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Pragmatic, Not Mad: The Rationality of North Korea's Nuclear Weapons Program

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Introduction

The September 2016 nuclear weapon test conducted by the Democratic People's Republic of Korea (DPRK), better known as North Korea, caused a shift in perceptions of the reclusive state's leadership. Experts had thought for years that the North Korean nuclear weapons program, produced through decades of covert efforts, was a way for the regime to extract concessions from other states to support its flagging economy.[1] The continued development of nuclear weapons and ballistic missiles in spite of severe economic and diplomatic penalties, however, has led to the conclusion that North Korean leader Kim Jong Un is instead pursuing a nuclear deterrent.[2] The most recent test appears to further confirm that North Korea is attempting to develop more powerful weapons for defence, as its estimated

[1] Choe Sang-Hun and Jane Perlez, "North Korea Tests a Mightier Nuclear Bomb, Raising Tension," *New York Times*, September 8, 2016, http://www.nytimes.com/2016/09/09/world/asia/north-korea-nuclear-test.html.

[2] Tariq Rauf, "North Korea's Fifth Nuclear Test," Stockholm International Peace Research Institute, September 9, 2016, https://www.sipri.org/commentary/topical-backgrounder/2016/north-koreas-fifth-nuclear-test.

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yield of 10 to 15 kilotons is the highest of the five tested since 2006.[3] The increasing number of test missile launches are also indicative of efforts to develop ballistic missiles with the ability to strike the United States and its allies in the region.[4] As a result, attacking North Korea is becoming an incredibly risky proposition, as it will likely be able to retaliate against other states with devastating force.

The North Korean government's efforts to develop a nuclear arsenal, even for deterrence, has worried many due to its long history of apparently irrational policies. Former North Korean leaders Kim Il Sung and Kim Jong Il are infamous for having ordered numerous acts with no apparent benefit to the state, including multiple assassination attempts on South Korean presidents, the capture of the U.S.S. *Pueblo* in 1968, and financial support of terrorism.[5] Current leader Kim Jong Un is seen as being no better, having ordered purges of the upper echelons of government and the assassination of his half-brother Kim Jong Nam with VX nerve agent in February 2017.[6] All of these actions have accomplished seemingly little beyond drawing the opprobrium of the international community, leaving North Korea almost totally isolated and desperately poor. The perceived irrationality of the North Korean leadership has only been reinforced by its totalitarianism, as any sign of disobedience is met with imprisonment or execution.[7] North Korea's leadership is thus seen as being made up of unpredictable madmen who cannot be reasoned with or deterred.[8] The nuclear program itself has been viewed as an irrational move due to the regime's refusal to abandon it after being pressured and punished for decades by the international community. The September 2016 test, for example, led to the United Nations Security Council unanimously voting in favour of Resolution 2321, whose heavy restrictions on coal exports have been predicted to cost North

[3] Ibid.

[4] Anna Fifield, "North Korea fires ballistic missile, first since Trump elected in U.S.," *The Washington Post*, February 11, 2017, https://www.washingtonpost.com/world/north-korea-fires-ballistic-missile-first-since-trump-elected-in-us/2017/02/11/42d6cb57-d187-4b2a-bafb-6834c97799b0_story.html?utm_term=.54f989a8ef91.

[5] Victor Cha, *The Impossible State: North Korea, Past and Future* (New York: HarperCollins Publishers Inc., 2012), pp. 54-58, 232; Jonathan D. Pollack, *No Exit: North Korea, Nuclear Weapons, and International Security* (London: International Institute for Strategic Studies, 2011), p. 64.

[6] Richard C. Paddock, Choe Sang-Hun, and Nicholas Wade, "In Kim Jong-nam's Death, North Korea Lets Loose a Weapon of Mass Destruction," *New York Times*, February 24, 2017, https://www.nytimes.com/2017/02/24/world/asia/north-korea-kim-jong-nam-vx-nerve-agent.html.

[7] Cha, *The Impossible State*, p. 8.

[8] Hugh Gusterson, "Paranoid, Potbellied Stalinist Gets Nuclear Weapons: How the U.S. Print Media Cover North Korea," *Nonproliferation Review* 15, no. 1 (March 2008): pp. 30-31.

Korea at least $650 million.[9] The past behaviour of North Korean leaders led to the common assumption that North Korean belligerence and its nuclear program were driven by narcissism and a desire to extort other states.[10] North Korea's persistence in developing nuclear weapons and threatening other states with them has thus been dismissed as the whim of mad tyrants, and not rational policy.

This article proposes a different explanation for the rationale driving North Korea's nuclear weapons program. Rather than being an irrational decision, the program is a rational policy option for the North Korean government to undertake, given the circumstances it believes it faces. The leadership has perceived itself as besieged by foreign enemies for decades, and the inadequacy of its conventional armed forces for defense make a nuclear deterrent essential for the state's continued survival. Limited foreign relations and trade have led North Korea to rely on China's continued patronage, insulating its leadership from most punitive measures while condemning much of the population to poverty. Finally, the totalitarian nature of the North Korean government allows it to suppress any domestic opposition to its nuclear weapons program, eliminating a potential cost as a result, but its reliance on the military for survival means that it must acquiesce to the demands of generals demanding a nuclear deterrent. Given the perceived necessity of possessing nuclear weapons and the relative lack of downsides, it is unlikely that the North Korean government will agree to abandon these weapons without a dramatic shift in the status quo. As a result, current efforts to denuclearize the Korean peninsula appear to have little chance of success, leading to the conclusion that states may be forced to accept North Korea as a nuclear weapon state.

Literature Review

Realist theories of international relations have long viewed nuclear weapons as ideal for guaranteeing state security in an anarchic international system. Scholars like Kenneth Waltz have written at length about states needing a way to deter enemies from attacking them, preferably by threatening them with retaliation that would nullify any gains from doing so.[11] To many of these authors, including Waltz himself, nuclear weapons are well-suited for this purpose due to their sheer destructive power, citing the lack of armed conflict between the

[9] Scott A. Snyder, "'Toughest Sanctions Ever': UN Security Council Resolution 2321," *CFR Presents Asia Unbound*, December 2, 2016, http://blogs.cfr.org/asia/2016/12/02/toughest-sanctions-ever-un-security-council-resolution-2321/.

[10] Gusterson, "Paranoid, Potbellied Stalinist Gets Nuclear Weapons," pp. 31-33.

[11] Kenneth N. Waltz, "More May Be Better," in Scott D. Sagan and Kenneth N. Waltz, eds., *The Spread of Nuclear Weapons: An Enduring Debate*, Third Edition, (New York: W.W. Norton & Company, 2013), pp. 5-6.

United States and Soviet Union during the Cold War.[12] Provided that a state ensures it can launch a second strike in response to an attack while maintaining reliable nuclear command and control, even a small nuclear arsenal can be an effective deterrent against enemy attack.[13] Waltz argued that even a conventionally superior foe is likely to avoid attacking a small nuclear weapon state, as even a few warheads could prove sufficient to cause severe damage to its forces or infrastructure.[14] For realists, acquiring nuclear weapons for defence is a rational decision, as the state's highest priority is to ensure its survival and there is no guarantee that allies will defend it during a crisis. The anarchic nature of international relations means that states ultimately must rely on themselves for security, and should embrace whatever means enable them to do so.

