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**UNCLE SAM VS. THE HERMIT KINGDOM: OPTIONS FOR HANDLING NORTH
KOREA'S NUCLEAR PROGRAM**

An honors paper submitted to the Department of Political Science and International Affairs
of the University of Mary Washington
in partial fulfillment of the requirements for Departmental Honors

Robert L. Wimberly

May 2017

By signing your name below, you affirm that this work is the complete and final version of your paper submitted in partial fulfillment of a degree from the University of Mary Washington. You affirm the University of Mary Washington honor pledge: "I hereby declare upon my word of honor that I have neither given nor received unauthorized help on this work."

Robert Wimberly
(digital signature)

05/05/17

**Uncle Sam vs. the Hermit Kingdom: Options for Handling North Korea's
Nuclear Program**

Rob Wimberly

April 27, 2017

A handwritten signature in black ink, appearing to read "Jason Davidson". The signature is fluid and cursive, with a prominent initial "J" and "D".

Dr. Jason Davidson, Professor of Political Science and International
Affairs, University of Mary Washington

A handwritten signature in black ink, appearing to read "Elizabeth Freund Larus". The signature is cursive and elegant, with a prominent initial "E" and "L".

Dr. Elizabeth Freund Larus, Waple Professor of Political Science and
International Affairs, University of Mary Washington

Introduction

Democratic People's Republic of Korea's nuclear and missile programs have proven to be a nagging headache if not an unmitigated disaster for the United States and its treaty allies, Japan and South Korea. Since declaring its intention to leave the Non-Proliferation Treaty in 1994, North Korea has made steady progress toward developing a deliverable nuclear weapon, and the issue has cast a shadow over broader U.S. strategy in Northeast Asia.¹ Indeed, at the time of this writing, the Hermit Kingdom has already conducted five nuclear tests and many fear that the North will soon test an Intercontinental Ballistic Missile (ICBM) capable of reaching the United States West Coast.² Each of these periodic nuclear and missile tests serve as reminders of both the urgency – and perhaps intractability – of the ongoing crisis on the Korean Peninsula as they represent continued progress toward a survivable, deliverable North Korean nuclear weapon.

This thesis seeks to evaluate the relative merits of various policy approaches to resolving North Korea's nuclear program. Can the U.S. persuade China to apply more pressure on the Kim regime in the form of sanctions and, if so, could more rigorous sanctions dissuade the North from its path to acquire nuclear weapons? If not, can the U.S. contain a nuclear North Korea, or should the U.S. and its allies resort to pre-emptive surgical strikes on the North's nuclear program? To answer these questions, this paper will first assess the state of the literature pertaining to the North Korean nuclear crisis, evaluate the problem of North Korea's nuclear program with respect to U.S. interests, and define the current administration's objectives relative to the problem. The

¹ "Chronology of U.S.-North Korean Nuclear and Missile Diplomacy," last modified October 25, 2016, *Arms Control Association*, <https://www.armscontrol.org/factsheets/dprkchron>.

² Steve Almasy and Joshua Berlinger, "North Korea calls ballistic missile test-fire a success," *CNN*, February 12, 2017, accessed February 12, 2017, www.cnn.com/2017/02/11/asia/north-korea-missile/.

thesis will then detail three possible approaches to heading off a North Korean nuclear weapon – containment, negotiation, and pre-emption – and consider each option. This paper will use a framework that evaluates each policy’s efficacy, externalities, and cost. Efficacy refers to the likelihood that a policy will achieve primary U.S. goals with respect to the problem of North Korean proliferation, externalities refer to the positive or negative unintended consequences of a policy, and cost refers to the price in terms of blood and/or treasure that the U.S. will likely expend in pursuit of a given policy.³ Finally, the paper will settle upon the most tolerable option. This paper finds that containment through the policy of strategic patience represents the best policy for the United States.

Literature Review

There is no shortage of literature related to the implications North Korea’s nuclear program; however, before reviewing existing literature on proposed policies to address North Korea’s nuclear program, it seems prudent to address the literature that connects North Korea’s nuclear and missile programs to U.S interests. Francis J. Gavin argues that preventing nuclear proliferation exists as a “third mission” of postwar U.S. grand strategy that exists on par with the two more widely acknowledged missions containing great power rivals and liberalizing the global economy. Gavin also lists several reasons for U.S. commitment to proliferation inhibition including the possibility that states use nuclear weapons against the U.S. either as a deterrent to constrain U.S. freedom of action or as a means of retaliation against U.S. actions, the prospect of other nuclear states using their nuclear weapons to compel U.S. involvement in a conflict, the

³ Meghan L. O’Sullivan, *Shrewd Sanctions: Statecraft and State Sponsors of Terrorism* (Washington, D.C.: Brookings, 2003), p. 32-35.

fear of a “nuclear domino” effect, and the hazards associated with nuclear failed states.⁴

Although Gavin effectively details the U.S. interests at stake in preventing proliferation and persuasively asserts that proliferation inhibition has historically occupied a much larger role in U.S. grand strategy than previously acknowledged, he concludes his article by leaving the door open to future research on both the sustainability of the non-proliferation agenda and the appropriate responses to current proliferation hazards.⁵ This thesis will contribute to filling that research gap by applying Gavin’s list of threats arising from horizontal nuclear proliferation to the North Korean nuclear crisis and assessing potential solutions to these threats.

The first two threats to U.S. interests that Gavin identifies – nuclear aggression/blackmail and the use of nuclear weapons to draw the other powers into crises – are wholly dependent on the nuclear strategy that North Korea adopts upon achieving a nuclear weapons capability, which itself is dependent upon North Korea’s motivations for acquiring nuclear weapons.

Interpretations of North Korea’s motive and likely use of a nuclear deterrent, however, vary.

