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North Korea's Strategically Ambiguous Nuclear Posture

Despite the international community's best efforts to prevent the regime from acquiring nuclear weapons, North Korea has developed an increasingly sophisticated nuclear arsenal since its first nuclear test in 2006. In 2017, the regime tested high-yield warheads, an array of short- to medium-range missiles, and even an intercontinental ballistic missile (ICBM) that could put most US

cities at risk. In 2022, North Korea broke its fouryear moratorium on testing ICBMs and added hypersonic missiles capable of maneuvering at high speed to its list of expanding missile tests. Pyongyang even boasted that it can "shake the world by firing a missile with the US mainland in its range," highlighting the regime's willingness to threaten the United States with its new arsenal.¹

North Korea's growing capabilities have reinvigorated policy debate about the regime's strategic How Pyongyang might use its nuclear capabilities continues to bedevil outside observers

nuclear thinking. While denuclearization remains a top priority, until North Korea dismantles its nuclear program, the question of how Pyongyang might use its newfound capabilities continues to bedevil outside observers.² The reclusive regime has yet to declare an official nuclear doctrine, and experts are divided

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© 2022 The Elliott School of International Affairs The Washington Quarterly • 45:2 pp. 39–58 https://doi.org/10.1080/0163660X.2022.2091874 over how to best characterize its nuclear *posture*. Posture, sometimes also called nuclear strategy, goes beyond official doctrine to comprehensively evaluate when and how a state would use its nuclear weapons by assessing its technological capabilities, force structure, official statements, and broader security priorities. To be sure, discerning North Korea's nuclear posture is fraught with the dual challenges of limited and evolving information about the "Hermit Kingdom," but understanding the strategies of the newest nuclear-armed state is too important a task to ignore. Pyongyang's nuclear posture will have far-reaching consequences for deterrence, crisis escalation, and the risks of nuclear proliferation in the Asia-Pacific and beyond.³

How can we best characterize North Korea's nuclear posture, and what indicators allow us to make such an assessment? This article addresses these questions by making two contributions: presenting an updated assessment of North Korea's nuclear posture and offering a conceptual map to better manage the uncertainty surrounding Pyongyang's strategic nuclear thinking. First, we argue that North Korea's nuclear posture is best described as one of strategic ambiguity-mixing features from traditionally distinct postures to generate uncertainty in its adversaries. Existing evaluations typically pigeonhole North Korea into individual boxes within traditional typologies of regional-power nuclear postures, even when there is considerable disagreement over which box fits best.⁴ Indeed, North Korea watchers have over time assigned the regime to every one of the available boxes within such typologies. Forcing North Korea into one box, however, belies the uncertainty surrounding the Hermit Kingdom and potentially misleads US and South Korean force planning, which must consider the risks involved in choosing the wrong box. We thus propose an alternative interpretation: Pyongyang has a de facto nuclear posture of strategic ambiguity, which relies on a mix of features from traditionally discrete postures to leverage uncertainty and optimize deterrence.

The first step to understanding this posture of strategic ambiguity is to recognize that nuclear postures traditionally serve as a *signaling device*. Unlike the range of possible military operations and contingencies that nuclear war-fighting strategies can cover, nuclear postures describe the state's *primary envisioned usage* of nuclear weapons.⁵ Thus, the nuclear postures of regional nuclear powers such as China, India or Pakistan signal a high probability that these states will use nuclear weapons in a manner that is consistent with available indicators. In this regard, the credibility of nuclear postures can be a factor in managing crisis stability.

North Korea, however, has neither developed the requisite capabilities nor articulated a coherent doctrine to credibly signal its intentions to use nuclear weapons in accordance with any one traditional posture. Indeed, an assessment of available indicators and the trajectory of the most recent developments suggests that, even if Pyongyang aspires to transition into a discrete posture eventually, it still faces significant disincentives for adopting such a transparent posture today. Consequently, we argue that Pyongyang relies on a nuclear posture that optimizes deterrence by obfuscating whether it prioritizes nuclear first use or a retaliatory second strike. This strategic ambiguity has dangerous implications for security in the Indo-Pacific, and analysts and practitioners must accordingly be prepared to think outside the box(es).