Other authors have built on the realist perspective further by arguing that the primary motivation for states to engage in nuclear weapons proliferation is that they face external security threats. T.V. Paul has noted that while states will generally avoid developing nuclear weapons due to the potential repercussions for doing so, this may not be the case in high-threat environments.[15] States located in such regions, he argues, tend to adopt a zero-sum view of national security due to experiencing protracted armed conflicts and longstanding rivalries.[16] As a result, they are more willing than others to develop nuclear weapons due to believing that the gains to their national security in the face of longstanding foes outweigh the perceived threat to those rivals.[17] A number of quantitative studies similarly argue that states develop nuclear weapons primarily in response to external threats, though Harald Müller and Andreas Schmidt further specify that the threat in question is likely from a nuclear-equipped rival.[18] Furthermore, while Paul's model proposes that states will be less likely to proliferate if they have a nuclear-equipped ally with a credible commitment to defend them, Müller and Schmidt's quantitative work suggests that this is not a necessary condition.[19]

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[12] Waltz, "More May Be Better," pp. 11-12.
[13] Waltz, "More May Be Better," pp. 20-21.
[14] Waltz, "More May Be Better," p. 24.
[15] T.V. Paul, *Power versus Prudence: Why Nations Forgo Nuclear Weapons* (Montreal: McGill-Queen's University Press, 2000), pp. 18-20.
[16] Paul, *Power versus Prudence*, p. 20.
[17] Ibid.
[18] Harald Müller and Andreas Schmidt, "The Little-Known Story of Deproliferation: Why States Give Up Nuclear Weapons Activities," in *Forecasting Nuclear Proliferation in the 21st Century: Volume 1: The Role of Theory*, edited by William C. Potter and Gaukhar Mukhatzhanova (Stanford: Stanford University Press, 2010), pp. 137-138; Sonali Singh and Christopher R. Way, "The Correlates of Nuclear Proliferation: A Quantitative Test," *Journal of Conflict Resolution* 48, no. 6 (Dec. 2004): p. 865.
[19] Paul, *Power versus Prudence*, pp. 22-23; Müller and Schmidt, "The Little-Known Story of Deproliferation," p. 154.

Beyond guaranteeing the state's security against foreign military threats, nuclear weapons may also be sought by states for more parochial purposes. As discussed by Scott Sagan, states may be driven to acquire nuclear weapons for the benefit of certain political actors, rather than solely acting according to the national interest.[20] According to this domestic politics model of proliferation, military officials and politicians being pressured by popular demand for nuclear weapons are the most likely ones to call for a weapons program, though this requires them to possess sufficient power to influence decision-making processes.[21] This would suggest that the retention of political power can, in some cases, be an important motivation for developing nuclear weapons.[22] This somewhat contradicts realist perceptions of nuclear proliferation, which treat the state as a monolithic entity, by accounting for internal political dynamics in the decision to proliferate.[23] Etel Solingen, meanwhile, has argued that a state's desire to integrate into the global economy will influence their decision to develop nuclear weapons, as doing so would lead to sanctions with severe repercussions for the state.[24] States that rely on international trade will be more reluctant to develop nuclear weapons due to the heavy costs of doing so, while isolationist regimes have less to lose and are thus more likely to do so.[25] States with isolationist governments, on the other hand, suffer fewer costs and thus have less incentive to avoid proliferation, and may even benefit from sanctions due to state agencies being able to monopolize the production and distribution of goods.[26]

An Eternal Security Dilemma: North Korea's Perceived Need for a Nuclear Deterrent

For almost its entire history, North Korea's leadership has perceived itself as being threatened by the neighbouring Republic of Korea (ROK) and the United States, and has repeatedly used aggressive behaviour against them for deterrence. This behaviour belies the fact that North Korea's conventional armed forces are unable to match South Korean forces, as poor economic performance has left much of its materiel outdated and its personnel being malnourished. Perceived hostility to its existence and its inability to deter its enemies make North Korea's decision to pursue a nuclear deterrent much more understandable, as even a small arsenal would be sufficiently dangerous to ward off foreign threats. Furthermore, the low

[20] Scott D. Sagan, "Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb," *International Security* 21, no. 3 (Winter 1996/97): p. 63.
[21] Sagan, "Why Do States Build Nuclear Weapons?" pp. 63-64.
[22] Sagan, "Why Do States Build Nuclear Weapons?" pp. 64-65.
[23] Ibid.
[24] Etel Solingen, *Nuclear Logics: Contrasting Paths in East Asia & the Middle East* (Princeton: Princeton University Press, 2007), p. 5.
[25] Solingen, *Nuclear Logics*, pp. 40-41.
[26] Solingen, *Nuclear Logics*, p. 41.

cost of nuclear weapons relative to North Korean defence spending means that building a nuclear deterrent is more cost-effective than attempting to compete with other conventional forces.

The DPRK has been in constant conflict with South Korea and the US since it was founded in 1948 under the rule of Kim Il Sung. Since the end of the Korean War (1950-1953), North Korea has blasted the South Korean government as an accomplice to Imperial Japanese atrocities during the Second World War to manipulate lingering resentments, and considers it to be little more than an American puppet.[27] The two have repeatedly clashed since the end of the war, including a number of border skirmishes and assassination attempts against South Korean leaders, such as the 1968 Blue House Raid by North Korean commandos targeting President Park Chung Hee.[28] The North Korean government has also engaged in terrorism against South Korea, including the bombing of a Korean Air flight in 1987, as a way of signaling its strength.[29] The tensions between the North and South made it necessary for the two to be separated by a heavily guarded and mined demilitarized zone (DMZ), preventing either side from launching a ground offensive.[30] Relations between the two have only worsened in recent years due to a number of incidents, including North Korea's sinking of the ROKS *Cheonan* in 2010 and artillery volleys at South Korea in 2015 in response to propaganda loudspeakers.[31] The latter incident was of particular concern, as both sides came close to resuming hostilities before reaching an agreement.

North Korea's actions may seem puzzling as they apparently accomplish nothing beyond provoking South Korea, but this could be explained as a way of deterring South Korea and its allies by signalling strength and unpredictability. Many of these past acts of violence occurred when international events were highly unfavorable to North Korea, such as the bombing of allied North Vietnam by the United States, and thus put the regime in a situation where it needed to signal its resistance to apparent existential threats.[32] More hardline positions taken by conservative governments in Seoul have likely helped cement this belief due to continuing aid being linked to demands for reforms, which are likely perceived as attempts to

[27] Jongseok Woo, "Structural Impediments, Domestic Politics and Nuclear Diplomacy in Post-Kim Il-Sung North Korea," *Pacific Focus* 30, no. 1 (April 2015): p. 67.
[28] Yongho Kim, *North Korean Foreign Policy: Security Dilemma and Succession* (Lanham: Lexington Books, 2011), pp. 102-103.
[29] Cha, *The Impossible State*, p. 86; Kim, *North Korean Foreign Policy*, pp. 101-103.
[30] Paul French, *North Korea: State of Paranoia* (London: Zed Books, 2014), p. 2.
[31] Panda, "North Korea's Nuclear Policy," 246; Choe Sang-hun, "Koreas Agree on Deal to Defuse Tensions," *New York Times*, August 24, 2015, http://www.nytimes.com/2015/08/25/world/asia/south-korea-vows-not-to-back-down-in-military-standoff-with-north.html.
[32] Kim, *North Korean Foreign Policy*, pp. 101-105.

interfere with North Korean sovereignty.[33] More dovish South Korean administrations have attempted to normalize relations with incentives like offers of economic support, through anything more substantial than aid has been refused by the DPRK out of apparent concern that diplomatic normalization could lead to regime change.[34] It is telling that despite these efforts, neither side has yet to acknowledge the other as a legitimate state.[35] Given the long history of conflict between the two Koreas, it is unlikely that the two will establish more peaceful relations in the foreseeable future, barring a dramatic change in policy.