Some have observed North Korea’s behavior to date – particularly its use of provocations to bring the U.S. and R.O.K. to the negotiating table – and conclude that any North Korean nuclear strategy is likely to be characterized by brinkmanship and the pursuit of status-quo altering objectives.⁶ Others argue that North Korea’s pursuit of nuclear weapons is rooted in defensive motivations for regime security and that its nuclear planning is likely to be highly risk-averse.⁷

⁴ Francis J. Gavin, “Strategies of Inhibition: U.S. Grand Strategy, the Nuclear Revolution, and Nonproliferation,” *International Security* (2015): p. 9-46. See also: Mark S. Bell, “Beyond Emboldenment: How Acquiring Nuclear Weapons Can Change Foreign Policy,” *International Security* 40 (2015): p. 87-119.

⁵ Ibid.

⁶ Terence Roehrig, “North Korea, Nuclear Weapons, and the Stability-Instability Paradox,” *Korean Journal of Defense Analysis* 28 (2016): p. 181-199.

⁷ See: Kwang Ho Chun, “North Korea’s nuclear question sense of vulnerability, defensive motivation, and peaceful solution,” *Strategic Studies Institute* (2010). Samuel S. Kim, “North Korea’s Nuclear Strategy And The Interface Between International And Domestic Politics,” *Asian Perspective* (2010).

According to this narrative, the U.S.'s continued maintenance of forces along the 38th parallel, its engagement with South Korea through military exercises explicitly designed to foment regime change, and its treatment of Saddam Hussein of Iraq and Muammar Qaddafi of Libya provide North Korea with compelling evidence against surrendering its nuclear weapons.⁸ Indeed, nuclear weapons may provide the Kim regime with security in more than one way. Given the immense sunk costs already invested in the nuclear weapons program, Kim may have no choice but to continue building nuclear weapons to retain the support of the North Korean military and bureaucracy and to maintain the legitimacy of the regime's military-first (*Songun*) policy.⁹ Still others argue that the North Korean nuclear strategy will not become apparent until after the North Korean leaders themselves have experimented with nuclear weapons' coercive power. Narang finds that North Korea will likely attempt to save resources by using its nuclear capability to compel China to intervene in crises on its behalf; however, if the North Korean leadership comes to find China's response unsatisfactory, North Korea will transition to using nuclear weapons as a means of asymmetric escalation to terminate crises before the U.S. and South Korea can effectively exploit their conventional superiority.¹⁰ One near-universal shortcoming within the existing literature attempting to decipher North Korea's nuclear motivations is the lack of clear and explicit implications for how the U.S. ought to head off North Korean proliferation or counter a nascent North Korean nuclear strategy. This thesis will

⁸ Bruce Klingner, "Respond Cautiously to North Korean Engagement Offers," *Heritage Foundation*, April 20, 2015, accessed November 15, 2016, www.heritage.org/research/reports/2015/04/respond-cautiously-to-north-korean-engagement-offers.

⁹ Patrick DeRochie, "THE DRIVING FACTOR: Songun's Impact on North Korean Foreign Policy," *International Affairs Review* (Summer 2011): 1-18.

¹⁰ Vipin Narang, "Nuclear Strategies of Emerging Nuclear Powers: North Korea and Iran," *The Washington Quarterly* 38 (2015): p. 73-91.

draw on these varying interpretations of North Korean behavior to provide a strategy for containing a nuclear North Korea.

Much has also been written on North Korea's third proliferation threat to U.S. interests: the potential for regional "nuclear dominoes." Many have forecasted that North Korea's neighbors – particularly Japan and South Korea – would find a nuclear North Korea intolerable and would face pressures to develop nuclear weapons of their own.¹¹ This would especially be the case if North Korea acquired the means to reliably deliver a nuclear weapon to the U.S. mainland, as policy-makers in South Korea and Japan would begin to doubt whether the U.S. would "trade Honolulu for Seoul or Tokyo for Los Angeles."¹² Nonetheless, optimists maintain that the U.S. can head off cascading proliferation by targeting its allies' fears of de-coupling and low-level "gray zone" provocations.¹³ Montiero and Debs argue that the U.S. can halt allied proliferation by using a carrot-stick strategy of assurances paired with the threat of de-coupling in the event of proliferation.¹⁴ These predictions and recommendations, while intuitively satisfying, fall short of providing the U.S. with a complete strategy for addressing North Korea's nuclear weapons. For instance, neither Santoro and Warden nor Montiero and Debs consider the security dilemma on the Korean Peninsula in which North Korea views U.S. attempts to make its security guarantees more credible to Japan and South Korea as attempts to impose regime change, as detailed earlier in the literature review. As a result, these articles offer no way of

¹¹ See: Mun Suk Ahn and Young Chul Cho, "A nuclear South Korea?" *International Journal* 69 (2014): p. 26-34., Stephen Cimbala, *The New Nuclear Disorder: Challenges to Deterrence and Strategy* (Surrey: Ashgate Publishing, 2015), accessed October 4, 2016, 149,

<https://books.google.com/books?id=uT5UBgAAQBAJ&pg=PA59&lpg=PA59&dq>.

¹² Peter Hayes and Chung-in Moon, "Should South Korea Go Nuclear?", *NAPSNet Policy Forum*, July 28, 2014, accessed October 2, 2016, <http://nautilus.org/napsnet/napsnet-policy-forum/should-south-korea-go-nuclear/>.

¹³ David Santoro and John K. Warden, "Assuring Japan and South Korea in the Second Nuclear Age," *The Washington Quarterly* (2015): p. 147-165.

¹⁴ Nuno P. Montiero and Alexandre Debs, "The Strategic Logic of Nuclear Proliferation," *International Security* 39 (2014): p. 7-51.

weighing the sometimes-conflicting goals of preventing allied proliferation and encouraging North Korean disarmament. This paper will attempt to offer a strategy for addressing both goals.

