

# DPRK Nuclear Strategy: The Objectives and Limits of Risk Manipulation

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## Abstract

The Democratic People's Republic of Korea (DPRK) has recently improved its ability to threaten the United States with intercontinental ballistic missile (ICBM) tests and an alleged thermonuclear device. The DPRK's missiles now have a longer range and its warheads are significantly more destructive. This research paper tackles the following question: What is the DPRK's nuclear strategy? In order to do so, this paper introduces the current debate on the country's nuclear strategy, a framework for analyzing any nuclear strategy, and the most relevant school of thought from Thomas Schelling's *Arms and Influence*. This paper finds that the DPRK's nuclear strategy manipulates the risk of escalation to make up for inadequacies in the survivability and credibility of its small nuclear forces. The DPRK, however, is limited in its ability to completely manipulate risk by giving tactical nuclear weapons to battlefield commanders with authority due to its authoritarian military and centralized civilian command and control. The DPRK's targeting policy suggests prioritizing cities that have counterforce targets as a bonus. The DPRK's capability is evolving while its strategy is not.

## Known Unknowns

On July 28, 2017, the Democratic People's Republic of Korea (DPRK) tested an intercontinental ballistic missile (ICBM) that analysts claim can reliably reach the United States mainland.<sup>1</sup> With this recent test, the game has changed. Now, the DPRK has more credibility in its threats toward the U.S. mainland. U.S. officials, however, still have not come to a consensus on how to deal with the situation. U.S. Ambassador to the United Nations Nikki Haley claimed all options were on the table, U.S. Secretary of State Rex Tillerson stated the United States was not seeking regime change, CIA Director Mike Pompeo hinted that regime change was on the table, and U.S. Vice President Mike Pence stated there would be no talks with the DPRK.<sup>2</sup> Lack of consensus about the DPRK is not a new phenomenon. Since the 1990s, scholars, analysts, and government officials have argued about what the U.S. response should be while speculating about which strategy and purpose the DPRK would employ for its nuclear weapons if it built them.

There is evidence to support many different theories about the DPRK's intentions. A comprehensive review of the available evidence supports an argument that the DPRK's nuclear strategy is designed to deter a powerful foreign threat. In order to do so, the DPRK pursues a strategy of manipulating the risk of escalation to make up for inadequacies in the survivability and credibility of its small nuclear forces. However, the DPRK is limited in its ability to completely manipulate risk by giving tactical nuclear weapons to battlefield commanders with authority for use, due to its authoritarian military and centralized civilian command and control. The finding of this paper is that the DPRK's capability is evolving but its strategy is not; its ability to carry out its desired strategy is simply improving to reflect its long-term goals.

## The Debate

The DPRK's strategy remains a difficult and speculative field of study. Most recently, Scott Sagan of Stanford University, argued that the primary driver of the DPRK's nuclear strategy is the fear of a U.S. attack. The goal is to prevent a foreign attack or disrupt or delay an advance by bombing military bases and port cities. If this strategy fails, the DPRK can threaten revenge on cities as a last effort.<sup>3</sup> Vipin Narang argues that North Korea pursues an asymmetric escalation strategy.<sup>4</sup> This strategy is a posture "explicitly designed to deter conventional attacks by enabling a state to respond with rapid, asymmetric escalation to first use of nuclear weapons against conventional and/or strategic targets."<sup>5</sup> Narang also argues that the DPRK's strategy appears to be modeled after Pakistan's, with the goals of repelling a conventional invasion, and deterring nuclear first use and retaliation from the United States.<sup>6</sup> Shane Smith builds on Narang's strategies to argue that, despite changes over time, the DPRK's policies suggest a nuclear strategy focused on survivable second-strike capability. This allows the DPRK to deter attacks and coercion aimed at the regime by communicating intent to "deal deadly retaliatory blows at the strongholds of aggression."<sup>7</sup> Smith also argues that the DPRK may pursue a nuclear

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<sup>1</sup> Lewis, "North Korean Nuclear Weapons Can Hit the U.S.," August 3, 2017.

<sup>2</sup> Reuters Staff, "Haley Says All Options on Table," March 8, 2017; Morello and Gearan, "Tillerson to North Korea," August 1, 2017; Sokolsky and Miller, "Regime Change in North Korea," August 2, 2017; Nicholas, "Pence Says U.S. Won't Hold Talks," August 2, 2017.

