

**BUCKS FOR THE BANG:  
NORTH KOREA'S NUCLEAR PROGRAM  
AND NORTHEAST ASIAN  
MILITARY SPENDING**

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*Delineating the impact of North Korea's nuclear program on overall military spending among the other principal states of Northeast Asia is challenging. This article presents a foundation to address that challenge. After summarizing key elements of North Korea's nuclear program, the article introduces frameworks to examine the security consequences of the program for the Northeast Asian region and assess North Korea's motivations to pursue nuclear capabilities. The reviews indicate how these frameworks can be used to deduce hypotheses of more specific linkages of North Korea's activities to other states' military spending decisions, some strategically motivated and others more influenced by symbolism and domestic politics. The article concludes with observations on contemporary developments derived from the analysis.*

**Key words:** North Korea, nuclear weapons, East Asian security, Northeast Asia, military spending

## Introduction

This article addresses the impact of the North Korean nuclear program on military spending among the principal states of Northeast Asia.<sup>1</sup> A single empirical relationship is difficult to discern with precision because of the multiplicity of factors involved. North Korea's nuclear ambitions have many potential sources and several categories of consequences, suggesting varying interpretations that would shape other states' reactions. Other states, in turn, evince military spending behavior shaped by a wide range of forces, among which North Korea's nuclear advances are only one factor. One state's leaders may see North Korea's developments as grave but, if already possessing countervailing capabilities, may show little change in military spending behavior. Conversely, another state may be relatively unalarmed, but undertake significant new military programs anyway, either to counter small but important possibilities or to use North Korean activities as a pretext to disguise other motivations.

To work around these complexities, I will approach the issue partly as a deductive exercise. First, I will summarize key known parameters of North Korea's nuclear program, focusing on those elements most pertinent to the subsequent discussion. Second, I will assess the consequences of North Korea's nuclear capabilities for the Northeast Asian region, considering both security implications and broader impacts. This assessment provides a "first cut" set of expectations for other states' reactions. Third, I will apply this assessment through a general model of nuclear acquisition explanations to discern Pyongyang's probable motivations for its activities. This application provides a "second cut" set of factors influencing other states' reactions. The combination of material consequences and discerned motivations provides a deductive foundation for hypotheses on military spending reactions among other principal Northeast Asian

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1. As used here, "Northeast Asia" is a geopolitical rather than strictly geographical definition, and so "principal states" includes the United States.

states.<sup>2</sup> The essay concludes with an evaluation of some developments in 2009 garnered from the preceding analysis.

### North Korea's Nuclear Program

#### *Evolution of the Nuclear Program*

Assessing whether North Korea's nuclear program has had an appreciable impact on military spending among its key Northeast Asian interlocutors requires more than simply stipulating that North Korea is a "nuclear power" or now possesses a "nuclear deterrent." Rather, the security implications for key affected states are decisively influenced by some precise benchmarks concerning how much fissile material North Korea has acquired and how far its weaponization capabilities have proceeded.<sup>3</sup>

North Korea is believed to have been accumulating plutonium since 1986, principally using its 5-megawatt electric reactor at the Yongbyon nuclear site. The nearby plutonium reprocessing facility is thought to have separated up to ten kilograms of plutonium prior to 1992. In 1994 North Korea discharged the reactor's 8,000 irradiated fuel rods, containing an estimated 27-29 kilograms of plutonium. This action fueled the crisis over

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2. While offering representative examples of such hypotheses, a comprehensive empirical investigation of the military spending reactions to North Korea's nuclear program is beyond this article's scope.
  3. The following discussion up to and including *Table 1* combines data from these sources: Siegfried S. Hecker, "The Risks of North Korea's Nuclear Restart," *Bulletin of the Atomic Scientists*, May 12, 2009, at [www.thebulletin.org/web-edition/features/the-risks-of-north-koreas-nuclear-restart](http://www.thebulletin.org/web-edition/features/the-risks-of-north-koreas-nuclear-restart); David Albright and Paul Brannan, "The North Korean Plutonium Stock, February 2007," Institute for Science and International Security (ISIS), February 20, 2007, at [www.isis-online.org/publications/dprk/DPRKplutoniumFEB.pdf](http://www.isis-online.org/publications/dprk/DPRKplutoniumFEB.pdf); Robert S. Norris and Hans M. Kristensen, "North Korea's Nuclear Program, 2005," *Bulletin of the Atomic Scientists*, vol. 61, No. 3 (May-June, 2005), at [www.thebulletin.org/article\\_nn.php?art\\_ofn=mj05norris](http://www.thebulletin.org/article_nn.php?art_ofn=mj05norris). Pyongyang's May 2008 nuclear declaration reportedly stated it had reprocessed thirty-eight kilograms of plutonium; see Hecker, "The Risks of North Korea's Nuclear Restart."

North Korean nuclear activities that culminated in the 1994 U.S.-North Korea Agreed Framework, under which North Korea shut down the Yongbyon nuclear and its nearby plutonium reprocessing facility, and stored the fuel rods in sealed canisters monitored by the International Atomic Energy Agency (IAEA). The agreement froze North Korea's plutonium-based nuclear program but never reached the intended stage of removing the spent fuel from the country. Thus North Korea was able to pick up where it left off when, in late 2002, charges that Pyongyang was also pursuing uranium enrichment led to the Agreed Framework's collapse.

In early 2003, North Korea began reprocessing the plutonium stored at the Yongbyon site, eventually yielding 20-28 kilograms of weapons-usable plutonium. Pyongyang also restarted the Yongbyon reactor, running it until April 2005, at which time it collected a supply of spent fuel, yielding up to fifteen kilograms more of weapons-usable plutonium.

In September 2005, the Six Party Talks produced a joint Statement of Principles, under which North Korea committed itself to end efforts to produce nuclear weapons, give up its "existing nuclear weapons," rejoin the Nuclear Nonproliferation Treaty (NPT) "at an early date," and resubmit to IAEA safeguards, including readmission of international inspectors to its nuclear facilities.<sup>4</sup> The statement also included a negative security assurance by the United States to the Democratic People's Republic of Korea (DPRK) and affirmation that the United States no longer had nuclear weapons deployed in the Republic of Korea (ROK, South Korea).<sup>5</sup>

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4. U.S. Department of State, "Joint Statement of the Fourth Round of the Six-Party Talks Beijing, September 19, 2005," at [www.state.gov/r/pa/prs/ps/2005/53490.htm](http://www.state.gov/r/pa/prs/ps/2005/53490.htm).

5. This was the first-ever formal U.S. statement that it had no nuclear weapons deployed on the Korean peninsula, marking one of the few significant exceptions to the U.S. policy to "neither confirm nor deny" specific nuclear weapons deployments. Personal correspondence with Hans M. Kristensen; also see Kristensen, "The Neither Confirm Nor Deny Policy: Nuclear Diplomacy At Work," working paper, August 2004, at [www.nukestrat.com/pubs/NCND.pdf](http://www.nukestrat.com/pubs/NCND.pdf). Security assurances to

The Statement of Principles, however, fell apart within hours of its announcement, triggering a new cycle of mutually provocative actions. In July 2006, North Korean missile tests brought a fresh UN Security Council condemnation. Then, on October 9, 2006, Pyongyang tested a nuclear device, eliciting the strongest UN Security Council action against North Korea in half a century.<sup>6</sup>

Remarkably, the Six Party Talks rebounded quickly from this all-time low.<sup>7</sup> On February 13, 2007, the negotiations produced an implementing agreement calling on North Korea to again shut down its Yongbyon site in exchange for shipments of fuel oil—similar to the provisions of the Agreed Framework—and eventually to dismantle all nuclear weapons capabilities and declare its complete plutonium inventory. In exchange, North Korea was promised additional energy aid, lifting of some economic sanctions, and normalization of political relations. On May 8, 2008, after much delay, Pyongyang produced

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North Korea are salient given the previous deployment of nuclear weapons in the ROK and the history of U.S. nuclear threat-making, up to and including naming North Korea in the 2002 Nuclear Posture Review (NPR).