North Korea's relationship with the United States has likewise been marked by hostility. The animosity between the two was originally a consequence of Cold War politics, as US politicians viewed South Korea as a bulwark against the spread of communism during the 1950s, leading to a large military presence in South Korea since the Korean War.[36] During the war, the threat of South Korea falling under the North's control was so feared that American officials openly called for the use of nuclear weapons against the DPRK, which was only avoided by the threat of Soviet reprisal.[37] Tensions remained between the two following the war, though open hostilities did not erupt until the capture of the *U.S.S. Pueblo* in 1968 in response to increasing American military deployments in the ROK.[38] Numerous border incidents have occurred since, including the infamous 1976 murder of two American officers by North Korean soldiers, which almost sparked another Korean War.[39] During both incidents, the US explicitly threatened the use of nuclear weapons against the DPRK, and stationed tactical nuclear weapons in the South as a deterrent throughout the Cold War.[40] North Korea, thus, has to be concerned about not only a long-time adversary adjacent to its borders, but a military superpower capable and willing to use nuclear weapons against it.

The threats to North Korea's national security makes it unsurprising that the regime has dedicated considerable funds to building up the Korean People's Army (KPA). The DPRK has worked to militarize virtually every aspect of society since the 1960s, including mandatory military training from childhood onwards and the development of military facilities and

[33] Brendan Howe, "North Korea's Insecurity Dilemma," *North Korean Review* 6, no. 2 (Fall 2010): p. 80.
[34] Rajaram Panda, "North Korea's Nuclear Policy: Domestic Determinants, Strategy and Future," *Journal of Comparative Asian Development* 10, no. 2 (2011): pp. 228, 231-232.
[35] Pollack, *No Exit*, p. 17.
[36] French, *North Korea*, pp. 274.
[37] Pollack, *No Exit*, p. 45.
[38] Pollack, *No Exit*, p. 16; French, *North Korea*, p. 275.
[39] French, *North Korea*, pp. 278-279; Cha, *The Impossible State*, pp. 56-57.
[40] Youngwon Cho, "Method to the Madness of Chairman Kim: The instrumental rationality of North Korea's pursuit of nuclear weapons," *International Journal* 69, no. 1 (March 2014): p. 18.

stockpiles throughout the country.[41] The military's role in government has expanded significantly thanks to its perceived necessity in avoiding collapse or conquest, which was made official with Kim Jong Il's announcement of the *Songun* (military-first) policy in 1999.[42] Actual defense spending is unclear due to officially disclosed North Korean figures excluding costs like investment and welfare services provided through the defense sector, but is estimated by South Korea's Ministry of National Defense and the U.S. State Department to be around 30% of gross national income (GNI).[43] This would suggest that the DPRK defense budget has fluctuated between $5.15 billion in 1990 and over $8 billion in 2007.[44] This level of spending has led to North Korean forces and materiel greatly outnumbering the South's, with 2010 figures indicating a standing force of almost 1.2 million DPRK troops versus 650,000 South Korean troops, making the KPA one of the largest standing armies in the world.[45] Approximately 70% of North Korean forces are deployed within 100 miles of the DMZ, while Seoul and the cities surrounding it are vulnerable to the thousands of artillery pieces placed along the border.[46] Scholars like Victor Cha believe that if North Korea did launch such an offensive, Seoul would quickly fall to KPA forces before American and South Korean forces could launch a counteroffensive.[47] This military might has come at a cost, however, as much of the population lives in poverty, and food shortages and famines are frequent occurrences.[48]

Despite North Korea prioritizing the build-up of its conventional forces above virtually every other necessity, it has been unable to compete with ROK or American military forces. North Korean military spending greatly outstripped that of South Korea due to its flagging economy until the 1970s, when an economic boom allowed it to spend much more.[49] As a result, South Korea's annual defence budget, estimated in 2010 to be around $26 billion, now exceeds North Korea's entire gross domestic product (GDP).[50] Beyond the massive budgetary gap between the two, the North Korean military is markedly inferior to that of South Korea. Much of its military hardware is obsolete Cold War surplus acquired from the Soviet Union, with

[41] Pollack, *No Exit*, p. 62.
[42] Pollack, *No Exit*, pp. 112-113; Kim, *North Korean Foreign Policy*, p. 11.
[43] Cho, "Method to the Madness of Chairman Kim," p. 11; Chung-in Moon and Sangkeun Lee, "Military Spending and the Arms Race on the Korean Peninsula," *Asian Perspective* 33, no. 4 (2009): p. 82.
[44] Cho, "Method to the Madness of Chairman Kim," pp. 11-13; Moon and Lee, "Military Spending and the Arms Race on the Korean Peninsula," p. 83.
[45] Cho, "Method to the Madness of Chairman Kim," p. 13-14; French, *North Korea*, p. 328.
[46] Cho, "Method to the Madness of Chairman Kim," p. 13.
[47] Cha, *The Impossible State*, pp. 212-213.
[48] Howe, "North Korea's Insecurity Dilemma," p. 77.
[49] Cho, "Method to the Madness of Chairman Kim," p. 11; Moon and Lee, "Military Spending and the Arms Race on the Korean Peninsula," pp. 75-76.
[50] Cho, "Method to the Madness of Chairman Kim," p. 11.

some equipment even dating back to the Korean War.[51] There have been efforts to acquire military hardware from foreign suppliers like Russia and India on credit, though their success seems doubtful given the past willingness of the regime to refuse simply to pay.[52] KPA troops are not much better off, with eyewitness accounts indicating that lower-ranking troops suffer from malnourishment due to numerous food shortages, to the point that there have been several instances of soldiers crossing into China to raid farms and villages for food.[53] The KPA appears to derive most of its strength from mass conscription, as most North Koreans serve in the military for a decade and are reservists until age 40.[54] In contrast, the ROK has concentrated on purchasing the most up-to-date equipment for its armed forces and ensuring it can spend more time training troops and support personnel.[55] Should the two Koreas end up fighting another conventional war, it is likely that the South would win despite the numerical disadvantage due to its superior materiel and training, even before taking US support into consideration. North Korea's conventional forces thus make for an inadequate deterrent, given that they are markedly inferior to those of its rival and would likely lose a conventional military conflict.

These military deficiencies and the regime's perception of being under constant threat make the decision to acquire nuclear weapons appear rational, as they serve to increase its chances of survival. Even a relatively small arsenal would likely be sufficient to convince both the US and South Korea to avoid launching an offensive against the DPRK, as even one warhead being launched in retaliation would be capable of causing immense damage to a city or armed forces.[56] A nuclear deterrent also has the advantage of discouraging the U.S. from using its own arsenal as a threat, since North Korea could threaten to retaliate against Seoul or other American allies like Japan.[57] Furthermore, a nuclear deterrent means that North Korea would no longer need to depend on China for security guarantees, and would gain greater freedom of action as a result. Notably, South Korea had contemplated a nuclear program of its own when faced with a similar military disparity during the 1970s.[58] Unlike North Korea, the ROK never took concrete steps towards developing nuclear weapons, due to a combination of

[51] Cho, "Method to the Madness of Chairman Kim," p. 16; Woo, "Structural Impediments," pp. 65-66.
[52] French, *North Korea*, p. 327.
[53] French, *North Korea*, p. 326.
[54] French, *North Korea*, p. 329.
[55] Moon and Lee, "Military Spending and the Arms Race on the Korean Peninsula," pp. 83-86.
[56] Wade L. Huntley, "Bucks for the Bang: North Korea's Nuclear Program and Northeast Asian Military Spending," *Asian Perspective* 33, no. 4 (2009): pp. 163-164.
[57] Moon and Lee, "Military Spending and the Arms Race on the Korean Peninsula," p. 89.
[58] Pollack, *No Exit*, pp. 74-80.

