations at Glasgow University, is willing to take on big challenges, and she ably covers an immense amount of multidisciplinary material in this work.

Given the incredible size of her subject, the author of course cannot explore every facet in depth; her narrative moves speedily, always in search of ideas and their practical application. She carefully maps out her interpretation of how ideas have traveled, while noting that subtle changes—such as the interpretation of the meaning of words—accumulate and progressively alter cultural understandings. Her sources and discussion are sweeping: the book ranges from discussions of Biblical interpretation to combat robots.

Heuser is critical of the tendency in Western thought for binary categorizations related to war—just versus unjust war, interstate versus intrastate warfare, and so forth. She emphasizes the contradictions that invariably occur when actors use organized violence to further their objectives. This point is well-taken. An individual may simultaneously be a drug trafficking warlord running a small, quasi-independent polity and a member of their country's parliament; occasional border clashes between two countries do not equal a state of war, even if that is little comfort for the families of the dead; and the Russian Federation and the United States are, formally, at peace with each other, even though American weapons claim Russian soldiers' lives every day. Heuser is right to emphasize how amorphous—and difficult to abolish—war is in practice.

In the years immediately following the end of the Cold War, many scholars treated war as a fading human institution that would soon be confined to the political margins—the business of drugged-out militiamen wandering failed states and similar low-rent characters. Insofar as great powers would engage in warfare, it was to be as bringers of order: leading peace operations, hunting down the leaders of terror groups, and otherwise ensuring that the world of the latter twenty-first century would be a gleaming neoliberal Tomorrowland. Like counterinsurgents operating at the global level, the wealthiest and most powerful states would export security to more and more of the world, driving war into the shadows.

To say that such thinking represented the triumph of hope over experience is a titanic understatement, yet it was enormously popular—and its influence almost certainly was tragic. Instead of approaching the post-Soviet global security environment as a priceless and delicate gift, a political Fabergé egg whose survival would require exquisite care and wisdom, the most well-situated states simply assumed that favorable conditions would continue forever. There was no need for caution, because truly excruciating outcomes were impossible—the world (or at least its more prosperous countries) was postbellum, and major states would not fight each other ever again because *something*—a quite slippery, difficult-to-characterize something—had shifted and history had moved past war. Yet,



although there still has not been a great power war as such, the possibility that peace could collapse now is widely dreaded. For millions, great power war shifted in mental categorization from “unimaginable” to “frighteningly plausible” as political conditions changed. Like war, human fickleness and impressionability have not been abolished.

Now, having never left, war is back. But it exists in a technological environment radically different from that of the past. A world filled with people raised with (and to a very considerable extent by) interactive screens is unlike any experienced by humanity before. (More than a century after their invention, it is still difficult to gauge the impact of movies on the human propensity to engage in organized violence.) In short, the future is deeply unknowable and not reliably predictable, yet it is imperative that there be no Third World War.

Thoughtful and serious scholarship about war cannot guarantee a peaceful future, but it perhaps is prerequisite to one, and *War* is a highly impressive work—rigorous and deeply scholarly, yet bold and challenging in its argument. It is also, especially given the complexity of its topic, highly readable, as Heuser is a surefooted author who avoids unnecessary jargon and takes care to ensure that the reader can follow her brisk pace. *War* is an excellent book, and highly recommended.

*Reviewed by C. Dale Walton  
Lindenwood University*



# DOCUMENTATION

## **Document No. 1. Selections from Hearing to Consider the Nomination of General Anthony J. Cotton, United States Air Force, for Reappointment to the Grade of General and to Be Commander of United States Strategic Command, before the Senate Armed Services Committee, September 15, 2022<sup>1</sup>**

### **INTRODUCTION**

Good morning, Chairman Reed, Ranking Member Inhofe, and distinguished members of the committee. It is truly an honor to appear before you today as a nominee to be the next Commander of United States Strategic Command (CDRUSSTRATC). I am very grateful to the President, Secretary of Defense, and the Chairman of the Joint Chiefs of Staff for their trust and confidence in me for this nomination.

We must deter the pacing challenge of China and address the acute threats presented by Russia. It is both our conventional and nuclear capabilities, along with a crucial support from our allies and partners, that underpin our strategic deterrence. Our Nation's nuclear forces continue to be safe, secure, reliable, and effective. As we bring the B-21 Raider, the Columbia Class Ballistic Missile Submarine, Sentinel Intercontinental Ballistic Missile (ICBM) Weapon System, and Long Range Standoff (LRSO) Weapon online, we will continue to ensure the credibility of deterrence for decades to come. Underpinning all of this is our nuclear command, control, and communication systems known as NC3. While the current system is secure and resilient, modernization and sustainment of this capability is just as important as the weapons system platforms themselves. If confirmed, I will use my authorities to ensure that NC3 systems continue to outpace the threat.

We will always build in margin. We will always have hedge. The mission of United States Strategic Command (USSTRATCOM) is to deter adversaries and employ force to guarantee the security of our Nation and our allies. If confirmed, I will work with relevant agencies across the U.S. government and within the Department of Defense, collaborate closely with civilian leaders, and directly with my fellow Combatant Commanders as we monitor the global threats and execute operations in accordance with the *National Defense Strategy* (NDS). I commit to commanding a resilient Joint Force capable of conducting multi-domain operations focused on deterring aggression, and if necessary, defending this Nation. I look forward to working with Congress and the members of this committee to address the strategic challenges of this great Nation.

### **ON THE SEA-LAUNCHED CRUISE MISSILE (SLCM)**

If confirmed, my job is to be able to present the decision maker, the President of the United States, with a wide variety of options to be able to meet challenges that we have seen to be warranted due to a requirement. In this case, I would want to be able to present the

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<sup>1</sup> The content was lightly edited for consistency and clarity. The headlines were not a part of the testimony or Advance Policy Questions.



maximum amount—the maximum capabilities that are available. When it comes to SLCM, I must admit that I would like to be able to do, like my predecessors before, to make an assessment on that. If it meets—if it is able to meet that capability gap that is there, I would like to be able to see that and assess that so I can make my best military assessment on the specific weapon system itself because I am not familiar with that weapon system on the specifics of what it can do with the capabilities to close the capability gap that we might perceive.