The final threat to U.S. interests comes in the form of North Korean state failure. Due to the inherently closed nature of the Kim regime, it is no surprise that there is no consensus on the state of its stability. On the one hand, North Korea is suffering from famine, a stagnant economy buckling under the weight of sanctions and poor economic planning, and rumblings of elite discontent in the wake of Kim Jong-un's bloody takeover.¹⁵ Those predicting the Kim regime's imminent demise argue that although the regime possesses a powerful propaganda machine, the Kims cannot divert attention from these severe domestic problems indefinitely. On the other hand, the Kims have proven remarkably resilient when faced with similar legitimacy crises such as the fall of multiple Communist governments in 1989, the deaths of Kim-Il Sung and then Kim-Jong Il, and the famines of the late 1990s.¹⁶ In stark contrast to those predicting the demise of the Kim regime based on the inevitable progress of history, supporters of the stable Kim regime hypothesis argue that the Kim regime has implemented a formula for successful authoritarianism by coercing foreign aid, silencing elite dissent, and "coup-proofing" the government bureaucracy through centralization of authority among the Kim dynasty.¹⁷ In this thesis I will address the possibility of a North Korean collapse as an unintended consequence of selected policies meant to counter North Korean proliferation and will weigh the cost of a North Korean "hard landing."

¹⁵ Bruce Klingner, "North Korea Heading for the Abyss," *The Washington Quarterly* (2014): p. 169-182.

¹⁶ Jennifer Lind and Daniel Byman, "Pyongyang's Survival Strategy: Tools of Authoritarian Control in North Korea," *International Security* (2010): p. 44-74.

¹⁷ Ibid.

Given the severe and far-reaching implications of North Korean proliferation, a wide array of policy proposals has emerged to prevent the emergence of a North Korean nuclear weapon. One set of proposals argues in favor of imposing sanctions on North Korea that “target the survivability of the regime” with the intention of either compelling North Korea to give up its nuclear weapons or collapsing the Kim regime and reunifying the Korean Peninsula.¹⁸ For instance, Kydd proposes offering China assurances that a reunified Korea would remain non-aligned in exchange for Chinese withdrawal of support for the Kim regime.¹⁹ Others dispute the effectiveness of sanctions in threatening the Hermit Kingdom. One study finds that four years after the United Nations Security Council approved resolutions 1695 and 1718 enacting far-reaching sanctions on trade, finance, and travel with North Korea, only 83 of 192 nations had submitted implementation reports to the United Nations related to the sanctions by 2010.²⁰ This suggests that many U.N. members lack the resources or technical know-how to enforce the sanctions and raises the prospect that the Kim regime may be circumventing sanctions that exist on paper. Another study questions whether sanctions can ever be truly threatening to North Korea due to the regime’s overt hostility toward economic liberalization and single-minded determination in seeking nuclear weapons.²¹ Indeed, sanctions may in fact help the Kim regime maintain its stability by closing off the country from outside influence and information. As part

¹⁸ See Mark Fitzpatrick, “North Korea: Is Regime Change the Answer?” *Survival* (2013): p. 7-20; Andrew H. Kydd, “Pulling the Plug: Can There Be a Deal with China on Korean Unification?” *The Washington Quarterly* (2015): p. 63-77. Kim Jina, “UN Sanctions as an Instrument of Coercive Diplomacy against North Korea,” *Korean Journal of Defense Analysis* (2014): p. 315-332.

¹⁹ Kydd, “Pulling the Plug: Can There Be a Deal with China on Korean Unification?”

²⁰ Masahiko Asada, “A Solution in Sanctions: Curbing Nuclear Proliferation in North Korea,” *Harvard International Review* (2011): p. 18-21.

²¹ Stephan Haggard and Marcus Noland, “Sanctioning North Korea: The Political Economy of Denuclearization and Proliferation,” *Asian Survey* (2010): p. 539-568.

of a broader search for a policy to address North Korean nuclear proliferation, this paper will assess the prospect of using sanctions to compel North Korean compliance.

If diplomacy and indirect encouragement of regime-change should fail, the U.S. will be forced to decide between containing a nuclear-capable North Korea and pre-emptively destroying the North's nuclear weapons. Many have made the case for containment. At least one study maintains that the U.S. and allied forces retain a vast qualitative edge vis-à-vis North Korea and could easily repel any northern military aggression.²² Authors have argued that the U.S. and South Korea can build upon this advantage and deter a nuclear-capable North Korea by investing in ballistic missile defense, shoring up intelligence, surveillance and reconnaissance capabilities, and maintaining a large force south of the demilitarized zone.²³ Containment's advocates tend to also favor retaining close consultation and assurance through existing U.S. alliances with Japan and South Korea to prevent a "nuclear domino" effect throughout Northeast Asia.²⁴ Proponents of pre-emptive strikes against the North Korean nuclear program, such as Kwon, counter that although the U.S. and its allies may be technically capable of defeating or even deterring a nuclear North Korea, the prospect of a nuclear North Korea may unacceptably constrain U.S. and allied freedom of action in the event of a crisis on the Korean Peninsula.²⁵ However, although both proponents of containment and pre-emption have devoted considerable attention to the resources needed to implement their respective strategies, only Kwon engages in any sort of cost-benefit analysis that considers these two strategies. In this paper I will attempt to

²² Michael O'Hanlon, "Stopping a North Korean Invasion: Why Defending South Korea Is Easier than the Pentagon Thinks," *International Security* (1998): p. 135-170.

²³ See Brad Roberts, "Tailored Options to Deter North Korea and WMD Threats," *Korean Journal of Defense Analysis* (2016): p. 25-31; Bruce Bennett, "Deterring North Korea from Using WMD in Future Conflicts and Crises," *Strategic Studies Quarterly* (2012): p. 119-151.

²⁴ Santoro and Warden, "Assuring Japan and South Korea in the Second Nuclear Age."