6. United Nations Security Council, Resolution 1718, October 14, 2006, at <http://daccessdds.un.org/doc/UNDOC/GEN/N06/572/07/PDF/N0657207.pdf>. Although China allowed the resolutions to invoke Chapter VII of the UN Charter, denoting North Korea's actions as a threat to global peace, China insisted the resolution refer to Chapter VII's Article 41, not Article 42, thereby specifically ruling out the use of armed force. China's UN ambassador, Wang Guangya, then issued a statement seemingly rebuking the inspections cordon China had just voted to implement. See "Explanatory Remarks by Ambassador Wang Guangya at the Security Council After Taking Vote On Draft Resolution on DPRK Nuclear Test," Permanent Mission of the People's Republic of China to the UN, October 14, 2006, at [www.china-un.org/eng/smhwj/2006/t276121.htm](http://www.china-un.org/eng/smhwj/2006/t276121.htm).
7. All parties determined that the nuclear test did not dramatically alter the basic situation, enabling a tactical consensus around a measured reaction that in turn supported early resumption of the negotiations. This surprising development stems from the particular underlying motivations of the involved states; North Korea's role in particular is discussed later in this article.

an 18,000-page declaration of its nuclear facilities and materials.<sup>8</sup> On June 27, North Korea blew up the Yongbyon reactor cooling tower, a day after President George W. Bush announced that he would remove North Korea from the U.S. list of State Sponsors of Terrorism.<sup>9</sup>

This momentum did not survive the advent of the Barack Obama administration. On April 5, 2009, North Korea conducted another long-range missile test, eliciting international rebuke. The “disablement” of North Korea’s nuclear facilities had not reached a point of irreversibility, and on April 25, 2009, Pyongyang announced that it had resumed plutonium reprocessing and was reactivating its nuclear facilities. On May 25 North Korea conducted its second nuclear test, followed by several more short-range missile tests. On November 3, Pyongyang announced that it had in August completed the latest round of spent fuel reprocessing, “as part of the measure taken to restore the nuclear facilities in [Yongbyon] to their original state which had been disabled under the agreement reached by the six parties.”<sup>10</sup>

#### *Assessing North Korea’s Nuclear Capabilities*

The presence of IAEA inspectors in North Korea at various times across the past two decades, supplemented by information from other outside observers, allows a relatively bounded estimate of the amount of plutonium Pyongyang has been able to extract from its Yongbyon reactor and make available for reprocessing into fissile material. Seismic and radiological data from North Korea’s two nuclear tests similarly provide parameters to estimate the regime’s progress in developing a usable nuclear weapon. This information, taken together, is sufficient for some

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8. “North Korea hands over plutonium documents,” Reuters, May 8, 2008, at <http://www.reuters.com/article/politicsNews/idUSN0833667920080508>.

9. North Korea was not officially removed until October 11, following satisfaction of further nuclear inspection requirements.

10. “DPRK Completes Reprocessing of Spent Fuel Rods,” Korea Central News Agency of the DPRK, November 2, 2009, at [www.kcna.co.jp/item/2009/200911/news03/20091103-08ee.html](http://www.kcna.co.jp/item/2009/200911/news03/20091103-08ee.html).

useful judgments of the current state of North Korea’s nuclear capabilities.

Taking into account the known operational parameters of the Yongbyon reactor and the known periods in which it has been in operation, North Korea has had the opportunity in the past two decades to extract spent fuel containing up to sixty-nine kilograms of plutonium. Using the plutonium reprocessing facility at the Yongbyon site, North Korea could have garnered up to sixty-seven kilograms of usable fissile materials. *Table 1* summarizes this acquisition.

*Table 1.* North Korean Plutonium Reprocessing

Plutonium Produced		Plutonium Reprocessed	
When	Amount (kg)	When	Amount (kg)
Before 1990	1-10	1989-1992	0-10
By 1994	27-29	2003-2004	20-28
By Spring 2005	13-17	2005-2006	13-17
By July 2007	10-13	2009	8-12
Total	51-69	Total	41-67

The number of nuclear weapons this stock could produce depends on the amount used for each device. That in turn depends upon two factors: the desired yield of the explosion and the technological competence to use the material efficiently. For the following purposes, North Korea is assumed to have only low technological capability, equivalent to the United States at the creation of its first nuclear weapons. (An assumption of higher capability would yield higher estimates of weapons numbers). Depending on what yield sizes Pyongyang determines to pursue, its stockpile of plutonium is enough for anywhere from four to sixteen nuclear explosive devices. *Table 2* displays some options.

*Table 2.* North Korean Nuclear Devices (low tech requirements)

Desired Yield (kilotons)	5	10	20
Required Plutonium (kilograms)	4	5	6
Maximum NK Nuclear Devices	7-16	5-13	4-10

Before testing its first nuclear device in 2006, North Korea gave China about twenty minutes' warning, and reportedly indicated the yield would be about four kilotons. While this is small by historical "first test" standards, it is consistent with some estimates of the likely size of the devices North Korea would fashion.<sup>11</sup> But the actual yield, determined from seismic monitoring, ranged from 0.5 to 0.8 kilotons, less than five percent of the yield of the first U.S. plutonium detonation. The most likely explanation for the low yield is that the test was a "fizzle": North Korean technicians did not achieve the precise timing needed for triggering the implosion-type design required for plutonium detonation.<sup>12</sup>

In April 2009, North Korea threatened to undertake a second nuclear test in response to international reactions to its long-range missile test. Several experts, however, had previously anticipated North Korea would need a second test to confirm progress in its technology following the initial "fizzle."<sup>13</sup> This time, North Korea gave both China and the United States approximately one hour's notice of the impending detonation. Analysis of the seismic data from the May 25 test indicated a more powerful explosion, with a yield of two to four kilotons.<sup>14</sup> *Table 3* provides data for the two

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11. Factors inducing North Korea to use a smaller amount of plutonium in its test include minimizing the draw on its limited stockpile and concerns about the test site containing a larger explosion.
  12. See Richard L. Garwin and Frank N. von Hippel, "A Technical Analysis: Deconstructing North Korea's October 9 Nuclear Test," *Arms Control Today* (November, 2006), at [www.armscontrol.org/act/2006\\_11/tech](http://www.armscontrol.org/act/2006_11/tech). Speculation that it was not a nuclear test at all was never well grounded—why simulate a failure?—and air samples collected a few days later detected radioactive debris, confirming that the explosion was nuclear.
  13. Hecker, "The Risks of North Korea's Nuclear Restart"; Garwin and von Hippel, "A Technical Analysis." The motivations behind North Korea's nuclear testing will be considered later in this article.
  14. See, e.g., Jeffrey Park, "The North Korean Nuclear Test: What the Seismic Data Says," *Bulletin of the Atomic Scientists*, May 26, 2009, at <http://the-bulletin.org/web-edition/features/the-north-korean-nuclear-test-what-the-seismic-data-says>; and Martin Kalinowski, "Fact Sheet: Second Nuclear Test Conducted by North Korea on 25 May 2009," at [www.armscontrolwonk.com/file\\_download/177/Kalinowski.pdf](http://www.armscontrolwonk.com/file_download/177/Kalinowski.pdf).

North Korea nuclear tests; *Table 4* provides comparable data for previous first tests of plutonium nuclear devices.

*Table 3.* North Korean Nuclear Test Parameters

DPRK Nuclear Test Date	Estimated Yield
October 9, 2006	0.5-0.8 kilotons
May 25, 2009	2.0-4.0 kilotons

*Table 4.* Previous First Tests (Plutonium)

Country	Date	Yield (kt)
U.S.	July 16, 1945	21
USSR	Aug. 29, 1949	22
Britain	Oct. 3, 1952	25
France	Feb. 13, 1960	60
India	May 11, 1998	12

Based on the increased yield, many reports conclude that North Korea's second nuclear test was more successful than the first. This point is, however, not certain. If North Korea used the same design and plutonium amounts as suspected in the first test, then the second test suggests it has advanced its technology—and also demonstrated sophistication not evident in its missile program and other military efforts. But if North Korea used a larger plutonium amount and a simpler design, more similar to those used in the first plutonium tests of other countries, the second test may have been another fizzle.<sup>15</sup> This uncertainty bears on North Korean claims that it has mastered the technology to fashion a “miniaturized” explosive device capable of mounting on Nodong or other missiles.<sup>16</sup> This question will be taken up in

15. Geoffrey Forden, “North Korea’s Design Choices,” May 25, 2009, at [www.armscontrolwonk.com/2311/north-koreas-design-choices](http://www.armscontrolwonk.com/2311/north-koreas-design-choices). See also Park, “The North Korean Nuclear Test.”