increased defence spending rendering it unnecessary and pressure from the US to abandon the program in favour of supporting the NPT.[59]

The Kim family has likely sought to acquire nuclear weapons for for more than their use in deterring threats, but also because their costs are low in comparison to maintaining a large conventional military, even an outdated and starving one. Many of the costs associated with developing nuclear weapons would likely have been from the initial research and development stage, estimated by the ROK Ministry of Defense to have been around $1 billion US.[60] Total estimated costs for the program up until March 2012 have been placed at around $3.1 billion dollars, including the 2006 and 2009 nuclear tests and several missile test launches.[61] If accurate, this would be a relatively small investment in comparison to the $8 billion annual defense budget. It is suspected that the weapons developed thus far are relatively primitive compared to those used by other states, helping to drive the cost down even further.[62] The return on such an investment would be disproportionately large, given how nuclear weapons help make up for the military disparity between the DPRK and South Korea. In short, North Korea's decision to develop nuclear weapons has proven to be a more viable means of assuring regime security than any buildup of conventional military power could, all while being much less costly.

The Hermit Kingdom: North Korea and the Advantages of Isolationism

In the past, states posing a threat to the international order have typically been subject to punitive measures by others in response. These would typically include imposing targeted or comprehensive economic sanctions or a cessation of diplomatic relations entirely in order to coerce governments into changing their behavior.[63] These means have even been used to force states to abandon their nuclear ambitions. Economic sanctions played an important role in convincing Iran to agree to freeze its nuclear weapons program in exchange for the return of

[59] Pollack, *No Exit*, pp. 74-80; "South Korea," Nuclear Threat Initiative, last modified April 2016, http://www.nti.org/learn/countries/south-korea/.
[60] Cho, "Method to the Madness of Chairman Kim," p. 21.
[61] Cho, "Method to the Madness of Chairman Kim," pp. 21-22.
[62] James Pearson and Ju-min Park, "North Korea overcomes poverty, sanctions with cut-price nukes," *Reuters*, January 11, 2016, http://www.reuters.com/article/us-northkorea-nuclear-money-idUSKCN0UP1G820160111.
[63] Suk Hi Kim and Mario Martin-Hermosillo, "The Effectiveness of Economic Sanctions Against a Nuclear North Korea," *North Korean Review* 9, no. 2 (Fall 2013): pp. 100-102.

billions of dollars in frozen assets.[64] North Korea has been no exception to this and has been subjected to numerous punitive measures in response to its belligerence and its nuclear program. Each test explosion and missile launch has led to the imposition of additional sanctions, with the September 2016 test leading to caps and even outright bans on critical exports of coal and other natural resources that will deprive the country of hundreds of millions of dollars in revenue, if not more.[65] The Kim regime has persisted in its efforts despite these crippling costs where many other governments would not, furthering the belief that it is irrational. The reality is that North Korea's decades-long diplomatic isolation, including a near-total lack of trade and heavy reliance on China for support means that it is largely immune to the pressures of economic sanctions. As long as China continues to provide aid, the DPRK has little incentive to bow to foreign pressure to end its nuclear program, since it can reap the advantages without most of the expected costs.

North Korea has remained at arm's length from much of the world for most of its history. The nature of international politics during the Cold War meant that its relations were largely limited to the Soviet Union and China, its primary benefactors, as well as other communist states.[66] Ties with its patrons fluctuated over the following decades, as Kim Il Sung took advantage of their rivalry to maximize aid for post-Korean War reconstruction and economic support.[67] During the Cold War, the Soviet Union and China both signed agreements guaranteeing that they would come to the DPRK's aid if attacked by a foreign power and the former provided billions of dollars in aid each year.[68] Soviet support proved to be especially critical for North Korea's nuclear ambitions, helping establish the foundations of its nuclear power generation capabilities, including the construction of the country's first nuclear reactor in 1967.[69] Relations between the Soviets and the DPRK soured over time due to the former becoming reluctant to support it in its military standoffs with South Korea, and eventually established diplomatic relations with the ROK in 1988 despite North Korean protests.[70] Despite this, the Soviet Union remained the DPRK's largest source of economic support and security

[64] Julian Borger, "Iran nuclear deal: world powers reach historic agreement to lift sanctions," *Guardian*, July 14, 2015, https://www.theguardian.com/world/2015/jul/14/iran-nuclear-programme-world-powers-historic-deal-lift-sanctions.
[65] Snyder, "Toughest Sanctions Ever."
[66] Pollack, *No Exit*, pp. 27-29.
[67] Pollack, *No Exit*, pp. 34-42.
[68] Cha, *The Impossible State*, pp. 348-351.
[69] Pollack, *No Exit*, pp. 48-49; Cha, *The Impossible State*, p. 249.
[70] Pollack, *No Exit*, pp. 101-102.

guarantor until its collapse in 1991; by the mid-1990s, financial support from Russia had gone from $3.5 billion each year to less than $100 million.[71]

The end of support from Russia meant that China has become North Korea's primary benefactor, and is almost entirely responsible for its continued survival. China was supplying approximately 70% of North Korea's food and oil during the 1990s, and is believed to have risen to almost 100% by the time Kim Jong Il died in 2011.[72] It likewise provides upwards of 50% of North Korea's overall foreign trade, leaving its economy almost wholly reliant on China's goodwill.[73] North Korean belligerence towards the South and Japan, as well as its continued insistence on developing nuclear weapons, has strained the relationship on occasion. The 2006 nuclear test in particular had apparently been a source of serious consternation for the Chinese leadership, which went so far as to refer to North Korea's test as *hanran* (brazen), a term normally reserved for highly antagonistic relationships.[74] Each subsequent nuclear test has been met with further recriminations by Chinese leaders, who have proven willing to vote for Security Council sanctions against North Korea.[75] The Chinese government has also required companies to comply with UN resolutions after the 2013 nuclear test by banning the export of dual-use materials and technologies that could be used for nuclear weapon development to North Korea.[76]

These apparent steps, along with North Korea's almost total reliance on China for trade and basic supplies, have led to hopes that the Kim regime would be pressured into denuclearizing, though a closer examination of Sino-Korean relations suggests that this is unlikely. Though the Chinese government has voted in favor of sanctions in the past, it has often failed to enforce them. Despite supporting economic sanctions against North Korea in response to the 2013 nuclear test, Chinese trade with the regime actually increased following a brief reduction in oil exports, with bilateral trade increasing by 8.9% relative to 2012.[77] Chinese support for sanctions following the January and September 2016 tests is similarly doubtful, given that it insisted on the inclusion of a livelihood exemption in UN Resolution 2270, which would allow the export of restricted goods to North Korea if companies claim their livelihoods

[71] Woo, "Structural Impediments," p. 65.
[72] Woo, "Structural Impediments," p. 66.
[73] Thomas Plant and Ben Rhode, "China, North Korea and the Spread of Nuclear Weapons," *Survival* 55, no. 2 (April 2013): pp. 61-62.
[74] Pollack, *No Exit*, p. 150.
[75] Jih-Un Kim, "Inflated Hope, Unchanged Reality: China's Response to North Korea's Third Nuclear Test," *Asian Perspective* 39 (2015): pp. 29-31; Snyder, "Toughest Sanctions Ever."
[76] Kim, "Inflated Hope, Unchanged Reality," pp. 31-32.
[77] Kim, "Inflated Hope, Unchanged Reality," pp. 34-35.

would be affected and only requires self-certification.[78] This is far from the only instance of China exploiting or creating loopholes in sanctions, having previously used its loose definition of what constitutes a luxury good to sell $136 million worth of them to North Korea in 2009 despite an explicit prohibition on such transactions.[79] These loopholes allow Chinese companies, including state-owned ones, to continue trading with North Korea while technically complying with sanctions. That China supports sanctions at all indicates a willingness to use them to punish Pyongyang's behavior, but not to the point where it will risk causing the collapse of North Korea.