<sup>3</sup> Sagan, "Korean Missile Crisis," 81.

<sup>4</sup> Panda, "Go First and Go Nuclear," April 30, 2017.

<sup>5</sup> Narang, "What Does it Take to Deter?," 486.

<sup>6</sup> Berkowitz, Karklis, and Meko, "North Korea showed off," May 18, 2017.

<sup>7</sup> Smith, *North Korea's Evolving Nuclear Strategy*, 9.

war-fighting strategy by threatening first use of nuclear weapons on the battlefield, but for now war fighting is still too expensive and risky.<sup>8</sup> Jeffrey Lewis argues that the DPRK plans to use nuclear weapons against U.S. forces in East Asia in the early moments of conflict, and that the DPRK's strategy depends on using nuclear weapons early, for fear of losing them.<sup>9</sup> Terence Roehrig, however, argues that the DPRK's nuclear force is too small and not accurate enough to consider counterforce targets. Instead, the DPRK will most likely target cities and bases in Asia to hold targets at risk through assured retaliation.<sup>10</sup> Lastly, Michael Cohen argues that the likelihood of the DPRK using nuclear weapons in a crisis depends on how Kim Jong-un experiences fear of imminent nuclear war in a nuclear crisis and his beliefs of how much control he has over nuclear escalation.<sup>11</sup> In a nuclear crisis, if Kim Jong-un experiences fear of imminent nuclear or conventional war and believes he has no control over escalation, then he is more likely to use weapons in a desperate move to save the regime or inflict damage. This debate is an important baseline for understanding how the DPRK's nuclear strategy is understood today.

## What is Nuclear Strategy?

Nuclear strategy is informed by national security interests and is the means used to accomplish desired ends. Castillo and Molander define the fundamental elements of nuclear strategy as: employment (targeting) policy, forces, force posture, and command and control.<sup>12</sup> I adapt their framework to include the factors of risk tolerance, targeting policy, command and control, forces, survivability, and drivers. Drivers and risk tolerance are important because strategy is more than the sum of the technical capabilities that a state possesses. This debate is not new; Bernard Brodie wrote in 1944 that, "Inventions in military or materiel rarely determine foreign policy; they merely permit certain courses of action which might otherwise be impossible."<sup>13</sup> Capabilities are easier to focus on and analyze, but can exaggerate the low probability–high impact scenarios based solely on what is technically possible. Capability-focused analysis gives less weight to intentions and direction, but trajectory is an essential element for understanding the nuclear strategies of new nuclear states. Risk tolerance from Tversky and Kahneman's work on prospect theory is helpful to understand what is at stake and whether or not the DPRK sees itself in the domain of gains or the domain of losses.

## Schools of Thought

The DPRK has several different options available to pursue its nuclear strategy. The first significant difference between conventional Cold War strategies and the strategies the DPRK is likely to take is that the DPRK and the United States are not in a state of mutually assured destruction (MAD). Based on the total number of nuclear weapons in the U.S. arsenal, the United States has the nuclear capability to destroy the DPRK, and the best the DPRK could hope for is some type of unacceptable retaliation on allies and potentially the U.S. mainland.

Among the many concepts related to nuclear strategy, risk manipulation emerges as the concept most supported by available evidence. This concept comes from Thomas Schelling's ideas on nuclear strategy. Risk manipulation is not about which state has the most capability to

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<sup>8</sup> Ibid., 11.

<sup>9</sup> Lewis, "North Korea Is Practicing for Nuclear War," March 9, 2017.

<sup>10</sup> Roehrig, "North Korea's Nuclear Weapons Program," 92.

<sup>11</sup> Cohen, "North Korea, Nuclear Weapons, and No Good Options?," 55-72.

<sup>12</sup> Castillo and Molander, *Flexible Response Revisited*, 11-12.

<sup>13</sup> Brodie, *Sea Power in the Machine Age*, 252.

use force, but which state is most willing to use it.<sup>14</sup> Manipulating the threat of force, or the risk of nuclear escalation, sees the road to war as a process, not a single event, that reduces but does not eliminate the need for credible first strike or a survivable second strike.<sup>15</sup> This strategy removes victory as a prerequisite for hurting the enemy.<sup>16</sup> Even if a state is likely to lose, it can threaten violence at high cost. Risk manipulation sees violence as most successful when it is threatened but not used,<sup>17</sup> and “exaggerates the historical novelty of deterrence and the balance of terror.”<sup>18</sup> It intentionally makes the problem worse by arms racing, using more aggressive rhetoric, and making the threat of first use unpredictable.<sup>19</sup> Deterrence and war change from being a contest of strength to a contest of nerve, risk-taking, and endurance.<sup>20</sup> This strategy intentionally limits options; it is a strategy of making retreat impossible for yourself by drawing red lines that make the state’s response automatic.<sup>21</sup> The next step is to use available evidence to analyze four factors that inform nuclear strategy: risk tolerance, targeting policy, command and control, and drivers.