²⁵ Edward Kwon, "The U.S.-ROK Alliance in Coping with North Korea's Nuclear Threat," *Korean Journal of Defense Analysis* 26 (2014): p. 496-497.

build on Kwon's work by comparing the merits of containment with those of pre-emptive surgical strikes based on the consequences for regional and global stability as well as the financial and human cost to the United States and its allies.

The Problem of North Korea's Nuclear and Missile Programs

Since North Korea has left the Non-Proliferation Treaty in 2003, it has steadily marched toward achieving a deliverable nuclear weapon.²⁶ Independent estimates from early 2015 maintain that North Korea has enriched approximately 32 kilograms of plutonium, or enough to produce up to 10 small nuclear warheads.²⁷ Most, if not all of the progress made on the production of weapons-grade plutonium has occurred at the nuclear research facility at Yongbyon, which features a 5MWe reactor capable of producing plutonium in reactions that use North Korea's abundant natural uranium.²⁸ North Korea's uranium enrichment capabilities are less transparent; North Korea is known to have at least one centrifuge plant at Yongbyon with roughly 2,000 P2-type centrifuges, but some U.S. intelligence officials believe that North Korea has a second, hidden plant with a considerably greater capability.²⁹ A high-end estimate holds that North Korea currently has enough nuclear material to produce a maximum of 22 nuclear weapons in total, each with a yield of 10 KT or 2/3 the size of the atomic bomb dropped on Hiroshima.³⁰ If North Korea operates two centrifuge plants and its nuclear reactor at Yongbyon

²⁶ "Chronology of U.S.-North Korean Nuclear and Missile Diplomacy," last modified October 25, 2016, *Arms Control Association*, <https://www.armscontrol.org/factsheets/dprkchron>.

²⁷ *Ibid.*

²⁸ "Yongbyon 5MWe Reactor," last updated September 30, 2011, *Nuclear Threat Initiative*, www.nti.org/learn/facilities/766/.

²⁹ David Albright, "Future Directions In The DPRK's Nuclear Weapons Program: Three Scenarios For 2020," 38North, 2015, accessed November 12, 2017, 38north.org/wp-content/uploads/2015/02/NKNF-Future-Directions-2020-Albright-0215.pdf.

³⁰ *Ibid.*

with at least moderate success, North Korea will have fifty nuclear weapons by 2020 and will be able to produce eight additional nuclear weapons' worth of fissile material each year thereafter.³¹

North Korea's short- and intermediate- range missile capabilities are far more advanced compared to its nuclear weapons program which gives North Korea the capability to accommodate many more warheads assuming it overcomes the barriers to warhead miniaturization. The Hermit Kingdom maintains approximately 1,000 short-to-medium range ballistic missiles, most of which are liquid-fueled and mobile. These missiles include the Nodong medium-range ballistic missile with a range of approximately 1,200 km, a large stockpile of Scud missiles that can hit targets 600 km away, and several Soviet-era light bombers.³²

Even North Korea's existing nuclear program will inevitably pose challenges for U.S. interests. North Korea's nuclear and missile capabilities may be limited in range at present, but they can still target – and therefore terrorize – Japan and South Korea. This has caused both allies to seek costly, functionally permanent extended deterrence guarantees from the United States.³³ Continued failure to rein in North Korea's nuclear program may also undermine the effectiveness of the international non-proliferation system. North Korea has already proven active in encouraging additional rogue proliferation; in September 2007 Israel destroyed a reactor that was likely part of a Syrian nuclear weapons program, and in 2013 a State Department brief concluded that North Korea had assisted in the construction of the reactor based on similarities in reactor design as well as evidence of the presence of North Korean

³¹ Ibid.

³² John Schilling and Henry Kan, "The Future of North Korean Nuclear Delivery Systems," *38 North*, April 2015, accessed November 14, 2016, 38north.org/wp-content/uploads/2015/09/NKNF_Delivery-Systems.pdf.

³³ Santoro and Warden, "Assuring Japan and South Korea in the Second Nuclear Age."

cargo.³⁴ Moreover, the North's authoritarian political system carries the inherent risk of state failure and political instability which would raise the risk that the North's nuclear weapons would be used by other actors. Although the Kim regime has proven resilient so far,³⁵ past success is no guarantee of future stability. Short of full-fledged state failure, Kim Jong-un could sell nuclear weapons to terrorists or other states for funding during hard times.³⁶ If the Kim regime were to encounter more serious problems – through coup or mass resistance – and other states proved unwilling or unable to secure the North's nuclear weapons, then the weapons would fall into the hands of local warlords, who could then either use them to carve out spheres of influence in the remnants of a North Korean failed state³⁷ or sell the weapons to terrorists for personal gain.³⁸ North Korea's current nuclear weapons program raises significant – but largely regionally contained – problems for U.S. interests.

The continued progression of North Korea's nuclear and missile programs raises the much more chilling prospect that North Korea will one day possess a survivable nuclear deterrent capable of striking the continental U.S. While North Korea previously used its nuclear program as leverage, at times temporarily suspending the program to extract aid from the

³⁴ Paul Kerr, Steven A. Hildreth, and Mary Beth D. Nikitin, *Iran-North Korea-Syria Ballistic Missile and Nuclear Cooperation* (CRS Report No. R43480) (Washington DC: Congressional Research Service, 2016), 6-7, <https://www.fas.org/sgp/crs/nuke/R43480.pdf>.

³⁵ Jennifer Lind and Daniel Byman, "Pyongyang's Survival Strategy: Tools of Authoritarian Control in North Korea," *International Security* (2010): p. 44-74.