16. North Korea has been working on missile warhead designs since at least the middle of the decade, and intelligence agencies reportedly now believe it is nearing success. “North Korea is Fully Fledged Nuclear

the following section.

The progress of North Korea's plutonium reprocessing and the evidence of the two nuclear tests in May 2009 provide a modicum of firm data bounding estimates of the current state of North Korea's capabilities.<sup>17</sup> Judging the impact of North Korea's nuclear program on regional security interactions, and on the dynamics of military spending in Northeast Asia generally, requires some further extrapolation.

### **Consequences of North Korea's Nuclear Capabilities**

From 1994 to 2002, North Korea's plutonium-based nuclear program was contained by the Agreed Framework at a low stockpile level and showed little evidence of weaponization. Since the collapse of that agreement at the end of 2002, North Korea has increased its plutonium stores six-fold and has garnered the knowledge of two nuclear tests. The advancement of the nuclear program, erratic but inexorable, threatens to trigger a variety of reactions in the region and the world.

Consequences of a nuclear North Korea can be usefully subdivided into three categories: regional security, proliferation, and the nuclear nonproliferation regime.<sup>18</sup> For purposes of sketching the potential impact of North Korea's nuclear program on the military spending of the principally affected states, the following discussion concentrates on the regional security category. The discussion concludes with briefer attention to relevant elements of the latter two categories.

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Power, Experts Agree," *Times Online*, April 24, 2009, at [www.timesonline.co.uk/tol/news/world/asia/article6155956.ece](http://www.timesonline.co.uk/tol/news/world/asia/article6155956.ece).

17. For a recent compendium, see Larry A. Niksch, "North Korea's Nuclear Weapons Development and Diplomacy," CRS Report for Congress, May 27, 2009.

18. Distinguishing these categories enables tracing the interactions between them and refining policy response options. This schematic is introduced in Wade L. Huntley, "Ostrich Engagement: The Bush Administration and the North Korea Nuclear Crisis," *The Nonproliferation Review*, vol. 11, No. 2 (Summer, 2004), pp. 84-88.

### *Regional Security Consequences*

In the Northeast Asia region, a persistently growing arsenal of nuclear weapons in North Korea will tend to aggravate security concerns and uncertainties. Uncertainties could generate unpredictable developments that deterrence strategies might not contain, particularly in crisis conditions. Principal adversaries should be expected to pursue countervailing tendencies. Increased regional defense spending would tend to confirm this expectation, but cannot be definitive as many intervening variables could allow for spurious correlations.

Less quantitatively, and more troublingly, North Korea's actions could trigger a nuclear arms race among its neighbors. Such an arms race could involve either expanded capabilities among already nuclear-armed states (the United States, China, or Russia) or new acquisition interest among those not yet nuclear-armed (Japan and South Korea), or both.

The prospect of Japan or South Korea eventually pursuing nuclear weapons in response to North Korea's acquisition has been a longtime worry.<sup>19</sup> Japan in particular sustains a peaceful nuclear power program that generates high-grade plutonium, a space launch capacity providing advanced ballistic missile capabilities, and the technical expertise to reorient these activities into a sophisticated nuclear-weapons development effort.<sup>20</sup> Senior Japanese leaders have occasionally noted Japan's capacity to exercise this option, particularly in the context of a heightened sense of crisis over North Korea's activities (such as the 2003-2004 period).<sup>21</sup> North Korea's nuclear and missile tests empha-

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19. Graham Allison, "How to Stop Nuclear Terror," *Foreign Affairs*, vol. 83, No. 1 (January-February, 2004), p. 72.

20. See Selig S. Harrison, ed., *Japan's Nuclear Future: The Plutonium Debate and East Asian Security* (Washington, D.C.: Carnegie Endowment for International Peace, 1996).

21. See Eugene A. Matthews, "Japan's New Nationalism," *Foreign Affairs*, vol. 82, No. 6 (November-December, 2003), pp. 74-90; Howard W. French, "Nuclear Arms Taboo Is Challenged in Japan," *New York Times*, June 9, 2002; Marc Erikson, "Japan Could 'Go Nuclear' in Months," *Asia Times Online*, January 14, 2003.

size the specific threat many in Japan increasingly perceive Pyongyang to pose.

A growing North Korean nuclear arsenal could also spur nuclear ambitions in South Korea, or even Taiwan. Governments in both Seoul and Taipei have in the past demonstrated nuclear ambitions that were ultimately restrained by direct U.S. intervention. The civil nuclear programs in both cases are far less advanced than Japan's, but public opinion in both cases is more favorably disposed to nuclear weapons than in Japan.<sup>22</sup> Yet neither Japan nor South Korea has shown interest in acquiring nuclear weapons as a reflexive response to North Korea's activities. Japan's government, for example, has long recognized that obtaining nuclear weapons would not advance its strategic interests either vis-à-vis North Korea or in the East Asia region more broadly.<sup>23</sup> Many in South Korea feel less threatened by North Korea's nascent nuclear capabilities than the considerable conventional threats, notably the vulnerability of Seoul to artillery attack, that have loomed for decades.<sup>24</sup>

Two reasons for these countries' nuclear reticence in response to North Korea are apparent. First, given the existing configu-

22. On the South Korea case, see Jungmin Kang et. al., "South Korea's Nuclear Surprise," *Bulletin of the Atomic Scientists*, vol. 61, No. 1 (January-February, 2005); and Daniel Horner, "S. Korean Pyroprocessing Awaits U.S. Decision," *Arms Control Today*, July-August 2009, at [www.armscontrol.org/act/2009\\_07-08/SouthKorea](http://www.armscontrol.org/act/2009_07-08/SouthKorea). On the Taiwan case, see David Albright and Corey Gay, "Taiwan: Nuclear Nightmare Averted," *Bulletin of the Atomic Scientists*, vol. 54, No. 1 (January-February, 1998).

23. In 1995 the Japanese Defense Agency compiled a thirty-one-page secret report reaffirming the conclusion of previous government studies that developing nuclear weapons would damage Japan's national and regional security interests. The existence of the report was disclosed by the *Asahi Shimbun* on February 20, 2003; see [www.globalsecurity.org/wmd/world/japan/nuke.htm](http://www.globalsecurity.org/wmd/world/japan/nuke.htm). See also Jeff Thompson, "Why Nukes Aren't on Japan's Agenda," *Asia Times Online*, July 19, 2003. Mataka Kamiya argues that "Japan is not willing, interested, or able to become a nuclear power;" see "Nuclear Japan: Oxymoron or Coming Soon?" *The Washington Quarterly*, vol. 26, No. 1 (Winter, 2002-03), pp. 63-75.

24. On North Korea's conventional military capabilities vis-à-vis South Korea, see Chung-in Moon and Sangkeun Lee, "Military Spending and the Arms Race on the Korean Peninsula," in this volume.

ration of military forces in the region, North Korea's possession of nuclear weapons does not make a conventional attack by Pyongyang more likely or more potentially successful. The principal strategic function of North Korean nuclear weapons would not be to threaten a nuclear first strike (which would invite the country's destruction) but to deter an attack on itself, if possible.<sup>25</sup> Nuclear weapons acquisition by Japan or South Korea would be of little value in deterring an already unlikely unprecipitated initiation of war by North Korea, and would not diminish whatever deterrent value North Korea's nuclear weapons supplied.