## Risk Tolerance

A central component of any nuclear strategy is the state’s tolerance for risk. One of the best theories for analyzing tolerance for risk comes from Tversky and Kahneman’s prospect theory.<sup>22</sup> Prospect theory “predicts that individuals tend to be risk averse in a domain of gains, or when things are going well, and relatively risk seeking in a domain of losses, as when a leader is in the midst of a crisis.”<sup>23</sup> According to prospect theory, the likelihood of success and how options are framed change the preference for risk. The first factor that influences the likelihood of success and pushes the DPRK into the domain of losses is the conventional military balance. The International Institute for Strategic Studies’ Military Balance estimates that the DPRK has a one million person military.<sup>24</sup> Despite this large military, most analysts predict that the DPRK would lose in a conventional war with the Republic of Korea (ROK) and the United States. The DPRK has dealt with this conventional inferiority since the end of the Korean war. The 60 year likelihood of losing in a conventional military conflict is a significant factor that contributes to the DPRK’s feeling to be in the domain of losses.

The next factor in prospect theory is framing. Framing is significant because focusing on how much will be lost versus how much can be gained changes the tolerance for risk. How the DPRK frames its security situation will be essential to know whether it perceives itself in the domain of gains or domain of losses. The difference in framing will be evident in the language used in propaganda.

On March 31, 2013, Kim Jong-un said, “Nuclear weapons guarantee peace, economic prosperity, and people’s happy life.”<sup>25</sup> The DPRK frames its nuclear weapons in terms of swords, guarantees, and resisting aggression. Its propaganda and statements focus on the lack of formal peace agreements after the Korean War, resisting foreign threats and intimidation, defending its

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<sup>14</sup> Schelling, *Arms and Influence*, 94.

<sup>15</sup> *Ibid.*, 98.

<sup>16</sup> *Ibid.*, 22.

<sup>17</sup> *Ibid.*, 10.

<sup>18</sup> *Ibid.*, 18.

<sup>19</sup> *Ibid.*, 97.

<sup>20</sup> *Ibid.*, 33.

<sup>21</sup> *Ibid.*, 43.

<sup>22</sup> Tversky and Kahneman, “Advances in Prospect Theory,” 297-323.

<sup>23</sup> McDermott, *Risk-Taking in International Politics*, 18.

<sup>24</sup> *Asia-Pacific Regional Security Assessment 2016*, 118.

<sup>25</sup> Mansourov, “Kim Jong Un’s Nuclear Doctrine and Strategy,” December 16, 2014.

socialist ideology, preventing the Korean people from becoming victims or modern slaves, and defending “all other socialist treasures won at the cost of blood and safeguard the nation’s right to existence and its time-honored history and brilliant culture.”<sup>26</sup> The DPRK equates the success of its nuclear program to survival of the state and its citizens, putting it into the domain of losses. This lens increases the DPRK’s sensitivity and the way it frames its messages and propaganda.