³⁶ See: Graham T. Allison, "North Korea's Lesson: Nukes for Sale," *New York Times*, February 12, 2013, accessed March 9, 2017, www.nytimes.com/2013/02/12/opinion/north-koreas-lesson-nukes-for-sale.html; Zachary Keck, "The Ultimate Nightmare: North Korea Could Sell Saudi Arabia Nuclear Weapons," *The National Interest*, June 22, 2015, accessed March 9, 2017, nationalinterest.org/feature/the-ultimate-nightmare-north-korea-could-sell-saudi-arabia-13162; for a more critical view on this subject, see: Keir A. Lieber and Daryl G. Press, "Why States Won't Give Nuclear Weapons to Terrorists," *International Security*, Vol. 38, no. 1 (Summer 2013): p. 80-104.

³⁷ Phil W. Reynolds, "What Happens if North Korea Collapses?" *the Diplomat*, September 3, 2016, accessed November 27, 2016, thediplomat.com/2016/09/what-happens-if-north-korea-collapses/.

³⁸ June Park and Jonathan B. Miller, "Is North Korea's nuclear tech for sale?" *East Asia Forum*, November 3, 2016, accessed February 12, 2017, <http://www.eastasiaforum.org/2016/11/03/is-north-koreas-nuclear-tech-for-sale/>.

international community,³⁹ a North Korean nuclear weapon capable of striking the U.S. could cause the Kim regime to calculate that it can engage in lower-level hostilities under the shadow of nuclear escalation.⁴⁰ Moreover, if North Korea proves capable of reliably targeting the U.S. homeland – be it Guam, Hawaii, or even the U.S. West Coast – South Korean and Japanese policymakers may eventually calculate that the U.S. would be unwilling to risk trading Honolulu for Seoul or Los Angeles for Tokyo.⁴¹ Such a calculation could even prompt these allies to pursue nuclear weapons of their own, sparking an arms race in an economically important, yet institutionally deficient, region of the world.⁴²

Luckily, North Korea remains several years away from a survivable nuclear deterrent capable of reliably targeting the continental U.S. due to multiple technological barriers. Although North Korea possesses numerous short- and medium- range missiles, its long-range missile capabilities are far more limited. If North Korea were to attempt to strike the continental U.S. today, it would only be able to field a militarized version of the Unha space launch vehicle. The Unha space launch vehicle does not pose a serious threat to the U.S., however, because the vehicle requires extensive above-ground infrastructure and preparation prior to launch, making it vulnerable to destruction before launch.⁴³ Additionally, the Unha has only undergone limited testing and may not be capable of carrying a nuclear warhead.⁴⁴ Under a scenario of “steady modernization,” North Korea may be capable of fielding the KN-08 mobile ICBM in

³⁹ Shane Smith, "North Korea's Evolving Nuclear Strategy," *38 North*, August 2015, accessed November 14, 2016, 38north.org/wp-content/uploads/2015/09/NKNF_Evolving-Nuclear-Strategy_Smith.pdf.

⁴⁰ See: Terence Roehrig, "North Korea, Nuclear Weapons, and the Stability-Instability Paradox," *Korean Journal of Defense Analysis* 28 (2016): p. 181-199. Matthew Kroenig, "The History of Proliferation Optimism: Does It Have A Future?" *Nonproliferation Policy Education Center*, May 26, 2012, accessed October 4, 2016, <http://npolicy.org/article.php?aid=1182&rtid=2>.

⁴¹ Hayes and Moon, "Should South Korea Go Nuclear?"

⁴² Cimballa, *The New Nuclear Disorder: Challenges to Deterrence and Strategy*, 149.

⁴³ Schilling and Henry Kan, "The Future of North Korean Nuclear Delivery Systems."

⁴⁴ *Ibid.*

emergencies by 2020, granting North Korea a long-range deterrent explicitly designed to hit the U.S., but intelligence suggests that the missile is liquid-fueled which adds to the preparation time prior to launch and thus its vulnerability to pre-emption.⁴⁵ More recently, North Korea appears to have achieved some success in the development of a submarine-launched ballistic missile which could also grant North Korea's nuclear arsenal some survivability, though intelligence suggests North Korea's submarines are ageing, noisy, and cannot remain far from home for long, which limits their threat to the continental U.S.⁴⁶ Even after overcoming limitations in missile range and survivability, North Korea must still miniaturize and mount its warheads onto a missile and ensure that these warheads survive re-entry into the atmosphere in a reliable reentry vehicle. While it seems probable that North Korea is currently able to build a warhead small enough to fit atop a medium-range ballistic missile, it is unclear whether it can do so without significantly sacrificing the yield of the warhead.⁴⁷ Additionally, North Korea has yet to demonstrate that it has a vehicle capable of surviving the heat and shock that come with atmospheric re-entry without relying on "blunt" re-entry bodies which are both inaccurate and vulnerable to U.S. missile defense systems.⁴⁸ In short, North Korea's long range strategic capabilities may give it the ability to introduce some uncertainty into a regional crisis, but its ability to deliver a nuclear warhead to the continental U.S. and escalate a conflict beyond Northeast Asia is far from certain. Consequently, U.S. extended deterrence guarantees will remain viable in the short- to medium-term because North Korea will remain unable to deter or defend against U.S. intervention in a regional crisis.

⁴⁵ Ibid.

⁴⁶ Ju-min Park and Jack Kim, "North Korea fires submarine-launched ballistic missile towards Japan," *Reuters*, August 24, 2016, accessed November 14, 2016, www.reuters.com/article/us-northkorea-missiles-idUSKCN10Y2B0.

⁴⁷ Jeffrey Lewis, "North Korea's Nuclear Weapons: the Great Miniaturization Debate," *38 North*, February 5, 2015, accessed November 16, 2016, 38north.org/2015/02/jlewis020515/.

⁴⁸ Ibid.

The Current Administration's Goals

Early indications suggest that the current administration will not abandon the Obama administration's goal of eventually denuclearizing the Korean. On the campaign trail Trump expressed a willingness to meet with Kim Jong-un and was quoted as saying

I'll speak to anybody. Who knows? There's a 10 percent or a 20 percent chance that I can talk him out of those damn nukes because who the hell wants him to have nukes? And there's a chance — I'm only gonna make a good deal for us⁴⁹.

