



**FAS**

# **CONVENTIONAL DETERRENCE** *of* **NORTH KOREA**

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Cover image: North Korea tests a KN23 SRBM from Kwali Airbase, August 6, 2019. Image from KCNA posted by Ankit Panda on twitter, August 7, 2019, <https://twitter.com/nktpnd/status/1158968598397935616>.

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# INTRODUCTION

A considerable portion of the debate over how to deter North Korea still relies on a standard model of deterrence that is now obsolete. The standard model assumes that Pyongyang is developing its nuclear arsenal for massive retaliation in the event of an allied invasion or to cover a major conventional attack. Therefore, deterrence depends on the ability to deploy overwhelming U.S. forces to the peninsula to defend South Korea from attack, while the threat of a U.S. nuclear response suffices to deter Democratic Peoples' Republic of Korea (DPRK) nuclear use. The alliance deters limited nuclear attacks by demonstrating an ability to intercept them with missile defenses; if a nuclear attack did occur, an overwhelming U.S. nuclear response would eliminate the regime and its nuclear forces. Concerned that the threat of a U.S. nuclear response is losing credibility, Seoul is pushing for added assurance that a U.S. president is resolved to order a nuclear response if needed. In fact, rapidly evolving military trends on the peninsula have rendered each piece of this standard model obsolete.

North Korea's public statements and advancing capabilities indicate troubling evolutions in its nuclear and defense strategy. A new generation of missiles has expanded Pyongyang's ability to strike targets on the peninsula, in Japan and Guam, and the continental United States with nuclear and conventional payloads. These advancements signal a distinct evolution in North Korea's defense strategy away from massive retaliation and toward a policy to use its missile forces to degrade allied conventional and logistics operations to limit damage to the regime, a policy that retains an option for massive retaliation but envisions more rapid escalation against military targets.

<sup>1</sup> The author thanks Paul Choi, Abe Denmark, Van Jackson, Hans Kristensen, and several current and former officials from South Korea and the United States who generously lent their time to interviews. The ideas in this report are extensions of those developed in collaboration and contrast with members of the FAS International Study Group on North Korea Policy and a subsequent symposium of deterrence experts convened to debate different models of how to deter North Korea, including Andrea Berger, Ian Campbell, Michaela Dodge, Melissa Hanham, Byeonggu Lee, Jina Kim, Ankit Panda, Tom Plant, Mira Rapp-Hooper, John Warden, and others. Mercedes Trent provided invaluable research assistance and Kate Kohn expertly laid out the report. Responsibility for the content of the report and any errors herein rests solely with the author. This study was supported by the Korea Foundation, a nonprofit public diplomacy organization established in 1991 by the National Assembly of the Republic of Korea. The FAS Defense Posture Project receives general support from the John D. and Catherine T. MacArthur Foundation.



The KN23, a short-range ballistic missile (SRBM) capable of sophisticated maneuvers in the atmosphere to evade missile defenses, represents a qualitatively new ability to conduct limited preemptive strikes against defended military and command-and-control (C3) systems to prevail in a limited conflict.

While the U.S.-ROK alliance will remain a nuclear alliance indefinitely, overreliance on nuclear weapons has created significant friction over allied deterrence posture, exacerbated political problems for the alliance, detracted attention from pressing challenges in conventional force posture, and has contributed to stability risks with North Korea. Nuclear weapons are increasingly unreliable as the primary foundation for allied deterrence and assurance.

In the last decade, the balance of conventional power on the peninsula has shifted decisively to the South. Many Republic of Korea (ROK) military officials now believe that they have or will soon have the ability to defend their territory by themselves. In addition to markedly superior land forces that can defend against territorial incursions, a new generation of advanced conventional strike forces and intelligence, surveillance, and reconnaissance (ISR) capabilities provides new options for both defending against nonnuclear aggression and responding to nuclear use. Both ROK and U.S. planners recognize that advanced conventional weapons can generate strategic effects that were previously only attainable with nuclear use and recognize significant disadvantages to reliance on nuclear weapons for deterrence. The dramatic asymmetry in power means that the U.S.-ROK alliance and the Kim regime are entering into a deterrence relationship between DPRK nuclear forces and allied conventional forces.

Yet, the alliance has not yet thought rigorously about the effects of these systems on crisis or arms race stability, or the role of the U.S. extended deterrence commitment given this evolving balance of power. Cold war models of deterrence that describe rough parity between two nuclear nations are inapplicable to the emerging situation on North Korea. Conventional deterrence, a topic that has been marginalized and sometimes denigrated in the years since the cold war, is rapidly becoming the alliance's central mechanism for both security and assurance on the peninsula. Reduced reliance on nuclear forces makes for an increasingly credible and flexible allied posture, but it also presents significant risks. Both ROK and U.S. officials must consider how their operation of conventional forces affect nuclear stability when the Kim regime has such limited ability to perceive conventional operations and such acute incentives to resort to nuclear first use if it believes itself to be under attack.<sup>2</sup> This consideration is all the more pressing given that the alliance must prepare not just to deter invasion and a major nuclear attack, but to fight and win a limited defensive war

<sup>2</sup> Lieber and Press 2013; Narang 2017; Boo 2016.

below the nuclear level.<sup>3</sup> As with Russia and China, the central challenge for U.S. deterrence posture is the risk that North Korea could attempt to impose a *fait accompli*, achieving limited objectives before superior allied force can be brought to bear, requiring the alliance to choose between contesting the new situation or acquiescing.<sup>4</sup>

The alliance needs a new concept of conventional deterrence appropriate to these present circumstances. Success of allied strategy depends on an efficient allocation of tasks between the allies such that ROK forces leverage their superior credibility and capability to defend their territory from attack and respond to limited aggression, while U.S. forces prioritize operations that deter and respond to escalation to the strategic level. Nevertheless, success requires that U.S. forces enable and supplement ROK operations in a limited conflict while increasingly capable ROK strike assets are integrated into emergency plans to respond to use of chemical, biological, and nuclear weapons, or mass-casualty conventional attacks.

The need to reassess allied deterrence posture comes at a difficult time for the alliance. The Trump administration's unreasonable demands on burden-sharing, disagreements over negotiation strategy with Pyongyang, and other issues have exacerbated severe friction in the alliance.<sup>5</sup> A reassessment of allied posture to produce a more efficient conventional deterrent must not be read as a call for decoupling or a sign of weakness, but rather an opportunity to strengthen the alliance's coordination and capabilities.<sup>6</sup>

<sup>3</sup> Jackson 2015; Warden 2017; Rapp-Hooper 2016.

<sup>4</sup> Roberts 2015; Colby 2018. This risk poses a challenge for a conventional deterrence posture that is distinct from the one it poses for nuclear deterrence, but also severe.

<sup>5</sup> For an early assessment of the range of risks that the Trump administration poses to the alliance, see Mount 2017a. This report goes to print shortly after the allies broke off the latest round of cost-sharing talks, which marks a low point in the recent challenges. Kim 2019.

<sup>6</sup> This report does not attempt to identify specific numbers of troops or weapons systems required to discharge the deterrence objectives identified here.

# RAPID EVOLUTION IN DPRK STRATEGY

U.S. defense strategists are rapidly coming to the recognition that the United States is losing its ability to deny aggression in a range of potential contingencies in Europe in Asia.<sup>7</sup> In a future conflict, it is unlikely that the United States can maintain air superiority, efficiently deploy forces to the battlefield, or to manage and support them effectively. These risks derive not only from adversary missile arsenals that are advancing rapidly in qualitative and quantitative terms but also cyber, electromagnetic, and disruptive political capabilities that could impede U.S. logistics operations in both the forward and rear areas.<sup>8</sup> While Pyongyang has adopted many of these capabilities and concepts of its larger partners, the dramatic disparity in both conventional and nuclear power between DPRK and allied forces presents a unique deterrence challenge. Its inability to detect or to repel conventional attack has driven the regime to adopt an asymmetric deterrence posture aimed at limiting damage to itself through preemptive escalation.

## *Shifts in DPRK force structure*

North Korea's conventional maneuver forces continue to decay rapidly.<sup>9</sup> The regime has explicitly prioritized the development of nuclear and missile forces at the expense of conventional modernization and readiness, at one point stating an intention to “drastically cut down investment into manufacturing conventional weapons.”<sup>10</sup> The regular armored and mechanized units necessary for offensive ground operations have been among the hardest hit by the regime's decision to divert resources to asymmetric

<sup>7</sup> The report of the National Defense Strategy Commission captures the level of concern in Washington over these trends, if it did not succeed in proposing a viable strategy to reverse them. National Defense Strategy Commission 2018.

<sup>8</sup> Chris Dougherty, “Why America Needs a New Way of War,” June 2019, <https://www.cnas.org/publications/reports/anawow> describes these concerns in detail.

<sup>9</sup> The Pentagon assesses that, “Although a few weapon systems are based on modern technology, the KPA has not kept pace with regional military developments. The KPA has not acquired new fighter aircraft in decades, relies on older air defense systems, lacks ballistic missile defense, and its Navy does not train for bluewater operations.” Office of the Secretary of Defense 2018, 10.

<sup>10</sup> Warden 2017, 20–21.



capabilities. The regime's naval surface fleet consists primarily of small frigates and missile boats at low readiness and limited capabilities. The KPA's poor logistics system, its limited stocks of food and petroleum, and likely difficulties maintaining secure command and control all impose severe constraints on the regime's ability to sustain combat operations. In short, North Korea lacks the ability to sustain regular combat activities for a protracted operation. It is not capable of a land invasion across the DMZ or of resisting a sustained allied assault in a symmetrical conflict.

To compensate for conventional inferiority, North Korea has developed asymmetric capabilities and doctrine to achieve its military objectives. Any DPRK aggression is likely to be a rapid *fait accompli*, ambiguous, or deniable in order to deplete the alliance of the ability to respond decisively.<sup>11</sup> Both offensive and defensive North Korean war planning is likely to rely on vertical and horizontal escalation to attempt to terminate a war or prevent an allied response before the regime is forced to capitulate. In short, Washington and Seoul cannot afford to trust that they will be able to bring their full power to bear against the regime in time to prevent it from achieving its military objectives or to force it to surrender those objectives once secured.

Instead, the regime has developed its forces to reliably inflict damage on targets in South Korea. Since 2017, the regime has largely replaced its first generation of rudimentary missile systems with a new generation of systems that appear more capable, more reliable, and possess a number of advanced features.<sup>12</sup> The KN08 and KN14 ICBMs were never tested have been supplanted by the KN20 and KN22. The Musudan IRBM, subject of several failed tests in 2016, was succeeded by the KN17 in late 2017. The KN11, a medium-range solid-fuel SLBM design, was tested repeatedly in 2016, was adapted for land-based use as the KN15, and apparently supplanted in 2019 by an updated design likely to be designated as KN26. North Korea's MLRS and SRBM systems have also seen rapid improvement. In 2017, a new SCUD-B variant with a maneuverable reentry vehicle added new precision-strike options. In 2019, the regime tested four new short-range systems, including two ballistic missiles and two large-caliber MLRS. The overall trend has replaced several unreliable and rudimentary liquid-fuel systems with solid-fuel options that are capable of longer ranges, precision strike, throwing larger warheads, or in-flight maneuverability. The new generation of systems is also apparently more reliable and, owing to new launcher designs, more concealable and more survivable.

<sup>11</sup> Roberts 2015, 65–6 presents the clearest articulation of the risk of a DPRK *fait accompli* and the attendant conditions necessary for accomplishing this strategy.

<sup>12</sup> This section summarizes data collected by Ankit Panda, Hans Kristensen, and Matt Korda of FAS, and Shea Cotton and other researchers at the Center for Nonproliferation Studies. For their analysis, see Panda forthcoming; Kristensen and Norris 2018; Cotton 2019; Korda 2017.