Our second contribution is thus to offer a new organizational framework to identify the gray zone of strategic ambiguity and reduce the dangers of blindsiding as analysts and practitioners respond to an evolving security landscape. As Pyongyang continues to develop new delivery systems, showcase unseen arsenals, and offer uncertain hints about its intentions, our framework helps facilitate a more dynamic assessment of North Korea's evolving posture. In the final section, we build on this framework to discuss the implications of North Korea's strategically ambiguous nuclear posture for crisis escalation and nuclear proliferation risks in the Indo-Pacific.

North Korea and Regional-Power Nuclear Postures

While research on nuclear postures during the Cold War unsurprisingly focused on the two superpowers, more recent studies have shed light on the postures of regional nuclear powers.⁶ These include countries like China, India and Pakistan, all of which have arsenals that are orders of magnitude smaller than the superpowers and operate under different budgetary constraints. Political scientist Vipin Narang, for example, identifies three mutually exclusive regional-power nuclear postures: 1) asymmetric escalation, which we also refer to as a first-use posture, prioritizes using nuclear weapons first in a crisis or conventional conflict in order to deter aggression, 2) assured retaliation, which we also refer to as a second-strike posture, aims to deter a nuclear attack by ensuring that the state's nuclear weapons can survive an adversary's nuclear strike and launch in retaliation, and 3) a *catalytic* posture, which seeks to deter adversaries by threatening to rapidly develop nuclear weapons in a crisis in order to catalyze intervention from a nuclear-armed ally.⁷ According to this tripartite framework, India and China have publicly and consistently claimed no first-use and can be categorized as possessing an assured retaliation posture; France as well as present-day Pakistan favor nuclear first-use in a crisis, which is consistent with an asymmetric escalation posture; while South Africa, Pakistan and Israel (until 1991) all aimed to trigger a powerful benefactor to intervene in accordance with a catalytic nuclear posture.

This categorization demonstrates three important points about regional-power nuclear postures. First, even if a state has never declared an official nuclear doctrine (e.g. Israel), experts can evaluate a number of indicators such as force structure and technological capabilities to assess the state's nuclear posture. Second, nuclear postures can change. For example, Pakistan appears to have shifted from a catalytic posture to an asymmetric escalation posture since 1991. Finally, regional-power nuclear postures are traditionally seen as mutually exclusive. For instance, for a regional power seeking nuclear deterrence, its primary envisioned use of nuclear weapons has been categorized as either for first use or for a retaliatory strike after receiving a nuclear attack, but not both simultaneously.

We build on traditional typologies of regional-power nuclear postures to assess North Korea's nuclear posture, but we do so with two caveats in mind. First, existing typologies may not capture all the possible nuclear postures that regional powers can adopt. Although building on traditional typologies allows us to compare North Korea to other regional nuclear powers, such typologies may not go far enough to capture Pyongyang's thinking, just as existing international relations theories fared poorly at predicting North Korea's successful acquisition of nuclear weapons.⁸ Second, like traditional typologies, we focus our analysis on *deterrent* nuclear postures. North Korean leader Kim Jong-un may contemplate using nuclear weapons offensively to unify the Korean peninsula, but we assume that his primary envisioned usage of nuclear weapons is to ensure regime survival.⁹ This does *not* mean that we assume North Korea is a status quo state or that we endorse diplomatic recognition of North Korea as a nuclear power: a deterrent posture may well be used to support a revisionist cam-

Understanding North Korea's nuclear posture enables more accurate strategic planning paign to unify the peninsula, and analyzing North Korea's nuclear posture is orthogonal to advocating that the regime should be accepted as a nuclear state. Rather, understanding North Korea's nuclear posture and the risks it may pose enables more accurate strategic planning. With these caveats in mind, we borrow from traditional typologies but expand upon them to account for the limitations in existing estimations of Pyongyang's nuclear posture.

What Is North Korea's Nuclear Posture?