Second, both Japan and South Korea already enjoy U.S. nuclear-girded security guarantees vis-à-vis North Korea. These guarantees are part of deep alliance relationships that also serve other security functions and that have evolved into linchpins of the broader political relationships of these countries with the United States. U.S. policy has consistently opposed independent nuclear acquisition by its Northeast Asian allies, for reasons of both regional relations and the nuclear nonproliferation regime.<sup>26</sup>

These factors explain, in part, why North Korean nuclear tests have not tipped other Northeast Asian nuclear dominos. In response to provocative North Korean activities, U.S. efforts to reaffirm and enhance its alliance and extended deterrence commitments have for Japan and South Korea served the equivalent

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25. See David Kang, "North Korea: Deterrence Through Danger," in Muthiah Alagappa, ed., *Asian Security Practice: Material and Ideational Influences* (Stanford, Calif.: Stanford University Press, 1998), pp. 261-62. The viability for North Korea of this deterrence aim is considered below. The North Korean capability to launch a first strike nevertheless would figure into crisis decision making. One nuclear first-use scenario would satisfy rationality criteria: a "Hail Mary" use, in which Pyongyang, otherwise facing certain defeat and extermination as a ruling regime, launched a nuclear attack in a desperate effort to buy time, introduce unpredictable dynamics, and/or (less rationally) exact parting revenge.

26. However, as the Agreed Framework was collapsing, the Bush administration seemed to signal that it might view a nuclear Japan more benignly than previous U.S. governments. See Charles Krauthammer, "The Japan Card," *Washington Post*, January 3, 2003; GlobalSecurity.org, "Japan's Nuclear Weapons Program," at [www.globalsecurity.org/wmd/world/japan/nuke.htm](http://www.globalsecurity.org/wmd/world/japan/nuke.htm).

function of independent nuclear acquisitions.

A primary example is U.S.-Japan cooperation on theater missile defense. North Korea's long-range missile test in 1998 helped galvanize a then-incipient joint missile defense development program. In December 2003, Japan's government decided to equip the country with a multi-tiered ballistic missile defense system.<sup>27</sup> Following North Korea's 2006 missile and nuclear tests, Japan accelerated these deployments. In March 2007, it passed a milestone when the Japanese Maritime Self-Defense Force successfully conducted its first missile intercept test, launching an SM-3 missile from the *Aegis* ship *Kongo* that destroyed, at an altitude of approximately 100 miles, a mock North Korean Nodong.<sup>28</sup> U.S.-Japan missile defense cooperation is among the more clear-cut examples of North Korea's nuclear program leading directly to significantly increased military expenditures on the part of its principal regional adversaries.<sup>29</sup>

Acquisition of nuclear weapons by either South Korea or Japan would be a dramatic and extreme measure, probably more

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27. The planned system consisted of SM-3 interceptors deployed on four *Aegis* destroyers to intercept short- and medium-range missiles in the mid-course, and ground-based *Patriot* Advanced Capability-3 (PAC-3) interceptors to intercept such missiles in their terminal phase. PAC-3 missiles are due to be in place at sixteen fire units around Japan's major cities by March 2011. "On Introduction of Ballistic Missile Defense System and Other Measures," Statement by the Chief Cabinet Secretary, Office of the Prime Minister, Government of Japan, December 19, 2003, at [www.kantei.go.jp/foreign/tyokan/2003/1219danwa\\_e.html](http://www.kantei.go.jp/foreign/tyokan/2003/1219danwa_e.html); Masako Toki, "Missile Defense in Japan," *Bulletin of the Atomic Scientists*, January 16, 2009, at [www.thebulletin.org/web-edition/features/missile-defense-japan](http://www.thebulletin.org/web-edition/features/missile-defense-japan).

28. "Successful Completion of the Aegis Ballistic Missile Defense Intercept Test Flight Test in Hawaii," Japanese Ministry of Defense Website, December 17, 2007, at [www.mod.go.jp/e/publ/lastest/press20071217.html](http://www.mod.go.jp/e/publ/lastest/press20071217.html). Japan was the first country other than the United States to successfully test the Aegis system.

29. The example is not definitive; China fears that the United States and Japan use the pretext of a North Korean threat to pursue joint missile defense capabilities more intended for contingencies involving China and Taiwan. See Wade L. Huntley, "Missile Defense: More May be Better—for China," *Nonproliferation Review*, No. 9 (Summer, 2002), pp. 81-115.

contingent on conclusions that U.S. security guarantees were becoming less reliable than on North Korea's nuclear acquisition *per se*. Hence, continuing North Korean nuclear activities are more likely in the near term to induce Japan and (to a lesser degree) South Korea to deepen defense cooperation with the United States, as represented by Japan's accelerated joint missile defense development. Although this outcome is relatively good news for regional nuclear proliferation concerns, it augurs significantly expanding military expenditures among these states on both expensive high-technology weapons systems and personnel deployments, both as direct responses to North Korean actions and as more general signifiers of alliance attitudes (e.g., either commitment or independence).

Over a longer time period, however, there is no guarantee a significantly larger and/or more technologically developed North Korean nuclear arsenal will not induce a phase shift in regional responses. Much will depend on other dimensions of possible North Korean behavior (such as continued nuclear testing, the status of its missile program, other proliferation activities, and conventional military deployments) as well as broader regional developments. A collapse of confidence in U.S. security guarantees precipitated by events in North Korea might induce Japan and/or South Korea to believe they had no choice but to pursue nuclear weapons capabilities of their own, whether or not the strategic logic for such a move had strengthened. On the other hand, a qualitative advance of the North Korean nuclear arsenal might induce a qualitative shift in Chinese threat perception, inducing greater convergence (and hence greater effectiveness) of coordinated regional responses. Thus, the broader impact of a nuclear North Korea is uncertain, indeterminate, and contingent on how other aspects of regional relations iteratively evolve.

#### *Nuclear Deterrence*

The most significant potential phase shift on the horizon is North Korea's acquisition of a sufficient nuclear capability to

provide meaningful deterrence of either conventional or nuclear attack on itself. As noted above, this (rather than a nuclear first-strike capability) is the principal strategic logic of North Korean nuclear weapons. The Pyongyang government, whenever openly embracing its acquisition of nuclear armaments, has invoked their deterrent purpose.

Some observers conclude that North Korea's minimal nuclear capabilities have already provided Pyongyang with a deterrent to military attack. Known facts do not support this conclusion. Rather, only recently has a meaningful deterrent effect become conceivable. The reasons for this are straightforward. However, the misleading judgment is commonplace enough, and the implications for explaining regional military reactions important enough, to warrant describing the point in moderate detail.

A nation-state may protect itself from military attack in one of two ways: defense or deterrence. Defense entails simply having sufficient capabilities to defeat an attack. Deterrence requires demonstrating both the capabilities and the will to inflict a level of punishment that a potential attacker would judge not worth the attack.<sup>30</sup> Among the criteria for successful deterrence is therefore, critically, that the means of punishment survive the attack that is to be deterred. This criterion is behind the importance of "second-strike capability" in U.S.-Soviet mutual deterrence throughout the cold war.

North Korea does not possess a *demonstrated* second-strike capability. As noted in the previous section, North Korea's nuclear tests suggest that its technicians have not yet mastered the implosion-design technology required for plutonium bombs. There is no hard evidence North Korea has achieved the more

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30. Useful recent resources in the copious deterrence literature include T. V. Paul, Patrick M. Morgan, and James J. Wirtz, eds., *Complex Deterrence: Strategy in the Global Age* (Chicago: University of Chicago Press, 2009); Patrick M. Morgan, *Deterrence Now* (Cambridge, UK: Cambridge University Press, 2003); Robert Powell, "Nuclear Deterrence Theory, Nuclear Proliferation, and National Missile Defense," *International Security*, vol. 27, No. 4 (Spring, 2003), pp. 86-118; and Avery Goldstein, *Deterrence and Security in the 21st Century: China, Britain, France and the Enduring Legacy of the Nuclear Revolution* (Stanford, Calif.: Stanford University Press, 2002).

challenging task of fashioning a “miniaturized” warhead of reduced size and weight sufficient to fit on a missile, and of increased durability sufficient to reliably detonate upon arrival at the target.<sup>31</sup> In addition, with respect to threatening the United States directly, tests of the long-range Taepodong missile thus far have not been successful, and this missile takes much too long to assemble, fuel, and arm to provide retaliatory utility anyway. To possess a convincing nuclear deterrent capability, North Korea would need to be able to mount warheads on its missiles, insure the survival of those missiles through the initial attack, and then launch them with enough precision and reliability to reach valuable targets.

