

# Strategy in the New Era of Tactical Nuclear Weapons

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## Abstract

Post–Cold War strategic discourse, primarily among Russian strategists, has challenged the precept that nuclear weapons are not useful tools of warfare or statecraft. To reduce the likelihood that such ideas will ever be tested in practice, the US must openly address hard-case scenarios and develop a coherent strategy sufficient to give adversaries pause. This article posits that the key to successfully deterring the use of tactical nuclear weapons lies not in winning an arms race but in the clear articulation of a purpose and intent that directs all aspects of US policy toward the prevention of nuclear war and leaves no exploitable openings for opportunistic challengers. Further, an ideal strategy would be crafted to reduce—not increase—the salience of nuclear weapons in geopolitics. The article considers three possible approaches to a strategy for tactical nuclear weapons, but the most desirable and effective will be a “strategy of non-use” based upon credible and well-prepared alternatives to a nuclear response.

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The end of the Cold War ushered in a new era suggesting the possibility that nuclear weapons could become a relic of the past. Prominent leaders, including US president Barack Obama, campaigned vociferously for measures to abolish the world’s nuclear stockpiles.<sup>1</sup> However, instead of moving toward a world of “nuclear zero,” the US and Russia have proceeded with nuclear modernization and capability development, and even China is quietly expanding its nuclear arsenal.<sup>2</sup> Perhaps more disturbing, it is now tactical—not strategic—nuclear weapons driving the latest discussions. Of course, the term “tactical” is controversial when applied to anything as destructive as a nuclear weapon. Notable characteristics such as range, explosive yield, or intended target cannot decisively delineate between strategic and tactical aims.<sup>3</sup> Nevertheless, like Russia, the US continues to push forward with the development and fielding of nuclear weapon systems (e.g., the B61-12, “low yield” D5, and long-range standoff weapon) that can be configured to produce less explosive force than the 15-kiloton “Little Boy” dropped on Hiroshima in

1945.<sup>4</sup> Any weapon in this yield range that could conceivably support conventional forces or operations will qualify for the purposes of this discussion. Today, it appears that military thinkers are increasingly contemplating the possibility of limited nuclear warfare—a concept that had been nearly banished from the strategic lexicon, especially in the West.

The term “escalate to de-escalate” does not formally appear in Russian military doctrine, but a combination of provocative actions, insinuations, and policy pronouncements have led US officials to apply this label to Russian president Vladimir Putin’s strategic approach, as reflected in the 2018 Nuclear Posture Review (NPR).<sup>5</sup> Former USSTRATCOM commander Gen Kevin P. Chilton, USAF, retired, articulated this concern, describing how the threat or employment of tactical nuclear weapons might be used to discourage outside interference in a Russian campaign, especially in the event of a pending military setback.<sup>6</sup> The implication of this scenario is that a world actor (Russia in this case) might perceive utility in the employment of a tactical nuclear weapon under the assumption that the US is likely to blink in certain circumstances. While the US has responded to this threat, it has focused almost exclusively on achieving deterrence through matching or overmatching adversary capabilities. This tactic is both insufficient and potentially dangerous. Using Colin Gray’s 1979 treatise “Nuclear Strategy: The Case for a Theory of Victory” as a starting point, this article argues that effective deterrence requires articulating a coherent strategy for employing tactical nuclear weapons. Further, since the US would prefer never to see them used, the best strategy would address “escalate to de-escalate” scenarios while simultaneously demonstrating global leadership in the restraint of nuclear arms.

This discussion begins by reviewing Colin Gray’s argument and considering its implications for the present landscape of nuclear strategy. Next, it examines how US adversaries, especially Russia, are exploring new options for limited nuclear war and why this is dangerous. It then explores three options for developing a modern strategy with regard to tactical nuclear weapons employment. Ultimately—though difficult to implement—a *strategy of non-use* would be by far the most desirable option for the US in shaping its geopolitical environment and reducing the likelihood of a nuclear exchange.

### **The Case for a Theory of Victory**

Colin Gray’s seminal 1979 piece in *International Security* argues that the US had failed to articulate a coherent strategy during the Cold War for the employment of nuclear weapons.<sup>7</sup> This is not to say that the US

military had no plans in place for conducting a nuclear war, as it most assuredly did. However, policy pronouncements of the day reflected a confusing mix of mutually assured destruction (MAD) logic, overemphasis on pre-war deterrence, and a flexible response doctrine that relied on ambiguous threats of punishment—each containing questionable assumptions and logical fallacies. Collectively, they painted a muddled picture of a United States that was leaning almost entirely on the mere possession of nuclear weapons to provide a deterrent effect.

The crux of Gray's argument is that this approach lacked credibility because it overly emphasized the message that nuclear war was mutual suicide, and this invited adversaries to doubt US resolve to carry through on threats of retaliation (and its own suicide). Additionally, this ambiguity had a detrimental effect on US strategy. First, the fatalism of this approach discouraged sober reflection on how to win a nuclear war if forced to fight one. Second, the lack of a publicly articulated strategy made it impossible for civilian policy makers to effectively rationalize the nuclear force or contain DOD tendencies to engage in arms races. Gray's recommended solution to these problems was to develop and articulate a "theory of victory." While details and war plans would remain classified, the Soviet Union should be made to understand that the US undergirded its deterrence strategy with a clear and attainable path by which to come out on top in case deterrence failed. Not only would this message add credibility to deterrence efforts and prepare for any unavoidable conflict scenarios, it would also allow policy makers to rally around a coherent vision and resource the nuclear arsenal appropriately.