China's continuing support of North Korea despite its increasing belligerence can be attributed to its own efforts to assure its national security. Much like its neighbour, the Chinese government perceives South Korea and the United States as major security threats, and to this end uses North Korea as a buffer between Chinese territory and America's sphere of influence.[80] Furthermore, China has a significant interest in preventing that North Korea's poverty does not lead to the regime collapsing.[81] Were this to ever occur, it is believed that a massive number of refugees would flee into China and heavily tax Beijing's resources, and the subsequent unification of the Koreas would leave China vulnerable to a potential land invasion by the United States.[82] China's continued patronage of North Korea allows it to keep itself secure while also limiting the potential spread of American influence in Northeast Asia.[83] This support is not without limits, however, as Beijing is only committed to militarily supporting North Korea if it is attacked first; presumably, the Chinese government is concerned about being dragged into a war with the U.S., and simply wishes to deter attacks against its ally.[84] This aid is a net gain for China as well, since the transactions between it and North Korea make up only 0.16% of China's total trade volume (as of 2013) while guaranteeing access to North Korea's considerable mineral reserves.[85] So long as China benefits from supporting North Korea, it is unlikely that it will exert its leverage over the regime to force a change in policy. As a result, the Kim regime has

[78] Elise Hu, "The 'Livelihood Loophole' And Other Weaknesses of North Korean Sanctions," *NPR Parallels*, September 15, 2016, http://www.npr.org/sections/parallels/2016/09/15/493889932/the-livelihood-loophole-and-other-weaknesses-of-n-korea-sanctions.
[79] Hu, "The 'Livelihood Loophole;'" Kim and Martin-Hermosillo, "The Effectiveness of Economic Sanctions," p. 101.
[80] Nam Jong ho, Choo Jae-woo, and Lee Jang-won, "China's Dilemma on the Korean Peninsula: Not an Alliance but a Security Dilemma," *Korean Journal of Defense Analysis* 25, no. 3 (September 2013): p. 391.
[81] Stephen Haggard and Marcus Noland, "Sanctioning North Korea: The Political Economy of Denuclearization and Proliferation," *Asian Survey* 50, no. 3 (2010): p. 566.
[82] Plant and Rhode, "China, North Korea, and the Spread of Nuclear Weapons," pp. 61-62; Jong ho, Jae-woo, and Jang-won, "China's Dilemma on the Korean Peninsula," pp. 392-393.
[83] Pollack, *No Exit*, p. 169.
[84] Jong ho, Jae-woo, and Jang-won, "China's Dilemma on the Korean Peninsula," p. 386.
[85] Kim, "Inflated Hope, Unchanged Reality," p. 39.

apparently felt encouraged to continue developing its nuclear arsenal, albeit while avoiding anything more than signalling through aggressive behaviour to avoid harming Chinese interests.

Though Cold War relations have played an important role in North Korea's diplomatic isolation, the most important cause of its limited foreign relations is the deliberate adoption of a policy of near-total seclusion to avoid subversion of the regime's control by outside influences. This *juche* (self-determination) policy was originally adopted in 1955 to encourage both economic self-sufficiency and ideological independence from other communist states, and gradually served as the foundation of the Kim cult of personality.[86] North Korea's continued isolation is attributable in part to the extreme xenophobia encouraged by *juche*, which extolls Korean purity while denigrating foreigners.[87] The leadership's insistence that the ideology requires maintaining a closed command economy has served as a useful justification for keeping the country isolated from the rest of the world, leading to it being known as the "hermit kingdom."[88] North Korea does have normalized relations with a number of states, though these are largely superficial in practice, with the exception of the few states that buy weapons technology from it, such as Syria and Iran.[89] It has few trading partners beyond China and South Korea, which have proven willing to tolerate North Korean trade deficits running in the hundreds of millions of dollars to keep it from going bankrupt.[90] To supplement its limited trade, the North Korean government has turned to producing and selling various illicit goods like counterfeit pharmaceuticals and currency, as well as exporting weaponry.[91] North Korea's isolation has led to its economy essentially collapsing, with the majority of the population being forced to eke out a living at the subsistence level and being left vulnerable to frequent food shortages and famines.[92]

The lack of significant North Korean relations with the rest of the world has proven to be a boon for its nuclear program due to insulating the country from many of the sanctions imposed in response. Its perpetual economic failures and food shortages, such as the Arduous March (1994–1997) and the million people who died from starvation, demonstrate that the

[86] Tanya Ogilvie-White, "The Defiant States: The Nuclear Diplomacy of North Korea and Iran," *Nonproliferation Review* 17, no. 1 (2010): p. 122.
[87] Cha, *The Impossible State*, p. 38.
[88] French, *North Korea*, pp. 1, 68-70.
[89] David Kang, "Chapter 12: North Korea's Relations with the United States and the Rest of the World," in Kyung-Ae Park and Scott Snyder, eds., *North Korea in Transition: Politics, Economy, and Society* (Plymouth: Rowman and Littlefield, 2013), pp. 267-268.
[90] Panda, "North Korea's Nuclear Policy," pp. 226-227.
[91] Plant and Rhode, "China, North Korea, and the Spread of Nuclear Weapons," p. 66.
[92] French, *North Korea*, p. 70; Panda, "North Korea's Nuclear Policy," p. 238.

leadership is willing to tolerate significant economic hardship and loss of life in pursuing its goals.[93] When South Korea suspended fertilizer shipments in response to the 2006 nuclear test, North Korea maintained its confrontational stance despite greatly reduced grain production and world prices tripling in 2008, even going so far as to refuse South Korean assistance in favor of China instead.[94] It has been helped in this regard by its trade being conducted almost exclusively with China and South Korea, both of which fear the possibility of state collapse too much to properly enforce sanctions. Most other countries fail to properly enforce sanctions due to having little to no trade with North Korea to begin with, and those that do have economic relations often conduct them through state-owned shell companies to circumvent restrictions.[95] Sanctions that directly target the regime could potentially be more effective than the comprehensive sanctions aimed at North Korea as a whole, as they could limit nuclear-weapon related activities by the government without causing additional hardship for the general population.[96] For example, prohibitions on necessary materials for its nuclear program could serve to constrain advancements, while financial measures aimed at various firms could freeze assets meant to fund the government's illicit activities.[97] Comprehensive sanctions, in contrast, have proven to not only have a significant humanitarian impact on the North Korean population, but more or less ineffective in actually influencing the behaviour of the regime.[98] Again, the need for Chinese support at the Security Council to pass the necessary resolutions for such sanctions means they are unlikely to be implemented without significant loopholes, if it all, in order to avoid harming China's own interests.[99]