The absence of a U.S. attack (or U.S.-led coalition attack) on North Korea at any one of several crisis peaks in the past two decades is not proof that North Korea’s nuclear capabilities deterred U.S. action. North Korea’s conventional capabilities—most notably the thousands of artillery pieces buried in the hills within range of Seoul, potentially armed with biological or chemical warheads—have long provided North Korea with a “second-strike capability” of sufficient gravity to counterbalance the already dubious benefits that an attack on it would have provided. North Korea’s nuclear capabilities did not add to this deterrent; rather, they subtracted from it, because *vulnerable* nuclear weapons *invite* rather than deter attack.<sup>32</sup> So long as Pyongyang believes its nascent nuclear capabilities deter the United States, while in fact the opposite is the case, a crisis could precipitate decisions on each side leading to disastrous outcomes.

This is not to say that North Korea’s nuclear capabilities provide no deterrent value at all. The country is reportedly known to have acquired miniaturized warhead design information and

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31. See, for example, Chung-in Moon and Sangkeun Lee, “Military Spending and the Arms Race on the Korean Peninsula,” in this volume.

32. The United States considered attacking China to prevent its acquisition of a reliable nuclear deterrent. See William Burr and Jeffrey T. Richelson, “Whether to ‘Strangle the Baby in the Cradle’: The United States and the Chinese Nuclear Program, 1960-64,” *International Security*, vol. 25, No. 3 (Winter, 2000/01), pp. 54-99.

has recently claimed success in this effort. North Korea's short- and medium-range missiles are more proven, and some are difficult to detect. Western intelligence agencies have reportedly concluded that North Korea may now be capable of mounting nuclear warheads on medium-range missiles that could reach targets in South Korea and Japan (including U.S. bases).<sup>33</sup> Under many scenarios, the *possibility* that even a portion of North Korea's nuclear weapons could survive and be effective in retaliation for an attack can be dissuasive if the potential benefits of the attack are not high enough, given the very high value of the potential Northeast Asian targets.<sup>34</sup>

The possibility of North Korea delivering nuclear weapons to their targets by less conventional means (i.e., not using missiles) evades the problem of developing miniaturized nuclear warheads and thereby creates an alternative route to a potentially credible retaliatory deterrent threat. For example, one recent analysis concluded that larger nuclear bombs, of a type North Korea's tests have shown it can now construct, "could be delivered by truck or ship or simply placed at a strategic location inside North Korea awaiting the arrival of enemy forces."<sup>35</sup> These options are not worry-free for Pyongyang, however. Delivering nuclear bombs by truck or ship sacrifices time-sensitive use, risks discovery en route, and depends upon effective remote trigger control. Bombs positioned inside North Korea would be immobile, present similar trigger control challenges (once the territory had been ceded), and would be ineffective to deter remote strikes. Nevertheless, in the midst of a crisis, a convincing North Korean

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33. "North Korea is Fully Fledged Nuclear Power," *Times Online*.

34. This analysis avoids the question of whether the United States would be more deterred if North Korea could credibly threaten targets in North America, which raises the issue of the credibility of extended deterrence guarantees to Japan and South Korea. For simplicity's sake, this discussion assumes U.S. decision makers value no less the threats to U.S. allies and bases in East Asia.

35. David Albright and Paul Brannan, "The North Korean Plutonium Stock, February 2007," Institute for Science and International Security (ISIS), February 20, 2007, at [www.isis-online.org/publications/dprk/DPRKplutoniumFEB.pdf](http://www.isis-online.org/publications/dprk/DPRKplutoniumFEB.pdf).

claim to have successfully hidden a nuclear explosive device in Yokosuka, Japan, would probably provide a credible “second strike” deterrent threat.

### *Other Considerations*

Of the three categories of consequences of North Korea’s possession of nuclear capabilities, its potential to export fissile materials, nuclear weapons development technologies and expertise, or even completed operational weapons is arguably the most immediate concern. For example, North Korea was reportedly involved in building the nuclear reactor in Syria destroyed in an Israeli air raid on September 6, 2007.<sup>36</sup> Such nuclear transfers are a particular worry given North Korea’s history of using its military resources and other illicit activities as revenue streams, and the increasing involvement of the North Korean military in all sectors of the country’s economy.<sup>37</sup>

Since the collapse of the Agreed Framework, this consequence has arguably been the primary U.S. concern, and was a central impetus for the Bush administration’s launching of the Proliferation Security Initiative (PSI).<sup>38</sup> Both Japan and (more recently) South Korea participate in PSI, which can involve voluntary participation in a variety of interdiction exercises. The joint participation of these countries serves as an element of alliance cohesion, and so also as a potential instrument for increased military expenditures by all three governments.

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36. U.S. Central Intelligence Agency, “CIA Director Hayden Announces Findings on Covert Syrian Reactor,” Press Release, April 24, 2008, at [www.cia.gov/news-information/press-releases-statements/press-release-archive-2008/cia-director-hayden-announces-findings-on-covert-syrian-reactor.html](http://www.cia.gov/news-information/press-releases-statements/press-release-archive-2008/cia-director-hayden-announces-findings-on-covert-syrian-reactor.html); see also Hecker, “The Risks of North Korea’s Nuclear Restart.”

37. See Blaine Harden, “In North Korea, the Military Now Issues Economic Orders,” *Washington Post*, November 3, 2009, online ed.

38. U.S. Department of State, “Proliferation Security Initiative,” at [www.state.gov/t/isn/c10390.htm](http://www.state.gov/t/isn/c10390.htm); see also Mark Valencia, “The Proliferation Security Initiative: Making Waves in Asia,” *Adelphi Paper* (International Institute for Strategic Studies), No. 376 (October 31, 2005).

Taking into consideration the various factors discussed in this section, North Korea's two nuclear tests clearly were not themselves "game-changing" events, which helps explain why military procurement reactions to them were in the short run less apparent, and diplomatic engagement subsequent to them relatively forthcoming. More significant has been the underlying trend, since the collapse of the Agreed Framework at the end of 2002, toward a slowly but surely advancing North Korean nuclear capability, both quantitatively and qualitatively. A relationship to parallel trends in military spending among the United States, Japan, and South Korea may be easily deduced, though not easily demonstrated.

But all the variables that have contributed to moderating a more severe regional reaction to North Korea's activities, including evidence of limitations on its nuclear achievements, periodic diplomatic progress, and divergence among the principal Northeast Asian states over both ends and means for coping with Pyongyang. That trend may yet shift tectonically. Even if North Korea's nuclear programs progress no further than their current material levels, these capabilities will continue to exert stress on regional relationships—stress that, in the context of other developments, could generate dramatic change in security perceptions, defense postures, and military procurements.

Among those potential developments are changes in North Korea's internal political structures and processes, to which we now turn.

### **North Korean Nuclear Motivations**

#### *The Opacity of Motives and Objectives*

Fathoming the nuclear motivations in states as opaque as North Korea is bedeviling. But if we are to trace North Korea's past and future impact on regional security and military spending, then understanding as much as possible why North Korea behaves as it does—and especially why it pursues nuclear

weapons—is as important as knowing what it has done in terms of procuring military and nuclear capabilities.

Virtually all analysts conclude that at some foundational level Pyongyang's leadership is motivated by "regime survival." But there's ambiguity in what this means exactly—survival of the country itself, survival of the current government's structure, personnel, and ideology, or survival in power of the elite leadership? Moreover, none of these variants is alone a sufficiently determinative explanation of the regime's behavior.