Furthermore, President Trump noted the key role that North Korea's patron state, China, would play in pursuing any negotiated settlement. This suggests that Trump shares the Obama administration's early faith in the use of regional multilateral forums to encourage denuclearization.⁵⁰ The Trump administration's emphasis on China's role in any negotiated settlement was put on display during Secretary of State Rex Tillerson's confirmation hearing in which Tillerson repeatedly criticized China for its "empty promises" to enforce international sanctions on North Korea.⁵¹ President Trump also implied that in the absence of Chinese assistance, the U.S. could solve the North Korean nuclear program, perhaps by force.⁵² Because Trump tweeted this message just prior to a meeting with Chinese President Xi Jinping, one could read this as an attempt to coerce additional Chinese support for a diplomatic solution. The Trump administration has not yet abandoned the Obama administration's hope for peaceful denuclearization of the Korean Peninsula.

⁴⁹ John Power, "Trump's Unlikely Rise Hints at Shift in US Policy on North Korea," *The Diplomat*, November 13, 2016, accessed November 15, 2016, thediplomat.com/2016/11/trumps-unlikely-rise-hints-at-shift-in-us-policy-on-north-korea/.

⁵⁰ Ibid.

⁵¹ U.S. Congress, Senate, Committee on Foreign Relations, Tillerson Confirmation Hearing, 115th Cong., 1st sess., 2017, 1-6.

⁵² Eugene Scott, "Trump: If China doesn't help, the US will solve 'the North Korea problem' without them," CNN, April 11, 2017, accessed April 17, 2017, www.cnn.com/2017/04/11/politics/trump-north-korea-china/.

Recent talk of a potential North Korean ICBM test this year may have produced a corollary to the original goal of denuclearization. The Trump administration has suggested that in the absence of peaceful denuclearization, it is willing to prevent the deployment of a North Korean ICBM by any means necessary, including the use of force. As President-elect, Trump tweeted that a North Korean ICBM test “won’t happen.” While some have interpreted the tweet as a lack of faith in North Korea’s technical capability for such a test, others have read it as the creation of red-line for Trump.⁵³ Trump administration officials, for their part, have reinforced the latter interpretation. When questioned about this tweet during his confirmation hearing, Secretary of Defense James Mattis maintained that although the administration would seek a negotiated solution to North Korea’s nuclear program, he was not willing to rule out the use of force to prevent the development of a North Korean missile capable of hitting the U.S. homeland.⁵⁴ During a visit to South Korea, Secretary Tillerson stated that “all options are on the table” to prevent a North Korean nuclear deterrent.⁵⁵ Despite an avowed hope for denuclearization of the Korean Peninsula, the Trump administration’s primary goal seems to be preventing North Korea from deploying a nuclear missile capable of hitting the U.S. homeland.

The Trump administration also seems to share the Obama administration’s secondary goal of protecting U.S. treaty allies and containing the impact of North Korea’s existing nuclear program. Although Trump campaigned on an “America First” foreign policy – even suggesting

⁵³ Matt Spetalnick, "Few good options in Trump arsenal to counter defiant North Korea," *Reuters*, February 12, 2017, accessed February 12, 2017, www.reuters.com/article/us-northkorea-missiles-usa-analysis-idUSKBN15R0Z5?feedType=RSS&feedName=worldNews.

⁵⁴ U.S. Congress, Senate, Committee on Armed Services, Mattis Confirmation Hearing, 115th Cong., 1st sess., http://www.armed-services.senate.gov/imo/media/doc/17-03_01-12-17.pdf.

⁵⁵ Anne Gearan and Anna Fifield, "Tillerson says ‘all options are on the table’ when it comes to North Korea," *Washington Post*, March 19, 2017, accessed March 30, 2017, https://www.washingtonpost.com/world/tillerson-says-all-options-are-on-the-table-when-it-comes-to-north-korea/2017/03/17/e6b3e64e-0a83-11e7-bd19-fd3afa0f7e2a_story.html?utm_term=.f1f76e5ed3a6.

that South Korea and Japan should develop independent nuclear weapons capabilities⁵⁶ – since his election he has focused much of his criticism on NATO.⁵⁷ Trump was quick to meet with Japanese Prime Minister Shinzo Abe as President-elect, and following a North Korean missile test Trump stated that “the United States of America stands behind Japan, its great ally, 100%.”⁵⁸ In his first trip abroad as Secretary of Defense, Mattis argued in South Korea that “It is a priority for President Trump’s administration to pay attention to the northwest Pacific” and then expressed a desire to “work together and strengthen our alliance.”⁵⁹ Despite campaign pledges to force Japan and South Korea to assume a greater share of responsibility for their own defense, high-level statements point to a more orthodox approach to managing the U.S. alliances vis-à-vis North Korea.

Potential Policy Solutions

The Trump administration has essentially three options for confronting North Korean proliferation: continue the Obama administration’s policy of “strategic patience,” convince China to support regime change, or roll back North Korea’s nuclear program by force. Of these options, strategic patience would appear to offer a the best policy with its moderate efficacy, its several positive externalities, its few negative externalities, and its relatively low financial and human cost.

⁵⁶ Kevin Rafferty, "Will Trump's foreign policy push Japan to go nuclear?" *Japan Times*, December 25, 2016, accessed February 12, 2016, www.japantimes.co.jp/opinion/2016/12/25/commentary/japan-commentary/will-trumps-foreign-policy-push-japan-go-nuclear/#.WKNYzPkrLIW.

⁵⁷ Julie Hirschfeld Davis, "Trump, Day After Merkel’s Visit, Says Germany Pays NATO and U.S. Too Little," *New York Times*, March 18, 2017, accessed April 17, 2017, https://www.nytimes.com/2017/03/18/us/politics/donald-trump-angela-merkel-germany.html?_r=0.