Framing, however, works both ways. On the one hand, the DPRK sees and frames its own situation. On the other hand, the United States and Western countries frame the DPRK threat to the world. The United States speaks about the DPRK as a failed or rogue state, and waits for the DPRK to collapse. These ideas further reinforce the DPRK’s framing into the domain of losses since both sides view the conflict as high stakes. If states frame every struggle as being about life or death, they will be more open to risk-seeking because they will perceive the potential for loss as very high. The DPRK intentionally frames foreign threats to any one part of the regime to be a threat to all of the DPRK. The regime appears to be manipulating risk and intentionally burning the bridge to limit options so the only thing it can do is defend itself.<sup>27</sup> Another indicator of the DPRK’s risk tolerance is its stated policy on first use. In 2013, the DPRK stated: “Nuclear weapons serve the purpose of deterring and repelling aggression and retaliating against enemies” and, “nuclear weapons will not be used against non-nuclear weapons states unless they join a hostile nuclear weapons state in its invasion of the DPRK.”<sup>28</sup> The DPRK states that nuclear weapons are for retaliation but does not clarify what joining a hostile state means. This manipulates the risk to the ROK and Japan if conflict escalates. The DPRK’s policy on first use suggests a baseline assured retaliation strategy in theory but a strategy of manipulated risk in practice. This first use policy is also consistent with manipulated risk in the way it seeks to weaken an adversary’s commitment while strengthening its own. Another way the DPRK frames the security situation is through its apparent irrationality and aggressiveness. Schelling points out that, “It does not always help to be, or to be believed to be, fully rational, cool-headed, and in control of one’s self or one’s country.”<sup>29</sup> The DPRK’s narrative at home and abroad has not dispelled the image of the DPRK regime as irrational or ruthless which in turn has strengthened its ability to deter aggression. Only recently have scholars and journalists begun questioning whether the DPRK is irrational.<sup>30</sup> Some U.S. officials seem to confuse cruelty with irrationality, and risk-seeking behavior with being undeterrable. The DPRK views itself in the domain of losses because of the conventional military balance, the way it frames the situation, and the way the United States frames the situation.

## Targeting Policy: Two Birds, One Stone

Another factor that indicates that the DPRK pursues a risk manipulation strategy is its targeting policy. The DPRK sends signals through propaganda and official statements about what its targets will be in the event of a nuclear conflict. Since 2000, the DPRK has threatened to turn Seoul into a sea of fire in response to tension between the North and the South.<sup>31</sup> The DPRK also specifically threatened the city of Pusan, South Korea by revealing a map in which the distance the missile traveled out to sea was the exact distance to Pusan.<sup>32</sup> In addition to

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<sup>26</sup> Ibid.

<sup>27</sup> Schelling, *Arms and Influence*, 43.

<sup>28</sup> Kim, “North Korea’s Nuclear Doctrine and Revisionist Strategy,” 34.

<sup>29</sup> Schelling, *Arms and Influence*, 37.

<sup>30</sup> Evans, “Is North Korea’s leader Kim Jong-un rational?,” March 18, 2017.

<sup>31</sup> Scarr et al., “North Korea’s Other Threat,” May 26, 2017.

<sup>32</sup> Berkowitz, Karklis, and Meko, “North Korea showed off a lot of missiles,” May 18, 2017.

specific regional cities named as targets, the DPRK also communicates vaguely about threats to the whole region: “If we push the buttons to annihilate the enemies even right now, all bases of provocations will be reduced to seas in flames and ashes in a moment.”<sup>33</sup>

To address the U.S. threat, the DPRK released propaganda in 2013 that included a targeting map of the United States mainland in the background. This was a significant indicator of targeting policy for its ICBM program. The map included targets in Hawaii, San Diego, and Washington D.C. The DPRK also released propaganda videos that show nuclear missiles striking Washington D.C.,<sup>34</sup> New York,<sup>35</sup> and San Francisco.<sup>36</sup> According to its propaganda, the DPRK’s regional targets are Seoul, Pusan, and Tokyo specifically, along with the rest of the region generally. Once the DPRK has reliable ICBMs and miniaturized warheads, it has signaled it will target Hawaii, San Francisco, San Diego, New York, and Washington D.C.

Lewis argues that the DPRK’s targets will also include U.S. regional ports, airfields, and bases in East Asia.<sup>37</sup> Lewis’s view is consistent with the DPRK statement from October 2014 when the National Defense Commission stated that, “The revolutionary armed forces of the DPRK had already declared before the world that an operational plan for striking all the bases of the U.S. imperialist aggressor forces in the Pacific targeting the DPRK and the main cities of the U.S. mainland where war maniacs are stationed was ratified.”<sup>38</sup> The DPRK’s signaling suggests it will prioritize countervalue targets, or cities, while other statements and veiled threats suggest a counterforce strategy that targets military assets. The strongest argument to make sense of such mixed signals is a targeting strategy based on efficiency. The DPRK will target cities that would result in strategic military and command and control losses as a bonus. This is a reversal of Joseph Loftus’s Emergency War Plan of 1952 that initially focused on counterforce, but where targeting programmers slightly moved the aim points away from the air bases and toward cities.<sup>39</sup> Similarly, the DPRK can target cities and gain military targets as a bonus. Seoul is the capital of South Korea and the base for the U.S. Yongsan Garrison. Pusan is South Korea’s second largest city and home to one of the main ports the United States would use for an amphibious landing. Yokota Air Base, Yokosuka Naval Base, Naval Air Facility Atsugi, Camp Zama, and the Mutual Defense Assistance Office—all vital strategic assets in the Pacific Theater—are all located in parts of Tokyo.<sup>40</sup> Hawaii is the home of Pearl Harbor-Hickam Joint Base and the headquarters of the U.S. Pacific Fleet. San Diego is the home port of the U.S. Pacific Fleet, and Washington D.C. is valuable for both counterforce and countervalue targeting. This suggests that the DPRK prioritizes cities first as targets, but chooses cities that include a secondary strategic military value as a bonus.