Some analysts suggest that repeated North Korean provocations are merely an effort to "get attention" from the United States and other principals. Such explanations imply an understanding of Kim Jong-il as a spoiled adolescent—an image reinforced by media attention to the Dear Leader's reportedly salacious lifestyle. This simplistic assessment is almost certainly wrong. Rather, North Korean provocations probably flow from a calculated strategy of coercive diplomacy that anticipates medium-term benefits from fomenting short-term crises. This strategy has met with success in the past.<sup>39</sup>

But to understand North Korea's provocative actions as an effort in coercive diplomacy still begs the question: to what end? Unfortunately, the vacuum of reliable information on this question is often filled by assumptions driven by particular policy preferences. Advocates of engagement and negotiation see Pyongyang as pursuing its nuclear program as a means to other ends, using belligerence to maneuver for bargaining position, but ultimately prepared to surrender its nuclear capabilities for the right price. Advocates of confrontation conversely see the ruling regime as genuinely wanting nuclear weapons in their own right. Its occa-

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39. Secretary of State Madeleine Albright's visit to Pyongyang two years after the 1998 missile test is one example; the achievement of the February 2007 agreement following the 2006 missile and nuclear tests is a second. Direct U.S.-North Korean engagement in the context of resumption of the Six Party Talks following the 2009 missile and nuclear tests may become a third. See Wade L. Huntley, "U.S. Policy toward North Korea in Strategic Context: Tempting Goliath's Fate," *Asian Survey*, vol. 47, No. 3 (May-June, 2007).

sional accommodations are merely a tactic to assuage neighbors and buy time, for the regime is certain never to surrender its nuclear weapons so long as it remains in power.

Both sets of assumptions may be wrong. First, the choice is too simple: It is likely that North Korea's leadership pursues its nuclear program for multiple and evolving reasons, and has not made up its mind whether it would ultimately surrender such a program. A lot may depend not only on the terms of any ultimate deal but also on the context in which it occurs. Second, the Pyongyang regime, although highly centralized and monolithic, has its internal factions and divided interests that bear on decision making. As discussed below, if rumors of Kim Jong-il's ill health and diminishing leadership are accurate, these divisions are likely to increase in importance and volatility. Finally, there is the problem of uncertainty: Given the opacity of the regime, no single assumption about North Korean motivations can be shown to be definitively right.

These problems limit the effectiveness of singular conclusions concerning North Korean motivations based on circumscribed information, which often results in selective data use producing circular analysis. A sturdier approach is to assess the totality of North Korean behavior in terms of a spectrum of possible motivations.

### *Approaches to Refining Understanding of Motives*

Scott Sagan offers a useful typology of conceptual categories to capture a fuller range of motivations and explanations for nuclear acquisition programs: state security, domestic politics, and ideational attractions:<sup>40</sup>

- *Realist security model*: states make decisions on nuclear-weapons acquisition on the basis of whether it increases state security against foreign threats, especially nuclear threats.

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40. Scott D. Sagan, "Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb," *International Security*, vol. 21, No. 3 (Winter, 1996/97), pp. 54-86.

- *Domestic politics model*: states make decisions on nuclear-weapons acquisition on the basis of parochial domestic and bureaucratic interests.
- *Normative symbols model*: states make decisions on nuclear-weapons acquisition on the basis of evoking important normative symbols of the state's modernity and identity.

These models are ideal types; any given state's decision making can involve elements of each model to varying degrees. None of the models tells the "real story." Moreover, the relative weighting of the factors flowing from each model may vary from state to state and within a state over time. The principal use of the models is to distinguish different factors analytically in order to parse the potential consequences of alternative responses.

Each of these models may also be unpacked somewhat. For example, within the security model a state may be motivated to acquire nuclear weapons either to respond to proximate regional concerns, remedy concerns about the distant but powerful superpower, or both. Within the norms model, international consensus might promote as well as impede national nuclear weapons ambitions, depending on how the particular norms and the particular domestic agents happen to interact. In the case of North Korea, the three motivational models usefully expand analysis of the scant information available and elucidate the complex forces likely intermingling to produce North Korean behavior over time.

#### *The Realist Security Model*

From this perspective, the principal motivations for North Korea's acquisition of nuclear weapons are the security of the state and survival of the regime, viewed internally as convergent. State security concerns focus on the United States, which threatens North Korea both regionally and directly: regionally through support of the South Korean government, which obstructs reunification of Korea on Pyongyang's terms, and directly through fear of potential U.S. attack for various reasons with either conventional or nuclear weapons. Thus, in this instance, regional moti-

vations and motivations deriving directly from U.S. policies converge. North Korea may be pursuing its nuclear weapons option as a means both to rectify its growing conventional inferiority to the U.S. and South Korean forces aligned against it, and to deter any solely U.S. preemptive action.

Either of the conventional assumptions about North Korea's motivations for acquiring nuclear weapons—that it wants them for keeps or that it's prepared to deal them—is plausible in this outlook. The typical argument that North Korea believes nuclear weapons would deter a U.S. attack would be valid, but so would the also typical argument that North Korea would trade them away for a package that includes reliable U.S. security assurances (which would probably necessitate a broader regional security accord formally ending the state of war on the Korean peninsula).

To the extent that this model predominates, North Korea can be expected to behave like a "normal" state. Realist assumptions about the efficacy (and sometimes inefficacy) of deterrence would apply. Under these conditions, continuous diplomatic engagement is more likely to lead to a peaceful denuclearization of North Korea. In this model, policy penchants that conflate aversion to the Pyongyang regime generally with nuclear decision-making irrationality are ill-equipped to exploit diplomatic opportunities and consequently aggravate the threat perception that drives North Korea's nuclear ambitions in the first place.

Despite the opacity of the Pyongyang regime, there are good reasons to doubt the sufficiency of the security explanation in the North Korea case. For one, as the previous section discussed, North Korea's nuclear program has yet to deliver a convincing deterrent capability. It may be on the verge of doing so now, but the project has subjected the country to increased risk of attack during the vulnerable early development stage as well as overwhelming international sanctions and acrimony. Exposing the country to peril for the extended period required to develop meaningful nuclear deterrence would be inconsistent with a short-run survival strategy. Meanwhile, North Korea's conventional capabilities functioned effectively to hold at risk valuable adversaries' assets and provide significant deterrence value on

their own. In this context, it is difficult to maintain that pursuit of nuclear weapons serves North Korea's national security interests.

This point is reinforced by noting that other similarly situated states have not felt similarly compelled to develop nuclear weapons. Comparison of the situations of North Korea and Vietnam, circa 1980, is particularly instructive. Both countries then were ruled by highly autocratic communist regimes, both had experienced conventional wars involving U.S. ground troops (Vietnam more recently), and both had been subject to U.S. nuclear threats. The security situations of these small East Asian states were similar. Vietnam, weaker and more locally beleaguered, had perhaps stronger systemic incentives to seek a nuclear "equalizer." Yet North Korea was the country that launched a nuclear-weapons program.

The role of China in this comparison adds insight. Some analysts consider China's burgeoning relations with South Korea and moderation of its defense commitment to North Korea in the early 1990s to have induced a sense of abandonment in Pyongyang, inciting its nuclear ambitions.<sup>41</sup> But North Korea initiated its program well before these developments. In the meantime, Vietnam fought a war with China in 1979 and so enjoyed less support from China than North Korea does now. Some consider India's border war with China in 1962 to have been a catalyst for India's nuclear-weapons development.<sup>42</sup> Such logic should have held even more strongly for Vietnam, weaker and strategically more vulnerable vis-à-vis China than India. Yet Vietnam refrained from nuclear-weapons development, embarked on Chinese-style economic reforms, courted (and eventually obtained) U.S. diplomatic recognition and economic engagement, and chose a course to maintain its security that included embedding the nation firmly in the ASEAN community.

Of course, there are important differences in Vietnam's situa-

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41. See, representatively, Victor Cha, "The Second Nuclear Age: Proliferation Pessimism versus Sober Optimism in South Asia and East Asia," *Journal of Strategic Studies*, vol. 24, No. 4 (December, 2001), p. 91.