It should be noted that Gray's position was not without controversy. Robert Jervis, one of his most notable critics, summarizes his own skepticism with this simple statement: "The problem . . . is not with the lack of a theory of victory, but with victory's impracticality."<sup>8</sup> While Jervis may have been skeptical that nuclear war could be won, his views largely aligned with Gray on the point that mixed messages sent by US policy makers regarding nuclear strategy undermined instead of enhanced the credibility of deterrence. Additionally, even after critically dissecting the prevailing nuclear strategy of the day, Jervis ultimately concludes his 1984 work *The Illogic of American Nuclear Strategy* by proposing that strong capability and unambiguous commitment would be the best path to deterring Soviet aggression.<sup>9</sup> It is difficult to understand how one could generate this prescribed resolve without developing and projecting a strategy clearly designed to win.

Fortunately for mankind, the Cold War came and went without a nuclear conflict. However, today's conflicts with Russia and an increasingly assertive China have allowed the US to modernize its nuclear weapons arsenal and expand its delivery capability for tactical nuclear weapons. US leaders have been unequivocal about the point that this expansion is a reaction to rising threats. The 2018 Nuclear Posture Review also states that the US has expanded its prerogative to use these weapons, including in response to "significant non-nuclear strategic attacks."<sup>10</sup> What remains unclear is how the US would actually use these weapons to attain its strategic goals if it were pushed to do so. The NPR primarily espouses a flexible response doctrine (based on the type of ambiguous threats of punishment criticized by Gray), stating that "tailored deterrence strategies communicate to different potential adversaries that their aggression would carry unacceptable risks and intolerable costs according to their particular calculations of risk and cost."<sup>11</sup> It specifically describes Russia as one of these potential adversaries and speaks to correcting misperceptions about the viability of gaining a strategic advantage through first use. But as the document proceeds, the basis for this "correction" appears to be a laundry list of the ways in which the US was expanding the capacity, flexibility, and reach of its nuclear forces.<sup>12</sup> Once again, the US is relying on the possession of nuclear capabilities as the primary basis for preventing nuclear war. Simply having weapons and vaguely threatening to use them—without articulating a strategy—falls short of establishing the credibility required for deterrence.

This article argues that the US needs a nuclear strategy that openly conveys a theory of victory in the modern world. Plans and strategies locked in the vaults of the Pentagon will neither effectively deter adversaries nor recapture the initiative in shaping the international landscape with regard to these weapons. If strategy, per the US Army War College, is "the relationship among ends, ways, and means," what would tactical nuclear weapons help the US achieve if they were ever used, and how might escalation be addressed?<sup>13</sup> At the same time, the prevention of nuclear conflict altogether certainly remains one of the foremost goals of US policy, so one must also consider the question, How does US strategy make nuclear weapons less relevant instead of more? Before examining these questions further, it is instructive to consider how the threat environment has evolved since the Cold War, particularly concerning the possibility of limited nuclear war.

### **Dangerous New Possibilities for Limited Nuclear War**

The end of the Cold War suggested the possibility that traditional paradigms of nuclear deterrence had outlived their usefulness. The

disintegration of the USSR, along with the consolidation and reduction of the Soviet nuclear arsenal, seemed to breathe life into the Reagan/Gorbachev vision of nuclear abolition.<sup>14</sup> However, a resurgent Russia and an ascendant China, with both countries expanding their nuclear capabilities, have returned the topic of nuclear deterrence to the forefront of the policy agenda. Russian president Vladimir Putin's provocations lend new relevance to the need for coherent strategy.

Gray warns in his 1979 commentary that "there could come to power in the Soviet Union a leader, or a group of collegial leaders, who would take an instrumental view of nuclear war."<sup>15</sup> The Cold War saw no such development, but since the turn of the century, Russian strategic thought has been leaning in this dangerous direction. Jacob Kipp, in his chapter "Russian Doctrine on Tactical Nuclear Weapons: Contexts, Prisms, and Connections," describes how Russian strategists have applied their own frameworks to Western conceptions of the "generations of warfare." Russian scholar Alexei Fenenko, in particular, authored an influential article in 2004 advocating the use of tactical nuclear weapons in precision strikes, which he believed could be useful in de-escalating a conflict before it expanded and risked general nuclear war. This concept would be part of a "sixth generation of warfare," and it questioned Western shibboleths about mutually assured destruction with regard to the nuclear threshold.<sup>16</sup> Fenenko also wrote a 2009 article clarifying Moscow's own "flexible response" doctrine and defending a then-recent announcement by the Kremlin repudiating the doctrine of "no first use."<sup>17</sup>

It should not come as a surprise that Russians today would treat the concept of MAD with skepticism. Lawrence Freedman, in his book *The Evolution of Nuclear Strategy*, explains that Soviet leaders—especially in the military—never fully embraced this concept, nor did they consider themselves "deterred."<sup>18</sup> According to Freedman, "The Russians did not deviate from the traditional view that the role of strategy was to devise a means of winning future wars, and the role of military planning was to prepare the necessary forces." Their focus was war fighting, not deterrence per se. The ability to win would provide the coercive capacity needed to deter.<sup>19</sup>

More striking, however, is the contrast between Fenenko's writing and Cold War Soviet military doctrine. A leading Cold War postmortem by the BDM Corporation reveals that Soviet nuclear doctrine of that time was largely devoid of concepts like escalation control, crisis management, and intrawar escalation. While not completely ruling out the possibility of a limited war, the doctrine did not emphasize planning for one and thus had little basis for a "flexible response" doctrine.<sup>20</sup> Fenenko, on the other

hand, not only champions this Western concept but also proffers a strategy of escalation dominance reminiscent of Herman Kahn.<sup>21</sup> His proposed employment of tactical nuclear weapons bears closer resemblance to the US Army doctrine of the early 1950s than anything from Soviet history.<sup>22</sup>