Between May and August, 2019 the regime test-fired eight KN23 SRBMs.<sup>13</sup> The missile has reportedly demonstrated an ability to fly depressed trajectories and to conduct aero-ballistic maneuvers in flight.<sup>14</sup> Pyongyang underlined these assessments by releasing photographs of maps that seem to show the missile conducting a pull-up maneuver in flight, modifying its ballistic trajectory to add altitude at the expense of range.<sup>15</sup> In August, a source in the U.S. Joint Chiefs of Staff described the maneuver and suggested that the missile also carried out a steep terminal descent: “In the reentry phase, the projectile pulled up to fly horizontally and then dived to a target with a near 90-degree falling angle, an apparent move to help avoid interception.”<sup>16</sup> These capabilities will pose a serious challenge for missile defense systems that must acquire the system in a shorter window and compensate for the maneuvers during intercept.

The KN23 is particularly alarming given what it implies about North Korea’s strategic planning.<sup>17</sup> In a July, 2019 statement describing the tests, the regime justified the tests as a response to “ultra-modern weapons and equipment which the bellicose forces of the south Korean military are introducing,” which the regime characterizes as “definitely offensive weapons.”<sup>18</sup> These statements likely refer to South Korea’s of two F-35 stealth aircraft two weeks prior, which Pyongyang worries that could penetrate its air defenses and strike its leadership or missile forces before its air defense network could respond. Unable to prevent or prepare for a strike, the regime has apparently developed an alternative method of confronting this risk. The KN23, the KCNA statement warned, are capable of “neutralizing those weapons... turning them to scrap iron at an early stage when it is considered necessary.” In other words, KN23 represents a first-strike option to destroy stealth aircraft before they are able to take off.

### *Implications for DPRK strategy*

North Korea’s recent missile developments and public statements regarding its nuclear posture now exceed the requirements of an assured retaliation strategy, which threatens to impose unacceptable costs on the United States and its allies in the event that they attempt to collapse the regime. Most observers agree that North Korea’s nuclear

<sup>13</sup> Lewis 2019.

<sup>14</sup> KN23 is not the only DPRK missile with aero-ballistic capabilities—the KN18 and KN21 SCUD variants—both possess maneuverable reentry vehicles and the KN25 600mm MLRS may also have been tested on a depressed trajectory in September, 2019. However, KN23’s appears capable of greater aero-ballistic maneuvers and the regime has repeatedly tested it in ways designed to communicate those capabilities.

<sup>15</sup> Panda 2019.

<sup>16</sup> Jeong 2019a. A ROK JCS officer had previously referred to a “so-called pull-up maneuver in the final phase.” Oh 2019.

<sup>17</sup> A version of the following two paragraphs appeared in Mount 2019a; Mount 2019b.

<sup>18</sup> KCNA 2019.

strategy, and so its broader defense strategy, is primarily concerned with nuclear use to preempt decapitation of its regime.<sup>19</sup> This concept falls into the broader category, “asymmetric escalation,” or the intention to resort to nuclear use early in a conflict to prevent an allied coalition from bringing overwhelming force to bear on North Korea’s leadership or its inferior conventional forces.<sup>20</sup>

Within the broader category of asymmetric escalation, a DPRK nuclear escalation might be intended to truncate a conventional war in two ways. First, nuclear use could be intended to coerce allied political leadership to reassess the expected utility of continuing the fight (by forcing the alliance to decide to stand down, or by splitting the alliance so that one of the partners chooses unilaterally to revise its war objectives). Second, nuclear use can intend to limit damage to the regime by degrading or delaying allied operations by striking logistical hubs, command and control networks, and concentrations of military forces (most efficiently while they are inactive on base but potentially on the battlefield) and so lower the alliance’s expectation about its ability to achieve its war aims.<sup>21</sup> Though a single nuclear strike could in practice have both coercive and anti-access objectives, the doctrines are logically and practically distinct in terms of the quantity, timing, and targets of planned strikes. In recent years, Pyongyang has been more consistent about signaling an intention for the latter.<sup>22</sup>

Nuclear weapons are generally understood to be poor instruments of defense. During the cold war, nuclear forces were necessary for implementation of a damage limitation strategy because they were uniquely capable against the strategic forces and command and control systems of nuclear-armed superpowers.<sup>23</sup> However, Pyongyang’s main concern is not with U.S. nuclear forces but with allied conventional forces, which remain capable of invasion, regime change, counterforce, decapitation, and the ability

<sup>19</sup> Allard, Duchatel, and Godement 2017. A minority perspective holds that the regime still harbors a mistaken interest in forcible reunification of the peninsula despite clearly lacking the capability. The 2017 edition of the OSD DPRK military power report agrees that “North Korea’s leaders almost certainly recognize that achieving forceful reunification under North Korea’s control is unattainable so long as the ROK has greater military capabilities and an alliance with the United States.” Office of the Secretary of Defense 2018.

<sup>20</sup> Narang 2017; Narang 2014.

<sup>21</sup> Under this option, the regime has internalized the lessons of the 1990s and 2000s: “never go to war with a fully-committed United States, “ and do not let the United States build up its forces undisturbed nor permit the United States to rely on force-generation sanctuaries in the region.” Chun 2016.

<sup>22</sup> Several analysts have argued that North Korea would have to develop nonstrategic or tactical weapons in order to carry out an asymmetric escalation, warfighting, or tripwire strategy, but this is not necessarily the case. Smith 2015; Jackson 2015. Short and medium-range ballistic missiles can ably serve the same function if postured or employed to coerce or disrupt an allied operations. That having been said, diplomatic initiatives to prevent North Korea from acquiring nuclear-armed artillery, air defense rockets, or anti-submarine mines should be a primary objective for allied leadership. Mount and Berger 2019.

<sup>23</sup> NATO strategy during the cold war relied on an ability to conduct tactical nuclear strikes against concentrations of invading Soviet armored forces, but this was in reality more of a tripwire strategy to deter an attack by raising the risk of nuclear escalation than it was a matter of repulsing Soviet incursions onto allied territory.

to prevail in limited wars but require significant infrastructure to support transit, staging, and onward movement of reinforcing equipment and personnel.

Since 1994, DPRK diplomats have warned that “we will not give you time to collect troops around Korea to attack us... if it is clear you are going to attack, then we will attack.”<sup>24</sup> In recent years, North Korea has carried out missile tests explicitly designed to simulate strikes on U.S. military installations, including a volley of 2016 test fires that the regime said simulated nuclear “preemptive strikes at ports and airfields in the operational theater in South Korea where the U.S. imperialists’ nuclear war hardware is to be hurled” and was accompanied by a map that demonstrated that the range of one test launch equaled the range necessary to strike Busan Naval Base.<sup>25</sup> These events imply a concept of deterrence that depends not on the imposition of costs but on the use of preemptive strikes to degrade or deny U.S. efforts to flow forces to the theater. Conventional, chemical, and nuclear attacks are particularly alarming components of this policy, but the regime is also likely to use special operations forces, cyber attacks, unmanned vehicles, small submarines, and other asymmetric means to accomplish this objective.<sup>26</sup> Van Jackson has argued that this concern is particularly pressing for allied planners because it forces us to think of the “Korean peninsula as an anti-access environment.”<sup>27</sup>

Rapid development of short, medium-, and intermediate- range precision strike systems are consistent with public statements that the regime intends to strike U.S. regional logistics hubs to prevent the flow of forces to the peninsula. However, the regime’s nuclear strategy of limiting damage by disrupting allied conventional operations appears to be evolving beyond an intention to create an “anti-access environment.” The regime’s demonstration of KN23 in 2019 implies that this concept of operations has evolved to include discriminate preemptive attacks to include escalation control of a limited war. Where there were previously few explicit statements to indicate that the regime considers escalation control to be a realistic option,<sup>28</sup> KN23 now offers an option to preemptively strike allied leadership, command and control networks, missile defense emplacements, or aircraft to degrade South Korea’s will or ability to continue the fight. It is not publicly known whether the regime intends KN23 to serve a nuclear, conventional, or dual-capable role. If KN23 is used in a conventional-only role, it represents a form of escalation control not only in the sense that it could help to discharge an “escalate-to-win” strategy but because it can do so

<sup>24</sup> Jackson 2016a.

<sup>25</sup> Kim 2016; Berkowitz, Karklis, and Meko 2017.

<sup>26</sup> Chun 2016.

<sup>27</sup> Jackson 2015.

<sup>28</sup> Allard, Duchatel, and Godement 2017.

with relatively limited amounts of force. Pyongyang's SCUD inventories are capable of firing large salvos of missiles to saturate and overwhelm missile defense systems, but KN23 represents an ability to do so with one or two weapons. If KN23 is used in a nuclear role, it constitutes an ability to more reliably destroy hardened and defended targets while conserving warheads for subsequent rounds of a protracted crisis because fewer need to be launched and fewer will likely be intercepted.

Taken collectively, the available data from DPRK missile advancements do not provide conclusive evidence about the regime's intentions. A damage limitation strategy is consistent with an intention to conduct acts of aggression and coercion because it increases the likelihood that Pyongyang can successfully impose a *fait accompli* while impeding an adversary's ability to defend against it or revert its gains once they have been secured. A damage limitation strategy is also consistent with an intention to deter invasion, counterforce, decapitation, or regime change attempts by preemptively destroying or disrupting assets necessary to conduct these operations effectively.<sup>29</sup> In this circumstance, disruptive strikes might aim to delay allied operations or permit some of its leadership and nuclear forces to survive a counterforce attempt. Facing rising expected costs from a protracted conflict, the regime may calculate that a preemptive strike stands the best chance preserving its survival and status as a nuclear power if it could degrade allied operations and potentially truncate a conflict.

However, KN23's particular characteristics are better suited to support attempts to coerce or to cover a *fait accompli*. While large salvos of simple ballistic missiles can limit damage through preemptive strikes, KN23 ability to evade missile defenses provides an option to do so in limited attacks, implying that the regime believes it could constrain allied response options with limited applications of force and therefore coerce the alliance into acquiescing to a new status quo.

<sup>29</sup> An ability to evade missile defense is also compatible with an assured retaliation posture because it decreases the likelihood that allied missile defenses can "mop up" remaining DPRK missiles after a partially-successful counterforce attempt.

## EXTENDED NUCLEAR DETERRENCE

The U.S.-ROK alliance is—and will for the foreseeable future remain—a nuclear alliance. However, it is critical to recognize that it not exclusively—or even primarily—a nuclear alliance. Extended nuclear deterrence should not be thought of as the principal foundation of the alliance’s deterrence posture or assurance efforts but as useful for a set of discrete functions that should be minimized to the greatest extent possible. The nuclear component of the alliance has generated significant strategic and political disadvantages that can be managed by reducing the salience of nuclear forces both in deterrence posture and as symbols of alliance commitment.

### *Strategic disadvantages of reliance on nuclear weapons*

Nuclear deterrence is unreliable as the primary foundation for allied deterrence posture. The primary risk in deterrence of Pyongyang is not that the regime doubts that the alliance is capable of imposing sufficient costs in response to nuclear use; it is that the regime perceives that it could prevail in a limited conflict by imposing a fait accompli, fracturing alliance cohesion, or threatening to escalate the conflict and, in so doing, escape the alliance’s planned retaliatory measures. Because nuclear weapons are less credible as responses to limited aggression and their use would likely be contentious within the alliance, reliance on nuclear weapons exacerbates rather than addresses this risk. In fact, it is difficult to imagine a circumstance in which U.S. nuclear use would be necessary on the Korean peninsula.