Understanding North Korea's nuclear posture is crucial for regional security, but evaluations are scarce and those that do exist are either outdated or wildly divergent. In 2015, Narang argued in this publication that "at present, it is plausible that North Korea has adopted a catalytic nuclear strategy with China as the envisioned patron state." According to this assessment, Pyongyang was poised to threaten "further nuclear breakout" in a crisis to catalyze its powerful ally to intervene.¹⁰ Similarly, defense researcher Shane Smith observed in 2015 that "[i]t is possible that North Korea's nuclear strategy may have shifted towards a catalytic model shortly after its first nuclear test in 2006."¹¹

While Pyongyang may have pursued a catalytic posture in the past, it has become increasingly clear in recent years that North Korea no longer prioritizes threatening nuclear breakout to extract protection from China. First, Pyongyang's deteriorating relationship with Beijing suggests that leaders in Zhongnanhai have become more reluctant to condone Kim's tantrums, which destabilize the Korean peninsula and border areas in Northeastern China. Fears of abandonment from Beijing would give Pyongyang strong incentives to move away from a catalytic posture.¹² Second, North Korea's increasing technological sophistication has allowed it to uphold its juche (self-reliance) ideology and eschew dependence on a nuclear patron.¹³ During the 2017 "fire and fury" crisis, North Korea not only tested the Hwasong-15-demonstrating its growing ability to target major US cities-but also conducted its sixth nuclear test, one that showed progress toward miniaturizing a nuclear warhead to mount on such delivery systems. Although it is unclear whether a North Korean nucleartipped missile could survive atmospheric reentry, these technological developments are another reason why experts have moved away from categorizing Pyongyang's nuclear posture as catalytic. Indeed, Narang himself suggested in a 2017 article cowritten with international security expert Ankit Panda that "North Korea now has to think about how precisely it wants to implement its 'asymmetric escalation' strategy [emphasis added]."¹⁴

Seems Like Asymmetric Escalation ...

Many experts today argue that North Korea espouses an asymmetric escalation, or first-use, posture, which also accords with the regime's generally bullish preferences and inflammatory behavior.¹⁵ According to this view, North Korea's vulnerability to decapitation and a disarming first strike leads to powerful incentives to employ nuclear weapons early in a crisis.¹⁶ By threatening to go nuclear first, North Korea could attempt to deter such attacks and make up for its conventional inferiority. Indeed, these arguments point not only to threatening nuclear first use when facing imminent defeat in a conventional conflict, but threatening a preemptive nuclear strike in order to deter an imminent attack. Adam Mount, for example, argues that North Korea is "primarily concerned with nuclear use to preempt decapitation of its regime," and other experts

conclude that "North Korean thinking on nuclear weapons centers on the concept of a pre-emptive strike." $^{17}\,$

Official North Korean documents and statements have contributed to this view. A few days prior to its first nuclear test in 2006, North Korea announced unconditionally that it "will never use nuclear weapons first," but subsequent statements have undermined this claim.¹⁸ As several authors point out, although a North Korean law passed in 2013 states that the regime would "only" use nuclear weapons "to repel invasion or attack from a hostile nuclear weapons state and make retaliatory strikes," this passage leaves open the possibility that Pyongyang would use nuclear weapons first to retaliate against a conventional attack from a nuclear-armed adversary.¹⁹ Similarly, in January 2016, Pyongyang issued a conditional statement that it would "not use nuclear weapons first unless the aggressive hostile forces violate [our] sovereignty [emphasis added]."²⁰ Because this clause does not rule out a conventional attack, it supports a first-use posture. In July 2016, moreover, North Korea released a photo of Kim Jong-un examining a map of the Korean peninsula on which the South Korean port city of Busan was drawn as a target; a statement released with the photo mentioned that Busan could be subject to a North Korean "preemptive strike."²¹ And in April 2022, after Russia invaded Ukraine, Kim stated that North Korea's nuclear forces can "never be confined to the single mission of war deterrent" and must "decisively accomplish" their "unexpected second mission" if enemy forces "try to violate the fundamental interest of our state."22 Although Kim did not specify what this "second mission" would entail, the statement implies North Korea could resort to nuclear use if its interests are sufficiently threatened, which is again more consistent with an asymmetric escalation as opposed to a catalytic posture.