There is considerable controversy over what escalate to de-escalate would look like in practice, especially in terms of nuclear weapons. Moscow's rhetoric has insinuated far more than it has actually stated. What it shows, however, is that Russia is determined to challenge US resolve about its security commitments, and it might very well flex its muscles to the point of testing the nuclear threshold when it perceives an advantage. The Pentagon is most concerned that Russia may invade one of its regional neighbors and either threaten use of or employ a nuclear weapon to discourage outside interference.<sup>23</sup>

Unlike a dispute between India and Pakistan, where the tit-for-tat exchange might be brutal but relatively straightforward, this scenario begs a complicated question as to how the US could respond. Even assuming the target of aggression was a NATO ally, would the US retaliate with a nuclear strike? If so, where and what would it strike? Would a retaliatory strike in the disputed country be more of a punishment to Russia or the local population caught in the middle? Conversely, would the US be willing to escalate the situation by striking a target on Russian soil? Doing so would certainly risk the onset of World War III. Could the US afford to send a conventional ground force? Force projection along the Russian border would be a difficult and costly venture. US forces would have to prepare for the possibility that they would be entering history's first real nuclear battlefield. Even without the introduction of tactical nuclear weapons, there is no guarantee that such a ground or air campaign would avoid escalation to a full-scale conventional or nuclear war with Russia. Finally, how much allied support could the US expect in any of these scenarios? If NATO members were to balk at the costs of a war, how long could the alliance endure? There can be little doubt that this conundrum is what prompted Russian strategists to envision utility for tactical nuclear weapons.

Another disturbing possibility is that the principle behind this approach could be extended beyond Russia's immediate neighborhood. What if the Russians, fearing expulsion by US forces, had brought tactical nuclear weapons to Syria? While they may have tolerated limited aggression against their forces, any existential threat could have been met with the counter-threat of a nuclear strike, making them essentially impervious. Yet again, what if Russia's next expeditionary adventure is even more controversial or ambitious, and it decides to include nuclear weapons in its mobile defense

package? Its forces could lodge themselves into a conflict or region such that dislodging them would become almost completely infeasible.

As troubling as this scenario might sound, the precedent it would set could be still more dangerous. China has demonstrated consistently that it intends to expand its area of influence, especially in Southeast Asia and the Pacific. It has not yet threatened the use of nuclear weapons, and in all probability, it does not see a need at present. But if the example were set by Russia that tactical nuclear weapons can successfully bolster expansionist goals, US hopes of developing China as a peaceful and constructive partner on the world stage might be vastly complicated. The need to avoid these difficult and dangerous scenarios serves to highlight the importance of developing an articulable strategy for tactical nuclear weapons.

### **Options for a Modern Theory of Victory**

The US answer to Russia's developments in its tactical nuclear force has apparently been a response in kind, modernizing its own force and developing new delivery vehicles like hypersonic rockets and ground penetrators. However, this is exactly the approach Gray warns against. Developing nuclear weapon capabilities without a clear strategy is potentially wasteful and dangerous. But how can the US develop a coherent strategy for hard-case scenarios—where at least one side believes that nuclear weapons can be successfully employed in a limited fashion without undue risk of full-scale escalation? Three potential options exist. The first is to bolster and rely on conventional deterrence to preclude the emergence of a limited-use scenario. The second is for the US to articulate a coherent strategy that incorporates tactical nuclear weapons. The third is to develop a strategy of non-use, or a credible nonnuclear response.

#### ***A Purely Conventional Approach***

One way to respond to the challenge of tactical nuclear weapons is developing a strategy obviating their need altogether. Robert Haffa explores this option in his *Strategic Studies Quarterly* article “The Future of Conventional Deterrence: Strategies for Great Power Competition.” He indicates that the key to avoiding great power conflict is to develop a conventional force posture formidable enough to deter aggression by potential adversaries. Such a force posture would demonstrate that the US, while retaining its nuclear capabilities, is not dependent on them. Haffa also posits that a conventional deterrent is more credible than a nuclear deterrent because it removes the possibility that the US might be self-deterred

by the gravity of a decision to employ nuclear weapons. While Haffa never explicitly argues against developing strategies for the use of nuclear weapons, his work clearly implies that the US would be safer if national security relied primarily on a robust conventional force that allowed it take nuclear weapons off the table in planning for likely conflict contingencies.<sup>24</sup>

Applying Haffa's logic at the macro level, the US would deter and, when necessary, respond to aggression by adversary nations with an overmatch of conventional military capabilities. This approach would paint the US as a squarely "status quo" power, responding to threats against its allies or interests. Deterrence would seek to prevent revisionist powers from upsetting the stability of, for instance, existing borders, power structures, and economic relationships, therefore reducing the likelihood of a nuclear war. Victory, in the case of conflict, would then be defined by the condition where a region or an issue under question has been returned to its original state, and possibly made more secure in that position. At the regional level, Haffa's logic would require the US to examine a wide range of the most likely potential conflicts—which the Department of Defense certainly does on a daily basis—and to seek a conventional overmatch for each contingency. Haffa himself provides one application of this process by briefly considering what the US might require to conventionally deter Russia from aggression against the Baltic states.<sup>25</sup>

While his approach allows for a coherent strategy, it is problematic for a number of reasons. First, it relies on conventional deterrence to prevent nuclear war. According to this logic, conventional parity and overmatch would prevent the kind of conflict that might spark a nuclear exchange in the first place. But as Haffa readily admits, conventional deterrence often fails.<sup>26</sup> What then would prevent either side from crossing the nuclear threshold if it perceived an advantage? Since neither side can unilaterally restrict the conflict, both sides must be prepared to employ their weapons effectively.