42. For an argument against this conclusion, see Sagan, "Why Do States Build Nuclear Weapons?" pp. 65-69.

tion that plausibly explain why it refrained from nuclear-weapons development while North Korea did not. But these explanations necessarily focus on divergences of the two countries' internal makeups, histories, and leadership legitimation. Such factors take the analysis beyond the security model.

The absence of a compelling strategic logic that supports the security utility of nuclear weapons for North Korea demonstrates that countries may sometimes pursue nuclear weapons despite lacking a compelling need for them. The existence of counter-cases like Vietnam demonstrates that the existence of stronger security incentives to obtain nuclear weapons capabilities does not always lead to their pursuit. Security threat is therefore demonstrably neither a necessary nor a sufficient explanation of proliferation, even in cases such as North Korea, where evidence to explain nuclear decision making remains scant.<sup>43</sup>

#### *The Domestic Politics Model*

North Korea certainly has domestic factions. They are difficult to discern, even among the domestic actors themselves. But indications of their existence and the terms of their interactions can sometimes be gleaned. Certainly, North Korea's military has played an extraordinarily dominant role, commanding an average of 30 percent of the country's gross domestic product since 1995.<sup>44</sup> Kim Jong-il, since assuming power in 1994, has bolstered his internal position by increasing the power and role of the military, under the auspices of the "military-first" policies.<sup>45</sup>

43. This observation belies assessments that tautologically point to North Korea's pursuit of nuclear capabilities as proof of the validity in redressing perceptions of insecurity. Recognizing the non-security domestic and ideational sources of nuclear motivations helps to avoid this error.

44. U.S. Department of State, *World Military Expenditures and Arms Transfers, 2005, Table 1*, p. 30, online at [www.state.gov/t/vci/rls/rpt/wmeat/2005/index.htm](http://www.state.gov/t/vci/rls/rpt/wmeat/2005/index.htm); ROK Ministry of National Defense, *Defense White Paper 2008* (Seoul: MND, 2009), p. 30, cited in the Moon and Lee article in this volume.

45. See Ken E. Gause, "North Korean Civil-Military Trends: Military-First

However, the imperatives of the economic and energy collapse weigh on the regime, particularly outside the military. Thus, two driving dynamics are allocation of resources between military and other demands, and the risks to security and domestic regime legitimacy of opening the economy through reform measures. Kim Jong-il manages these forces, leaning one way or another as circumstances warrant. Most recently, as economic sanctions have closed off military equipment sales abroad and other sources of hard currency, Pyongyang has increasingly relied on trade with China and South Korea.<sup>46</sup> In this context, the North Korean military has expanded to take over management of the foreign sale of the country's natural resources (most of which goes to China), providing a lucrative substitute source of revenue while insinuating the military even deeper into the country's economy and society.<sup>47</sup>

In this model, North Korea's nuclear-weapons acquisition is driven principally by the military, which views the nuclear program as means for national security, internal validation of its mission, and resource husbanding. A civilian nuclear power faction is a contingent factor; public support of nuclear weapons capabilities is derivative. Nonmilitary factions seeking support for economic reform can be expected to view the nuclear program tactically, to value energy and economic aid offers highly, and to support deal making. Many of the organizational and psychological deficiencies associated with nuclear weapons decision making hold, some in particularly aggravated forms.

The recent turmoil surrounding the health of Kim Jong-il, and the planning (or lack thereof) for his succession, figure prominently in this model. The dynamics of the leadership succession

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Politics to a Point," Strategic Studies Institute, September 2006, at [www.StrategicStudiesInstitute.army.mil/](http://www.StrategicStudiesInstitute.army.mil/); and see the Moon and Lee article in this volume.

46. Dick K. Nanto and Emma Chanlett-Avery, "The North Korean Economy: Leverage and Policy Analysis," Congressional Research Service Report for Congress, updated, August 26, 2008.

47. Blaine Harden, "In North Korea, the Military Now Issues Economic Orders," *Washington Post*, November 3, 2009, online ed.

process, whether orderly or not, are likely to induce top leaders to attend more than usual to internal audiences and political forces in shaping international policy. To the extent that these conditions dominate, North Korea may be expected to react hostilely to even innocuous overtures (as factions compete internally to legitimate their positions by showing strength and resistance to the United States), or not to react at all (as internal political dynamics undercut the capacity for coherent international action).

#### *Normative Symbols Model*

North Korea's national ideology of *juche*, and national myth-making more generally, pervades the national society. The sources and implications of these ideational factors are complex, but several facets stand out. The ideology of *juche*, roughly translated as "self-reliance," is highly introverted. The mythology that North Korea is alone in the world and left to its own resources to resist overpowering American hegemonic intentions functions as a principle of regime legitimacy and a predominant normative imperative. Kim Jong-il validated the importance of this mythology in amending it to legitimize the increased influence of the military under his rule. This disposition strongly evinces the inward-oriented leadership legitimation often associated with nuclear weapons aspirations.<sup>48</sup>

In this model, nuclear weapons capability represents the epitome of national self-reliance. It answers and counters the imperialist's most powerful weapon and assures national survival. Having the bomb is also viewed internally as a symbol of power and stature meaningful on the international stage (even if evidence to support this perception is lacking). Many official government statements convey this self-conception of the role that ought to be accorded to North Korea on the basis of its nuclear achievements.<sup>49</sup>

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48. See Etel Solingen, *Nuclear Logics: Contrasting Paths in East Asia and the Middle East* (Princeton, N.J.: Princeton University Press, 2007).

49. For samples, visit the website of the Korea Central News Agency of the DPRK ([www.kcna.co.jp/index-e.htm](http://www.kcna.co.jp/index-e.htm)).

To the extent that this orientation predominates, “normal diplomacy” is not likely to be effective in reversing North Korea’s nuclear weapons acquisition. Not only do internal ideational motivations drive the country to wriggle out of its NPT commitments; the dominance of the internal mythology combined with the country’s insularity block the role that adherence to the nonproliferation norm as a means of national identity takes on in other countries. Rather, opposite tendencies may emerge: Pyongyang would be likely to perceive strengthening of nonproliferation norms themselves as threatening and actively seek to undermine those norms, to the extent that it is able.<sup>50</sup> Confrontation of the global regime, especially if entailing nuclear threat-making, would be a normative resource the Pyongyang elite could draw from to reinforce domestic allegiance or even its own resolve.

### Conclusion

As noted at the outset of this article, tracing a comprehensive empirical impact of North Korea’s nuclear program on the overall military spending among the other principal states of Northeast Asia presents tall methodological obstacles. The military spending practices of states are driven by a multitude of factors. Many of these factors are responsive to international conditions, but many others are not. President Eisenhower’s famous warning against the power of the “military-industrial complex” sums up this second dimension.<sup>51</sup> Where North Korea might factor among these influences, its impact on spending may be greater or lesser than perceptions of the threat, depending on confidence in preexisting capabilities and other tradeoffs. Finally, where complex weapons systems are involved, the time

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50. See Tanya Ogilvie-White, “US Disarmament Leadership and the Nuclear Defiance of North Korea and Iran: Escalation or Reconciliation?” *Non-proliferation Review*, vol. 17, No. 1 (March, 2010).

51. Eisenhower, “Farewell Radio and Television Address to the American People,” January 17, 1961, text at [www.eisenhower.archives.gov/All\\_About\\_Ike/Speeches/Farewell\\_Address.pdf](http://www.eisenhower.archives.gov/All_About_Ike/Speeches/Farewell_Address.pdf).

lag between impetus and spending may be considerable. Hence, simple correlations of North Korean actions and overarching spending patterns cannot accurately map the causal relationship, if there is one. Nor can public statements of spending rationales provide reliable indicators, given the many incentives to misrepresent that government leaderships have at hand.