On July 28, 2017, the DPRK tested a new ICBM that analysts claim can hit most of the U.S. mainland.<sup>41</sup> This further confirms that the DPRK is seeking a cities strategy first because an ICBM is not needed if the DPRK would only focus on regional military targets. The analysis of statements, propaganda, and missile development priorities, supports the claim that the DPRK is pursuing a nuclear strategy of manipulating risk.

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<sup>33</sup> Ellyatt, “North Korea threatens nuclear strike on U.S.,” March 7, 2016.

<sup>34</sup> Hancocks, “North Korea threatens war with U.S.,” March 29, 2016.

<sup>35</sup> Santora and Choe, “North Korea Propaganda Video,” February 5, 2013.

<sup>36</sup> Yuhua, “North Korea nuclear threat,” April 20, 2017.

<sup>37</sup> Berkowitz, Karklis, and Meko, “North Korea showed off a lot of missiles,” May 18, 2017.

<sup>38</sup> Mansourov, *Kim Jong Un’s Nuclear Doctrine and Strategy*, December 16, 2014.

<sup>39</sup> Kaplan, *The Wizards of Armageddon*, 211.

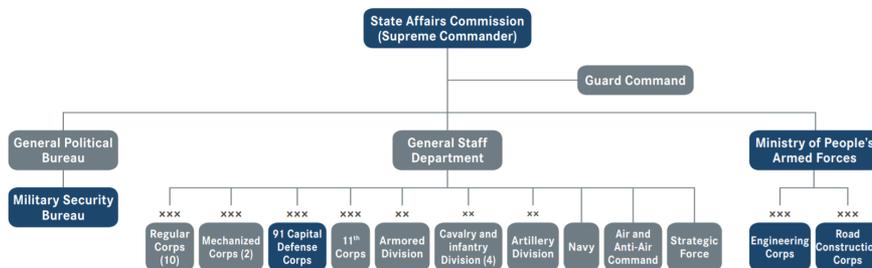
<sup>40</sup> Berkowitz, Karklis, and Meko, “North Korea showed off a lot of missiles,” May 18, 2017.

<sup>41</sup> Lewis, “North Korea’s Terrifying Reveal,” July 28, 2017.

## Command and Control

The technical aspect of the DPRK's command and control structure is difficult to analyze, but assumptions can be made about policies based on statements from the DPRK and how the regime controls its citizens and military. According to state law, Kim Jong-un, as Supreme Commander, is the only person who can order the use of nuclear weapons "to repel invasion or attack from a hostile nuclear weapons state and make retaliatory strikes."<sup>42</sup> The DPRK's nuclear weapons are controlled by the Strategic Force, which is equal to other branches such as its air command and naval command; these subordinate commands are organized directly under the General Staff Department. (See below)<sup>43</sup>

<Chart 1-3> North Korea's Military Command Structure



\* State Affairs Commission: Former National Defense Commission, Military Security Bureau: Former Military Security Command, 91 Capital Defense Corps: Former Pyongyang Defense Command, xxx: Corps, xx: Division

In addition to the command structure, in 2013, the DPRK's Supreme People's Assembly adopted the Nuclear Weapons State Law which states:

- Nuclear weapons are a self-defensive means of coping with the hostile policy of and nuclear threat from the United States.
- Nuclear weapons serve the purpose of deterring and repelling aggression and retaliating against enemies.
- The DPRK is strengthening its nuclear deterrent and retaliatory strike power in both quality and quantity.
- Nuclear weapons will only be used on the final order of the Supreme Commander of the Korean People's Army.
- Nuclear weapons will not be used against non-nuclear weapons states unless they join a hostile nuclear weapons state in its invasion of the DPRK.<sup>44</sup>

The DPRK's nuclear weapons are centralized under the control of Kim Jong-un through formal laws and the Strategic Force. The regime strengthens its ability to keep nuclear weapons under centralized civilian control through purges and loyalty pledges that stress personal loyalty above competence.<sup>45</sup> Kim Jong-un has purged the military regularly since he took power in 2011 by eliminating numerous senior generals from Kim Jong-il's regime that could be potential leaders of military coups. This limits the DPRK in effectively pursuing a risk manipulation strategy because of its military posture and command structure. The DPRK trades its ability to

<sup>42</sup> Choi and Grisafi, "North Korea's nuclear force reshuffles its politics," February 11, 2016.