The second problem with a purely conventional approach is its overreliance on the status quo to underpin its theory of victory. Henry Kissinger describes the concept of world order as an inherently evolutionary process, shaped by the incessant challenges of both contested ideas of legitimacy and shifting power relations.<sup>27</sup> All manner of circumstances and interests are subject to change over time. Haffa's approach—in a manner reminiscent of the Cold War—relies heavily on alliances for the forces required to deter a great power adversary, especially Russia. Alliances, however, depend on relationships and commitment, both of which are variable according to domestic politics on either side. Additionally,



America's partners must retain the capability to add military value in a conflict outside their borders—an assumption under increasing question. Further, conflicts are rarely black and white. Most of the Russian aggression since the end of the Cold War has occurred on the pretext that political crises have necessitated foreign intervention (even if these crises were covertly manufactured by Russia itself). If a real political crisis were to occur in the Baltic states (regardless of who started it), it would beg the question of who should rightfully intervene. John Mearsheimer, from a perspective of offensive realism, challenges the entire concept of a status quo, stating that “status quo powers are rarely found in world politics, because the international system creates powerful incentives for states to look for opportunities to gain power at the expense of rivals, and to take advantage of those situations when the benefits outweigh the costs.”<sup>28</sup> A theory of victory that relies primarily on defending the status quo is working against the tide of history.

The third problem with a purely conventional approach to deterrence is that it requires a country to periodically use force to demonstrate its capability and resolve.<sup>29</sup> This stipulation exposes an internal inconsistency within the concept itself. When a nation employs its military, it not only displays potency but also tips its hand. America's wars against Iraq and Afghanistan awed the world, but they also telegraphed the strengths and limitations of US military power. In a manner consistent with the “security dilemma” of international relations, applications of US power have increased the insecurity of potential rivals and prompted more aggressive and effective balancing. Additionally, as the US has learned time and again, employing force incurs unintended commitments. Quagmires in Afghanistan, Iraq, and Syria have proven a tremendous drain on military manpower and resources. One could easily argue that instead of enhancing America's conventional deterrence capability, military campaigns have eroded it.

Perhaps the greatest problem with the purely conventional approach is its impracticality and even unattainability from a resource perspective. No great power has ever maintained continuous overmatch on all fronts. An effective deterrent in the Baltics might require a commitment as high as 225,000 ground troops, either forward deployed or rapidly deployable, between the US and its allies.<sup>30</sup> Deterrence of China would require a network of new bases and forward-deployed troops around the Pacific region. All ground forces of the US military would have to be increased, along with the entire infrastructure for rapid deployment. The US would have to maintain unrivaled air superiority and global strike capabilities in an age

when missile and drone technology is eroding this advantage. It would also need to simultaneously and rapidly defeat multiple echelons of a near-peer adversary's military capability, without considering the counter-efforts and capabilities that the US would face. The cost of such a strategy, both fiscally and politically, would be prohibitive. Further, because of the "security dilemma," such a buildup might actually spark one of the wars it would seek to prevent.

These points of contention should not be taken as an argument that conventional forces are obsolete or that conventional deterrence does not have an important place in national defense. What they do suggest is that when dealing with nuclear-armed rivals or potential adversaries, a conventional military solution will be insufficient to prevent nuclear war, and it would be impractical to base nuclear strategy on the conventional defense of the status quo. This path will not allow the US to bypass difficult questions regarding tactical nuclear weapons.

### ***Integration of Tactical Nuclear Weapons***

By most accounts, the advent of nuclear weapons brought a paradigm shift in theories of warfare. These weapons were different. For many thinkers, including Kenneth Waltz, instead of revolutionizing conventional warfare, nuclear conflict became a class unto itself.<sup>31</sup> If a war were to cross the nuclear threshold, the game would change, and conventional capabilities would become largely irrelevant. In spite of these views, the continued development of tactical nuclear weapons reminds us that the possibility of limited nuclear war has never been absent from the strategic landscape. Moreover, as global bipolarity and America's subsequent "unipolar moment" have both eroded with time, the strategic constraints that previously shaped the nuclear era might be up for reconsideration.<sup>32</sup>

The second path to a tactical nuclear weapons strategy would involve integrating these weapons into the existing force. This approach apparently matches the direction observed in US adversaries, such as China, Russia, and North Korea. It would necessitate accepting the possibility of limited nuclear war, although it would not necessarily be offense oriented. In any case, the US could still eschew first use. The initial challenge with such an approach is that victory would be highly context specific. Unlike the Cold War theory of victory that Gray suggests, a modern strategy would have to incorporate a wider range of adversaries and potential scenarios. Ideally, tactical nuclear weapons would find their place within a coherent grand strategy. Regardless, they would be assigned in support of specific, preexisting policy objectives. The important consideration is that

the addition of a nuclear dimension would also increase the gravity of the discussion surrounding the policies themselves.