To work around these issues, I have approached the problem partly as a deductive exercise. After summarizing the key known material advances of North Korea's nuclear program, I have examined the security consequences of the program for the Northeast Asian region. This examination showed why the strategic impact of North Korea's nuclear acquisitions has been less than might have been supposed two decades ago. In particular, states in the region have evinced virtually no signs of the oft-feared further proliferation of nuclear weapons that "realist" analysis would have anticipated by now.<sup>52</sup> These observations suggest the hypothesis that the impact of North Korea's nuclear program on military spending among other principal Northeast Asian states may be selective rather than general, with particular programs filling specified needs (such as U.S.-Japan missile defense cooperation) rather than across-the-board spending increases.

However, a complete assessment requires also examining the non-strategic elements of the relevant security relationships. For this purpose, I presented a framework for assessing North Korea's motivations to pursue nuclear capabilities through the lenses of three ideal types. This assessment challenged the frequent presumption that Pyongyang pursues nuclear weapons to provide for its security, suggesting that instead domestic political machinations and pervasive ideational forces also probably are fundamental drivers. These non-strategic drivers, to the extent of their influence over North Korea's behavior, complicate security interactions with the Pyongyang regime and increase other states' uncertainty and perceptions of threat. The result is that,

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52. See Kenneth N. Waltz, "The Spread of Nuclear Weapons: More May Be Better," *Adelphi Papers*, No. 171 (1981).

in a manner anticipated by “constructivist” analysis, the Northeast Asian security climate is “made” more fearful than it might otherwise be.<sup>53</sup> These observations suggest the hypothesis that the impact of North Korea’s nuclear program on military spending among other principal Northeast Asian states may be greater than strategically warranted, involving forms of activity also more oriented toward symbolic representations and domestic political milieus (such as various efforts to bolster alliance solidarity).

#### *Clues to Future Policy Making on North Korea*

The deductive hypotheses generated by these two layers of analysis provide a basis for identifying specific linkages between North Korea’s activities and military spending reactions by other principal Northeast Asian states that are less evident at more general levels. This article has noted examples of these linkages and provides a foundation that enables future research to identify such linkages comprehensively. It now turns to a brief consideration of how this framework illuminates contemporary circumstances.

As noted earlier, over the past two decades, Pyongyang’s most consistent behavior has been to precipitate crises as a means of coercive diplomacy to disrupt unsatisfactory circumstances and provoke action by interlocutors. But this observation takes us only so far, for any of the three models reviewed in the previous section could supply the motivations for such behavior. In terms of power and “rational” self-interest, hardball negotiations and credible threats are natural techniques. In terms of ideology and national unity, external hostility positively reinforces regime legitimacy. Such behavior can also be construed from the domestic politics model, but less readily; where Pyongyang’s internal regime dynamics overshadow its behavior, consistent behavior of any sort is less likely to emerge.

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53. See Alexander Wendt, “Anarchy is What States Make of It: the Social Construction of Power Politics,” *International Organization*, vol. 46, No. 2 (1992), pp. 391-425.

Herein may emerge clues to North Korea's 2009 interactions with the incoming Obama administration. Over the first half of the year, the Six Party Talks process virtually collapsed. Given the clear commitment to diplomatic outreach asserted by candidate Barack Obama and implemented in the administration's earliest initiatives, North Korean defiance at this point is curious. Given Pyongyang's persistent confrontations with the preceding administration, one might have expected more reciprocity. Perhaps, observing the new administration's highly visible efforts to engage interlocutors elsewhere in the world—most notably Iran and the global Islamic community—Pyongyang determined to draw U.S. attentions back to Korea. Yet Kim and his cohort could not have realistically hoped to induce U.S. policy makers to be any more disposed to engagement than they were already prepared to be.

More basically, as also noted earlier, North Korea does not dependably reciprocate accommodation (or cower to intimidation). Having learned that it could successfully call the bluffs of the previous administration, Pyongyang may have sought to "test" the new administration. On the other hand, explanations having little to do with the Obama administration are equally plausible. North Korea's withdrawal from the Six Party Talks negotiations and its missile and nuclear tests may have flowed from the evolution of internal succession-driven political dynamics. Or, North Korea may have generated a renewed sense of crisis as a pretext to conduct a second nuclear test on a timing cycle driven by technological development needs.

At the end of 2009, the most recent flare-up showed signs of abating. But if succession-driven internal politics are playing a stronger-than-normal role in North Korea now, responsiveness to external actions (positive or negative) will be muted relative to past episodes, and the risks of unexpected actions and unintended consequences will be higher. To be sure, the successful negotiation of the Agreed Framework after the sudden death of Kim Il-sung demonstrated that North Korea is capable of high-stakes diplomatic engagement in the midst of leadership succession. But there is no guarantee the current regime will be as nim-

ble. If Kim Jong-il has been unable to secure the same allegiance to his power over the succession that his father achieved, genuine succession developments will unleash internal deal making that will tend to warp and/or obfuscate the regime's external policy postures.

In some ways the situation is graver than ever. North Korea continues to move ever farther down the road to being a decidedly nuclear armed state, both materially and ideologically. Achieving a non-nuclear Korean peninsula now requires rolling back an existing capacity, which is qualitatively more difficult than freezing a nascent status quo, both technically and psychologically.<sup>54</sup> If these developments have not been as deleterious for Northeast Asian regional security as may have been feared in 1993, this good fortune does not imply a case for accepting a nuclear North Korea as a *fait accompli*—which, among other things, could itself disrupt the fragile contemporary stability. Relative safety merely supplies a little more time for a proactive and foresighted strategy.

Given the uncertainties concerning the motivations driving North Korea's nuclear appetite, an effective strategy would aim to affect North Korean behavior by shaping its environment as much as by interacting with the regime itself. The most effective environmental shaping would involve forging a strategic consensus among all other principal Northeast Asian states (and especially between the United States and China) on long-term goals and viable means.

The persistence in Pyongyang of domestic and ideational motivations limits prospects even for this approach. That reality means acknowledging frankly the linkage between Pyongyang's

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54. Prospect theory examines the empirical fact that individuals tend to evince considerable commitment to perceived status-quo possessions, and will take greater chances to avoid losses than to obtain objectively equivalent gains, deviating from the cost-benefit expectations of the "rational actor" assumptions of most realist approaches. See Jack Levy, "Loss Aversion, Framing Effects, and International Conflict: Perspectives from Prospect Theory," in Manus I. Midlarsky, ed., *Handbook of War Studies II* (Ann Arbor, Mich.: University of Michigan Press, 2000).

nuclear ambitions and the nature of its regime—a linkage demonstrated by the weak strategic logic of nuclear security for North Korea and the meaningfulness of domestic and ideational motivations as determinants of its nuclear decision making. Recognizing this linkage need not reduce to the simple objective of “regime change” that animated the Bush administration, nor to the “regime obsequiousness” that sometimes characterizes Chinese dispositions. A more holistic approach, attuned to North Korea’s idiosyncratic regime character and maintained consistently over time, could eventually prove transformative.

Periodic progress in the Six Party Talks negotiations and growing convergence on UN Security Council reactions to North Korean nuclear activities suggest incipient collaboration. But focusing on the underlying military spending patterns among the principal Northeast Asian states reveals the lack of strategic depth to this coordination. In particular, bolstered alliance convergence among the United States, Japan and South Korea, on the one hand, juxtaposed with sustained military development efforts on the part of China and Russia, on the other, create a regional arms competition antithetical to generating an effective strategic consensus on dealing with nuclear North Korea.

Hence, a near-term objective of the diplomacy-minded Obama administration can be to pursue better Northeast Asian strategic collaboration on Korean peninsula postures. In particular, the administration could seek a meeting of the minds with China to disengage this issue as much as feasible from serving as a means to larger ends within the two countries’ broader strategic relationship. That would not only facilitate emergence of a longer-term strategic consensus among all the principal Northeast Asian states in dealing with North Korea, but it would also dissipate the catalytic influence of North Korea’s ambitions on regional security circumstances, and on the concomitant military spending expansion noted earlier in this article. Realizing and disrupting this influence on underlying military spending would in turn promote the long-held hope of generating regional collective security mechanisms. Ultimately, a permanent peaceful non-nuclear resolution in Korea may depend upon such progress.

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