<sup>43</sup> 2016 *Defense White Paper*, 28.

<sup>44</sup> Kim, "North Korea's Nuclear Doctrine and Revisionist Strategy," 34.

<sup>45</sup> Taylor, "Kim Jong-un Is Having Serious Trouble," November 20, 2012.

manipulate risk of nuclear escalation for more centralized command and control. Thus, its ability to manipulate risk is diminished by its chosen command structure and formal law. In addition to command structure and formal law, Castillo's book *Endurance and War: The National Sources of Military Cohesion* argues that the way regimes control their citizens and the amount of autonomy the armed forces possess influence battle field performance and staying power in conflict.<sup>46</sup> Castillo presents four types of cohesion to classify military staying power and battlefield performance: messianic, authoritarian, professional, and apathetic.<sup>47</sup> The DPRK's cohesion best matches Castillo's authoritarian theory, which has implications not only for its conventional staying power and battlefield performance, but also its nuclear strategy. Castillo argues authoritarian militaries control civil society and do not give the military autonomy to train.<sup>48</sup> This means that authoritarian militaries have limits on how willing they are to delegate authority for the deployment of either strategic or tactical nuclear weapons as a way to manipulate risk. The DPRK is unlikely to delegate nuclear command and control to the tactical level, as evidenced by its history of purges and mandatory personal loyalty pledges, consistent with an authoritarian style. The DPRK can still manipulate risk in other ways, but even with the technical means to deploy tactical nuclear weapons to the battlefield, the DPRK's authoritarian cohesive identity further reduces the likelihood of delegation for use.

## Forces: Means of Delivery and Survivability

The biggest challenges the DPRK has to overcome to credibly threaten delivery of a nuclear warhead, and therefore manipulate risk, are the miniaturization of nuclear warheads and the reliability of its ballistic missiles. The DPRK currently has a robust and improving missile program that includes both mobile launchers and missile launch sites. As of this writing, its newest missile, the KN-14, is a two stage ICBM with a range of 10,400 kilometers.<sup>49</sup> According to the Center for Strategic and International Studies (CSIS), the DPRK has four types of missiles designed for deployment in the Korean Peninsula, including one missile that can reach Japan, and one ICBM with a range greater than 10,000 kilometers. The DPRK is also developing a new missile, the Musudan, that could reach as far as Guam, and a new ICBM, the KN-08, that could reach the Northwestern United States.<sup>50</sup> The most recent ICBM is designed to deliver a nuclear warhead to the U.S. mainland. The DPRK also focuses on transporter erector launchers (TEL) to ensure the survivability of its ballistic missiles. While the exact number of TELs held by the DPRK is unknown, the Department of Defense (DoD) estimates it to be fewer than 100 launchers for the missiles with ranges in the Peninsula, fewer than 50 for the missiles that can reach Japan, fewer than 50 for the missiles that can reach Guam, and fewer than six road mobile ICBM launchers.<sup>51</sup> Although the DPRK is reported to have 72 submarines, the DPRK has begun modernizing a submarine-launched ballistic missile (SLBM) program because most are not able to be used for ballistic missiles.<sup>52</sup> Schelling and Kan also argue that the DPRK is pursuing four goals when it comes to delivery systems: 1) the development of new road-mobile missiles, 2) development of short range, sea-based, land-attack missiles to increase survivability, 3) upgrading the satellite launching station, 4) developing solid-fuel propellant variants of its missiles.<sup>53</sup> This

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<sup>46</sup> Castillo, *Endurance and War: The National Sources of Military Cohesion*, xi.

<sup>47</sup> *Ibid.*, 4-5.

<sup>48</sup> *Ibid.*, 33-35.

<sup>49</sup> Wright, "North Korean ICBM," July 28, 2017.