Some argue North Korea has an asymmetric escalation posture; others assured retaliation

... Or Is It Assured Retaliation?

Other experts, however, conclude that Pyongyang has an assured retaliation, or secondstrike, posture.²³ As we elaborate below, political scientists Dong Sun Lee and Iordanka Alexandrova claim in a November 2021 study not only that "Pyongyang [has] adopted an assured retaliation posture" but also that an "asymmetric escalation posture is currently the *least* feasible option for Pyon-

gyang [emphasis added].²⁴ Asia security expert Van Jackson also points out that "North Korea has sought and arguably has a secure second strike retaliatory capability.²⁵ Pyongyang has assiduously been working to improve the

survivability of its strategic assets by developing mobile launchers, hardened silos, and camouflage and concealment techniques. To be sure, improving survivability does not necessitate an assured retaliation posture; for instance, the ability to withstand a US conventional counterforce strike improves North Korea's chances of successfully launching a nuclear first strike and could therefore support an asymmetric escalation posture. But advocates argue that improved survivability is not the only reason to believe Pyongyang is pursuing a posture of assured retaliation.

First, an asymmetric escalation posture favors a decentralized, or "delegative," nuclear command and control (NC2) system because it relies on predelegating launch authority to field commanders to rapidly use nuclear weapons before the adversary can neutralize them.²⁶ Yet, experts largely agree that Kim Jong-un is constantly wary of internal power struggles and would avoid empowering subordinates, or possible usurpers, with nuclear launch authority.²⁷ This suggests that North Korea instead favors a centralized, or "assertive," NC2 in which Kim retains sole authority to launch nuclear weapons-a position that solidifies control of the regime's arsenal in the hands of its dictator but slows the time between the decision and execution of a missile launch, thereby disadvantaging a first-use posture.²⁸ This assertive system is also explicitly outlined in North Korea's 2013 law mentioned above, which states that Kim Jong-un is the ultimate arbiter of the regime's nuclear weapons: "The nuclear weapons of the DPRK can be used only by a final order of the Supreme Commander of the Korean People's Army."29 As Panda observes, the 2013 law is "unequivocal" that North Korean nuclear weapons will only be released by Kim.³⁰

Second, low-yield, or "tactical," nuclear weapons are a hallmark of an asymmetric escalation posture, but it is unclear if North Korea has fielded such weapons.³¹ Tactical nuclear weapons are an important indicator of a firstuse posture because they signal the state's intentions to use nuclear weapons on the battlefield to prevail in a conventional conflict without triggering massive retaliation. A massive retaliatory blow from the United States would jeopardize the survival of the Kim regime, so the deployment of lowyield nuclear weapons could help Pyongyang enhance the credibility of an asymmetric escalation posture.³² Yet, North Korea has neither demonstrated that it has fielded such weapons nor indicated that it is rushing to develop them. Instead, it has only offered hints about their possible deployment while making very public efforts to develop long-range strategic missiles that could target the United States.³³ Deploying tactical nuclear weapons, moreover, requires a technologically sophisticated NC2 system to support these weapons on the battlefield, and it is unlikely that North Korea has the technology to develop such a system soon.³⁴ Thus, the absence of battlefield-ready tactical nuclear weapons or the complex command-and-control system to utilize them undermines Pyongyang's statements that it would use nuclear weapons first.