So, the Chairman, the Vice Chairman, and the current CDRUSSTRATC absolutely understand where they are on the endorsement of continuing. [...] From my perspective, I absolutely understand that they are looking at the capability gap to be able to do that. The only thing that is different between them and I is I have yet to do an assessment on the weapons system itself. But absolutely understand where they are on being able to have a capability gap that is filled that they have seen. I have seen that capability gap as well, and I endorse the fact that we need to fill that capability gap.

## **ON A TRIPOLAR NUCLEAR ENVIRONMENT**

The current force that we have today, we are ready to execute today. What I would say is, if confirmed, and I know this is continually happening today, is we must evaluate what the additional risks are and what the adversary is doing to ensure two things. First, to evaluate to make sure that the nuclear strategy that we have within USSTRATCOM can meet the objectives, the national objectives that are presented before us. So the first thing I would do, if confirmed, is to ensure—because sir, the first time since 1945, the first time for us as a Nation, we have two near-peer adversaries. We have always put together a nuclear defense strategy that has one nuclear power. We are going to have to roll up our sleeves to ensure that we are doing everything we are that we can strategy wise with Strategic Air Command—excuse me, between USSTRATCOM to ensure that we are meeting the objectives to be able to have and take care of two near peers. First time in history that we have ever seen that.

What is different is two near peers that actually act differently. From a doctrines perspective, we understand Russian nuclear theory and nuclear doctrine. Minimal deterrence was what we thought of when we talked of China as recent as 2018. We have seen the incredible expansiveness of what they are doing with their nuclear force, which does not, in my opinion, reflect minimal deterrence. They have a bona fide triad now. So we are going to have to understand more deeply the Chinese nuclear strategy.

The challenges facing USSTRATCOM are unprecedented. For the first time in history, the Nation will soon face the need to deter two nuclear capable competitors who will have the capability to unilaterally escalate a conflict to any level of violence, in any domain, worldwide, at any time and with any instrument of national power. The 2022 NDS directs the Department to act urgently to sustain and strengthen deterrence, with the People's Republic of China (PRC) as our most consequential strategic competitor and the pacing challenge for the Department. Russia also poses acute threats, as illustrated by its brutal and unprovoked invasion of Ukraine. This strategic environment requires an integrated

deterrence approach from the Joint Force, working seamlessly across warfighting domains, theaters, spectrum of conflict, other instruments of U.S. national power in our network of alliances and partnerships.

The current program of record is the absolute minimum USSTRATCOM requires to provide effective strategic deterrence today. As the threats from Russia and China continue to grow, we must continuously evaluate our nuclear force structure, capacity, and capability to ensure strategic deterrence remains credible and effective. Any identified nuclear capacity and capability gaps should be addressed as soon as possible to provide the Joint Force an effective military capability able to achieve Presidential objectives and to demonstrate national resolve in response to growing threats.

This is a point of continual reevaluation. As the world becomes more diverse and threatening, we must continuously evaluate our nuclear force structure, capacity, and capability to ensure strategic deterrence remains credible. Today, with our current programs of record, we are in a good place. We are modernizing our systems and transitioning our nuclear forces and capabilities to ensure our security. I believe more frequent assessments than the current four-year cycle will be required to ensure we can identify, mitigate, and properly address any gaps in a timely manner, as necessary. If confirmed, I will make a commander's assessment on the entire strategic deterrence portfolio to ensure our requirements are sufficient to address the threat.

## **ON NUCLEAR WEAPONS MODERNIZATION**

I think the challenge of USSTRATCOM is to ensure that we sustain legacy systems as we transition to the modern—to our modernized systems. That is going to be key for us. In order to do that, it is going to take the full power of government to be able to pull that together, especially when we are talking about the central weapons system and the Columbia and all of the five that I have under my purview as a current Joint Forces Air Component Commander working for the CDRUSSTRATCOM. So being able to do that, sir, I think a couple of the key things are going to be required from us. We are going to need stable, predictable, and adequate, and timely funding. My job, if confirmed as the CDRUSSTRATCOM, is to ensure that we also have stable requirements. Because what we are going to see, and what I think is going to be great for us with the new modernized systems, is the fact that we are by design building in a system that we know will last for decades because that is built into the system. So the modularity that we will see will be able to keep pace with the threats that we will see in the future. What we need to do in the meantime, though, is to sustain the legacy system that still—that is still safe, secure, and effective as we make that transition.

As we are seeing the modernization programs within the nuclear portfolio, I would venture to say that it is probably being seen across the Department of Defense, but in particular for the nuclear portfolio. Even as we are seeing the industry partners do the Herculean efforts and work in moving the programs along at a great pace, what we are now finding is the realities of supply chain limitations and supply chain shortfalls. We had a great discussion and a good example—or some components that are U.S. made components with

U.S. made subcomponents that are still taking what would be on average, maybe 10 days to source, that are now taking up to 90 days to source. So by definition, if you look at what we need to do in regards to maintaining a flow and schedule to get our new modernized systems online, you know, if you introduce that into the flow, those delays right there cause me concern. And I think it is going to take everyone to understand how we can close the gap on supply chain management and ensure that we can get the supplies to the industry partners that are trying to modernize this force.

I fully support modernizing our strategic nuclear deterrent capabilities across the triad, the supporting stockpile and infrastructure, Nuclear Command, Control, and Communications, and our Integrated Tactical Warning/Attack Assessment capabilities. Many of these efforts are just-in-time with little to no margin for delay.

I support the need to sustain and modernize our nuclear triad and its supporting infrastructure, along with the continued development of current and future capabilities required to deter strategic attack in all domains against the U.S., Allies, and partners.

The current program of record is the absolute minimum USSTRATCOM requires to provide effective strategic deterrence. The 2022 *Nuclear Posture Review* (NPR) affirms previous NPR findings that the nuclear triad and the associated nuclear command, control, and communications system remain the most effective way to maintain strategic deterrence against existing and future threats. Stable, consistent, and on-time funding is critical both to sustain the legacy nuclear triad and to execute nuclear modernization programs on schedule in order to deliver the future nuclear deterrence capabilities required to address rapidly expanding national security threats.