Beginning in 2009, the Security Consultative Mechanism (SCM) statement has stated that U.S. extended deterrence consists of “the full range of military capabilities, to include the U.S. nuclear umbrella, conventional strike, and missile defense capabilities,”<sup>30</sup> which was later refined to state that “any use of nuclear weapons will be met with an effective and overwhelming response.”<sup>31</sup> This convention of ambiguity is intended to accommodate the wide range of potential circumstances in which North Korea could employ a nuclear device and provide flexibility for political leadership

<sup>30</sup> For a narrative account of SCM’s development, see Roehrig 2017.

<sup>31</sup> The phrase has become standard language for government officials. Tillerson and Mattis 2017.



to select the most effective response in a crisis. Selection of a response option should depend critically on the circumstances of the initial nuclear use and the consequences of various responses, including the location and weapons effects from the detonation; the expected relative efficacy of conventional and nuclear responses to create defined strategic effects; the casualties incurred; the operational, economic, political, and normative costs incurred by a nuclear response.<sup>32</sup> In a range of cases, a nonnuclear response will be preferable to a nuclear one.<sup>33</sup> The alliance's standard language recognizes that reality and leaves the full range of options open. It does not commit an American president to impose specific types of costs on an adversary in the event of an undefined contingency marked by DPRK nuclear use.

The 2018 Nuclear Posture Review (NPR) reverses this convention. It states that “any North Korean nuclear attack against the United States or its allies and partners is unacceptable and will result in the end of that regime. There is no scenario in which the Kim regime could employ nuclear weapons and survive.”<sup>34</sup> The language adds additional specificity to the U.S. threat that may be perceived as constraining the options available to a U.S. president to respond to a future contingency.<sup>35</sup> The paragraph seems to leave a future president little latitude to calibrate a cross-domain response commensurate with the specific characteristics of the initial DPRK nuclear detonation. In any case of nuclear first use, regardless of the casualties, target, circumstances, or characteristics of the weapon, observers in Seoul, Pyongyang, and other capitals may expect that the United States will carry out the protracted, risky, and costly operations necessary to destroy the regime. “Regime destruction” operations are often taken to entail strikes on some combination of leadership targets, government facilities, official communications networks, military and internal police, and other elements of party control,<sup>36</sup> which would almost certainly drive the regime to carry out further nuclear strikes.

The NPR's definition of what constitutes an “attack” is not clear, which detracts from any deterrent leverage the threat was meant to produce. For example, a nonlethal North Korean employment of a nuclear weapon for coercive purposes may or may not constitute an “attack” under the NPR's definition, but it is difficult to imagine that U.S. and allied interests would be well-served by regime destruction or even a recip-

<sup>32</sup> Manzo and Warden 2018.

<sup>33</sup> Mount 2015.

<sup>34</sup> U.S. Department of Defense 2018, 33.

<sup>35</sup> It could be enormously consequential if US, ROK, DPRK, or Chinese leadership held this perception, whether or not it is accurate.

<sup>36</sup> “Regime change” operations are an even higher bar, implying deliberate installation of an alternative leadership structure, which likely requires some form of occupation.

rocal employment of a nuclear weapon for signaling purposes in this contingency. A reciprocal exchange of nonlethal demonstration blasts would degrade the cohesion of international efforts to prevail in the present conflict, demonstrate to potential adversaries that they can change the game if facing a losing conventional conflict, and would destabilize the broader international system by doing severe, perhaps fatal, damage to the nuclear taboo.<sup>37</sup> Regime destruction operations would almost certainly precipitate the broader nuclear exchange, the prevention of which is likely to be the central concern of the U.S. and ROK presidents.

However, it is not difficult to imagine an instance of nuclear employment that meets colloquial definitions of an “attack” where regime destruction would be highly imprudent—for example, a nuclear detonation over naval forces that causes limited military casualties and damages ships but leaves civilian targets on the peninsula unharmed. In these circumstances, regime destruction would represent a massive escalation that precipitates exactly the kind of devastating crisis that allied deterrence posture is intended to prevent.

In short, the NPR’s threat is deeply inadvisable in that it constrains planning and expectations about a U.S. response in unconstructive ways while offering little additional deterrence leverage. It is not clear why North Korean nuclear use is or should be subjected to a more defined response as other potential aggressors.<sup>38</sup>

The sole circumstance in which an American president should consider nuclear use is if it is physically necessary to prevent a mass-casualty attack on the territory of the United States, South Korea, or Japan. The sole circumstance in which nuclear would be needed to meet this standard is if U.S. intelligence could determine the location of a missile that is:

- loaded with a nuclear or biological warhead capable of mass destruction
- is under cover that can be destroyed by a nuclear but not a conventional weapon, and
- can be fired soon enough after exiting cover that it cannot be struck with a conventional weapon.

Given that the principal challenge in conducting a counterforce strike is that of locating enemy mobile missile launchers rather than destroying them once found, this is a highly speculative scenario. It would require that U.S. intelligence have confirmation

<sup>37</sup> Mount 2015.

<sup>38</sup> The 2018 employment does not commit the United States to impose specific kinds of costs in response to nuclear employment by other adversaries, simply stating that the United States would “consider the employment of nuclear weapons in extreme circumstances...” U.S. Department of Defense 2018, 21.

of a launch order and the exact position of a solid-fuel missile or a liquid-fuel missile being fueled horizontally in cover matching exact specifications.<sup>39</sup>

U.S. leaders might consider nuclear employment for other reasons, for example to signal resolve to use nuclear weapons to Russia, China, or the North Korean leadership and therefore to enhance the credibility of future nuclear threats. This argument is relatively common in general discussions about nuclear use. However overwhelming likelihood is that the optimal conclusion of the conflict at hand will and should vastly outweigh speculative arguments about future contingencies that may or may not manifest. Furthermore, leaders are most likely to calculate ad hoc about the costs and risks of an extant conflict than they are to pause to consider past actions in circumstances that may be marked by different leaders, stakes, and military circumstances.<sup>40</sup> The United States can and should only consider nuclear use if it is the exclusive means of preventing a mass-casualty attack.<sup>41</sup> Certainly, the United States should not consider nuclear use to strike a target that can be effectively destroyed with a conventional option.<sup>42</sup>

#### *Political disadvantages of reliance on nuclear weapons*

One potential explanation for the NPR's decision to attenuate the ambiguity surrounding nuclear use may be found in widespread concern about Seoul's perception of the credibility of the U.S. extended deterrence commitment. Over the last decade, many American analysts have grown concerned that Seoul was coming to doubt that the United States would employ nuclear weapons to defend it. This concern has motivated experts to raise the possibility of more prominent signs of nuclear assurance, including more visible nuclear assurance missions,<sup>43</sup> training exercises for combined nuclear strike missions,<sup>44</sup> exotic nuclear sharing arrangements for dual-capable fighter aircraft or missile warheads, and more detailed dialogues in Deterrence Strategy Committee (DSC) that include additional information about the circumstances in which the United States would consider nuclear use.<sup>45</sup>

<sup>39</sup> While it is likely there are nuclear command and control (NC3) targets that match this specific level of vulnerability, these targets do not meet the articulated standard either before or after a launch order is transmitted.

<sup>40</sup> For more on the poverty of reputational reasoning, see Mercer 1996.

<sup>41</sup> Whether this standard is consistent with “no first use” or “sole purpose” nuclear declaratory policies depends on an assessment of the likelihood that this condition will exist.

<sup>42</sup> Lewis and Sagan 2016.

<sup>43</sup> For an overview of Bomber Assurance and Deterrence Missions with South Korea, see Mount 2017c.

<sup>44</sup> Santoro 2017. This proposal would mimic NATO's Support of Nuclear Operations With Conventional Air Tactics (SNOWCAT) missions and include “suppression of enemy air defenses, aircraft refueling, and search and rescue operations.

<sup>45</sup> Roberts 2019. The persistent difficulty with this conversation is that U.S. nuclear employment cannot be reliably

These debates, which reached a crescendo in 2016, are unlikely to fully dissipate.<sup>46</sup> The United States will not redeploy nonstrategic nuclear weapons to the peninsula due to the catastrophic consequences that action would have for credibility in negotiations with the North, relations with Japan and China, broader arms control efforts, and for any South Korean government.<sup>47</sup> Forward deployment of nuclear weapons would constitute a political and military liability more in exchange for no additional military capability or deterrence credibility.<sup>48</sup> Requests to this effect were attempts to manage ineliminable issues inherent to the credibility of extended nuclear deterrence and the expanding threat from DPRK nuclear capabilities.<sup>49</sup> The location of U.S. nonstrategic nuclear weapons will do little to assuage political concerns about U.S. credibility because the U.S. president will in any event retain sole discretion for the employment of nuclear weapons; no decision regarding the permanent, rotational, or temporary deployment of nuclear-capable forces has any practical bearing on employment decisions in a crisis.

In fact, these worries misinterpret some of the concern in Seoul about U.S. nuclear planning. While there is questionably conservative anxiety over U.S. resolve to employ a nuclear weapon, there is also appreciable concern among ROK military and political officials that the United States might resort to nuclear employment in defiance of the preferences and interests of the government in Seoul.<sup>50</sup> Calls for expanded and more specific coordination in the U.S.-ROK Deterrence Strategy Committee Deterrence are motivated at least as much by overreliance on nuclear weapons as underreliance on them.

The primary effect of requests for redeployment of nuclear weapons and nuclear assurance measures is to detract from more pressing concerns about counter-provocation planning and conventional force posture, and to compound stability risks in the relationship with Pyongyang given its rational concern that assurance steps like bomber exercises are rehearsals for preventive decapitation strikes.<sup>51</sup> If the mark of successful alliance coordination is a close alignment in the requirements for deterrence and

predicted in advance but occurs at the sole discretion of the president. The precise circumstances in which this decision is made will be unique to the particular contingency.

<sup>46</sup> Roehrig 2017, 133 summarizes the proposals made in the fall of 2016.

<sup>47</sup> In October of 2019, Undersecretary of Defense John Rood repeated the U.S. stance against redeployment of tactical nuclear weapons to the peninsula. Lee 2019.

<sup>48</sup> Klingner 2017; Sokolsky 2017.

<sup>49</sup> Cheon 2018. On the latter, see, for example, Amb. Chun Yung-woo's argument that "we need these strategic or tactical assets that can destroy North Korea's nuclear-capable missiles before they can inflict harm on us... Right now they can retaliate, but by that time, tens of thousands of people might have been killed." Fifield 2017.

<sup>50</sup> Author interview, July 11, 2019.

<sup>51</sup> The phrase is from John Warden, personal correspondence, 28 October, 2019.

assurance, excessive reliance on nuclear signaling is detrimental to the function of the alliance. The inherent characteristics of nuclear weapons that makes them politically contentious and incredible as a response to important contingencies also makes them ineffective instruments for assurance. The interminable and unproductive debates of nuclear signaling demonstrates that nuclear deterrence is unreliable as the primary foundation of allied cohesion. The permanent presence and regular combined interoperation of U.S. conventional should be recognized as the strongest possible form of assurance that the United States can offer.<sup>52</sup>

In summary, there are considerable and ineliminable costs and risks to reliance on nuclear deterrence on the Korean peninsula. The incredibility of nuclear threats to deter low-level aggression; the humanitarian, economic, and alliance costs of nuclear employment; and the need to defend against attacks against South Korea all weigh in favor of a concept of deterrence that relies on conventional forces as the central components of allied strategy.

<sup>52</sup> Mount 2016.