Finally, proponents in the assured retaliation camp argue that the survivability of North Korea's nuclear weapons may be enough for the regime to adopt a second-strike posture.³⁵ Indeed, other regional nuclear powers with an assured retaliation posture have had the survivability of their strategic nuclear forces called into question as well. China, for example, is often characterized as having an assured retaliation posture, but many experts agree that its nuclear forces have been historically vulnerable, keeping only a modest nuclear arsenal since its first nuclear test in 1964.³⁶ Indeed, Chinese nuclear expert Wu Riqiang finds that even modern-day China's chances of retaining just three nuclear weapons following an all-out US counterforce-strike could be as low as 4 percent depending on China's military alert level.³⁷

Despite this historical vulnerability, however, former Chinese leaders Mao Zedong and Deng Xiaoping believed that a modest nuclear arsenal would be enough to deter a nuclear attack.³⁸ This shows that the *beliefs and perceptions* of the leadership in the nuclear-armed state play a crucial role in determining how survivability factors into nuclear posture. By many measures, North Korea's nuclear arsenal is more vulnerable to a US first strike than China's arsenal, but its capabilities are improving, and if proponents of an assured retaliation posture are correct, the subjective role of survivability may permit Pyongyang to pursue a posture that relies on retaliation rather than a rapid first strike.³⁹

In sum, experts have assigned North Korea to a catalytic, an asymmetric escalation, and an assured retaliation posture over time—three mutually exclusive categories in the commonly used typology of regional-power nuclear postures. Since 2017, disagreements persist over whether the regime relies on an asymmetric escalation or assured retaliation posture. An important reason for this divergence is that existing studies attempt to fit North Korea into a discrete category even when there is considerable uncertainty about its intentions. Certainly, some experts admit that the regime does not fit easily into one box. For example, although Smith suggested in 2015 that North Korea had pursued a catalytic posture, he also noted that the regime "at times exhibits elements from [multiple] strategies, and the one it adopts in the future may in fact be a hybrid."⁴⁰ Without a clearer conception of what such a hybrid looks like, and a detailed examination of whether and why Pyongyang would pursue such a posture, however, scholars and policymakers are left with limited options for thinking outside the box.

A Fourth Option: Strategic Ambiguity

We conceptualize a nuclear posture of strategic ambiguity as a hybrid of traditionally discrete postures to generate uncertainty over when and how nuclear

weapons would be used. In North Korea's case, it blends a posture of asymmetric escalation with one of assured retaliation to obscure its intentions and optimize deterrence. Just as academic theories failed to predict North Korea's acquisition of nuclear weapons, they have also overlooked the regime's ability to craft a distinctive nuclear posture.⁴¹

Beginning with North Korean official statements, a closer examination reveals that there is more ambiguity than the statements cited above that appear to We conceptualize strategic ambiguity as a hybrid of traditionally discrete nuclear postures

support the view that North Korea has adopted an asymmetric escalation posture. In 2016—the same year that Pyongyang released photos targeting Busan and threatened preemptive nuclear strikes—one of the authors translates Kim Jong-un as declaring that North Korea "will not use nuclear weapons first [*munjuh*] unless any aggressive hostile forces encroach upon our sovereignty *with nukes* [*hek uro*] [emphasis added]."⁴² The phrase "with nukes" suggests North Korea would use nuclear weapons only against hostile forces "attacking with nuclear weapons."

The official English version of the statement, however, misses the nuance in the Korean version: "will not use a nuclear weapon unless [North Korea's] sovereignty is encroached upon by any aggressive hostile forces with nukes."⁴³ Here, the phrase "with nukes" appears to refer to the type of aggressor (i.e. aggressors possessing nukes) rather than the form of attack (i.e. attacking with nuclear weapons). Thus, the Korean version is more consistent with a second-strike posture. Some South Korean researchers assert that in the Korean version "with nukes" is an ambiguous expression between nuclear attacks and conventional attacks backed by nuclear coercion,⁴⁴ but such ambiguity in an official statement is noteworthy because it obfuscates whether Pyongyang would use nuclear weapons to strike first or second. This begs the question of why Kim would choose such ambiguous language that serves more to confuse than clarify his strategic thinking.

Figure 1 summarizes the key indicators used to determine whether a regional nuclear power has adopted an asymmetric escalation or assured retaliation posture as well as the available evidence from North Korea. There are three observable indicators that favor asymmetric escalation: 1) North Korea has issued statements in support of first strikes and preemptive nuclear attacks; 2) its second-strike capabilities (survivability) are still questionable; and 3) its





conventional capabilities are inferior compared to US-South Korea combined forces, which can incentivize it to use nuclear weapons first.