Nuclear modernization continues to be a top priority for the Department of Defense. The nuclear triad has credibly deterred adversaries and assured Allies for more than six decades. To mitigate the simultaneous transition risk, we must maintain and sustain our existing nuclear enterprise until replacement systems are fully fielded. Doing this provides needed triad flexibility and offsets risks resulting from unanticipated issues or emergent challenges. Where possible, we must pursue every opportunity to accelerate modernization.

While today's stockpile is safe, secure, and militarily effective, concerns exist as many replacement programs are just-in-time or late to need. Even though the nuclear modernization plan sequences the components in a logical and prioritized manner, stockpile and weapon system modernizations must execute on time to address this concern. Continued stable, consistent, and on-time funding is critical to delivering the future nuclear deterrence capabilities required to address rapidly expanding national security threats.

## ON DETERRENCE

Integrated deterrence is a whole of government opportunity. And in a way I describe that is, it is—I remember growing up and using the dime theory when I was a young lieutenant, but it is using all instruments of power within the government, the United States, to afford us a deterrence factor that makes it, so we never have to get to the day where I have to execute the mission, if confirmed, from USSTRATCOM. Strategic deterrence to me composes more

than just nuclear deterrence. Strategic deterrence to me has a conventional and a nuclear component to it. And it is the backstop, in my opinion, to ensure that we can deter forces when called upon.

I absolutely believe that our nuclear deterrent force held [after Russia's attack on Ukraine]. We did not see Russia do anything with our native—or our NATO partners. The rhetoric may have—we may have heard the rhetoric, but I think at the end of the day, Russia and China both understand that we have a strong, resilient nuclear force that is offering deterrence to ourselves and extended deterrence to our allies.

### **ON NC3**

I will start with NC3. I know there are members of the committee that say it is the fourth of the triad, right. It is the quad. I have heard folks say that. I call it the tapestry. In my opening statement, you heard me discuss and talk about, it is just as important as the platforms that we are talking about modernizing, and that is absolutely true. The good news is it is still a—it is a resilient system today. What I like, having over 36 years in this business, is the conversations that people like yourself, and others also see it as just as important as the—as a weapon systems that we often talk about. If confirmed, I would use my authorities. As everyone's aware, the to the Nuclear Command, Control and Communications Enterprise Center or the NC3 Enterprise Center that is located within USSTRATCOM and the CDRUSSTRATCOM is having kind of oversight, delegated oversight authorities to be able to kind of make sure that we as a Department are looking to ensure that we are modernizing with Next Gen technologies. I call it NC2 over assured comms to ensure that we have the state of the art NC3 systems that we need for not only today, not only mid-term, but the future. And that is going to be absolutely critical for us, because I guarantee you that I want to ensure that we always outpace our adversaries, who are also paying attention to our NC3 systems.

### **ON THE IMPORTANCE OF THE NUCLEAR TRIAD**

For every operational plan that the Department of Defense has, it relies on the fact that strategic deterrence is going to hold to allow those other missions to accomplish. If that does not happen, that is when you see that deterrence fails. The way that we accomplish that is through our triad of having bombers who are recordable if warranted, having submarines that can be used, or having ICBMs that are readily available for the decision maker to do that. Our adversaries understand that and know that we can hold them at bay. That is that bedrock and foundation that is so critically important for us and this Nation.

### **ON MISSILE DEFENSE**

I think when we talk about missile defense, especially with the not only rogue nations, but now with two adversaries, near-peer adversaries that have different capacities and



capabilities, I would agree that for the protection of the homeland, more options is better than less.

Missile defense and nuclear deterrence are both critical elements of Integrated Deterrence. The nuclear deterrent is foundational to deterring strategic attack and the use of nuclear weapons against the U.S. and our Allies and partners. Missile defense diminishes adversary confidence that a missile attack against the U.S. or our Allies or partners will be successful. A robust, credible layered missile defense system, paired with our conventional and nuclear forces, enhances the ability to deter strategic attacks, deny benefits, and impose costs against any potential adversary.

Space-based interceptors may provide the opportunity to engage offensive missiles when they are most vulnerable – during the initial boost phase of flight, and before countermeasures are deployed.

Boost-phase intercept concepts have great potential, and the Department has been exploring how to resolve the challenges associated with threat system engagement at this point in the launch sequence. The need for persistent space and terrestrial sensor integration, pursuit of kill technologies like High Energy Laser/Directed Energy, non-kinetic weapons, and the policies permitting rapid engagement, are important to successful boost-phase intercept.

If confirmed, I would support the Department's efforts to examine concepts and technologies for both space-based and boost-phase intercept programs. Operational concepts, plans, and policies would be developed in parallel as space-based and boost-phased intercept programs are potentially designed and fielded.

## **ON HARD AND DEEPLY BURIED TARGETS**

The B61-11 gravity bomb is effective against a very specific subset of hard and deeply buried facilities. Retiring the B61-11 requires addressing these targets using other means compatible with modern delivery platforms. These means must be effective across a range of target types and scenarios, and adaptable to meet evolving adversary threats. If confirmed, I look forward to working with DoD to address the operational concerns created by the B61-11 retirement.

## **ON THE IMPORTANCE OF THE NUCLEAR INFRASTRUCTURE**

There is nothing more important than the relationship that we have with Department of Energy, and specifically the National Nuclear Security Administration (NNSA). As we talked throughout the hearing in regards to the modernization programs, they are interwoven—the platforms mean absolutely nothing if I don't have the assets available for the platforms. So to your question on infrastructure, you are absolutely—not only the Nevada locations, but all of NNSA locations are in dire need of upgrades in their infrastructure that dates back to Manhattan Project times. We are living in a different world today. As I keep saying, two near-peer adversaries, nuclear adversaries. We are going to have to ensure that the infrastructure

are upgraded and are at the capacity and capability to meet the needs of the warfighter. You mentioned I as only two legs. I have modernization programs that are going to need new systems for them. Can't do that without the credible work of the men and women that that make up the NNSA. But they are going to need infrastructure that will allow them to be able to do that type of work.