# EXTENDED CONVENTIONAL DETERRENCE

In the last decade, sustained South Korean efforts to modernize force structure and adapt deterrence posture have caused tectonic shifts in the deterrence picture on the peninsula.<sup>53</sup> As the DPRK regular armored and infantry units have atrophied from poor maintenance and training caused by diversion of resources to strategic forces, special operations units, and other specialized asymmetric capabilities, the ROK armed forces have made major investments in advanced precision conventional strike assets from air and ground platforms, sea control, and C4ISR capabilities.<sup>54</sup> The trend on both sides of the 38th parallel is to expand standoff strike capabilities, lowering the risk of a general conventional invasion in either direction but raising the risk that an accident or misperception, or limited DPRK aggression, cause a limited conventional conflict. Any limited conventional war carries a significant of escalation to the nuclear level.

## *South Korea's expanding conventional capabilities*

ROK military officials are now confident that their national forces are currently or will in the next five years be capable of defending against DPRK aggression and incursion.<sup>55</sup> After years of sustained growth during the Park Geun-hye administration, the Moon administration's "Defense Reform 2.0" initiative increased expenditures 7% in its first year. In August 2019, MND released a plan to spend roughly \$239 billion more between 2020 and 2024, a further 11% increase on average. The concentration is on modernization of weapons platforms. Even as the size of the army declines by 25% over the next year, MND projects the budget for force enhancement will expand to account for over 36% of total spending by 2023.<sup>56</sup>

<sup>53</sup> For an overview of ROK defense reform, see Raska 2016.

<sup>54</sup> An overview of modernization trends can be found in Cordesman 2016.

<sup>55</sup> Author interview, 9 July, 2019. Though most analysts believe that conventional deterrence now depends primarily on ROK forces, some believe that the option of reinforcement by U.S. land forces remains a critical factor to backstop the risk of escalation. Author interviews, 11 July, 2019.

<sup>56</sup> Smith 2019. As a percentage of GDP and overall government spending, the defense budget has been remained consistent for the past five years.



The concentration on modernization supports South Korea's deterrence strategy, which has an overall objective of limiting damage to its territory by destroying DPRK missiles both left and right of launch. MND lists capabilities to "deter and respond to nuclear and missile threats" as its "top priority," promising to dedicate \$81.2 billion to the challenge over five years, or more than 10% of its overall budget.<sup>57</sup> The acquisitions support ROK's "4D operational concept," which plans to detect, disrupt, destroy, and defend against DPRK missiles. The ROK military has invested heavily in conventional strike platforms intended to generate strategic effects that the United States previously included as objectives in its nuclear war plan but without the collateral damage and other negative consequences. For example, ROK has reportedly deployed graphite blackout bombs capable of taking down DPRK power networks by discharging spools of graphite filaments, an effect that the United States assigned to its nuclear forces during the cold war.<sup>58</sup> Existing or upcoming ROK missiles have demonstrated increased range, precision, and ability to destroy hardened and protected targets including artillery, efforts that were fueled in part by an allied decision to revise the missile guidelines that imposed range/payload restrictions on ROK missiles.<sup>59</sup> While MND has not released figures to quantify its inventory of Hyunmu II surface-to-surface SRBMs, some public analysts estimate the figure at 1,500 missiles.<sup>60</sup> Procurement of new F-35 stealth fighters, multiple-launch rocket systems, unmanned indigenous and U.S.-made aerial vehicles, and a new generation of guided missile destroyers all provide additional land attack capabilities. The Korean Air and Missile Defense (KAMD) concept to defend against missile attacks has been a major priority, driving procurement of new PAC-2 and PAC-3 interceptors, the indigenous KM-SAM and L-SAM, and Aegis destroyers equipped with SM-3 interceptors.<sup>61</sup> While many of the systems rely on technology developed by the American defense industry, the programs collectively demonstrate a push to develop a modest but complete "kill chain" for North Korean missiles, which will supplement more numerous and more capable U.S. capabilities.

Yet, South Korea still relies on U.S. capabilities for certain critical missions. Despite major advancements in ROK ISR and plans to procure 5 reconnaissance satellites,<sup>62</sup>

<sup>57</sup> ROK Ministry of National Defense 2018, 127.

<sup>58</sup> Ryall 2017. The Soviet power grid was a consistent feature of U.S. nuclear war plans as both a way to hinder the USSR war effort and to impede its postwar recovery. See, for example, Burr 2015.

<sup>59</sup> Pinkston 2012.

<sup>60</sup> Uk 2017. Compare this figure to the Pentagon estimate of DPRK total missile launchers in the low 100s. Office of the Secretary of Defense 2018, 17.

<sup>61</sup> Jeong 2019b.

<sup>62</sup> In 2018, the ROK Agency for Defense Development awarded a contract to build a small constellation of five surveillance satellites, including four that feature synthetic aperture radar. Grevatt 2018; Thales Alenia Space 2018.

U.S. overhead, manned, and unmanned platforms remain indispensable for tracking targets deep in North Korean territory. U.S. battle management and communications systems are vital for situational awareness and effective command-and-control of allied forces.<sup>63</sup> ROK anti-submarine capabilities are limited after DPRK boats leave port. Missions to disable, eliminate, or exploit DPRK nuclear facilities and systems depend on two small WMD elimination teams that have recently transitioned to U.S. Special Operations Command.<sup>64</sup>

ROK efforts to attain a discrete “kill chain” indicate a desire to both supplement U.S. capabilities and to act independently of U.S. support. In certain cases, especially plans for a light aircraft carrier and a new generation of nuclear-powered attack submarines, ROK procurement would incur large costs while doing little to enhance allied deterrence posture.<sup>65</sup> At the same time, several elements of U.S. strategy duplicate missions that can be accomplished more effectively by ROK forces. While it is natural for each country to preserve an ability to act independently to secure its vital interests, an effective alliance will minimize these inefficiencies, directing scarce resources to areas of comparative advantage.

These advances have helped establish conventional weapons as the primary components of allied deterrence strategy. The reticence of ROK officials and U.S. commanders to resort to nuclear use and the flexibility, credibility, and capability of conventional options ensure that they are the preferable option for both denial and punishment. Though ROK and U.S. planners commonly recognize that conventional weapons can generate any necessary strategic effect, strategists do not often conceive of U.S. conventional forces as producing a deterrence relationship in the same way that nuclear forces do. As a result, many of the concepts and requirements of strategic deterrent planning have not been regularly applied to conventional planning. But if conventional deterrence can produce strategic effects like cost imposition, if it is practiced imprudently it can also create an unstable condition that compounds the risk of nuclear use.

#### *Impractical models of conventional deterrence*

The regime’s consolidation of a preemptive damage limitation strategy has major implications for allied conventional deterrence posture. In the United States, standard concepts of conventional deterrence depend on an ability to either deploy U.S.

<sup>63</sup> As the United States moves to retire its aging JSTARS aircraft, South Korea seriously considered purchasing the airframes as they retired.

<sup>64</sup> Mauroni 2018.

<sup>65</sup> Discussions over a ROK SSN have raised justifiable concerns over the government’s intentions for the program. Kim 2017.

forces to the peninsula in time to affect a conflict or to deny North Korea an ability to inflict damage against allied targets. Both because of North Korea's rapidly advancing missile arsenal and its military strategy, both assumptions are increasingly untenable. Allied officials must reconsider the deterrence function of missile defense, reevaluate the capabilities and plans it considers central to deterrence, the time and forces it may have available for a contingency, and reassess crisis action standard operating procedures and other measures during a crisis to avoid sending signals that could inadvertently lead to escalation.<sup>66</sup>

### *Rapid deployment*

Traditional concepts of U.S. extended conventional deterrence rely on an ability to deploy air, naval, and land forces in time to decisively effect the conflict. During the cold war, the United States carried out annual exercises like Reforger to demonstrate that its logistics network was prepared to accomplish these tasks.<sup>67</sup> Several analysts have recommended that the United States stage a Reforger in Asia to enhance deterrence credibility.<sup>68</sup>

North Korea's expanding and advancing missile arsenal poses a significant challenge for these standard models by severely complicating the ability of U.S. land and air forces to rapidly deploy to the peninsula in a crisis. If U.S. bases in Japan, Guam, or even Hawaii and Alaska come under nuclear or conventional attack, it will be a serious challenge for them to project force onto the peninsula, or to conduct refueling and logistics operations to support the deployment of forces from the U.S. homeland. U.S. Forces Korea is increasingly centralized around two hubs in Pyeongtaek and Daegu. The U.S. Air Force is reliant on Osan and Kunsan Air Bases, while the Navy's single point of debarkation is at Busan Naval Base. If U.S. and ROK airbases come under fire, it may limit their ability to offload troops and materiel and also to generate tactical aircraft sorties. If operations at Busan are degraded, it could severely diminish the ability of U.S. Forces Korea to support a war effort with subsequent echelons of heavy vehicles, ammunition stocks, and supplies.

<sup>66</sup> Political appointees failed to appreciate these risks during the tensions of 2017. For example, CNN reported in 2018 that the president had ordered the evacuation of U.S. military families the previous year. Diamond and Liptak 2018. Former USFK Commander Gen. (ret) Vincent Brooks has previously described that step as the spark that could have started a war. Schifrin 2019.

<sup>67</sup> For an account of the Reforger exercises, see Department of the Army 1984. NATO is currently preparing Defender-Europe 20, an exercise to deploy 20,000 U.S. soldiers to Europe. Disparate units will draw prepositioned stocks and rehearse airborne forcible entry operations and then consolidate to simulate deployment to a combat zone. Kimmons 2019.

<sup>68</sup> Sayers 2018; Kania and Moore 2019. The recommendation is calibrated for China, but some Korea observers have also suggested it would be beneficial for deterrence of North Korea.

U.S. combat forces stationed on the peninsula are relatively modest, consisting principally of 1 armored brigade combat team (ABCT), a combat aviation battalion (CAB), an artillery brigade, 4 squadrons of attack aircraft, and a complement of support units.<sup>69</sup> Two sets of Army Prepositioned Stocks (APS) provide a capability to deploy quickly to the peninsula. APS-4 consists of equipment for one heavy BCT and one sustainment BCT in Japan and Korea, while APS-3 maintains a set afloat in Charleston, SC and other capabilities deployed globally that is intended to deploy 1 BCT to be combat-ready within 15 days.<sup>70</sup> Furthermore, elements of the III Marine Expeditionary Force (MEF) in Okinawa may deploy in a contingency.

The alliance retains two sets of options for deploying U.S. “augmentation forces” to the peninsula in a crisis. The first are Flexible Deterrence Options (FDO), “pre-planned” diplomatic, informational, and military actions designed to “bring an issue to early resolution without armed conflict.” Military FDOs attempt to “rapidly improve the military balance of power in the AOR without precipitating armed response from the adversary,” including raising the alert status of forces in theater, increasing ISR collection, or by undertaking shows of force.<sup>71</sup> FDOs are meant to be calibrated to “avoid undesired effects such as eliciting an armed response should adversary leadership perceive that... [FDOs] are being used as preparation for a preemptive attack.”<sup>72</sup> These options are unlikely to cause a motivated DPRK regime to reevaluate its decision to attack, as it plans to adopt a strategy to degrade deployment of U.S. forces. FDOs intended to increase alert status, deploy forces to the operational area, or show force will reinforce rather than undermine DPRK’s belief in the need to preempt an invasion. FDOs that are routine displays of strategic assets do little affect the regime’s estimate of allied capability or credibility.<sup>73</sup>

If FDOs fail to deescalate a conflict, the United States can initiate a plan to flow forces in the region referred to as Time Phased Force Deployment Data (TPFDD), which a senior military official characterized in 2001 as “basically a list and schedule of deploying units and all their deploying equipment.” The details of TPFDD are classified, but South Korean military officials have released considerable information about what they expect from the plan. The 2018 ROK defense white paper describes augmentation forces that include “690,000 troops, 160 vessels, and 2,000 aircraft,”<sup>74</sup>

<sup>69</sup> Hackett and Fitzpatrick 2018.