On the other hand, three indicators favor assured retaliation: 1) North Korea has issued statements that appear to favor a second strike; 2) it has not yet demonstrated that it has developed or deployed tactical nuclear weapons; and 3) North Korea appears to have an assertive NC2 system. For the sake of thoroughness, it is useful to reiterate that North Korea's observable indicators are also inconsistent with a catalytic posture (not depicted in Figure 1). Pyongyang's shift to an independent nuclear force is now well recognized by existing work, as we explain above. We therefore exclude a catalytic posture from consideration here for clarity. Taken together, North Korea possesses a mix of indicators, imperfectly compatible with either an asymmetric escalation or an assured retaliation posture. Thus, North Korea's nuclear posture appears indeterminate when viewed in terms of the traditionally mutually exclusive categories.

Given that North Korea's nuclear posture does not fit neatly into traditional categories, consider for a moment the security landscape from Pyongyang's perspective: How might a regional nuclear power theoretically lacking the capabilities to credibly adopt either a first-use or second-strike posture aim to optimize deterrence? If Pyongyang were to rely on asymmetric escalation today, it faces hurdles to making the posture credible given the political and technological constraints on its NC2 system, its lack of field-deployed tactical nuclear weapons, and its uncertain nuclear retaliatory capabilities to deter a massive US retaliation. Moreover, the United States possesses formidable "left-of-launch" (i.e. preventive) and preemptive capabilities that further undermine North Korea's ability to successfully launch a first strike.⁴⁵ If North Korea explicitly adopts an asymmetric escalation posture without the requisite capabilities, it may even backfire by incentivizing the United States to attempt a disarming strike early in a conflict.⁴⁶

Conversely, if North Korea were to declare an assured retaliation posture today, it would face difficulties convincing adversaries that it can ignore "useit-or-lose-it" incentives—incentives to go nuclear early for fear of losing one's vulnerable arsenal to an adversary's attack. As political scientists Keir Lieber and Daryl Press point out, US counterforce capabilities are challenging the retaliatory capabilities of even advanced nuclear-armed states, let alone North Korea. Even if Pyongyang deploys nuclear submarines—traditionally seen as a pillar to achieving a secure second-strike capability—such assets are likely to be noisy and detectable by South Korean and US forces closely monitoring North Korea's limited coastline.⁴⁷ Thus, neither an asymmetric escalation posture nor an assured retaliation posture appears to optimally address North Korea's concerns today.

Until Pyongyang acquires the capabilities to credibly threaten either a first-use or a second-strike posture, it must make do with its available assets. Pyongyang may therefore mix between elements of asymmetric escalation and assured retaliation postures, creating uncertainty in its adversaries to optimize its deterrence. In game theory, a "mixed strategy" describes situations in which an actor could select any one of two (or more) strategies rather than relying on one fixed strategy. This means from the opponent's point of view, there is always some chance that the actor could play strategy A *or* strategy B, generating uncertainty in the opponent that benefits the actor. In the context of North Korea, Pyongyang may strategically rely on generating uncertainty in its adversaries by obfuscating whether it would strike first or second.

North Korea currently demonstrates ambiguity in at least three key areas of its

nuclear posture: 1) the survivability of its nuclear forces, 2) the ability to carry out a nuclear strike on the US mainland, and 3) the ability to credibly threaten a nuclear first strike on any target. In the first area of survivability, experts still debate whether Pyongyang possesses a truly survivable force to back an assured retaliation posture, but this ambiguity surrounding its retaliatory capabilities may be enough to deter a nuclear first strike. Political scientist

North Korea currently demonstrates ambiguity in at least three key areas

Avery Goldstein and others have argued that regional nuclear powers with relatively vulnerable arsenals can achieve nuclear deterrence through "first-strike uncertainty": the *possibility* that even one nuclear weapon survives an adversary's first strike and is launched in retaliation could deter the adversary.⁴⁸