Taken together, North Korea's relative insulation from international trade and China's continued role as its somewhat-reluctant benefactor suggest that Pyongyang has little to fear from economic sanctions imposed in response to its nuclear program. The lack of trading relationships with North Korea means that the actual impact of sanctions is greatly diminished, while the trade restrictions that do affect its economy are largely negated by the regime's willingness to ignore the suffering of the general population. Furthermore, continuing Chinese aid and trade means the North Korean government has little incentive to end its nuclear program, since the lack of significant ties beyond China means it is protected against possible sanctions. Taken together, these suggest that imposing further economic sanctions on North

[93] Cho, "Method to the Madness of Chairman Kim," pp. 8-9.
[94] Panda, "North Korea's Nuclear Policy," pp. 232-233.
[95] Kim and Martin-Hermosillo, "The Effectiveness of Economic Sanctions," pp. 101-102.
[96] Stephen Haggard and Marcus Noland, "Engaging North Korea: the efficacy of sanctions and inducements," in *Sanctions, Statecraft, and Nuclear Proliferation*, edited by Etel Solingen (Cambridge: Cambridge University Press, 2012), pp. 237, 258-260.
[97] Haggard and Noland, "Sanctioning North Korea," pp. 563-564.
[98] Kim and Martin-Hermosillo, "The Effectiveness of Economic Sanctions," pp. 108-109.
[99] Haggard and Noland, "Engaging North Korea," pp. 258-260.

Korea in response to its nuclear program is unlikely to deter it further, as Chinese cooperation would be necessary to guarantee their success and does not appear to be forthcoming.

Totalitarianism and the Role of the Military: North Korean Domestic Politics

A final factor to consider in North Korea's nuclear ambitions is the nature of its domestic politics. In many cases, the citizens of a state would have at least some influence over major policies like the development of nuclear weapons, as even autocratic regimes typically need to satisfy their citizens to maintain their grip on power.[100] North Korea has thus far proven to be an exception to this norm due to the structure of the regime, which has been described as Orwellian for its efforts to stamp out any signs of dissent.[101] The government has been able to harness economic sanctions, normally associated with popular demand for policy changes, to reinforce its control by passing those costs down to the general population and using them for propaganda. The regime does conform to the domestic politics explanation of proliferation, however, in that the decision to develop nuclear weapons stems in part from demands by KPA generals. Placating these demands would have been a top priority for Kim Jong Il and Kim Jong Un due to the importance of the KPA in ensuring the regime's continued survival, even when taking the latter's efforts to limit the military's influence into account. The structure of North Korea's government, particularly its dependence on the military for survival and the power it gives the generals, highlights that developing nuclear weapons is meant to not only defend against external threats, but assure its continued political survival as well.

The totalitarian methods used by the North Korean government to cement the reign of the ruling Kim dynasty, the upper echelons of the Korean Workers' Party (KWP), and the generals, are perhaps the best-known aspect of the regime to outsiders. The lives of North Korean citizens are controlled by the government through the distribution of basic necessities on the basis of perceived loyalty to the state and the Kims.[102] Social standing is determined by one's own devotion to the Kim family and the actions of family members, with otherwise loyal descendants of perceived traitors being condemned to poverty as loyalists are permitted to work in Pyongyang.[103] Even those permitted to join the KWP are not safe, since the slightest hint of dissent against the regime, such as slandering the leadership or even listening to foreign music, will lead to their being sent to one of the infamous *kwalliso* prison camps for brutal

[100] Sagan, "Why Do States Build Nuclear Weapons?" pp. 64-66.
[101] French, *North Korea*, p. 3.
[102] French, *North Korea*, pp. 18, 208-209.
[103] Cha, *The Impossible State*, pp. 185-186.

torture and slave labor, or simply executed publicly as a warning to other prisoners.[104] Legitimate political opposition does not exist in North Korea, as there is no freedom of speech, press, assembly, or even association, and the government expends considerable effort in surveillance to root out dissenters.[105] *Juche*'s isolationist stance means that maintains absolute control over communications and the flow of information, and even restricts domestic movement to limit internal communication.[106] These totalitarian policies have led to political dissent remaining non-existent within North Korea.

The regime's ability to repress its people and control the flow of information into the country are useful for not only stifling any potential opposition to its nuclear policy, but for using economic sanctions for propaganda purposes as well. As discussed earlier, the government has previously demonstrated a willingness to endure severe economic deprivation to achieve its goals, regardless of the casualties that ensue.[107] Any sanctions imposed on North Korea for its nuclear program are likely to have their costs passed down to the general population through increasingly strict rationing, as the government does not need popular support to survive and will sacrifice its citizens to ensure its own survival.[108] North Korea's command economy means that such rationing could easily be implemented, since the government maintains total control over the distribution of resources and necessities.[109] This approach seems to have resulted in resources being allocated from rural to urban areas, where party members are largely based, despite the fact that growth was previously based on rural economic activities like agriculture and mining.[110]

The government's control of media and communications has allowed it to use economic sanctions to its advantage by using them as evidence that foreign opponents are attempting to defeat the country, thus legitimizing its nuclear weapons program as a necessity for defense.[111] Shortly after the 2009 nuclear test, for example, an editorial in the state newspaper *Rodong Sinmun* argued that North Koreans must be willing to suffer severe economic hardship to gain long-term security through nuclear weapons to avoid being dominated by foreign powers.[112] Prohibitions on foreign publications and requirements to watch the government's official

[104] Cha, *The Impossible State*, pp. 170-175.
[105] Polity IV Project, "Polity IV Country Report 2010: North Korea," Center for Systemic Peace, June 1, 2011, http://www.systemicpeace.org/polity/NorthKorea2010.pdf.
[106] Panda, "North Korea's Nuclear Policy," p. 227.
[107] Haggard and Noland, "Engaging North Korea," p. 237.
[108] Haggard and Noland, "Engaging North Korea," pp. 258-259.
[109] Kim and Martin-Hermosillo, "The Effectiveness of Economic Sanctions," p. 106.
[110] Bernt Berger, "Sanctions against North Korea: A tricky dilemma," *European Union Institute for Security Studies Issue Brief* 23 (July 2015): p. 4.
[111] Panda, "North Korea's Nuclear Policy," p. 228.
[112] Pollack, *No Exit*, p. 165.

television programs mean that it is difficult to contradict these claims internally, as anyone attempting to do so is likely to be labelled a traitor.[113] This may be changing with time, as there is increasing use of illegal means of obtaining and distributing news from outside the country like shortwave radios and Internet access, though their impact apparently remains limited.[114] For now, the government's control of the economy and information allow it to pass the burden of economic sanctions onto its citizens and exploit them for propaganda.