<sup>70</sup> In 2017, the Army relocated prepositioned stock from Korea to the continental United States to create a 16th ABCT. Judson 2017.

<sup>71</sup> U.S. Joint Chiefs of Staff 2017b.

<sup>72</sup> U.S. Joint Chiefs of Staff 2017a, 169.

<sup>73</sup> Jackson 2016b.

<sup>74</sup> ROK Ministry of National Defense 2018, 59–60.

estimates that have remained consistent for at least a decade.<sup>75</sup> The plan is intended to be sufficiently flexible that USFK can integrate ROK logistical assistance, which “enables adjustments to arrival sequences of units and equipment.”<sup>76</sup> Previously, the alliance had emphasized that the TPFDD could be supplemented by Force Module Packages (FMP), which were defined as a “grouping of combat” and supporting units and supplies “necessary to sustain forces for a minimum of 30 days... with a specific functional orientation (e.g. air superiority, close air support, reconnaissance, ground defense)...” to include capabilities like carrier battle groups.<sup>77</sup>

Both constructs are insufficient for the most alarming potential contingencies on the peninsula. FDOs represent signaling options that are incapable of repelling concerted and rapid aggression and may even detract from efforts that are necessary to confront these actions.<sup>78</sup> Their relatively modest scope makes it unlikely that these options would succeed in causing the regime to reevaluate its plans in a contingency so severe that its leadership had issued orders to initiate an attack.

On the other hand, TPFDD options are likely to be too slow and ponderous to confront a *fait accompli*. The central concern in U.S. conventional deterrence posture is the ability to deploy forces in time to decisively affect the conflicts they are intended to deter. APS sets are intended to be ready to fight at relatively short notice. For example, in March 2019, an ABCCT stationed at Ft. Bliss, Texas deployed to an APS set in Poland in seven days in a test of its readiness.<sup>79</sup> However, serious questions remain about the ability of the U.S. logistics system and the readiness of equipment to execute the TPFDD. During his confirmation hearing, Marine Commandant Gen. David Berger stated that “there isn’t enough lift to meet COCOM movement timeline/desires during peak spikes in demand.”<sup>80</sup>

Even a successful effort to deploy forces as planned is likely to be insufficient to repel or deter a *fait accompli* strategy. Consider extremely ambitious standards for deployment timelines. In 1993, the Army Strategic Mobility Program recommended an ability to provide a corps-size force of 5.5 divisions in 75 days, with the first brigade in

<sup>75</sup> ROK Ministry of National Defense 2008. In 2003, the ROK MND believed that the United States had committed to “commit over 40 percent of its Navy, over 50 percent of its Air Force, and over 70 percent of the Marines to a crisis in Korea.” ROK Ministry of National Defense 2003.

<sup>76</sup> Commander, Seventh Air Force 2016.

<sup>77</sup> U.S. Joint Chiefs of Staff 2000.

<sup>78</sup> At worst, FDOs become standard operating procedures that obscure their destabilizing effects. Bomber assurance and deterrence missions are an unfortunate example of this tendency. Jackson 2016b.

<sup>79</sup> South 2019.

<sup>80</sup> Berger 2019.

place in 4 days, the rest of its division in 12, two further divisions in 30.<sup>81</sup> In 2003, Secretary Rumsfeld established extremely demanding standards for U.S. force projection, called the 10-30-30 goals. These goals aspired to deploy one BCT in 4-7 days, 3 in 10 days, 9 in 20 days, and 15 in 30 days with minimal equipment reinforcement from the continental United States.<sup>82</sup> However, even these ambitious timetables are unlikely to make a decisive difference in plausible scenarios. Even successfully drawing, staging, and deploying a prepositioned BCT in a week is unlikely to contribute to denial of a DPRK fait accompli, which must evolve in a matter of days—or even hours—to prevent South Korea from bringing its superior conventional force to bear. While a U.S. ABCT is unquestionably formidable, its 100 main battle tanks are a drop in the bucket compared to the ROK Army's 2,300.<sup>83</sup> In practice, these timetables are most likely extremely optimistic, as reception, staging, onward movement, and integration (RSOI) of augmentation forces will be complicated by an ambiguous or short-notice onset of a conflict that will delay a decision to deploy, DPRK disruptive activities, ROK civilian traffic moving south, the need to outfit the units with WMD protective gear, and other factors. The first days of a conflict will likely be consumed by delays in decision-making and coordination, the need to surge ISR capabilities, evacuation of noncombatants, support for combat aircraft, and rapid deployment of special operations forces.<sup>84</sup>

In short, depending on TPFDD plans for deterrence plays into North Korea's strategy of limiting damage by impeding implementation of these plans. In the face of an attempt by a motivated DPRK leadership to aggress against South Korea for domestic political gain or disrupt what it mistakenly believes to be a U.S. invasion, scarce U.S. logistical resources should be reserved for capabilities that material affect the situation. FDOs will likely be interpreted as cosmetic and will therefore be unlikely to cause the regime to reevaluate its chosen course of action, or they will be perceived as indications that the United States is preparing to escalate its involvement and will therefore likely cause the regime to accelerate its own plans.

<sup>81</sup> Tucker 2000, 54.

<sup>82</sup> Furthermore, the goals aspired to defeat the enemy in 30 days and to be prepared for another contingency 30 days later.

<sup>83</sup> ROK Ministry of National Defense 2018, 332. In practice, wheeled light armored vehicles are likely to be more relevant to this type of contingency.

<sup>84</sup> It may be necessary to maintain an ability to deploy ground forces for the remote possibility of a gradual collapse of the DPRK regime, but it must be noted that the deployment of U.S. forces stands a risk of exacerbating the situation by provoking responses from both Beijing and Pyongyang. For one estimate of the enormous requirements of managing a DPRK collapse, see Bennett and Lind 2011.



### *Damage limitation*

ROK posture, and the models of several analysts, seem to believe that deterrence requires that the allies render the regime uncertain in its ability to inflict damage on the allies. Through some combination of left-of-launch operations to destroy North Korean missiles on the ground or ballistic missile defense intercepts right of launch, this position argues that the regime's uncertainty about its ability to inflict damage would dissuade it from initiating conflict. This perspective is a poor guide for deterrence policy for four reasons.<sup>85</sup>

First, the argument does not provide clear guidance for force posture or acquisitions. Damage limitation arguments rarely specify an identifiable standard for the quantity or types of attacks that allies would have to credibly commit to prevent. In a closely-reasoned piece, John Warden and Vince Manzo argue that "the United States should field damage limitation capabilities... that would allow the United States to disarm the majority of North Korea's nuclear weapons capability and prevent significant retaliatory strikes against U.S. cities."<sup>86</sup> The Ballistic Missile Defense Review does not specify a standard for the quantity or type of damage it aims to prevent, simply stating that "missile defense limits the number of adversary missile warheads that strike their targets," offering "significant" or "effective protection."<sup>87</sup> This language recommends an ability to limit some damage, but it does not say how much or of what types. Why should allies seek to prevent the "majority" or "significant" amounts of damage, when retention of any ability to conduct nuclear strikes may be sufficient to convince Kim Jong Un that he has options to backing down?<sup>88</sup>

Second, given its advanced and expanding missile arsenals, the regime could hold a rational expectation that it could inflict significant damage on allied targets. North Korea has developed a new generation of accurate and sophisticated missiles to hold targets on the peninsula at risk. The ability of the KN23 and other missiles to evade defenses, the proliferation of short-range missiles with maneuverable warheads, and the regime's retention of large numbers of tube artillery all provide considerable ca-

<sup>85</sup> This section draws heavily on arguments made in Mount and Rapp-Hooper 2019. See also Reif 2017; Kriss 2017.

<sup>86</sup> Manzo and Warden 2017. They argue that if North Korea were able to target the United States with nuclear attacks, it would be more likely to carry out nonstrategic nuclear attacks or to initiate war.

<sup>87</sup> U.S. Department of Defense 2019.

<sup>88</sup> Brad Roberts and others have argued that ballistic missile defense is valuable as a way of depriving an adversary of the option to carry out limited coercive attacks, "firing one or two and threatening more," and therefore puts "the burden of escalation in an emerging crisis onto the adversary." Roberts 2014. This is a more precise standard, but is less about limiting the regime's ability to inflict damage than about forcing it into a dilemma about how to inflict that damage. Patriot and THAAD batteries may currently meet this standard for point defense of a small quantity of targets in South Korea from some types of missiles fired from some locations, but complete coverage is becoming increasingly difficult.

pability to inflict damage despite allied defenses. Targets in Japan, Guam, Hawaii, and the continental United States represent a greater challenge for North Korean missiles. The regime's ability to inflict damage on these targets is essentially a matter of probability. Japan can have reasonably high confidence that its Patriot and Aegis defense systems can intercept some North Korean targets, but it cannot be confident that it will be completely successful. Defense of targets in the continental United States relies on the ground-based midcourse defense system (GMD). The current set of 44 interceptors is postured for a force of 11 DPRK ICBMs if four are fired at each target, but the system has little experience being tested under realistic experimental conditions.<sup>89</sup> It has faced major technological setbacks that have limited its development at a critical time.<sup>90</sup> As North Korea produces additional ICBMs, improves their reliability, and enhances them with penetration aids, the likelihood will increase that a salvo of ICBMs will successfully detonate on American territory.<sup>91</sup>

A range of military strategists have recommended that the United States disperse, harden, and multiply its overseas installations to complicate an adversary's targeting challenge.<sup>92</sup> Jackson implies that because Pyongyang intends to delay force flow, strike approaching naval ships, degrade allied ability to conduct sorties, and disrupt logistics that sustain ground forces, the allies should attempt to open new port facilities and reverse the consolidation of U.S. land forces.<sup>93</sup> Warden and others recommend that U.S. facilities be hardened against nuclear weapons effects and U.S. forces be trained and equipped to operate after WMD<sup>94</sup> use while Rapp-Hooper argued in 2016 that it would be prudent to harden against cruise missiles if not nuclear detonations.<sup>95</sup>

Preparing to operate after nuclear use is a necessary task, but it is not sufficient by itself or collectively with missile defense and cyber methods to "negat[e] North Korea's nukes."<sup>96</sup> Hardening and dispersal may decrease the time that a facility can recover from a nuclear attack or reduce the damage taken by nuclear strikes that do not detonate directly over their target, but the regime will be capable of imposing appalling damage against civilian and military targets regardless of allied actions. If the regime does hold a strategy of disrupting adversary operations, dispersal and hardening of allied bases will likely be followed by further expansion of North Korea's short- and

<sup>89</sup> Grego, Lewis, and Wright 2016.

<sup>90</sup> In 2019, the Missile Defense Agency cancelled the Redesignated Kill Vehicle after five years of work, sending the agency back to the drawing board on future improvements. Reif 2019.

<sup>91</sup> For a notional discussion of the probability estimates of North Korean ICBMs, see Plant 2017.

<sup>92</sup> Ochmanek 2017; Ochmanek 2018.

<sup>93</sup> Jackson 2015.

<sup>94</sup> Warden 2017, 44.

<sup>95</sup> Rapp-Hooper 2016, 82.