## **ON THE LRSO**

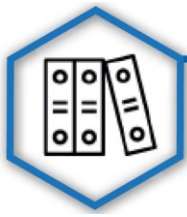
Bottom line, up front, we absolutely need LRSO. The good news is the industry partner is doing incredible work keeping that program on time and on schedule. And I am quite pleased as the Air Component Commander that is the lead Major Command, overseeing it now and watching it, seeing what that is doing. So to your point, for our long range standoff bomber capability, that leg of the triad having a viable, credible weapons system is absolutely critical. And the LRSO is that viable, critical weapon that is a de-escalatory weapon, because you are absolutely right, if we are generating bombers, it can send a signal before the first bomber even lifts off.

Yes, development and on-time delivery of the LRSO cruise missile and its associated W80-4 warhead is essential to maintain an effective and credible air-delivered nuclear deterrent, especially as adversaries deploy advanced digital air-defense systems. The current Air-Launched Cruise Missile was deployed at the height of the Cold War to evade Soviet-era analog defenses and will be nearly 50 years old when LRSO is fielded.

## **ON ICBMS**

No, I do not support changing our current ICBM alert level. The ICBM force provides the Nation with a responsive, highly reliable, and cost-effective deterrent capability which is crucial to the effectiveness of our nuclear triad. The 2022 NPR affirmed our ICBM alert posture is appropriate and contributes to strategic stability. Any attempt to defeat the hardened and geographically dispersed ICBM force requires an adversary to execute a complex strategic attack consisting of hundreds of weapons. An alert ICBM force reduces any incentives a potential adversary might have to execute a disarming first strike; this cost-benefit calculus enhances deterrence.





## FROM THE ARCHIVE

The featured article for this issue's "From the Archive" section is a 1983 essay by Dr. Colin Gray, co-founder and first President of National Institute for Public Policy. Dr. Gray wrote this article in response to the second draft of the Conference of Catholic Bishops' 1983 Pastoral Letter on the subject of nuclear weapons and deterrence. This Pastoral Letter attracted extensive press attention and commentary at the time—both sympathetic to and critical of its main points and conclusions. Indeed, it sparked numerous subsequent studies on the same subject by other religious denominations. Dr. Gray was largely critical in this essay but judged that the Pastoral Letter was sufficiently important to warrant his critique.

### NUCLEAR DETERRENCE AND THE CATHOLIC BISHOPS

Dr. Colin S. Gray, President, National Institute for Public Policy, *Information Series* No. 140, April 1983.

#### NUCLEAR REALITIES

The author has no pretensions to expertise as a theologian. He is writing as a nuclear strategist who believes both that moral questions are relevant to our security policy, and that those questions have not been posed as directly or as insistently in the recent past as perhaps they should have been.

This paper discusses what the author believes to be the salient facts of the world as it is and the present nuclear strategy of the United States and then offers commentary on the Second Draft of the Pastoral Letter of the National Council of Catholic Bishops.

It is probably useful to begin by saying that, fierce though the rhetoric often is, contributors to the current nuclear policy debate generally are disagreeing on means rather than ends. There is no lobby for nuclear war, for limited nuclear war, or for protracted nuclear war. The abominable character of nuclear war is not an issue.<sup>1</sup>

It is less than obvious to this author quite how one contributes to peace if one reminds people (people in the *West* that is) that nuclear war would be terrible—as if everyone did not know that already—and then proclaims that we must abolish war in general, and nuclear war in particular. Vision and good intentions are cheap and easy to come by. Virtually anyone, writing on the back of an envelope, can invent a world order superior in moral (and other) terms to the present one. Unfortunately, the currency of relevant policy debate is *not* imagination alone. How has one performed a noble service for peace, if he reminds people that “apocalypse now” is an ever-present possibility, tells them that there is a better world out there somewhere but lacks even the faintest glimmer of a half-way-plausible theory concerning how we are to proceed from here to there? Jonathan Schell has no advice on the transition to offer, and neither have the Catholic Bishops.<sup>2</sup> For reasons that this author has explained in detail elsewhere, the promise of arms control—on which the Second Pastoral

<sup>1</sup> See Colin S. Gray, “Issues and Non-Issues In The Nuclear Policy Debate,” *The Bulletin of the Atomic Scientists*, Vol. 37, No. 10 (December 1981), pp. 47-69.

<sup>2</sup> See Jonathan Schell, *The Fate of the Earth* (New York: Knopf, 1982); particularly Part III.



Letter reposes such hope, if not faith—is not at all encouraging.<sup>3</sup> (The Catholic Bishops themselves, with their references to distrust, political hostility, and the illiberal character of the Soviet state, damn their own theory of transition from dependence upon an imperfect system of nuclear deterrence).<sup>4</sup>

Policy debate must at least begin with recognition of the world as it is, with all its dangerous imperfections. The paragraphs that follow present the most salient facts of nuclear reality.

First, nuclear weapons are here to stay; they cannot be disinvented. Humankind cannot return to an age of pre-nuclear innocence. Whether or not we have signed a Faustian Pact that one day must be redeemed remains an open question.

Second, the super- and great powers will never agree to anything remotely close to total nuclear-disarmament. The reasons are all-too-obvious. A nuclear disarmed country would be open to blackmail by any Power that had hidden away a handful of nuclear weapons, or which produced a handful of such weapons in secret.

Third, countries build and maintain nuclear weapons for reasons that seem good to them. The Soviet Union finds nuclear armaments to be ideal weapons of political intimidation with respect to Western democracies, wherein the general public is a genuine player in policy decisions. In fact, one of the more persuasive cases for U.S. strategic superiority lies in this region of argument. The U.S. and the Soviet Union are very dissimilar in their vulnerability to intimidation, because of the differences in their political systems. It can be argued that the U.S. needs military compensation for the openness of her political life. Also, the West has found nuclear weapons very useful, if not essential, as a way of coping with the unfortunate facts of geography. For a host of geopolitical reasons, the Soviet Union has far easier access to important areas along the periphery of Eurasia than does the United States. Without nuclear threat, the structure of Western security probably would not work.