Like many other autocratic regimes, the North Korean leadership relies on the support of prominent state factions to maintain its grip on power. In particular, the military leadership has played a large role in ensuring the continued reign of the Kim family, and has been rewarded with privileges such as a higher budget and soldiers getting rations before other citizens.[115] It is also believed to have served as a key source of support for Kim Jong Il when he took power in 1994, as he had used his previous position as secretary general to ensure the promotion of officers that were personally loyal to him.[116] The military's importance was also emphasized by the collapse of other communist regimes, which Kim Jong Il believed to be the result of their militaries lacking the ability to suppress political dissent.[117] Military primacy in North Korean affairs was made official with Kim Jong Il's *Songun* policy in 1999, confirming that the government's top priority would be the military and ensured it would be able to influence virtually every aspect of society.[118] The military-first policy seems to have led to generals pushing for a nuclear arsenal out of an apparent desire for a self-reliant deterrent and the prestige associated with possessing nuclear weapons.[119] The extent to which this has influenced the regime's original decision is unclear, however, as both Kim Il Sung and Kim Jong Il had shown interest in a nuclear weapons program for decades, though it has almost certainly played some role.[120]

The military's demands for nuclear capabilities are crucial to understanding why the regime's current actions in this regard are rational. As the military has long been a key source of support for the Kim family's continued reign, ensuring that its leaders are satisfied would have been a top priority for Kim Jong Il and current leader Kim Jong Un. While the latter has

[113] French, *North Korea*, p. 39.
[114] French, North Korea, pp. 39, 397.
[115] Seong-Yong Park, "North Korea's military policy under the Kim Jong Un regime," *Journal of Asian Public Policy* 9, no. 1 (2016): pp. 57-58; Moon and Lee, "Military Spending and the Arms Race on the Korean Peninsula," p. 97.
[116] Pollack, *No Exit*, p. 126.
[117] Park, "North Korea's military policy under the Kim Jong Un," p. 62.
[118] Park, "North Korea's military policy under the Kim Jong Un regime," pp. 62-63.
[119] Kim, *North Korean Foreign Policy*, pp. 12, 152.
[120] Park, "North Korea's military policy under the Kim Jong Un regime," p. 65.

apparently been working to reduce the clout of the military by purging and executing top generals, its role in assuring North Korean security against external threats means that it remains an important faction within the state and needs to be catered to. As a result, domestic politics has obliged the North Korean government to pursue nuclear weapons to assure its own survival in the face of internal pressure in addition to perceived external threats. This makes the chances of willing denuclearization slim, as the regime associates nuclear weapons with its continued survival.

Conclusion: Is a Nuclear-Free North Korea Possible?

North Korea's decision to develop nuclear weapons is hardly an irrational project. If anything, the approach taken by Kim Jong Un and his predecessors is reasonable given North Korea's present circumstances. The country has long faced a security dilemma in the form of perceived threats from South Korea and the US while lacking the conventional forces necessary to guarantee the regime's security, with nuclear weapons being a comparatively inexpensive and powerful way to deter enemy forces. Given North Korea's highly limited foreign relations, save its near-total reliance on Chinese support, it has little reason to fear the external costs normally associated with developing a nuclear weapon. Finally, the nature of North Korean domestic politics means that the government is motivated more by maintaining the support of the military's leadership than by winning the favor of the general population, which is pacified through propaganda as the sanctions meant to punish officials are passed down to them. In short, North Korea is in a position where developing a nuclear deterrent is not only desirable, but necessary for the continued survival of the regime, with the ruling elite suffering little to no consequences.

These findings are important if governments are to understand why North Korea's leadership is so determined to develop nuclear weapons. Its security concerns mean that it is unlikely to give up its nuclear program, regardless of how much the rest of the world tries to use economic incentives or coercion to do so, simply because the regime views nuclear weapons as necessary for its continued survival. International reactions, including Secretary of State Rex Tillerson's statement in March 2017 that military action against North Korea is being considered, have only served to validate the North Korean government's belief that it is surrounded by enemies seeking its destruction.[121] It would thus be difficult to convince Kim Jong Un and his government to give up their nuclear deterrent without agreeing to guarantee their state's security in some way, which seems unlikely given its aggression towards South

[121] David E. Sanger, "Rex Tillerson Rejects Talks With North Korea on Nuclear Program," *New York Times*, March 17, 2017, https://www.nytimes.com/2017/03/17/world/asia/rex-tillerson-north-korea-nuclear.html.

Korea and the behavior of the regime towards its own citizens. Perhaps the only plausible alternative to this, given the heavy casualties likely to result from attempting to wrest North Korea's nuclear weapons through force, would be to convince the Chinese government to end its support of the regime, though China's own security concerns make this implausible unless North Korean behaviour becomes too extreme to justify. At present, the best of all these bad options may be for the US and other states opposed to a nuclear North Korea to seriously consider accepting it as a nuclear weapon state.

Bibliography

Armstrong, Charles. "Chapter 1: The Role and Influence of Ideology." In *North Korea in Transition: Politics, Economy, and Society*, edited by Kyung-Ae Park and Scott Snyder, pp. 3-18. Plymouth: Rowman and Littlefield, 2013.

Berger, Bernt. "Sanctions against North Korea: A tricky dilemma." *European Union Institute for Security Studies Issue Brief* 23 (July 2015): pp. 1-4. Accessed December 14, 2016. http://dx.doi.org/10.2815/886681.

Borger, Julian. "Iran nuclear deal: world powers reach historic agreement to lift sanctions." *Guardian*. Last modified July 14, 2015. Accessed December 13, 2016. https://www.theguardian.com/world/2015/jul/14/iran-nuclear-programme-world-powers-historic-deal-lift-sanctions.

Cha, Victor. *The Impossible State: North Korea, Past and Future*. New York: HarperCollins Publishers Inc., 2012. Kindle eBook.

Cho, Youngwon. "Method to the madness of Chairman Kim: The instrumental rationality of North Korea's pursuit of nuclear weapons." *International Journal* 69, no. 1 (March 2014): pp. 5-25. Accessed September 15, 2016. http://dx.doi.org/10.1177/0020702013518489.

Drezner, Daniel W. "An analytically eclectic approach to sanctions and non-proliferation." In *Sanctions, Statecraft, and Nuclear Proliferation*, edited by Etel Solingen, pp. 154-173. Cambridge: Cambridge University Press, 2012.

Fifield, Anna. "North Korea fires ballistic missile, first since Trump elected in U.S." *Washington Post*. Last modified February 11, 2017. Accessed February 13, 2017. https://www.washingtonpost.com/world/north-korea-fires-ballistic-missile-first-since-trump-elected-in-us/2017/02/11/42d6cb57-d187-4b2a-bafb-6834c97799b0_story.html?utm_term=.54f989a8ef91.

French, Paul. *North Korea: State of Paranoia*. London: Zed Books, 2014. Kindle eBook.

Gusterson, Hugh. "Paranoid, Potbellied Stalinist Gets Nuclear Weapons: How the U.S. Print Media Cover North Korea." *Nonproliferation Review* 15, no. 1 (2008): pp. 21-42. Accessed February 21, 2017. http://dx.doi.org/10.1080/10736700701852894.

Haggard, Stephen, and Marcus Noland. "Sanctioning North Korea: The Political Economy of Denuclearization and Proliferation." *Asian Survey* 50, no. 3 (2010): pp. 539-568. Accessed November 28, 2016. http://dx.doi.org/AS.2010.50.3.539.

Haggard, Stephen, and Marcus Noland. "Engaging North Korea: the efficacy of sanctions and inducements." In *Sanctions, Statecraft, and Nuclear Proliferation*, edited by Etel Solingen, pp. 232-260. Cambridge: Cambridge University Press, 2012.

Howe, Brendan. "North Korea's Insecurity Dilemma." *North Korean Review* 6, no. 2 (Fall 2010): pp. 74-85. Accessed December 13, 2016. http://dx.doi.org/10.3172/NKR.6.2.74.

Hu, Elise. "The 'Livelihood Exemption' And Other Weaknesses of North Korean Sanctions." *NPR Parallels*. Last modified September 15, 2016. Accessed December 15, 2016. http://www.npr.org/sections/parallels/2016/09/15/493889932/the-livelihood-loophole-and-other-weaknesses-of-n-korea-sanctions.

Huntley, Wade L. "Bucks for the Bang: North Korea's Nuclear Program and Northeast Asian Military Spending." *Asian Perspective* 33, no. 4 (2009): pp. 147-182. Accessed December 13, 2016. http://proxy.library.carleton.ca/login?url=http://search.proquest.com.proxy.library.carleton.ca/docview/215886510?accountid=9894.