On the second point of holding the US mainland at risk, ambiguity similarly remains regarding North Korea's ability to strike major US cities. In 2017, many experts assessed that North Korea had achieved the level of miniaturization required for its nuclear warheads to mount its ICBMs, and Kim Jong-un declared that his nuclear deterrent was "complete" after the successful test of the Hwasong-15 ICBM.⁴⁹ Yet doubts remain about the missile's ability to strike the US continent with nuclear weapons is much improved but still unclear.⁵⁰

Finally, regarding credibility of Pyongyang's willingness to strike first, North Korea is not the first nuclear-armed state to invite uncertainty in this area. For example, the Chinese government has publicly reiterated statements of no-first-

Conceptualizing the DPRK's posture as ambiguous provides a framework for future changes use while also permitting "limited ambiguity" about whether it might strike first in certain scenarios.⁵¹ This limited ambiguity appears to be designed to bolster deterrence against conventional attacks that can erode China's relatively vulnerable nuclear forces. North Korea's nuclear arsenal is likely more vulnerable than China's, so a conventional counterforce strike would significantly undermine Pyongyang's retaliatory nuclear capabilities. To deter such

conventional counterforce attacks, Pyongyang may raise the prospects of striking first, even though it may be unable to credibly adopt an asymmetric escalation posture due to its assertive NC2 system and lack of battlefield-ready tactical nuclear weapons, as mentioned above. Thus, strategic ambiguity may be the reclusive regime's best effort to overcome the limitations of relying on either a fixed asymmetric escalation or assured retaliation posture. As Narang and Panda point out, "ambiguity, for North Korea, is a feature, not a bug... Leaving some things unsaid ... abets North Korea's overall deterrent."⁵²

To be clear, a strategically ambiguous nuclear *posture* should not be confused with a brinkmanship *strategy*.⁵³ Brinksmanship aims to generate coercive leverage during a crisis by manipulating the risk of nuclear weapons being launched *inadvertently*, or as Thomas Schelling puts it, by issuing "threats that leave something to chance." A posture of strategic ambiguity, by contrast, does not tell us how and whether a state will issue such threats that risk inadvertent nuclear use. Rather, it relies on the manipulation of the adversaries' uncertainty about whether a state would *intentionally* launch its nuclear weapons.⁵⁴

Moreover, as we have already noted, North Korea is not the only state that has permitted or even courted uncertainty to enhance its nuclear deterrence. China is one such example where experts have identified efforts to permit "limited ambiguity" regarding its no-first-use statements, and other regional powers have also been cagy about the details of their nuclear-use scenarios.⁵⁵ While these cases are beyond the scope of this article, future research could examine the extent to which other states have also embraced strategic ambiguity as a posture. Our aim here, however, is to show that pegging Pyongyang to a traditionally discrete posture is both fraught with internal inconsistencies and problematic for accurately evaluating the regional security implications of North Korea's evolving nuclear arsenal. Instead, we argue that the indicators described in Figure 1 are most consistent with a North Korean nuclear posture of strategic ambiguity.

An additional benefit of conceptualizing North Korea's posture through a Venn diagram is that it provides a framework to flexibly account for possible changes in the regime's nuclear posture in the future.⁵⁶ North Korea's changing capabilities, statements, and force structure could catch researchers and policymakers off-guard. Visually mapping these indicators helps us assess shifts between strategic ambiguity, asymmetric escalation, and assured retaliation. For example, if North Korea fields tactical nuclear weapons, this could indicate a shift toward an asymmetric escalation posture-granting it the ability to deliver a more moderated first strike that poses a lower risk of inviting massive reprisal. On the other hand, if North Korea were to improve the survivability of its nuclear forces, this could alleviate Pyongyang's "use it or lose it" fears and facilitate an assured retaliation posture. Such incremental changes in capabilities or incentives do not necessarily indicate a complete shift in nuclear posture. But mapping out the environment of indicators allows us to more readily detect the direction of change, even if evolutions in North Korea's nuclear posture are gradual, and ambiguity remains a feature of Pyongyang's strategic behavior.⁵⁷