⁵⁸ Kevin Liptak, "At Mar-a-Lago, Trump tackles crisis diplomacy at close range," *CNN*, February 12, 2017, accessed February 12, 2017, www.cnn.com/2017/02/12/politics/trump-shinzo-abe-mar-a-lago-north-korea/.

⁵⁹ Michael R. Gordon and Choe Sang-Hun, "Jim Mattis, in South Korea, Tries to Reassure an Ally," *New York Times*, February 2, 2017, accessed February 12, 2017, <https://www.nytimes.com/2017/02/02/world/asia/james-mattis-us-korea-thaad.html>.

The Obama administration's policy of "strategic patience" amounted to a dual-track effort of ratcheting up pressure on North Korea in hopes of drawing the Kim regime back to the negotiating table while concurrently preparing a containment effort to deter North Korea from using its nuclear weapons to the detriment of the U.S. and its allies. The strategy has been marked by close alliance consultation with both Japan and South Korea including the large-scale deployment of U.S. conventional forces, and multilateral diplomacy – primarily through the United Nations – to bring comprehensive economic sanctions to bear against North Korea. Early indications, such as the Trump administration's response to North Korea's intermediate range ballistic missile test in early 2017, suggest that the Trump administration is so far likely to continue with "strategic patience" in practice if not in rhetoric.⁶⁰ In this respect, there is room for improvement on the Obama administration's foundation during the 45th President's term, and this paper will consider several narrow but consequential changes to strategic patience as the best version of the option.

The military dimension of "strategic patience" was intended to achieve the secondary U.S. goal of deterring North Korea from engaging in nuclear blackmail vis-à-vis U.S. allies. The U.S. maintains approximately 80,000 troops forward deployed in Japan and South Korea: 52,000 sailors and marines in Japan, and 28,500 airmen and infantry in South Korea.⁶¹ Although the forces in Japan are considered expeditionary, the primary objective of the forces in South Korea is defense against North Korean aggression. To this end, U.S. military forces in South Korea regularly engage in joint-military drills explicitly directed toward the North Korean threat with

⁶⁰ Spetalnick, "Few good options in Trump arsenal to counter defiant North Korea."

⁶¹ Mackenzie Eaglen, "US military force sizing for both war and peace," *American Enterprise Institute*, March 10, 2015, accessed November 15, 2016, <https://www.aei.org/publication/us-military-force-sizing-war-peace/>.

their South Korean counterparts, such as Operations Key Resolve and Foal Eagle.⁶² To date, alliance cooperation between the U.S., Japan, and South Korea has typically followed a hub-with-spokes pattern, with alliance consultations typically occurring through bilateral channels; however, the trio recently engaged in a trilateral missile defense drill alongside the RIMPAC exercises during the Summer of 2016 which suggests that strategic necessity has overcome at least some of the historical animosity between the two East Asian states.⁶³ The Trump administration should expand on this foundation and establish an arrangement for trilateral radar data sharing between the U.S., Japan, and South Korea. This would serve to unify two key “spokes” in the alliance and would provide the U.S. with integrated radar data across a wider geographic area, which in turn improve the efficiency of U.S. homeland missile defense systems against future North Korean ICBM threats.⁶⁴

Comprehensive economic sanctions underpin the other dimension of “strategic patience” and constitute the primary means of pressuring North Korea to surrender its nuclear weapons. The U.S. has maintained a comprehensive embargo on North Korea since the outbreak of the Korean War, and the United Nations has also implemented escalating sanctions after each North Korean nuclear test, starting in 2006.⁶⁵ The current legal basis for U.S. sanctions on North Korea

⁶² Franz-Stefan Gady, "Largest Ever US-Korea Military Drill Focuses on Striking North Korea's Leadership," *the Diplomat*, March 8, 2016, accessed November 15, 2016, thediplomat.com/2016/03/largest-ever-us-korea-military-drill-focuses-on-striking-north-koreas-leadership/.

⁶³ Ankit Panda, "US, Japan, South Korea Plan Missile Defense Exercise on RIMPAC 2016 Sidelines," *the Diplomat*, May 17, 2016, accessed November 15, 2016, thediplomat.com/2016/05/us-japan-south-korea-plan-missile-defense-exercise-on-rimpac-2016-sidelines/.

⁶⁴ See: Rinehart, Hildreth and Lawrence, *Ballistic Missile Defense in the Asia-Pacific Region: Cooperation and Opposition*, 19-20. Patrick M. Cronin, "If Deterrence Fails: Rethinking Conflict on the Korean Peninsula," *Center for A New American Security*, March 27, 2014, accessed February 20, 2017, <https://www.cnas.org/publications/reports/if-deterrence-fails-rethinking-conflict-on-the-korean-peninsula>.

⁶⁵ See: "North Korea Sanctions Program" *Office of Foreign Assets Control*, November 2, 2016, accessed November 28, 2016, <https://www.treasury.gov/resource-center/sanctions/Programs/Documents/nkorea.pdf> and "Sanctions against North Korea," *Global Policy Forum*, accessed November 28, 2016, <https://www.globalpolicy.org/security-council/index-of-countries-on-the-security-council-agenda/north-korea.html>.