<sup>96</sup> Harvey 2017.

medium-range missile arsenals so that it could continue to hold these facilities at risk. Though Pyongyang lacks Beijing or Moscow's ability to undertake a concerted arms race, the political and fiscal cost of ensuring a level of resilience sufficient to ensure uninterrupted operations is likely to be prohibitive. Given that a hardened shelter for 12 aircraft costs approximately \$850 million, it is far easier and cheaper for North Korea to build another missile battalion, to test warheads of increased yields, or test its missiles to improve their accuracy, than it is for the United States to open and harden an additional base.<sup>97</sup> Dispersal and hardening are unlikely to eliminate reliance on major hubs like Yokosuka and Pyeongtaek, the loss of which would severely constrain U.S. operations early in a conflict even if alternative ramps and ports were available. Even if hardening and dispersal does succeed in opening a wider window of advantage, it will likely be transient, as evidenced by the development of KN23 and large-caliber MLRS systems after USFK shifted its headquarters south to Camp Humphreys and deployed THAAD to limit its vulnerability to tube artillery and SRBMs. The allies should seize cost-effective opportunities to disperse and add redundancy to their critical systems, but should not trust that any level of effort along these lines will be sufficient to safeguard these facilities against attack or proceed with an objective of doing so.

Third, the regime could hold an irrational expectation that it could inflict damage that is not based on a dispassionate or accurate calculation of the survivability of their missiles or the capabilities of allied missile defense. Both the psychological literature and documentary empirical evidence suggests that leaders rarely reason systematically or accurately about military outcomes, a generalization that is exacerbated by the regime's widely-reported tendency to reason in alarmist terms about the military threat posed by Washington.

Fourth, an attempt to prevent damage could likely have significant destabilizing effects and risks eliciting precisely the same actions it is intended to prevent. If the regime is uncertain in its ability to destroy certain targets due to missile defenses, it will have an incentive to vertically escalate sooner in a conflict, to employ larger salvos of missiles in an attempt to saturate allied missile defenses, likely increasing the amount of damage caused to civilian targets advertently or inadvertently due to inaccuracy. Missile defenses may incentivize nuclear use if the regime is uncertain in its ability to destroy a runway or hardened facility with a salvo of conventional missiles.

If the allies dedicated to a damage limitation policy cannot depend on missile defense capabilities right-of-launch, they must be prepared to execute left-of-launch attacks

<sup>97</sup> Stillion 2009. Cost converted from 2009 dollars. As Stillion makes clear, hardening also does not guarantee aircraft will be operable even after a conventional attack due to condition of the runway, support units, and need to relocate to resume operations.

on North Korean territory. If Pyongyang is concerned about a counterforce or decapitation attempt, it would gain an incentive to patrol its warheads more frequently, to delegate nuclear release authority to field commanders, or to preempt the strikes in an attempt to limit their effectiveness or to truncate the conflict by forcing allied leadership to back down. In a limited contingency, left-of-launch attacks onto North Korean territory may represent a substantial horizontal escalation that could be mistaken for a general counterforce or decapitation attack that could result in nuclear use, an unintended vertical escalation.<sup>98</sup> Meanwhile, there is significant evidence that U.S. and ROK political leaders and defense officials are likely to overestimate their ability to limit damage from North Korean attacks,<sup>99</sup> increasing the chance that U.S. leaders engage in behavior that is riskier than they intend.

It is inadvisable to rely on damage limitation for deterrence given the assumption's negative consequences for alliance planning, acquisitions, crisis management, and stability.

### *Decapitation*

According to an alternative concept, deterrence depends on the alliance's ability to decapitate the North Korean regime in a crisis: to kill or incapacitate the leadership or separate it from its NC3 systems so that it cannot order their use. The question of whether to target enemy leadership was examined in detail as part of nuclear targeting during the cold war where theorists like Herman Kahn were concerned to leave leadership intact who could be coerced to terminate a conflict.<sup>100</sup> But allied margin of superiority over North Korea now constitutes a credible conventional decapitation option against the leadership of a nuclear-armed adversary. Whether to deny Kim Jong Un's ability to issue a command to employ nuclear weapons, to punish the regime for having done so, or to degrade its warfighting ability, decapitation has taken on increasing prominence in debates about deterrence.

On the theory that the regime is primarily concerned with its own survival, the Korea Massive Punishment and Retaliation (KMPR) strategy intends to "punish and retaliate against North Korea in the event of a strike against the ROK by directly targeting its leadership, including its war headquarters, through deployment of missiles capable of simultaneous, massive-scale precision strikes, and special operations units."<sup>101</sup> Though the policy is framed in terms of a retaliatory attack, the capability has led ROK plan-

<sup>98</sup> Panda 2018.

<sup>99</sup> To take only the most shocking example, Donald Trump stated in 2017 that "we have missiles that can knock out a missile in the air 97% of the time." Grego, Lewis, and Wright 2016; Panda and Narang 2017.

<sup>100</sup> Kahn 2007.

<sup>101</sup> ROK Ministry of National Defense 2016, 71–2.

ners to think in terms of a preemptive strike to prevent DPRK leadership from initiating a nuclear attack. KMPR has been publicly described both as a surgical strike and as a massive barrage to destroy multiple leadership facilities even in the face of uncertainty about the exact location of a leader.<sup>102</sup> ROK defense officials now believe their conventional missiles to be capable of destroying even hardened and buried targets by assigning multiple warheads to the same target.

In recent years, the alliance has taken significant steps to communicate this capability. After the adoption of OPLAN 5015 reportedly provided for decapitation operations, joint exercises in 2016 and 2017 included prominent signals that they simulated decapitation operations.<sup>103</sup> In 2017, South Korean defense minister Song Young-moo announced plans to establish a dedicated “decapitation unit”<sup>104</sup> that reportedly consists of 1,000 special warfare troops trained for infiltration and assassination missions.<sup>105</sup> MND also publicly released imagery of a Hyunmu-2 penetrating and destroying the contents of a shallow bunker.<sup>106</sup> During joint exercises later that year, the United States released photographs of the SSGN USS Michigan docked at Busan while fitted with dry deck shelters for delivery of special operations forces.<sup>107</sup>

Decapitation is an unreliable foundation for deterrence. For one, it is not certain that even if a strike succeeded in incapacitating Kim Jong Un before he issued a launch order, that it would suffice to prevent a North Korean nuclear attack or impose costs on the regime sufficient to terminate the war or deter future aggression. While there is little definitive public information about North Korea’s nuclear command and control arrangements (NC3), it is believed that they remain highly centralized.<sup>108</sup> Nevertheless, it may very well be possible for Kim Jong Un’s subordinates or successors to carry out retaliatory nuclear strikes or other actions following successful decapitation strikes. These officials may not regard themselves as having incurred costs from having participated in the initial DPRK attack so may be more inclined to punitive retaliation than restraint. Alternatively, if a decapitation strike succeeded in eliminating most of the regime’s senior leadership, it may be difficult to find an authority capable of ordering a termination of conflict. Given the opacity of the regime, it would be extremely risky to assume that intelligence analysts understood its decisionmaking procedures and interests sufficiently well to believe that they could exact costs sufficient to deter

<sup>102</sup> Yonhap News Agency 2016.

<sup>103</sup> Fifield 2016; Talmadge 2016.

<sup>104</sup> Choe 2017.

<sup>105</sup> Yeo 2017.

<sup>106</sup> ROK Ministry of National Defense 2017.

<sup>107</sup> U.S. Naval Forces Korea Public Affairs 2017.

<sup>108</sup> Narang and Panda 2017.

by the threat of punishment.<sup>109</sup> Similarly, decapitation leaves little room for imposing graduated costs on the regime in response to limited aggression: decapitation is a blunt instrument relevant only for extreme circumstances in which all other deterrence measures have failed. Lastly, foregrounding the threat of decapitation attacks creates incentives for Pyongyang to adopt destabilizing command and control procedures. The threat of decapitation encourages the devolution of nuclear use authority or the development of automatic retaliatory procedures, an incentive that led to research on “dead hand” systems during the cold war.

For these reasons, the threat of decapitation does not represent a credible option for deterrence by punishment or for maintaining crisis and arms race stability prior to conflict. While the United States and South Korea should maintain an ability to track and strike DPRK leadership in extremis, they cannot depend on this capability to prevent war or nuclear use. The alliance would be better served by prioritize efforts to improve the credibility of security assurances to the regime to increase the likelihood that it can choose to contain or deescalate a limited war rather than be forced into a corner where it believes its only option is to escalate rapidly and decisively at the start of hostilities. Foregrounding decapitation threats is antithetical to these interests.

Military conditions on the peninsula are evolving rapidly. Washington and Seoul must reassess allied deterrence policy given significant constraints. North Korea’s increasingly capable missile arsenals mean that the allies can no longer have confidence in their ability to limit damage from either large salvos missiles or limited attacks intended to coerce leadership or suppress allied military operations. Decapitation, counterforce, invasion, and nuclear use are not reliable means of deterring limited aggression or coercion and should instead be thought of as a last-ditch option in the event that deterrence fails. As a result, several standard models of nuclear and conventional deterrence are now obsolete. At the same time, the conventional balance is shifting decisively in favor of the alliance, which affords new options for defense, denial, and cost imposition. South Korea’s armed forces are increasingly capable of defending its territory from incursions and responding to attacks. The alliance needs a new concept of conventional deterrence that leverages growing advantages to maintain stability despite growing risks.

<sup>109</sup> The strategy is also in tension with any attempt to offer senior DPRK military leaders incentives for conciliation in a crisis. Vincenzo 2018.



# A CONCEPT FOR CONVENTIONAL DETERRENCE

As allied conventional forces assume many of capabilities, missions, and risks that marked nuclear weapons during the cold war, the allies should conduct a top-to-bottom review of their combined deterrence posture. The new concept should ensure that their conventional acquisitions, posture, and planning reflects the primary consideration of deterrence relationships—stability. A stabilizing conventional force posture will ensure that the allies can simultaneously: repel, and deny the regime benefits from, limited aggression at any level of escalation; impose graduated costs to disincentive repetition; and conduct collection and, if necessary, strike operations against targets inside North Korea from trying to escalate its way out of failed conventional aggression.<sup>110</sup> Meeting these standards at acceptable cost will require allocating tasks between the allies to exploit areas of competitive advantage, which will in turn require improved coordination between the allies.

## *Stability on the Korean peninsula*

Maintenance of stability, or the tendency of a system to revert to the status quo ante rather than to escalate, should be the guiding objective of allied deterrence policy.<sup>111</sup> The United States and South Korea both hold inherently defensive military objectives: to preserve the freedom, safety, and prosperity of their citizens from attacks by North Korea. An unprovoked attempt to end the regime as a political authority or a nuclear power is not necessary to meet these objectives and is likely to have devastating consequences for them. The most effective way of preserving these interests is by ensuring that allied deterrence strategy, force posture, and public communications preserve stability.<sup>112</sup>

<sup>110</sup> This risk was highlighted in the 2014 Quadrennial Defense Review. U.S. Department of Defense 2014.

<sup>111</sup> Valuable scholarship on strategic stability can be found in Acton 2013 and the associated papers. Since the 2016 election, strategic stability has unfortunately receded as an organizing construct for U.S. deterrence planning.

<sup>112</sup> This section relies on concepts that were developed jointly in Mount and Rapp-Hooper 2019; Mount and Berger 2019. but in some places makes proposals and uses language that were not jointly agreed to by my coauthors in those studies.

Stability requires maintaining an equilibrium of forces that allows Pyongyang a rational expectation while denying it any hope of winning a conflict. Maintaining this equilibrium requires that allied forces credibly demonstrate three intentions in three different conditions. In peacetime, the alliance must demonstrate restraint to lower the risks of inadvertent escalation, to shape Pyongyang's arsenal in stabilizing ways, and to enhance the credibility of U.S. security guarantees. Conventional arms control agreements are critical tools for establishing and maintaining a condition of stability.<sup>113</sup> In exchange for significant DPRK measures to reduce the immediacy of the threat its forces pose to South Korea, the allies should be prepared to accept verified limits on their operations and inspections of military facilities to certify that they are nonnuclear and not preparing for unprovoked decapitation strikes. However, absent this agreement, the alliance should recognize that it has a strong incentive to clearly demonstrate to Pyongyang that it is not preparing such an attack. In a limited war, the alliance must maintain escalation dominance, or the ability to raise the costs of aggression over the regime's expected benefits at each level of escalation.<sup>114</sup> To do this, the alliance should be prepared to deny DPRK forces entry into ROK territory, deny the regime benefits from aggression, and to maintain the capability for graduated cost imposition in response to an attack.<sup>115</sup> Lastly, the alliance has to be prepared for the possibility of an unlimited war and must have plans available to generate and execute operations to separate the regime leadership from its forces and to replace it if necessary. Given that these operations are unlikely to be fully successful in eliminating North Korea's nuclear arsenal, allied leadership should not depend on a potential counterforce strike in managing a crisis.