Consider three possible points of entry for tactical nuclear weapons into US strategy. The first is comprehensive integration. Tactical nuclear weapons could be used to augment conventional forces. This was the US military's initial approach to nuclear weapons strategy in the 1950s. Though opposed to America's first use of the atomic bomb in World War II, General MacArthur strongly advocated atomic strikes during the Korean conflict, and the military requisitioned new warheads and conducted test runs for this contingency.<sup>33</sup> While Truman refrained from authorizing the strikes in Korea, the military continued to develop this concept. Nuclear weapons then became a cornerstone of national defense under the Eisenhower administration, which found itself caught between a growing Soviet threat and the exigencies of domestic politics. These weapons seemed like an ideal way to fill the gap in conventional force ratios without breaking the bank.<sup>34</sup>

Eisenhower's strategic approach paved the way for the embrace of tactical nuclear weapons, and it envisioned their use in any future conflict with the Soviets. By the middle of the 1950s, nuclear weapons were fully integrated into military forces and strategy. In December 1953, the chairman of the Joint Chiefs of Staff was quoted as saying, "Today atomic weapons have virtually achieved a conventional status within our armed forces."<sup>35</sup> Support for this approach also came from some surprising quarters. Scientists such as J. Robert Oppenheimer, an early advocate of nuclear arms control, actually favored the development of tactical nuclear weapons as a way to shift focus away from hydrogen bombs and bring "battle . . . back to the battlefield."<sup>36</sup>

The incorporation of tactical nuclear weapons as a form of heavy artillery led to radical changes in the structure and doctrine of the military force. Andrew Bacevich traces this evolution in his book *The Pentomic Era*.<sup>37</sup> In hindsight, Bacevich explains, the Army's "pentomic" concept was a dismal failure. This new style of fighting turned the conventional principles of warfare on their head and created serious problems with command and control. It quickly became apparent that this doctrine was ideal only for a specific, unlikely scenario of nuclear warfare. Even more, the Army's assumptions about its ability to fight in an irradiated environment were almost laughable, sometimes wishing away the effects entirely.<sup>38</sup> While the pentomic concept proved little more than a costly detour in the history of the Army, many of the weapons it developed remained in the inventory and continued to serve a strategic role throughout much of the Cold War.

The question for today is whether conditions have changed that might make it practical or desirable to reincorporate nuclear weapons into conventional doctrine. To begin with, advances in missile and long-range drone technology—along with the fledgling development of hypersonic delivery vehicles—may obviate the need to issue nuclear weapons directly to troops. These advances have already made the weapons more accurate and effective than their predecessors have. Also, the authority and capability to launch these weapons could be far more tightly controlled than would have been possible during the Cold War. Another advantage of comprehensive integration is that it would prompt the military to update its doctrine, training, and equipment for nuclear contingencies that might happen anyway. Bifurcating conventional and nuclear conflict has allowed the US military to continue neglecting preparation for combat in irradiated environments. Demonstrating preparedness to fight under such conditions could also enhance deterrence, as adversaries would not be able to utilize radiation for area denial purposes.

However, in seriously considering the option of comprehensive integration, the factors that have not changed are more problematic than those that have. Even with new technologies and global reach, the idea that integration can be accomplished while maintaining tight, centralized control of nuclear weapons runs counter to the principles of war. Robert Peters, Justin Anderson, and Harrison Menke, for instance, argue for full integration of tactical nuclear weapons into planning and exercises for regional conflicts, but their 2018 article begs the question of when and how the authority to use these weapons would be delegated to military commanders. Commanders cannot successfully prosecute campaign plans in a complex, dynamic environment if they do not have tactical control of the assets upon which their plan depends. This type of delegation, however, requires the dangerous assumption that escalation could be limited to the geographic theater of conflict.<sup>39</sup>

Thomas Schelling wrestled with the problem of escalation and suggested that deterrence might continue to operate even during the course of a nuclear conflict, ultimately limiting the scope, but it has never been clear how this would play out in practice.<sup>40</sup> Supposing that nuclear weapons were treated strictly as artillery for an otherwise conventional campaign, what would prevent the losing or disadvantaged side from simply opting for bigger artillery? Is it logical to assume that a nation would choose to sacrifice a core interest when escalation options remain? Some might suggest that restraint would hold in peripheral conflicts, but the Cold War demonstrated a dampening effect on the number and scope of

these conflicts precisely because of the specter of nuclear war. Neither superpower was willing to test the limits because both were uncertain of the outcome. Herman Kahn, one of history's most influential theorists regarding escalation, likens the assumptions required for nuclear brinkmanship to attempting to play a "limited game of 'chicken.'" Further, he states, "To rely . . . on slow, rung-by-rung escalation in international crises is a dangerous strategy."<sup>41</sup>

Finally, the argument that Russia and China may be considering some elements of comprehensive integration is not sufficient justification for the US to follow suit. International norms and conventions such as the Non-Proliferation Treaty (NPT) still constrain the spread of nuclear weapons and the behavior of nuclear powers. Although they are flouted in some cases, they are followed in most. A belligerent approach by the US might inadvertently undermine this fragile regime. There are still options for preventing a dangerous spiral of escalation between the existing nuclear powers, but the likelihood of a nuclear war would increase if the US were to move toward a more aggressive stance.

Less drastic than comprehensive integration, another point of incorporation for tactical nuclear weapons might be termed *defensive integration*, or a tripwire concept. A primary example of defensive integration is the US defense of Western Europe during the Cold War. When the Eisenhower administration first developed its concept of massive retaliation, no threat was higher on its list of concerns than that posed by the Soviets against European allies. Bernard Brodie, one of the early academic theorists of nuclear deterrence, personally advocated the employment of tactical nuclear weapons to "redress what is otherwise a hopelessly inferior position for the defense of Western Europe."<sup>42</sup> As the Cold War progressed, "massive retaliation" gave way to "flexible response," and the use of tactical nuclear weapons was never guaranteed under this approach, but always possible—according to the needs of US policy makers. In fact, these weapons, which peaked at more than 7,000 tactical warheads, largely served a political role in assuring allies of US commitment to their defense.<sup>43</sup>

The foundation for defensive integration as a theory of use for tactical nuclear weapons is area denial. If an adversary crosses a specified line, it risks triggering a nuclear response. As with comprehensive integration, advances in technology would largely reduce the need for the forward basing of nuclear weapons, making the implementation of such a strategy potentially simpler than before. However, any intercontinental launch risks the possibility of sparking a general nuclear war, as opponents will be

hard-pressed to distinguish tactical from strategic warheads or predict impact points with speed and accuracy.