Fourth, a functioning nuclear deterrence system is critical to the tenuous international security order. Any of us can criticize the nuclear deterrence system as well as the Catholic Bishops can, but we should not forget that the current system is the only system that we have. Before we begin experimenting with bold new designs for “world order” and the like, let alone begin weakening the existing system, there had better be a very good story for the future. At the present time, there are no bold new *designs* for a better world that incorporate a plausible theory of how we proceed, *safely*, from here to there. The Bishop’s letter posits *arms control* as the key, but history and the logic of inter-state competition tell us that that is not going to work. Indeed, the Pastoral Letter does not even attempt to explain why arms control will accomplish in the future what it has failed to accomplish in the past. In short, if someone insists that we move from a here that “works,” albeit with considerable danger, to a better future, the burden of proof regarding the feasibility of the transition and the details of the new world order rest with the visionary.

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<sup>3</sup> Colin S. Gray, *Arms Control: Problems, Information Series* No. 132 (Fairfax, VA: National Institute for Public Policy, January 1983).

<sup>4</sup> National Conference of Catholic Bishops Ad Hoc Committee on War and Peace, “The Challenge of Peace: God’s Promise and Our Response [Second Draft of Pastoral Letter],” *Origins, NC documentary Service*, Vol. 12 (October 28, 1982), p. 32. Hereafter cited as “Pastoral Letter.”

Fifth, given that nuclear weapons are here to stay, there has to be a nuclear strategy, and governments have to engage in what, traditionally, has been called “war planning.” All that is worth debating is what the nuclear strategy should be. For both moral and strategic reasons, this author rejects strategies that threaten civilians directly. He agrees with the Pastoral Letter that the U.S. should not target civilians intentionally, and that the U.S. should not execute a *retaliatory* (or revenge) attack against cities under any circumstances. It so happens in this case that strategic reasoning leads to the same conclusions as does moral reasoning.

Sixth, U.S. policy-makers have no responsible choice other than to *plan* for the limited, discriminating employment of nuclear weapons. The alternatives are the following: should deterrence fail on the one hand there would be the certainty of a Holocaust; on the other hand there would be the strong, even very strong, *possibility* of a Holocaust. It would be criminally irresponsible to conduct nuclear defense planning in such a manner that if the deterrence system should fail, it could only fail in the most deadly manner possible. To say this is not to affirm a belief in limited nuclear war as a prospective fact, rather, it is to affirm the necessity for planning so as to maximize the possibility that any nuclear war would be limited. There really is no sensible debate possible on the subject of strategic flexibility, since no one can seriously favor being strategically inflexible.<sup>5</sup>

Seventh, there is the contentious issue (or really non-issue) of planning to “win a nuclear war.” Again, the U.S. (and Soviet) Government has no responsible choice other than to *plan* to win, or prevail, or conclude hostilities on favorable terms—the preferred form of words may vary. How would a government go about planning, purposively, to *lose a war*, or even to conclude a *stalemate*? All countries plan to use force with the intention of succeeding in their efforts. What would the American people make of a government in Washington which said that it planned to lose a war? It should never be forgotten that politically the Western Alliance, is, and always will be, on the political defensive. U.S. war aims in the event of an East-West armed conflict likely would be very modest. “Victory” in nuclear war may be translated into the West achieving its political goals, and those goals may be no more extravagant than persuading or coercing the Soviet Union to withdraw Warsaw Pact forces back behind their starting lines.

Eighth, nuclear deterrence is the first priority of the U.S. Everybody agrees on this. But, uncomfortable though it may be to have to face up to the fact, the prevention of nuclear war is not an overriding objective under all circumstances. If it were such an overriding objective, then the United States should disengage very promptly from her security commitments around the periphery of Eurasia.<sup>6</sup> It is U.S. (and NATO) policy, to be taken only in the gravest of circumstances and for plainly defensive reasons, that she will use nuclear weapons first if the only other choice is conventional defeat. This policy is dictated both by

<sup>5</sup> See the discussion of this point in “‘Dangerous to Your Health’: The Debate Over Nuclear Strategy and War,” *Orbis*, Vol. 26 (Summer 1982), pp. 342-345. The prospective difficulties of limiting nuclear war are well argued in Desmond Ball, *Can Nuclear War Be Controlled?*, Adelphi Papers No. 169 (London: IISS, Autumn 1981); and, John D. Steinbruner, “Nuclear Decapitation,” *Foreign Policy*, No. 45 (Winter 1981-1982), pp. 16-28.

<sup>6</sup> See Earl C. Ravenal, “The Case for a Withdrawal of Our Forces,” *The New York Times Magazine*, March 6, 1983, pp. 58-61, 75.



geography and by commonsense. The United States, in an abstract sense, does have a choice. But that choice is not between today's policy of first use in the last resort and the bluff recommended in the Second Draft of the Pastoral Letter. The United States is at liberty to renounce nuclear threats and nuclear weapons. To merit respect, people who favor that option must be prepared to accept the likely consequences, both geostrategic and moral.

Finally, most people agree that there is a role for an arms control process. But, history shows that we cannot achieve "peace," in any of the meanings of that overworked word, through arms control. If anything, excessive rhetoric and unrealistic expectations concerning arms control tend to do real damage to international security, because the disillusionment that must follow is similarly excessive. Arms control can be of modest assistance to strategic stability—no more than that.<sup>7</sup>

### POLICY TODAY

What is the nuclear deterrence theory of the Reagan Administration? This administration, in common with every administration over the past twenty years, recognizes that incredible threats will be discounted by a potential aggressor. Indeed, an incredible threat of instant Apocalypse, or Holocaust now, probably frightens us more than it frightens the Russians. Over the past decade, embracing four administrations, the U.S. Government has asked itself two central questions: what do the Soviets find most deterring? And, should deterrence fail, what might it actually be in the U.S. interest to do? The answer to the first question is believed to be to deny the Soviet Union any credible theory of victory on its own terms. In other words, the U.S. does not need a theory of American victory in nuclear war, but she does need a theory (and posture to match) for the defeat of the Soviet Union.<sup>8</sup> Naturally, the question follows—what would defeat the Soviet Union? The answer provided is that Soviet military power must be made to be defeated and Soviet leaders must fear that their ability to retain political control would be degraded or destroyed.