#### *Conventional deterrence force posture & structure*

Conventional weapons are uniquely positioned to deter nonnuclear aggression by denying the regime the ability to improve its position through aggression. Allied conventional forces on the peninsula should be capable of repelling intrusions into ROK territory, destroying artillery emplacements that are firing into ROK territory, and imposing graduated costs against the regime commensurate with their initial act

<sup>113</sup> For more on potential conventional arms control steps and their value, see Mount and Berger 2019, 35–7; Jackson 2019; Warden and Panda 2019. Like nuclear arms control, the alliance should not seek conventional arms control for its own sake but should ensure that its proposals comport with a shared concept of stability.

<sup>114</sup> In other words, the alliance should not need to escalate a conflict significantly in order to prevail. Even if escalation dominance is no longer plausible for Russia or China, it remains both plausible and desirable for North Korea. Fitzsimmons 2017.

<sup>115</sup> The alliance policy for cost imposition should be to not only defend against DPRK aggression but to impose additional costs proportionate to the attack. Specifically, the alliance should prepare to exact costs against military facilities and units that enabled the attack to degrade their ability to repeat the action. This formulation imposes costs.

of aggression. Escalation dominance requires that the alliance must not depend on deployments from the continental United States to meet these objectives for contingencies up to existential threats to South Korea and nuclear use.<sup>116</sup> If allied forces did depend on reinforcements for defense or graduated cost imposition, it would provide the regime with an opportunity to conduct a rapid fait accompli to achieve limited gains to attempt to terminate a conflict before those deployments could reach the peninsula and/or to horizontally escalate the conflict to strike allied bases to prevent those deployments.

Because of North Korea's preemptive anti-access strategy, U.S. budgetary constraints, and rapidly expanding South Korean capabilities, a critical function of an effective concept of conventional deterrence is to efficiently and credibly allocate responsibilities and capabilities between the allies. U.S. strategists too often think that the United States must deter, fight, and win a conflict by itself. In fact, deterrence already relies critically on ROK forces.<sup>117</sup> An efficient and credible division of duties will ensure that ROK forces stationed on the peninsula are supplemented with sufficient U.S. capabilities to defend South Korean territory and impose graduated even if U.S. logistical hubs in South Korea, Japan, and Guam are degraded. The function of U.S. augmentation forces should be to provide additional strike capabilities to decrease the duration, intensity, or lethality of a limited conflict and to provide additional ISR and strike capabilities to locate and hold at risk leadership, C3, and military targets away from the battlefield, in North Korea's interior, to deter the regime from escalating. Integrating capable and growing ROK strike assets into combined plans for a general war or a counterforce attempt is necessary to maximize the effectiveness of these plans. The fact of the matter is that this division of labor is enforced on us by geography, technology, and a range of immutable strategic factors: follow-on echelons of U.S. forces deploying from overseas will be incapable of defending South Korea against rapid faits accomplis, while ROK forces will be incapable of conducting missions to end North Korea as a nuclear state without a major commitment of U.S. forces.

These standards for allied force structure ensure that each country maximally exploits their comparative advantage rather than duplicating the other's function. For example, ROK regular maneuver forces and special operations forces are more ready and credible means of repelling DPRK incursions than deployments of comparable U.S. units, whether prepositioned or deployed from overseas. This posture also decreases the risk that Pyongyang perceives U.S. force flow as a prelude to invasion and regime change,

<sup>116</sup> In the typology that the National Defense Strategy has popularized, this argues that both "contact" and "blunt layer" forces must be stationed on the peninsula.

<sup>117</sup> In the coming decades, the ROK's relative conventional advantage on the peninsula and U.S. vulnerability to anti-access strategies will both expand, increasing the alliance's reliance on ROK capabilities to defend and deter.

causing it to escalate and expand the envelope of the conflict before that force can be brought to bear. For allies to concentrate on capabilities in which they hold a comparative advantage also decreases the chance that they duplicate capabilities and thereby divert resources from missions that they must discharge.

In short, the function of U.S. forces should be to supplement South Korea's ability to defend itself by helping ROK forces to prevail in a limited conflict and by supplying capabilities needed to discharge more ambitious missions if required.

The primary construct for U.S. augmentation forces should be discrete force module packages that are tailored for specific contingencies. FDOs are inefficient for defense and for signaling, while even an extremely flexible TPFDD will misallocate scarce resources nuclear needed to maintain readiness of a handful of specific and necessary capabilities. In a crisis, allied leadership will place a premium on rapid availability necessary capabilities and be frustrated to learn that available options are either too weak or too delayed to make a significant difference to a rapid conflict.

This concept should not be read to imply that the United States decouple from South Korea or that the ROK armed forces must prepare to defend their country without U.S. support. Rather, it implies that U.S. leaders should be willing to supply the necessary defensive capabilities to South Korea to assist and enable ROK forces and to increase coordination within the alliance to ensure the success of this concept.<sup>118</sup>

The combined concept of conventional deterrence must be capable of deterring both nonnuclear aggression and nuclear use. Let's consider each in turn.

#### *Conventional deterrence of nonnuclear aggression*

To repel North Korean incursions into allied territory requires constant readiness and situational awareness of forward-deployed defensive forces. For decades, allied forces have maintained an ability to detect and confront intrusions of special operations forces from small surface vessels, from undersea tunnels, overland, and airborne insertion; to destroy DPRK artillery batteries firing on South Korean territory; and to defend against a large invasion of North Korean mechanized forces and infantry. While the alliance minimizes reliance on U.S. augmentation forces for defense and denial, the United States should develop force packages capable of supplementing and enabling ROK forces. These will include ISR and strike assets capable of rapidly supplement-

<sup>118</sup> Evolving DPRK capabilities may very well require that the allies adjust or increase the number of forward deployed U.S. units on the peninsula. On the other hand, a successful attempt to establish an arms control regime with North Korea could enable the alliance to draw down U.S. forces. The quantity of U.S. presence should be understood as a means to clearly-defined strategic ends that adjust with circumstance. Even if a future U.S. administration takes steps to reduce U.S. defense spending or revise its alliance commitments—both advisable steps—it should prioritize maintenance of the alliance's ability to deter North Korea.

ing ROK capabilities for early warning, targeting, and to conduct strikes against defended targets near the battlefield, and may depending on the contingency include submarine warfare by aircraft, surface ships, and static sensors;<sup>119</sup> contribution to defensive and offensive electronic warfare and cyber operations; regional manned and unmanned ISR for surveilling the sea space and penetrating into DPRK airspace; missile tracking radars, and command and control platforms. Several existing capabilities will remain valuable for enabling and contributing to ROK operations. The alliance may well determine that continued presence of a U.S. combat-capable ABCT will remain a prudent investment to enhance combined training operations and to conduct discrete missions if needed. The 2nd CAB and the 25th Fighter Squadron (A-10C) provide a valuable supplement to ROK close air support capabilities. The ability to surge multiple aircraft carriers to conduct strike operations in a limited conflict could be invaluable for increasing the sortie rate of allied aircraft without reliance on more vulnerable land bases.

However, the U.S. priority should be to maintain force packages optimized to conduct reconnaissance of targets in the DPRK rear areas to prevent the regime from escalating the conflict and to impose costs if it does. Strategic FMPs calibrated for high end conflict should focus on penetrating strike and ISR to detect preparation of follow on echelons of DPRK addressing forces, to track DPRK leadership and strategic forces, and to hold these targets at risk if necessary. U.S. leadership should consult with Seoul about its intentions and should take extreme discretion before authorizing missions that could be detected.

Regardless of the structure and capabilities of planned FMPs, certain enhancements will be required to ensure that allied forces remain viable given an expanding threat. The alliance must expand its capabilities to deny and defend against DPRK aggression to confront intrusions of small submarines, unmanned aerial vehicles, and larger amphibious special operations units on a growing fleet of hovercrafts.<sup>120</sup> In addition to an ability to operate in an environment degraded by chemical, biological, or nuclear use, ISR assets and defensive forces must now be resilient to missile, cyber, and SOF attacks that could degrade their positions, their supply lines, or the C3 systems that support their operations.<sup>121</sup>

<sup>119</sup> Supplementing ROK early warning and sensing options requires significantly improved procedures for sharing information between the allies.

<sup>120</sup> Bermudez 2018.

<sup>121</sup> TPFDD for large contingents of ground forces may well remain relevant for collapse contingencies and other unlikely scenarios.

### *Conventional deterrence of nuclear use*

An adequate response to nuclear use will require the involvement of U.S. forces from off the peninsula both to provide capabilities that are likely to remain beyond the reach of the South Korea military and to demonstrate alliance cohesion to dissuade further escalation. If the conflict escalates beyond a conflict that is limited in both geographic dispersal and intensity, U.S. assets will necessarily lead operations against larger concentrations of DPRK forces and the regime's WMD capabilities. Over and above the deterrent value of its nuclear forces, U.S. conventional forces play an indispensable role in deterrence of nuclear use.

It is important to recognize that conventional deterrence of nuclear use is not a novel concept nor unique to the peninsula. U.S. conventional forces already play a critical role in deterring nuclear use around the world. There is no longer an exclusively nuclear war plan. In recent years, conventional weapons and other cross-domain options have been integrated into the nuclear war plan. Like their ROK counterparts, U.S. strategists now plan to achieve specific strategic effects and outcomes using coordinated packages of options across domains.

Advancements in the capabilities and quantity of allied conventional strike platforms enable them to hold at risk categories of targets that would have been assigned to nuclear forces during the cold war. The precision of modern conventional warheads provides them with added utility to destroy or disable hardened targets, including by penetrating underground facilities and collapsing tunnel entrances, capabilities valuable both for command targets and for warhead storage sites and missile bases. While nuclear earth-penetrating warheads like the B61 mod 11 and mod 12 likely retain an advantage in destroying hardened targets relative to conventional munitions, a U.S. military official stated clearly in 2013 that a redesigned version of the Massive Ordnance Penetrator "is capable of effectively prosecuting selected hardened, deeply buried targets."<sup>122</sup> In practice, Pyongyang is likely to harden and bury its most critical targets beyond the reach of both nuclear and conventional earth penetrating weapons. However, expanded inventories of cruise missiles and ROK maneuverable ballistic missiles provide increased ability to subject hardened targets to repeated precision strikes and to strike entrances to tunnel complexes situated on the north and west faces of mountain ranges, a common North Korean practice. Improved targeting ISR means that if even a mobile target can be identified and located, it can be destroyed by precision conventional warheads. If a target cannot be identified or located with precision, a barrage of nuclear warheads may have a marginally improved chance of

<sup>122</sup> Capaccio 2013. That assessment was released amid concerns over Iran's Fordow uranium enrichment facility. Air Force officials are said to be seeking smaller munitions with void-sensing fuzes, providing tactical aircraft with options for destroying hard and buried targets. Butler 2012.

destroying it, but this is not a realistic possibility given the proximity of South Korean territory, Chinese and Russian territory, and the need to continue to operate over North Korea.