The key problem in considering defensive integration for area denial is the question of *whose area*. The idea that nuclear weapons might be used to protect one's homeland against foreign invasion has become relatively uncontroversial. What is very controversial is the concept of a "near abroad." Russia and China have been increasingly assertive in defining what they believe is their own sphere of influence. In Russia's case, the concept of escalate to de-escalate was envisioned for the express purpose of isolating a conflict with one of its neighbors. The fact that NATO has expanded to the Russian border directly challenges Russia's claim to its near abroad. Depending on one's point of view, this move might be appropriate, but it is a complicated one. If there was a question mark as to US willingness to use nuclear weapons in the defense of Western Europe, how much more might this resolve be questioned with regard to the Baltic states? Likewise, would the US risk a general nuclear war with China over territory controlled by the Philippines? Defensive integration is a theory of use based upon protecting the status quo, but it does not deal well with situations where this status quo is already contested. Therefore, a defensive integration approach would largely perpetuate the cycle of uncertainty.

A third approach to a theory of use for tactical nuclear weapons will be labeled *specialized uses*. In this approach, tactical nuclear weapons may be considered for situations in which they are uniquely suited as tools of warfare. A current example is bunker busting. This relatively new application for nuclear technology did not exist during the Cold War. The US military began developing ground-penetrating missiles in the 1990s in response to revelations regarding deeply buried nuclear facilities in North Korea and Iran. It asked Congress to fund the development of nuclear versions in 2002.<sup>44</sup> Since then, the US Department of Defense has advanced its technology for both nuclear and nonnuclear ground penetration.<sup>45</sup>

From the standpoint of a theory of use, the logic of specialized uses is relatively straightforward. The US will win any conflict because an adversary has nowhere to hide. But are nuclear weapons both necessary and desirable for this purpose? While fully comparing these classified technologies is impossible, nonnuclear ground penetrators might be sufficient to the task. Conversely, the technology of tunneling and fortification continues as well and may challenge the limits of a conventional option. The question of desirability is even more complicated. On one hand, the collateral damage might be low in some conditions (although the environmental impacts are difficult to predict). On the other hand, this does not

mean that tactical nuclear weapons' use would not alter the geopolitical environment. Most nations would likely condemn their employment, and some nuclear actors might be emboldened to challenge nuclear taboos in their own circumstances. Furthermore, unless the US removes its unilateral moratorium on nuclear testing, the capability and effects of these weapons will remain unproven.<sup>46</sup> For all these reasons, some US policy makers are squarely against the concept of this type of weapon, and former representative David Hobson (R-OH) is quoted as saying, "What worries me about the nuclear penetrator is that some idiot might try to use it."<sup>47</sup>

Another consideration is the effect nuclear penetrators have on the overall concept of nuclear deterrence. Nuclear weapons and their associated development programs have previously been considered impervious when buried deep within hardened bunkers. The possibility of destroying these bunkers means that both an adversary's first- and second-strike capabilities can be held at risk. As pointed out by Kier Lieber and Daryl Press in their 2017 article for *International Security*, the Cold War concept of nuclear deterrence was based largely upon the premise that neither side could feel confident about eliminating the other's nuclear arsenal with a first-strike attack. If both sides retain a secure second-strike capability, then neither opponent feels that it must attack first to avoid being disarmed. These authors' concern is that expanding technologies for finding and destroying second-strike capabilities would undermine deterrence and make a world of nuclear-armed actors much less safe.<sup>48</sup> Thus, while nuclear penetrators may have been designed with countries like Iran and North Korea in mind, they pose a threat to all nuclear powers, especially Russia. Regardless of whether specialized uses are retained independently or in combination with comprehensive or defensive integration, a clearly articulated strategy is necessary to provide both the warnings and the reassurances required to turn these weapons from tools of provocation into instruments of effective deterrence.

### **A Strategy of Non-Use**

The 1983 movie *WarGames* carries a simple and compelling message—the only way to win the game of thermonuclear war is not to play. But the neat simplicity of this wisdom has always been undermined by the question, What if the other side decides to play anyway? While nobody wants a nuclear war, how can you convince your adversary not to play the game if it suspects you might not be willing to retaliate in kind? This is the problem that Russian strategists have attempted to exploit: considering provocations that would leave the West in checkmate, unable or unwilling

to respond. Might it still be possible to win without playing, though, at least by the adversary's rules? An effective strategy with an articulable theory of victory need not necessarily require a nuclear response. By presenting a coherent strategy of non-use, the US can likely deter the employment of tactical nuclear weapons in a scenario involving calculated escalation for the purpose of de-escalation; if deterrence fails, it can secure its interests without resorting to nuclear war. If an adversary can be made to understand that the employment of a tactical nuclear weapon will clearly result in the unpalatable choice between strategic loss or general nuclear war (strategic loss on a grander scale), then the perceived advantage of escalate to de-escalate will disappear.