Needless to say, a U.S. strategy aimed at engaging Soviet military forces of all kinds would not only have pre-war deterrent benefit but would also be in the U.S. interest to implement in time of war. It should be obvious that both sides in a World War III would have the strongest imaginable motives to implement their targeting policies in a restrained manner. Because both superpowers would be very interested indeed in fighting a war removed from their home territories, there is some merit in the proposition that protracted conflict should be anticipated. The Soviet Union knows that political systems can come unraveled as a consequence of the pressures that long wars invariably place on society. It is important for *deterrence* that the West look to be capable of sustaining an armed conflict for weeks and months.

<sup>7</sup> Excellent reviews of the (limited) roles for arms control are Richard Burt, "A Glass Half Empty," *Foreign Policy*, No. 36 (Fall 1979), pp. 33-48; and "The Relevance of Arms Control in the 1980's," *Daedalus*, Vol. 110, No. 3 (Winter 1981), pp. 139-177.

<sup>8</sup> For an analytical description by a former leading participant in the strategy-making process, see Walter Slocombe, "The Countervailing Strategy," *International Security*, Vol. 5, No. 4 (Spring 1981), pp. 18-27. Also of value is Desmond Ball, "U.S. Strategic Forces: How Would They Be Used?" *International Security*, Vol. 7, No. 3 (Winter 1982/1983), pp. 31-60.

Clearly, some measure of cooperation between enemies over the “rules of engagement” would be needed. But in a context where neither side wants to initiate a homeland-to-homeland nuclear war, the ability of the West to wage a protracted conventional conflict may be of critical significance both for deterrence and for insurance against the event.

A great deal of nonsense is spoken today about the nature of deterrence, and frequently generic deterrence is confused with a *particular theory* of deterrence.<sup>9</sup> The Draft Pastoral Letter encourages this confusion by quoting a selective definition of deterrence provided by some officials of the Arms Control Association who should know better.<sup>10</sup> A little theoretical rigor is required if meaningful debate is to be formed.<sup>11</sup>

First, there are several theories of deterrence, and the current debate over U.S. nuclear strategy is between those theories. No one is challenging deterrence *per se*. Second, to greatly oversimplify, there are two basic “camps” in the debate. One camp says stable deterrence is secured through the mutual ability to punish societies. The other camp says stable deterrence is secured when the United States can engage and thwart the strategy of Soviet military power directly (or indirectly through attacks on command and control). This second “camp” is characterized, misleadingly, as the “war-fighting” school of thought. To repeat, the “war-fighting” theory is a theory of deterrence. A so-called nuclear “war-fighter,” no more wants to fight a nuclear war than a so-called mutual assured destroyer actually wants to destroy anything. So much for semantic confusion.

By way of an added refinement, there are a few people, President Reagan included, who are very dissatisfied with the offense-dominant character of current defense preparations.<sup>12</sup> This author believes that the deterrent value of the threat to deny the Soviets a plausible plan for success is much attenuated by the fact that the North American continent lies naked to any kind of Soviet retaliation.<sup>13</sup>

The weapon choices in the Reagan Administration’s strategic modernization program follow from its theory of deterrence, and the weapon requirements of that theory are very heavy principally because the United States chooses to accept extended deterrent duties on behalf of distant friends and allies. A U.S. deterrent posture capable solely of devastating a handful, or perhaps several handfuls, of Soviet cities (which probably would be evacuated), would be a deterrent posture *possibly* appropriate to a United States that asked of its strategic forces only that they deter a large-scale nuclear assault on North America. The so-miscalled “war-waging” theory of nuclear strategy and deterrence is driven by U.S. overseas, foreign policy commitments. One cannot debate the MX ICBM or the *Trident II* SLBM intelligently, save in the context of the strategy they are designed to enforce, and that

<sup>9</sup> As, for example, in Robert C. Gray, “The Reagan Nuclear Strategy,” *Arms Control Today*, Vol. 13, No. 2 (March 1983), pp. 1-3, 9-10.

<sup>10</sup> “Pastoral Letter,” p. 31.

<sup>11</sup> For a detailed presentation of alternative approaches to nuclear deterrence, see Colin S. Gray, *Nuclear Strategy: The Range of Choice*, Information Series No. 103 (Fairfax, VA: National Institute for Public Policy, December 1982). The best recent book-length treatment of nuclear deterrence questions is Keith B. Payne, *Nuclear Deterrence in U.S.-Soviet Relations* (Boulder, Colo.: Westview, 1982).

<sup>12</sup> On March 23, 1983, President Reagan announced that he was directing the U.S. Government to seek ways by which the United States could be protected against Soviet strategic nuclear weapons.

<sup>13</sup> Colin S. Gray, “Nuclear Strategy: The Case for a Theory of Victory,” *International Security*, Vol. 4, No. 1 (Summer 1979), pp. 54-87.

strategy cannot be discussed intelligently save in the context of the foreign policy of the United States.

### THE PASTORAL LETTER

While the differences between nuclear and conventional weapons, one-to-one, are very obvious, this author is ethically uneasy about drawing moral distinctions between threatening or killing people by one means as opposed to another means. For example, what is the *moral difference* between a World War II that killed approximately fifty-five million people over the course of six years, and a World War III that could kill anywhere between, say, five and one-hundred-and-five (or more) million people in an afternoon? Is the difference strictly quantitative? What if it could be demonstrated that in the most just of just causes a particular nuclear strategy could not possibly result in more than, say, one, two, five, or ten million deaths? Is the moral objection to the nature of the weapon? In which case, why? Is it to the *probable* scale of casualties? In which case where is the numerical threshold between just and unjust war? Or is it to the scale of *possible* casualties?