<sup>50</sup> Center for Strategic and International Studies, "Missiles of North Korea."

<sup>51</sup> *Military and Security Developments Involving the Democratic People's Republic of Korea*, 19.

<sup>52</sup> Cook, "North Korea's Most Important Submarine Base," March 27, 2017.

<sup>53</sup> *Ibid.*

investment in modernization and expansion of nuclear capabilities suggests that the DPRK is not satisfied with its current delivery systems and is actively seeking to improve survivability through multiple dimensions. Until it can do so, its ability to credibly manipulate risk as a nuclear strategy remains limited.

## Survivability

One of the last factors to examine in understanding the DPRK's consistent risk manipulation strategy is the survivability of its nuclear forces. The DPRK knows that it lacks sufficient survivability, has a limited number of warheads, and has a submarine force that still does not significantly increase the DPRK's ability to threaten the risk of a nuclear attack. Therefore, the DPRK takes action to improve survivability. The DPRK accomplishes this most easily by using TELs to have the capability to move missiles and warheads around the peninsula. Another part of the DPRK's survivability strategy is heightening the risk of inadvertent escalation with China. In order to further manipulate risk in general, the DPRK began constructing a missile launch facility 50 kilometers from the Chinese border which increases the risk of conflict with China.<sup>54</sup> The DPRK also rapidly developed a solid-fuel propellant ballistic missile in its submarines and conducted a successful test that flew up to 600 kilometers. Michael Elleman argues that learning to build solid-fuel motors of that size usually requires decades of effort, but the DPRK was successful with no public reporting of large solid-fuel development prior to 2016.<sup>55</sup>

This suggests an awareness of lacking survivability and urgent effort to improve specific elements of its nuclear forces and means of delivery to improve survivability, which increases the risk of assured retaliation to the United States. These improvements to capability are consistent with a risk manipulation strategy. Kim Jong-un is also willing to order the military into "pre-emptive attack" mode.<sup>56</sup> This indicates that the DPRK has different levels of nuclear posture that it uses to respond to security or political actions of other states in order to improve survivability and manipulate risk further. Additionally, it uses "salami tactics." Salami tactics are tactics of erosion to test the seriousness of an adversary by probing.<sup>57</sup> The DPRK's small improvements in capability, its provocations at the demilitarized zone (DMZ), the sinking of the ROK Cheonan in 2010, and increased frequency of missile tests are all forms of salami tactics. These tactics seek to probe where its enemies are weak, find out where it can push the most, and therefore change the status quo in its favor. The DPRK is not satisfied with the current state of survivability and uses a variety of methods to change the status quo in its favor. The strategy does not change, but the pace of the change is increasing.

## Drivers: Supply Versus Demand

Another important question to examine is whether or not the DPRK's strategy is evolving over time. All nuclear states have a preferred strategy. The question is whether long-term goals or the sum total of current capabilities and the conventional balance drive the strategy. It would be a mistake to judge a strategy based on capabilities in a moment, without looking at patterns of action over time, as these changes do not necessarily represent different goals, but could be rational responses to changes in the security environment. Based on available evidence

<sup>54</sup> Roehrig, "North Korea's Nuclear Weapons Program," 93.

<sup>55</sup> Elleman, "North Korea-Iran Missile Cooperation," September 22, 2016.

<sup>56</sup> Kim, "N. Korea leader tells military to be ready," March 7, 2016.

<sup>57</sup> Schelling, *Arms and Influence*, 67.

and the DPRK's action, large changes in the numbers of nuclear forces seem to be less relevant to its nuclear strategy. If the DPRK had 20 nuclear weapons in 2005, or 100 weapons in 2020, its nuclear strategy would remain the same as long as it sees itself in the domain of losses. In 2002, after the leak of the U.S. Nuclear Posture Review—which included contingency plans for nuclear attack on seven countries including the DPRK—the “axis of evil” comments from President George W. Bush, James Kelly's accusation of a secret uranium enrichment program, and the U.S. invasion of Iraq, the DPRK changed its nuclear strategy to increase its nuclear deterrent force for self-defense.<sup>58</sup> This was a direct response to the level of credibility of the U.S. threat. After its first nuclear weapons test, the DPRK could begin to credibly communicate a nuclear weapons strategy.