How would deterrence be conceived in such an approach? A strategy of non-use begins with sending a general message that no government will ever be allowed to profit from a nuclear attack, regardless of whether it is answered in kind. Then, if deterrence fails and a country uses a nuclear weapon in what it believes to be a limited fashion, the US should lead the international community to turn its back so sharply and decisively on the aggressor that, in the long-term, no other country will again be willing to follow this example. Of course, nuclear war is always possible in any scenario irrespective of the best strategic approach. A strategy of non-use designed to prevent the clever employment of a tactical nuclear weapon should also be underpinned by a full range of nuclear retaliatory options that are not limited to tit-for-tat exchanges, leaving the initiative with the aggressor. Moreover, it should be nested within an articulated strategy for general nuclear war. The specifics of such an overarching strategy transcend the scope of this work. However, one would envision destroying the military and political capacity of an aggressor to make war, ensuring such a thorough defeat that it has no other interest but to rebuild its society as a just and peaceful member of the international community.<sup>49</sup>

There are several key requirements that will allow a strategy of non-use to succeed. First, it cannot be based upon merely defending the status quo. Change is inevitable, and the US should lead the international community in asserting that nuclear weapons will never stem the tide of change or effectively resolve any conflict. Additionally, it needs to be widely recognized that any act of nuclear aggression will alter the global order as it is currently understood. A nonnuclear response robust enough to deter an attack must similarly change the world, making it a very uncomfortable place for the aggressor—even at the cost of sharing discomfort across the international community. Some of the changes would be permanent, with second- and third-order effects for the way international



business is conducted. Accomplishing them would require the broad propagation of new standards and norms, a process that would involve challenges. With US leadership, it would be possible.

Second, a strategy of non-use must incorporate tailored approaches toward specific actors and scenarios. A one-size-fits-all solution will be unlikely to deter every potential adversary since the vulnerable points of pressure will shift over time. The US is in some ways fortunate because Russia is currently the only state that appears readily positioned to exploit a gray area in the framework of global deterrence. The possibility of nuclear aggression by North Korea or (eventually) Iran is terrifying to contemplate, but it would almost certainly invite a swift nuclear response designed first to disarm and second to topple the ruling regime. Few would doubt US resolve against these adversaries. India and Pakistan could wage nuclear war against each other, but again, it is difficult to imagine the scenario where a gray area might invite an unanswerable nuclear attack. China, on the other hand, could potentially follow Russia's model and prove much harder to deter, especially within its sphere of influence. It is unlikely that China would find such an option advantageous during its current state of ascendance, but conditions could change in the decades to come. Therefore, engaging the process of crafting an effective deterrent against Russia could pave the way toward reducing a long-term danger. Ideally, China should be treated as a partner in inoculating the world against this type of threat.

Third, the nonnuclear response to a nuclear attack needs to be not only punishing but defeating. Thomas Schelling describes "punishment" as the basis for nuclear deterrence, using the threat of overwhelming violence as leverage for coercion.<sup>50</sup> In this vein, a strategy of non-use would eschew the extreme violence of a nuclear attack—at least in some cases—but it must promise a maximum level of pain and disruption to be similarly effective. Unfortunately, the threat of punishment may not be enough to deter aggression. Victory should leave the opponent vanquished. It means permanently altering the game so the same actors can never use the same strategy under similar conditions again. The response required to defeat an adversary without resorting to a nuclear attack would likely include some conventional military component, but more importantly, it should integrate all the elements of national power across a wide network of international partners. Bear in mind that a strike with a single tactical warhead would conceivably destroy a battalion, a command node, a couple of ships, or perhaps some aircraft, but a coordinated nonnuclear response could be far more costly in strategic terms. It should fundamentally alter the condi-

tions under which an aggressor government and its societal elites engage with both their domestic population and the surrounding world.

In the case of Russia, several possibilities exist. First, all financial assets belonging to any Russian citizen outside its borders should be frozen and subject to forfeiture, most likely to the country in which they are held. Russia is particularly vulnerable to this approach because insecure property rights within its borders prompt elites to put their money elsewhere. Of course, in a world of laws, norms, and complex relationships, this proposal would be complicated to implement. A response like this would take years of diligent, coordinated groundwork to prepare. This effort would also be contested as Russia would undoubtedly move to reduce its vulnerability. The process would cause positive and negative evolutionary changes to the international system of economics, but it would certainly elevate the issue of nuclear deterrence internationally and integrate it into other fields of discussion.

Second, the US and its partner nations could cripple the export of Russian oil and gas. This action should not be accomplished without considerable planning and preparation. It would involve significant short-term pain, especially for those countries currently dependent on Russia for natural gas. If the US could accommodate its allies with alternative sources of energy and leverage allied support, it would send a powerful message to the Russian government and ruling elites.

Third, the US and its partners could institute a travel ban on all Russian citizens and deny air traffic to and from Russian territory. Fourth, the US could spearhead an effort to have Russia permanently removed from the United Nations Security Council. Fifth, the US should prepare a menu of potential conventional military options focused on Russian interests. It may include deployments into Russia's near abroad, where attacks at its periphery could prove more damaging. For instance, Russian naval vessels outside of home port could be held at risk and captured or destroyed under certain conditions. The military portion of this response may or may not take place in conjunction with a conventional conflict over territory (such as a ground incursion into the Baltic states), but the key difference in the case of a nuclear event is that Russia's ability to act as a great power outside its borders should be significantly degraded.