Jong Ho, Nam, Choo Jae-woo, and Lee Jang-won. "China's Dilemma on the Korean Peninsula: Not an Alliance but a Security Dilemma." *Korean Journal of Defense Analysis* 25, no. 3 (September 2013): pp. 385-398. Accessed September 28, 2016. http://proxy.library.carleton.ca/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=tsh&AN=90262443&site=ehost-live.

Kang, David. "Chapter 12: North Korea's Relations with the United States and the Rest of the World." In *North Korea in Transition: Politics, Economy, and Society*, edited by Kyung-Ae Park and Scott Snyder, pp. 261-272. Plymouth: Rowman and Littlefield, 2013.

Kim, Jih-Un. "Inflated Hope, Unchanged Reality: China's Response to North Korea's Third Nuclear Test." *Asian Perspective* 39 (2015): pp. 27-46. Accessed September 28, 2016.http://proxy.library.carleton.ca/login?url=http://search.proquest.com.proxy.library.carleton.ca/docview/1655119108?accountid=9894.

Kim, Jungsup. "The Security Dilemma: Nuclear and Missile Crisis on the Korean Peninsula." *Korean Journal of Defense Analysis* 18, no. 3 (March 2006): pp. 89-106. Accessed September 28, 2016. http://dx.doi.org/10.1080/10163270609464113.

Kim, Suk Hi, and Mario Martin-Hermosillo. "The Effectiveness of Economic Sanctions Against a Nuclear North Korea." *North Korean Review* 9, no. 2 (Fall 2013): pp. 99-110. Accessed September 28, 2016. http://dx.doi.org/10.3172/NKR.9.2.99.

Kim, Yongho. *North Korean Foreign Policy: Security Dilemma and Succession*. Lanham: Lexington Books, 2011.

Moon, Chung-in, and Sangkeun Lee. "Military Spending and the Arms Race on the Korean Peninsula." *Asian Perspective* 33, no. 4 (2009): pp. 69-99. Accessed November 28, 2016. http://proxy.library.carleton.ca/login?url=http://search.proquest.com.proxy.library.carleton.ca/docview/215883108?accountid=9894.

Müller, Harald, and Andreas Schmidt. "The Little-Known Story of Deproliferation: Why States Give Up Nuclear Weapon Activities." In *Forecasting Nuclear Proliferation in the 21st Century: Volume 1: The Role of Theory*, edited by William C. Potter and Gaukhar Mukhatzhanova, pp. 124-158. Stanford: Stanford University Press, 2010.

Nuclear Threat Initiative. "South Korea." Last modified April 2016. http://www.nti.org/learn/countries/south-korea/.

Ogilvie-White, Tanya. "The Defiant States: The Nuclear Diplomacy of North Korea and Iran." *Nonproliferation Review* 17, no. 1 (2010): pp. 115-138. Accessed February 21, 2017. http://dx.doi.org/10.1080/10736700903484702.

Paddock, Richard C., Choe Sang-Hun, and Nicholas Wade. "In Kim Jong-nam's Death, North Korea Lets Loose a Weapon of Mass Destruction. *New York Times*. Last modified February 24, 2017. Accessed February 24, 2017. https://www.nytimes.com/2017/02/24/world/asia/north-korea-kim-jong-nam-vx-nerve-agent.html.

Panda, Rajaram. "North Korea's Nuclear Policy: Domestic Determinants, Strategy and Future." *Journal of Comparative Asian Development* 10, no. 2 (2011): pp. 223-252. Accessed September 28, 2016. http://dx.doi.org/10.1080/15339114.2011.616705.

Park, Seong-Yong. "North Korea's military policy under the Kim Jong-Un regime." *Journal of Asian Public Policy* 9, no. 1 (2016): pp. 57-74. Accessed December 13, 2016. http://dx.doi.org/10.1080/17516234.2015.111122718.

Paul, T.V. *Power versus Prudence: Why Nations Forgo Nuclear Weapons*. Montreal: McGill-Queen's University Press, 2000.

Pearson, James, and Ju-min Park. "North Korea overcomes poverty, sanctions with cut-price nukes." *Reuters*. Last modified January 11, 2016. Accessed December 13, 2016. http://www.reuters.com/article/us-northkorea-nuclear-money-idUSKCN0UP1G820160111.

Plant, Thomas, and Ben Rhode. "China, North Korea and the Spread of Nuclear Weapons." *Survival* 55, no. 2 (April 2013): pp. 61-80. Accessed September 28, 2016. http://dx.doi.org/10.1080/00396338.2013.784467.

Polity IV Project. "Polity IV Country Report 2010: North Korea." Center for Systemic Peace. Last modified 2011. Accessed September 3, 2016. http://www.systemicpeace.org/polity/NorthKorea2010.pdf.

Pollack, Jonathan D. *No Exit: North Korea, Nuclear Weapons, and International Security*. London: International Institute for Strategic Studies, 2011.

Rauf, Tariq. "North Korea's fifth nuclear test." Stockholm International Peace Research Institute. Last modified September 9, 2016. Accessed December 8, 2016. https://www.sipri.org/commentary/topical-backgrounder/2016/north-koreas-fifth-nuclear-test.

Sagan, Scott D. "Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb." *International Security* 21, no. 3 (Winter 1996/97): pp. 54-86. Accessed November 28, 2016. http://dx.doi.org/10.1162/isec.21.3.54.

Sang-hun, Choe. "Koreas Agree on Deal to Defuse Tensions." *New York Times*. Last modified August 24, 2015. Accessed December 12, 2016. http://www.nytimes.com/2015/08/25/world/asia/south-korea-vows-not-to-back-down-in-military-standoff-with-north.html.

Sang-hun, Choe, and Jane Perlez. "North Korea Tests a Mightier Nuclear Bomb." *New York Times*. Last modified September 8, 2016. Accessed October 18, 2016. http://www.nytimes.com/2016/09/09/world/asia/north-korea-nuclear-test.html.

Sanger, David E. "Rex Tillerson Rejects Talks With North Korea on Nuclear Program." *New York Times*. Last modified March 17, 2017. Accessed March 17, 2017. https://www.nytimes.com/2017/03/17/world/asia/rex-tillerson-north-korea-nuclear.html.

Singh, Sonali, and Christopher R. Way. "The Correlates of Nuclear Proliferation: A Quantitative Test." *Journal of Conflict Resolution* 48, no. 6 (Dec. 2004): pp. 859-885. Accessed August 7, 2017. http://dx.doi.org/10.1177/0022002704269655.

Snyder, Scott A. "'Toughest Sanctions Ever': UN Security Council Resolution 2321. *CFR Presents Asia Unbound*. Last modified December 2, 2016. Accessed December 8, 2016. http://blogs.cfr.org/asia/2016/12/02/toughest-sanctions-ever-un-security-council-resolution-2321/.

Solingen, Etel. *Nuclear Logics: Contrasting Paths in East Asia & the Middle East*. Princeton: Princeton University Press, 2007.

Waltz, Kenneth N. "More May Be Better." In *The Spread of Nuclear Weapons: An Enduring Debate*, Third Edition, edited by Scott D. Sagan and Kenneth N. Waltz, pp. 3-40. New York: W.W. Norton & Company, 2013.

Woo, Jongseok. "Structural Impediments, Domestic Politics, and Nuclear Diplomacy in Post-Kim Il-sung North Korea." *Pacific Focus* 30, no. 1 (April 2015): pp. 59-77. Accessed November 20, 2016. http://dx.doi.org/10.1111/pafo.12041.