1. The Pastoral Letter begs the central issue when, near its beginning, it *asserts* that “it is neither tolerable nor necessary that we should be doomed to live under such conditions” (the threat of nuclear war).<sup>14</sup> The Letter offers no way out of these conditions, save for vague and unsubstantiated hopes for arms control, so the proper question may well be how do we render these conditions as tolerable as possible?
2. The Pastoral Letter asserts that “[t]he arms race is to be condemned as a danger, an act of aggression against the poor and a folly which does not provide the security it promises.”<sup>15</sup> The *arms race* is not the danger, the danger lies in the foreign policy (mis)behavior of governments. Moreover, the United States is competing in arms in order to protect an international order of which she is the principal Western guardian. Given the strategic culture of the Soviet empire, it is folly not to race energetically.<sup>16</sup> As for the allegations that the arms race *promises* to provide security, it is difficult to imagine to whom the Bishops can have been listening. The West competes in arms because it has no prudent choice.
3. The Letter alleges that the possibilities for placing political and moral limits on nuclear are “infinitesimal.”<sup>17</sup> This is a gross exaggeration. Both U.S. and, one must presume, Soviet nuclear strategy are permeated with political limitations. What would happen in the event of nuclear war is pure speculation. One may be skeptical of the prospects for reciprocal restraint, but to characterize of [sic] those prospects

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<sup>14</sup> “Pastoral Letter,” p. 307.

<sup>15</sup> Ibid., p. 313.

<sup>16</sup> See Richard Pipes, “Soviet Global Strategy,” *Commentary*, Vol. 69 (April 1980), pp. 31-39; “Militarism and the Soviet State,” *Daedalus*, Vol. 109, No. 4 (Fall 1980), pp. 1-12.

<sup>17</sup> “Pastoral Letter,” p. 313.

as “infinitesimal” is to transform a plausible argument into an implausible argument by going too far.

4. The Pastoral Letter contains the demagogic sentence: “To say ‘no’ to nuclear war is both a necessary and a complex task.”<sup>18</sup> What does it mean, “to say ‘no’ to nuclear war”? What are the alternatives? Is the United States to say ‘no’ always? In which case, the strategy is a gigantic bluff which, in practice, would be culturally and politically impossible to support in a democracy?
5. The Pastoral Letter claims that nuclear capabilities deny the protective functions associated with national sovereignty.<sup>19</sup> However, the Soviet Union, with its damage-limitation programs, denies this assertion. Until President Reagan’s announcement in favor of strategic defense on March 23, 1983, the United States had decided not to attempt to defend its homeland directly. Admittedly, such defense is vastly more difficult today than in the past, but the idea that homeland defense is impossible in the nuclear age is simply wrong.
6. The Pastoral Letter, in effect, would deny a workable nuclear deterrent while offering nothing plausible to take its place. “We believe it is necessary, for the sake of prevention, to build a barrier against the concept of nuclear war as a viable strategy of defense.”<sup>20</sup> The Letter seems not to understand that a “viable strategy of defense” is a robust, if contentious, theory of deterrence against a distinctively Soviet adversary.
7. The Pastoral Letter argues that nuclear weapons must not be employed against population targets.<sup>21</sup> The Catholic Bishops would deny the U.S. the right to target military targets (that is a war-fighting strategy for defense) as well.<sup>22</sup> What then can be targeted, given that limited, contingent endorsement of nuclear deterrence is the reluctant position of the Letter?<sup>23</sup>
8. The Letter advises that the deliberate initiation of nuclear warfare can never be justified.<sup>24</sup> This will be welcome news to the Soviet Union and will suit their military schemes very well. This author has some difficulty with the product of this ethical calculus that has been performed. The Bishops are advising that, if need be, Western civilization should surrender in the face of Soviet state power rather than use a single nuclear weapon (for fear of escalation to Holocaust). This idea lacks for a strong constituency in Europe.<sup>25</sup>

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<sup>18</sup> Ibid., p. 313.

<sup>19</sup> Ibid., p. 313.

<sup>20</sup> Ibid., p. 314.

<sup>21</sup> Ibid., p. 316.

<sup>22</sup> Ibid., pp. 314, 315, 317.

<sup>23</sup> Ibid., pp. 316-317.

<sup>24</sup> Ibid., p. 314.

<sup>25</sup> See Henry A. Kissinger, “Nuclear Weapons and the Peace Movement,” *The Washington Quarterly*, Vol. 5, No. 3 (Summer 1982), pp. 31-39.

9. On the subject of "Limited Nuclear War," the Pastoral Letter asks "would not the casualties, even in a war defined as limited by strategists, still run in the millions?"<sup>26</sup> The answer is yes they would, and quite possibly run into the tens of millions. No one is trying to promise cheap, let alone painless, nuclear wars. If the United States cannot face the possibility of taking millions of casualties in a nuclear war, should deterrence fail, then she would be well advised to extricate herself as best she could from those political commitments that might even remotely serve to involve her in nuclear war. When one is in combat in the main theater of operations, large wars against large countries are always very expensive. The United States suffered relatively lightly in the two World Wars of this century, in large part, because the Wars were not waged on U.S. territory, because the United States entered the conflicts late, and because—in the 1941-45 case—the main body of the German Army was heavily occupied in the East.
10. The Pastoral Letter asserts that "in the nuclear age deterrence is often contrasted with defense. Since the presumption exists that defense against a nuclear attack is not feasible, the burden of both U.S. and Soviet policy has shifted to deterrence."<sup>27</sup> While it is true that deterrence is often contrasted with defense, that contrast is logically false and should not be perpetuated without challenge. Defense is a theory of deterrence. In addition, it is far from a settled fact that defense against nuclear attack is infeasible.
11. The Letter asserts the importance of the superpowers moving by negotiation to nuclear weapon reductions and "eventually to the phasing out altogether of nuclear deterrence and the threat of mutual-assured destruction."<sup>28</sup> It may well be important, just as the eradication of cancer is important, but it does not follow that just because it is important it is possible. Moreover, as has already been observed, the phasing-out of nuclear deterrence would translate into Soviet hegemony over Eurasia.
12. The Letter says that "[i]n current conditions 'deterrence' based on balance, certainly not as an end in itself but as a step on the way toward a progressive disarmament, may be judged morally acceptable."<sup>29</sup> Appropriate comments on this are to the effect that there would be no balance, since the nuclear deterrent acceptable to the Catholic Bishops would deny the U.S. the bargaining leverage needed for negotiating success with the Soviet Union; that it would not be a real deterrent, since the Bishops have denied the U.S. the right to target civilian or military targets; and that nuclear disarmament is infeasible unless there has been a prior political revolution in the terms of East-West relations (and the Bishops do not claim to know how to effect such a revolution). In short, the whole approach recommended in the Letter rests upon a

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<sup>26</sup> "Pastoral Letter," p. 315.