These are but a few of the potential options. The common theme is that, human cost aside, it is entirely possible to exceed the punishing effects of a limited tactical nuclear response without using nuclear weapons. The price of doing so involves a degree of pain to the US and its allies as well. This toll is one of the primary reasons why an articulable strategy is

important. Not only would it send a clear deterrent message, it would also be a tool for the US to gauge the requirements of its own approach realistically and galvanize the domestic and international support necessary to implement such a strategy. Many critics might point to a case like Iran and claim that sanctions and other economic measures, in particular, do not work. The response to this argument is that neither the US nor any other country has generally been willing to endure a great deal of pain in applying sanctions that really bite. The point at which pain becomes reciprocal has always been the sticking point for rallying domestic and international support. The US cannot solicit the support it needs for such a strategy without an aggressive diplomatic and public engagement campaign supported by a clearly articulated strategy of non-use. Undoubtedly, this exercise in coalition building would be more difficult than simply planning a nuclear response. However, pretending that one is going to use a nuclear weapon and then being unable or unwilling at the moment of need would be the worst of all worlds.

A final cost to consider regarding a theory of non-use is that it would inherently bind the US to a commitment not to use its own nuclear arsenal for a first strike. Some strategists will likely chafe at this inflexibility. But it suffices to say that the preemptive use of nuclear weapons has been highly controversial. The US would also have to forego its stated prerogative for a nuclear response to either a cyberattack or an attack with another form of weapon of mass destruction. Again, this constraint invokes a discussion outside the scope of this work, but America must decide if, while possessing the world's greatest conventional force and a host of cyber capabilities, it really needs nuclear weapons to respond to these contingencies. It does not.

An advantage to the US for allowing itself to be so bound is that it could credibly begin new initiatives for arms control. In fact, the groundwork required for building a nonnuclear response could potentially become the basis for a new arms control regime. The framework designed to deter Russia could eventually include Russia itself, and it would almost necessitate cooperation with the Chinese. If nothing else, the US would resume a leading role in shaping global norms and expectations for the use of nuclear weapons, and this could have significant positive results.

Some will undoubtedly argue that taking extreme measures to isolate Russia internationally and pressure its leadership from without and within would only risk inspiring irrational and unpredictable behavior—possibly leading to a general nuclear war instead of preventing it. However, it must be noted that these measures would only be taken in response to a nuclear

attack—one of the most reckless acts possible in the modern world. Since the next step on the ladder of escalation could result in full-scale nuclear war, extreme measures would be more than justified. It would be wise to establish off-ramps that allow for de-escalation, but just as the nuclear genie cannot be returned to the bottle, neither should Russia (nor any other actor) be completely restored if it were to choose such a course of action. The consequences will not be quickly forgotten and should not be quickly forgiven.

Beyond the difficulty required to implement a theory of non-use, one could also argue that this approach is just another form of conventional deterrence using a wider set of national power instruments. To an extent, this is true. Tools of diplomacy, information, and economics would take the lead, while military power would perform a supporting role (unless the conflict escalates on a military basis). This strategy addresses a limited set of hard-case scenarios (i.e., not an attack on core US interests) where a nuclear response would be questionable. If escalation could not be contained, the full range of nuclear response options would remain in play. Additionally, while a theory of non-use would still rely heavily on commitments from partner nations, the required contributions would be more political and economic in nature, and less military, making them far more credible to an adversary. Most importantly, such an approach would reflect a fundamentally different character in the way the US relates to other nations and to global order in general. Whereas the conventional deterrence approach would require an expansion of the US global military footprint and exacerbate concerns regarding American imperialism, a strategy of non-use would foster diplomatic and economic ties in a cooperative effort to address an existential threat to humanity. Not only would such a policy shape the global environment in a more positive direction, but the effort required would shape the US as well—ideally into a more suitable leader for the free world.

## Conclusion

While this article advocates the development of a *strategy of non-use* for tactical nuclear weapons, it cannot replace all other forms of strategic nuclear deterrence. A nuclear attack impacting the US homeland or core national interests would warrant a nuclear response in most conceivable cases, and the US should express its resolve in the clearest possible terms. America should build a nonnuclear response apparatus that precludes the need to automatically respond in kind to nuclear aggression outside the realm of its core interests, but it should always be prepared to escalate to

nuclear war if necessary. Additionally, while the 2018 NPR points to multiple, situation-specific “tailored strategies,” these should be more than a list of capabilities. They should articulate to friend and foe alike how the US will use (or refrain from using) its new weapons for victory if so required. Elements from the conventional approach—along with *comprehensive* and *defensive integration*—may find an appropriate place, and even *specialized uses* might be considered but with great caution.

The key lesson is that effective nuclear strategy includes publicly articulating a logical roadmap between means and ends, supported by policy makers and respected by America’s adversaries. Some might argue that this view is escalatory, inviting a bellicose response, but the US has already ceded initiative to adversary states by falling into an arms race approach. An effective strategy should anticipate and effectively shape the response it will elicit, thus reducing uncertainty for all parties. It should also be considered that the tacit framework now serving as the public face of US nuclear policy reflects the contested nature of political opinions and even democracy itself. Policy makers, along with the American public, have a wide range of views about nuclear weapons. To some extent, ambiguity allows the military to avoid paralysis within a contentious political milieu. However, by keeping the logic that underpins US strategy vague, unspoken, or highly classified, the defense establishment can summarily dismiss its critics and perpetuate abiding habits like arms races. In doing so, it avoids critical self-examination.

Unfortunately, errors in logic create exploitable weaknesses that could inadvertently lead to nuclear war. The US should address these weaknesses now, in a time of relative peace. If nuclear strategists draw the wrong lessons or fail to answer difficult questions, the world will become a more dangerous place. Just as articulating a strategy for tactical nuclear weapons is likely to prompt America’s adversaries to respond in kind, projecting vagueness, ambiguity, and logical inconsistency can have the same effect. **SSQ**

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