Finally, we do not discount the possibility that ambiguity regarding North Korea's nuclear posture is an inadvertent outcome rather than an intentional strategy. For instance, Pyongyang could be unclear about its own strategy, leading to confused public messaging, or outside observers could lack sufficient information, leading to divergent estimates. Alternatively, North Korea may aspire to adopt a traditionally discrete nuclear posture but still lack the requisite capabilities. Yet another possibility is that it could be moving toward a new hybrid posture with greater transparency. As Narang and Panda observe, however, there appears to be "an ambiguity that pays strategic dividends" for now in North Korea's nuclear doctrine.⁵⁸ Given the contradictory incentives that the regime faces, and its long history of calculated secrecy, we maintain that a deliberate strategy of ambiguity is a serious possibility, the vital implications of which we discuss below.

Implications: Crisis Escalation and Proliferation Risks

The implications of North Korea's nuclear posture are not limited to the extreme scenarios of nuclear warfighting. Rather, nuclear weapons can cast a long shadow down the escalation ladder and affect decisions even at low levels of crises. As political scientist James Fearon demonstrated, private information and incentives to misrepresent that information are important causes of war: because war is costly, states have incentives to locate a peaceful bargain short of war, but private information about capabilities and resolve, and incentives to dissemble, can prevent states from settling their disputes peacefully.⁵⁹ If the Hermit

Uncertainty may be Pyongyang's strategic choice, or an inadvertent outcome Kingdom is eschewing a traditional nuclear posture that could have helped signal its intentions, it leaves greater room for miscalculation and injects uncertainty even into low-level crises. Unlike a situation in which uncertainty surrounding Pyongyang's nuclear posture results solely from incomplete information, a *premeditated attempt* at obfuscation implies that Kim is prepared to accept and even invite these risks. As a result, policymakers

cannot simply assume that the ongoing uncertainty and disagreements regarding North Korea's nuclear posture originate solely from outsiders' limited ability to interpret observable indicators. Instead, much of the uncertainty may be Pyongyang's strategic choice.

A North Korean nuclear posture of strategic ambiguity also has implications for regional nuclear proliferation. While existing research points out that the possession of nuclear weapons by one state can aggravate security concerns and proliferation incentives for other states,⁶⁰ less attention has been paid to how nuclear postures can affect nuclear proliferation incentives. The nuclear posture of a nuclear power could incentivize other states to pursue nuclear weapons through a variety of pathways, such as by influencing threat perceptions or by contributing to more frequent and dangerous crises.

For instance, if North Korea's nuclear posture appears more threatening to the South Korean public, the public may (even mistakenly) believe that an indigenous nuclear weapons program would make them feel more secure.⁶¹ Indeed, an alarming majority of South Koreans have supported an independent nuclear program in recent years even though South Korea is a treaty ally of the United States and falls under the US nuclear umbrella.⁶² Similarly, if North Korea's nuclear posture leads to more incentives for crisis escalation on the peninsula, such experiences may incentivize more South Koreans to support a home-grown nuclear program.⁶³ This kind of public pressure may not necessarily

result in South Korea developing its own nuclear weapons, but it creates significant challenges for alliance management that have been overlooked in existing studies on nuclear postures.

In sum, a North Korean nuclear posture of strategic ambiguity can make crises unstable by making information asymmetries more difficult to overcome, and the experience of unstable crises can in turn create more internal pressure in countries like South Korea to develop an independent nuclear weapons program. The international community has thus far focused its efforts on denuclearizing North Korea, but these efforts do not address the multitude of challenges posed by Pyongyang's current arsenal. Addressing these challenges requires a better understanding of North Korea's nuclear posture and how this posture-and not just Pyongyang's possession of nuclear weapons-could affect crisis escalation and public demands for nuclear weapons in the region. The flexible framework proposed in this article can provide the United States with greater clarity about North Korea's nuclear posture, but Washington, Seoul, and other allies in the region should encourage Pyongyang to adopt more transparency in its posture even while continuing efforts to denuclearize the reclusive regime. Pyongyang's ambiguous posture resulting in unwanted crisis escalation and conflict are perils that all parties in the region can work to avoid.

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