<sup>27</sup> *Ibid.*, p. 315.

<sup>28</sup> *Ibid.*, p. 316.

<sup>29</sup> *Ibid.*, p. 316.

central fallacy: Nuclear deterrence is acceptable, *pro tempore*, contingent upon a progressive disarmament which all of the evidence indicates is not likely to occur.

13. The Pastoral Letter, again and again, misstates the character of nuclear deterrence. "If deterrence exists only to prevent the use of nuclear weapons by others [which it does not], then proposals to go beyond this objective to encourage war-fighting capabilities must be resisted. We must continually say 'no' to the idea of nuclear war."<sup>30</sup> The Bishops, somehow, hope to deter with unusable weapons. Perhaps they understand their argument, but others (this author included) do not. A "war-fighting" strategy, perhaps paradoxically is a strategy for the deterrence of war. The Bishops license a temporary nuclear deterrent, but deny the right to a nuclear strategy of any kind.
14. The Pastoral Letter repeats old fallacies about destabilizing weapons.<sup>31</sup> The MX IBCM, survivably deployed, is not a destabilizing weapon. However, the fulminations of the Letter against "war-fighting" strategies and "hard-target kill" weapons are much undermined by the fact that the Letter does not suggest an alternative strategy (remember that the U.S. must not target population).
15. In common with some freeze ideas, the Letter asks "support for immediate, bilateral verifiable agreements to halt the testing, production and deployment of new strategic systems."<sup>32</sup> The Soviet Union will have to deny her basic political culture (always possible, but hardly very likely) before this can come about, since the U.S. cannot verify Soviet weapons production, save by very intrusive on-site inspection.
16. The Letter says that "efforts for negotiated control and reduction of arms must continue."<sup>33</sup> Public opinion certainly insists on this, but the Letter does not tell us why success is any more likely in the future than it was in the past. The whole structure of argument of the Bishops' Letter tumbles down if it is admitted that there are excellent grounds for having very severe reservations about the prospects for the negotiability of disarmament.
17. The Pastoral Letter asserts that "the numbers of existing weapons must be reduced in a manner that reduces the danger of war."<sup>34</sup> That sounds good as rhetoric, but it lacks substance. The fact is that there is no persuasive, powerful theory concerning the relationship of weapons numbers or quality to the danger of war.
18. The Letter advises that the United States should be prepared to take some "independent initiatives to reduce some of the gravest dangers and to encourage a constructive Soviet response."<sup>35</sup> It is difficult to oppose the idea of assuming limited, calculated risks in a good cause. But, it is contrary to the Soviet political culture to

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<sup>30</sup> Ibid., p. 317.

<sup>31</sup> Ibid., p. 317.

<sup>32</sup> Ibid., p. 317.

<sup>33</sup> Ibid., p. 317.

<sup>34</sup> Ibid., p. 318.

<sup>35</sup> Ibid., p.318.



indulge in the business of gesture reciprocation. U.S. initiatives will be read by the Soviet Union as a sign of weakness. George F. Kennan advised the U.S. of that back in 1946 and 1947, and his advice is as true now as it was then.<sup>36</sup>

19. The Letter, correctly and sensibly, stresses the need for political engagement between East and West.<sup>37</sup> But, the problem of peace is not so much a problem of communication or even understanding as it is a problem of the content of Soviet policy.
20. The Letter makes some general approving points which really do not apply to the United States today. It advises that “[n]ations must accept a limited view of those interests justifying military force. True self-interest may include the protection of weaker states, but does not include seizing the possessions of others, or the domination of other states or peoples.”<sup>38</sup> This describes a United States that is guilty of none of these heinous things.
21. The Letter advises that “it is necessary to develop means of defending peoples that do not depend upon the threat of annihilation or upon a war economy.”<sup>39</sup> The Bishops are preaching to the already converted. U.S. nuclear strategy does not threaten (or intend to execute) annihilation; and the United States does not have a war economy. Was there ever a *war-economy* that devoted only 6-7% of its GNP to defense and did not draft people into military service?
22. The Pastoral Letter advises that “[h]istory has demonstrated that an upward spiral even in conventional arms and a continuing unbridled increase in the armed forces, rather than securing true peace, are provocative of war.”<sup>40</sup> History demonstrates no such thing. If the authors intend this remark to refer to the present time, could the U.S. defense build up be called “unbridled”? Undisciplined language like this damages the credibility of the whole document.
23. The Letter informs us that Soviet imperial policing behavior in Eastern Europe and Afghanistan “has led in some quarters to an obsessive perception that Soviet policy is directed by irrational leaders striving insanely for world conquest at any costs.”<sup>41</sup> One may be sure that it has, but those quarters are not very important for the debate over nuclear deterrence. This author does not know any participant in the current debate who believes either that Soviet leaders are irrational, or that they are “striving insanely for world conquest at any costs.”

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<sup>36</sup> In his “Long Telegram” from the U.S. Moscow Embassy in 1946—which was the inspiration for his “Mr. X” article in *Foreign Affairs* in 1947 on “The Sources of Soviet Conduct.”

<sup>37</sup> “Pastoral Letter,” p. 318.

<sup>38</sup> *Ibid.*, p. 319.

<sup>39</sup> *Ibid.*, p. 319.

<sup>40</sup> *Ibid.*, p. 320.

<sup>41</sup> *Ibid.*, p. 321.

It is all too easy to be misunderstood. There is much of value in the Pastoral Letter. However, as should be plain enough by now, this author believes that the central tenets that the Letter advances are devoid of merit. To summarize, the Letter:

- Suggests that the U.S. adopt a policy of nuclear bluff (she must never go first, and it would be irrational and immoral to go second).
- Ties temporary acceptance of a non-operational nuclear deterrent to the achievement of progress in arms control, when it provides no plausible idea how to succeed in arms control.
- Would have the general effect of weakening the Western end of the only security system that now exists.