During this time, the details of the DPRK's nuclear strategy were still in the formation stage, but from the very beginning, they had a specific goal in mind. Many scholars have posited that the DPRK's nuclear strategy is evolving, despite a relatively unchanging security environment.<sup>59</sup> However, the idea of an evolving nuclear strategy after 2003 confuses the steps needed to develop an initial nuclear deterrent capability, and implies that the DPRK cannot form a coherent nuclear strategy. It promotes the idea that the DPRK is not a rational actor, but a failed state that cannot decide on a nuclear strategy and is thus more prone to mistakes or miscalculation than other new nuclear states. However, if the DPRK makes progress with specific capabilities such as regional ballistic missiles, ICBMs, nuclear miniaturization, command and control, and survivability, it is not a spontaneous evolution in nuclear strategy. Instead, these improvements to capability are a result of planning and the intentional allocation of resources. Another troubling aspect of the claim that the DPRK's nuclear strategy is evolving, rather than capabilities improving to reflect desired goals, is that it is a soft form of threat inflation. A consistent theme in the evolution of the DPRK's nuclear strategy argument is that it is becoming more dangerous; it started with the DPRK threat of a nuclear program to gain political concessions, evolved into minimum requirement for assured regional retaliation, and now includes the potential for nuclear warfighting. This argument assumes that the DPRK's strategy is changing to be more aggressive, more unpredictable, and more dangerous. While improvements to the DPRK's capabilities do make the threat more credible and dangerous, the level of threat of attack based on its strategy has not changed since 2003 and is not accelerating today. Any claim that the threat of attack from the DPRK is increasing fails to look beyond the first round of conflict. The DPRK has no incentive to compete with the U.S. military for multiple rounds. After the U.S. invaded Iraq in 2003, the goal of the DPRK's nuclear strategy was always to hold U.S. mainland cities at risk with a miniaturized warhead on an ICBM, to have a credible regional nuclear force, and to make it survivable in order to deter an attack from the United States. Efforts to modernize its submarine program, work toward solid-fuel propellant, and build a satellite missile launch site are all expected outcomes of this long-term strategy. These improvements not only increase capability, but also the persuasiveness of the DPRK threat and keep it from sounding like a bluff.<sup>60</sup> The DPRK's strategy is not becoming more aggressive and dangerous, or to quote Brodie, inventions do not decide nuclear strategy.<sup>61</sup> The DPRK is, however, improving its capability in order to execute its desired strategy.

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<sup>58</sup> Beal, *North Korea: The Struggle Against American Power*, 104-116.

<sup>59</sup> Smith, *North Korea's Evolving Nuclear Strategy*; Joseph Bermudez also writes that steps to gain credible second strike capabilities and recent statements “suggest an important evolutionary step in the North's thinking about deterrence and strategy, they may also be understood as political rhetoric employed to mimic US statements or as an aspirational objective of KPA planners given the current small size of the North's nuclear stockpile and limited delivery capabilities.” Bermudez, *North Korea's Development of a Nuclear Weapons Strategy*, 13; Kim, “North Korea's Nuclear Doctrine and Revisionist Strategy,” 36.

<sup>60</sup> Schelling, *Arms and Influence*, 35.

<sup>61</sup> Brodie, *Sea Power in the Machine Age*, 252.

## Conclusion

This research leads to four key conclusions based on the analysis of the DPRK's action through the lens of strategic frameworks and theories. First, the DPRK's nuclear strategy is to achieve assured second strike capability, in order to credibly manipulate the risk of escalation to make up for inadequacies in the survivability of its small number of nuclear forces. Its goal is to achieve more survivable forces through solid fuel propellant, submarines, mobile launchers, and bases near the Chinese border that enhance its ability to manipulate risk of inadvertently drawing China into a conflict. Second, the DPRK is limited in its ability to manipulate risk by deploying tactical nuclear weapons to battlefield commanders because of formal state law, authoritarian cohesive military, centralized civilian command, and authoritarian military cohesion. Third, the DPRK's targeting signals suggests prioritizing cities that have counterforce targets as a bonus. When viewed through the lens of the Cold War debate between cities or military targets, countervalue or counterforce, the DPRK's targeting signals would appear contradictory. However, choosing cities that give a countervalue bonus is an efficient way to threaten violence, and therefore manipulate risk. Fourth, the DPRK's strategy is not evolving, but the urgency with which it improves its ability to carry out its desired strategy is. Improvement to capability does not equate to a spontaneous improvement in understanding of nuclear strategy. The DPRK's strategy of manipulating risk of escalation has, and will remain, constant unless there are changes in its security environment.

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