Though conventional weapons can in most cases generate the same types of strategic effects as nuclear forces, there are two potential that they cannot replicate. The first is the presence of a handful of hardened targets that nuclear weapons can destroy but conventional ones cannot. While the quantity of these targets cannot be known with reference to open-source information, it is important to recognize that these targets are most likely not the regime's most critical facilities. Second, it may simply be the case that elements of the Kim regime regard destruction of a target with a nuclear warhead as inherently more consequential than an equivalent target destroyed by a conventional warhead. Due to the stigma attached to these weapons or to the implications of nuclear use for inferences about U.S. resolve, nuclear use may always have a unique deterrence value over and above its weapons effects. Given that these stigmata cannot be quantified, or known with certainty, and that they are less likely to be present in the leadership of a conventionally-inferior and highly-centralized regime that lacks empathy for the welfare of its citizens, it is advisable that U.S. officials discard these considerations when making critical decisions about crisis management or selection between potential response options.<sup>123</sup>

In the aftermath of a North Korean employment of a nuclear weapon, political leadership in Seoul and Washington will have three primary concerns: to prevail in the conflict at hand, to establish a reputation to deter future crises, and to defend the stability of the international system over the long term.<sup>124</sup> The primary consideration in all three will be in preventing Pyongyang from conducting additional nuclear attacks.

A decision to employ nuclear weapons is the sole responsibility of the President of the United States.<sup>125</sup> The decision of how to respond to North Korean nuclear use depends critically on the circumstances of that attack, including the location, target, military casualties, civilian casualties, yield of the weapon, location and type of the launch platform, an assessment of the intended purpose of the attack, and other factors. It is altogether possible that a president could simply rule out the use of nuclear forces to respond in a specific contingency, requiring U.S. STRATCOM and other allied commanders to present a package of conventional and cross-domain options. If the nuclear detonation occurs in the context of a limited war, the alliance's political leaders will have four broad options for responding while continuing to prosecute the limited war:

<sup>123</sup> Discarding the unquantifiable psychological effects of nuclear use enables U.S. adoption of the nuclear necessity principle described above. Lewis and Sagan 2016.

<sup>124</sup> This paragraph and the ones following extend arguments made in Mount 2015.

<sup>125</sup> Reform of nuclear use authority is badly needed. Betts and Waxman 2017; Blair 2018.



to destroy nonnuclear targets specifically selected as a response to the initial detonation with conventional forces; to conduct a limited nuclear strike in response; to execute an attempt to forcibly remove the regime's ability to order further attacks through counterforce, decapitation, or regime destruction strikes with conventional forces; to conduct these strikes with nuclear and conventional forces. For each option, conventional forces are the primary elements of the allied response. Consider each in turn.

First, leadership may elect to continue to prosecute the limited war and, most likely, to select additional targets for conventional forces designed to impose additional costs on the regime in response to its nuclear escalation. Additional targets entail some margin of horizontal or vertical escalation to cover forward command posts, missile launchers, staging areas for military targets, or targets deemed to be of value to the regime's leadership away from the battlefield like VIP villas.<sup>126</sup> In selecting this option, allied leadership will demonstrate its resolve to continue to carry out the operations that the regime judged to be so costly as to warrant escalation to the nuclear level; its commitment to preserving alliance cohesion given ROK preference for a conventional response; its interest in communicating a reputation to other potential adversaries that it is willing to continue to prosecute the conventional fight despite efforts to shift the grounds of competition to the nuclear domain; and its effort to limit escalatory pressures to avoid a larger exchange of nuclear forces. Provided the allies remain capable of generating a sufficient number of sorties to strike the designated targets and continue to prosecute the war, conventional forces should be capable of destroying or disabling any but the most hardened targets. Leadership is more likely to select this option the lower the yield of the initial DPRK warhead, the further from allied territory the detonation occurs, the fewer the casualties, and the less likely there will be further nuclear attacks.

Second, allied leadership may choose to execute a limited nuclear strike to respond to the initial DPRK detonation, with a target and yield dependent on the circumstances of that blast.<sup>127</sup> In selecting this option, leaders would likely reason that nuclear use is necessary to assert allied resolve to escalate if necessary to reestablish deterrence, and to project a reputation to deter future instances of nuclear use. This option also economizes on the use of regional assets that might have been disrupted or degraded by North Korean attacks, decreasing the chance that the allied decisionmakers have to choose between continuing regular combat operations and carrying out strikes designed to reestablish deterrence. However, in interviews and tabletop scenarios,

<sup>126</sup> The latter option is descriptively a possibility but incompatible with the earlier arguments against decapitation, since the regime's leadership may perceive itself as under attack in the event its villas are struck whether or not the allies knew they would be vacant.

<sup>127</sup> Given the costs to the global economy, U.S. diplomatic standing, and domestic political pressures, it would not be in U.S. and allied interests to execute a reciprocal nuclear strike in response to a DPRK nuclear detonation intended to signal resolve but that did not result in allied casualties. Mount 2015.

former U.S. and allied officials regularly stress that their primary concern in related contingencies is to prevail in the conflict at hand in defense of allied territory and its population, arguing that it would not do to win a competition in nuclear signaling but lose a war.<sup>128</sup> Even if a U.S. president were to elect to limited nuclear retaliation, conventional forces would be the primary means of securing the main allied objectives of territorial integrity and security of the civilian population from further attacks.

Third, allied officials may decide that the regime's leadership must be ended as a nuclear weapons power using conventional weapons. In this option, the allies would carry out a coordinated set of strikes to attempt to destroy the regime's nuclear forces, its leadership, and the command and control networks that connect the two. Without an invasion, it is unlikely that the allies could institute a coordinated regime change. Nevertheless, a combined allied strike plan would integrate conventional kinetic standoff and SOF missions, cyber attacks, and EW and other measures to separate the regime from its forces and destroy it.

Last, the leadership could select a plan to end the regime as a nuclear power using both nuclear and conventional forces. In the likeliest version of this scenario, a small number of critical NC3, leadership, and counterforce targets would be designated for destruction of nuclear munitions while the majority of allied sorties and enemy targets destroyed will most likely be with conventional forces. It would be conventional forces tasked with the primary allied goal of reestablishing South Korean territorial integrity, addressing remaining threats from residual DPRK forces, and managing the resulting humanitarian crisis. In terms of total explosive yield, number of targets destroyed, and salience for the most critical allied objectives, conventional forces would still play the leading role. The alternative to this outcome is that U.S. president unilaterally opts to obliterate North Korea with a massive preemptive barrage of ICBMs to destroy the regime and its nuclear forces before it could be launched. The enormous quantity of civilian casualties from fallout in North and South Korea, the need to overfly Russian territory, the likelihood of precipitating a conflict with Beijing, and the attendant global political, economic, and diplomatic are all manifestly prohibitive.<sup>129</sup>

The unfortunate fact is that no president or advisor can be certain whether nuclear use or nuclear restraint would be more effective at preventing a further nuclear exchange. It may be that initial DPRK nuclear attack occurred because the regime doubted U.S. resolve, and so a nuclear response is necessary to signal this resolve to reestablish deterrence. Alternatively, the regime may expect a nuclear response and has judged this outcome to be desirable to continued prosecution of a limited conventional war,

<sup>128</sup> Mount 2017b.

<sup>129</sup> That this option is regarded seriously in some circles is indicative of the distortionary effect that nuclear weapons have on serious planning. Author's interview, November 13, 2019.

hoping that U.S. nuclear use will divide the alliance, catalyze Chinese intervention, or otherwise detract from allied military operations.

In certain circumstances, North Korean nuclear use would be an attempt to shift a competition from a conventional conflict where it will clearly lose to one where it might rationally hope that it could force the alliance to split or back down. One way to deter Pyongyang from escalating to the nuclear level would be to attempt to convince them that the United States would prevail in a nuclear exchange. However, the regime is likely to have anticipated the costs of any limited nuclear response and accepted that they are still worth taking the gamble. The credibility of an overwhelming nuclear response is difficult to establish given that it would be detrimental to a wide range of American interests. A better way would be to convince Pyongyang that the United States and South Korea would not back down in the face of nuclear coercion. While it is highly likely that the allies would retain their resolve to prevail, there is no guarantee that they can convince the regime of this. The preferable alternative in these conditions is to refuse to acquiesce in the regime's attempt to shift the competition to more advantageous grounds.

In short, in any plausible allied response to nuclear use, conventional forces play the central role. If the alliance is capable of generating a strategic effect that strengthens deterrence, it can do so with conventional forces—in all but a minuscule sliver of cases not likely to ever manifest in a timeframe that would allow for a nuclear order and strike. To the extent that the alliance can signal its ability to generate any required strategic effect with conventional forces, it will have produced a stronger deterrent posture than one that relies on nuclear forces for a specific contingency or types of effect because the credibility of a threat is enhanced if it does not require the alliance to incur the significant costs associated with nuclear use.

## CONCLUSION

In 2010, President Obama directed that his administration reduce reliance on nuclear weapons. Despite the Trump administration effort to increase the salience of nuclear weapons, that goal remains the correct one. President Obama's goal remains the correct one, not only for moral reasons, but for military ones. Minimizing reliance on nuclear forces can enhance the credibility and flexibility of allied forces, reduce the political friction attendant with discussions over nuclear assurance, and incentivize more realistic deterrence planning and posture. A more effective allocation of responsibilities and capabilities can maximize the allies' comparative advantage in credibility at each potential level of escalation and therefore increase the strength of the overall posture. The time is ripe for a top-to-bottom reassessment of U.S.-South Korean combined deterrence posture to keep pace with an increasingly capable North Korean threat. The resulting assessment should confine nuclear planning to its specific and narrow function and realize the benefits of a deterrence posture that places conventional forces at its center.

Even more than in the recent past, the alliance's reassessment should include frank and specific discussions about each party's intention in various plausible contingencies. The availability of force module packages, the acquisition of strike capabilities, or the intention to conduct decapitation strikes in the event deterrence fails—none of these are sufficient responses to the most pressing risk the alliance faces: how to defend against, respond to, and maintain allied cohesion in the face of an attempted DPRK *fait accompli*. The alliance needs not just an inventory of capabilities or a handful of splendid plans for extreme circumstances but an agreed campaign plan that promotes stability in before, during, and after conflict.

North Korea's rapid evolution in capability and strategy arrives at a time of severe friction within the alliance. Political disagreements and mismanagement have not only contributed to the continued neglect of longstanding disagreements like nuclear assurance and counter-provocation planning but have exacerbated many of them.<sup>130</sup> A significant improvement in coordination is needed if the alliance is to maintain

<sup>130</sup> For my personal perspective on the alarming state of the alliance's military agenda, see Mount 2019a.

effective deterrence of Pyongyang—not only because alliance cohesion is the strongest defense against an adversary that seeks to divide the partnership but also because the specific tasks now required of the alliance demand a greater degree of cooperation than previously.

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The debate over whether North Korea could be deterred was eclipsed by the onset of negotiations in 2018. Yet, the last three years have been marked by rapid advancements in the regime's military capabilities and apparent evolution in its military strategy, which now relies on the threat of preemptive attacks against allied conventional forces to limit damage to the regime. Many of the standard assumptions that have underwritten U.S.-ROK deterrence posture are now obsolete. The deterrence balance on the peninsula is now between DPRK nuclear forces and allied conventional forces. Allied deterrence posture that depends on the threat of nuclear use or invasion will be insufficient to deter the regime from attempting to impose a fait accompli to forcibly achieve limited objectives. The alliance must place conventional deterrence at the center of its planning to ensure that U.S. conventional forces can effectively supplement South Korea's ability growing ability to defend itself from limited aggression. The proposed posture requires closer coordination and additional capability, a difficult but necessary step at a time when the alliance faces severe friction.

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