is established by Executive Orders 13466 and 13722, which declared North Korean nuclear proliferation a “national emergency” and transferred authority over North Korean sanctions from Trading With the Enemy Act authorities to the Office of Foreign Assets Control (OFAC).⁶⁶ These orders prohibit U.S. persons from exporting, importing, or initiating new investment into Democratic People’s Republic of Korea and grant OFAC the authority to prosecute U.S. persons who facilitate transactions between North Korea and third parties.⁶⁷ Significantly, however, secondary sanctions have not been applied to several Chinese firms known to have engaged in business with North Korea.⁶⁸ Unlike primary sanctions barring U.S. persons from business dealings with North Korea, secondary sanctions on foreign persons or firms that have dealt with the Kims are not automatically enforced and must be affirmatively and specifically designated by the Secretary of the Treasury.⁶⁹ The Trump administration should build upon the current sanctions regime by applying secondary sanctions to third-country firms that continue to do business with North Korea, and increasing the flow of information into North Korea by exploiting vulnerabilities in the North’s cell phone system, which could allow the rapid dissemination of information from the outside world very rapidly.⁷⁰

These sanctions are ostensibly meant to serve as leverage in any future nuclear deal. The Obama administration laid out two official positions on any nuclear negotiations with North Korea. First, the North must demonstrate its commitment to denuclearization prior to negotiations. Second, former Secretary of State John Kerry suggested that a deal with North

⁶⁶ “North Korea Sanctions Program.”

⁶⁷ Ibid.

⁶⁸ Evans J.R. Revere, “Dealing with a nuclear-armed North Korea,” *Brookings Institution*, October 4, 2016, accessed April 5, 2017, <https://www.brookings.edu/research/dealing-with-a-nuclear-armed-north-korea/>.

⁶⁹ Daniel Martin and Anthony Woolich, “North Korea sanctions update, April 2016,” *Holman Fenwick Willan*, www.hfw.com/North-Korea-sanctions-update-April-2016.

⁷⁰ Revere, “Dealing with a nuclear-armed North Korea.”

Korea might resemble the Iran deal reached in 2015.⁷¹ This statement, plus strategic patience's heavy reliance on sanctions suggest that a nuclear deal with North Korea reached through strategic patience would entail a suspension of U.N. sanctions related to North Korea's nuclear program in exchange for North Korean assent to dismantle its current nuclear weapons and decommission its nuclear infrastructure.

Instead of strategic patience, the Trump administration could also explicitly and actively pursue regime change with Chinese cooperation. Some have proposed that the U.S. and China could reach a deal in which China withdraws support for the Kim regime in exchange for U.S. assurances that the newly reunified Korea would remain non-aligned and free of U.S. military presence.⁷² In such a deal, China could cut off food and energy resources, which might then foment internal unrest in North Korea and prompt collapse of the North Korean government. China would also offer the North Korean elite political asylum to accelerate the process and ensure a smooth transition.⁷³ The U.S. and South Korea would first work to convince China during negotiations that the potential and consequences of future North Korean instability is greater than the potential for migration during reunification. After the imposition of Chinese sanctions, the U.S. and South Korea would simply wait for the North to collapse. After the Northern collapse, South Korea and China would then move to secure the border and former North Korean state. The U.S. would contribute up to 10,000 personnel to secure weapons of mass destruction. The U.S. would use teams of approximately 200 special forces operators to

⁷¹ Patrick Goodenough, "Kerry: 'Successful' Iran Nuclear Deal a 'Model' For How to Deal With North Korea," *CNS News*, June 7, 2016, accessed Feb. 20, 2017, www.cnsnews.com/news/article/patrick-goodenough/kerry-successful-iran-nuclear-deal-model-how-deal-north-korea.

⁷² Kydd, "Pulling the Plug: Can There Be a Deal with China on Korean Unification?"

⁷³ Kwon, "The U.S.-ROK Alliance in Coping with North Korea's Nuclear Threat."

raid and secure potential WMD sites.⁷⁴ Once political stability is restored in the North, the South Korean government would initiate an inclusive referendum to produce a new government and the United States would withdraw its forces from South Korea. After reunification, Korean nationalism would serve to enforce the Peninsula's neutrality. Koreans would almost certainly resist Chinese attempts to leverage its economic ties with the Peninsula, and both the Korean right and left would probably resist the deployment of U.S. forces in the absence of a North Korean threat.⁷⁵ The Trump administration could seek an understanding with China on reunification of the Korean Peninsula, which could end the North Korean nuclear program.

Finally, the United States could engage in a series of military strikes against North Korea's nuclear facilities to disarm the regime. Under this option, the U.S. would undergo an air campaign using stealth aircraft and cruise missiles to target known nuclear weapons development and storage sites. Open-source intelligence can provide a list of clear above-ground targets including the nuclear research facilities at Yongbyon and Pyongson, the uranium mines across North Korea's northern border, and North Korea's several missile bases.⁷⁶ While classified intelligence assessments would surely supplement this rudimentary list of targets in reality, it is not possible to consider these assessments in this paper. The U.S. could successfully eliminate these known nuclear and missile facilities using a mix of up to 24 regionally-based F-22 tactical fighters equipped with Joint Direct Attack Munitions, 10 B-2 bombers equipped with the

⁷⁴ Bruce W. Bennett and Jennifer Lind, "The Collapse of North Korea: Military Missions and Requirements," *International Security* (2011): p. 84-119.

⁷⁵ Kydd, "Pulling the Plug."

⁷⁶ "North Korea Facilities -> Nuclear Map," *Nuclear Threat Initiative*, No Date, Accessed March 19, 2017, www.nti.org/gmap/nuclear_north_korea.html.

Massive Ordinance Penetrator bomb, and up to 600 Tomahawk land attack cruise missiles launched from just two Ohio-class submarines.⁷⁷

In the immediate aftermath of a strike on North Korea's nuclear program, the U.S. would need to deter or defeat any North Korean counter-attack. The effort to deter North Korean retaliation would rely upon the implicit threat to pursue regime change and reunification by force if Northern retaliation exceeds acceptable losses to the U.S. or its allies.⁷⁸ This threat would be backed up by existing U.S. and South Korean ground forces south of the de-militarized zone (DMZ), U.S. naval and Marine presence in Japan and Guam, and the threat to invade with more troops from the U.S. homeland. If the deterrent threat were successful and Kim were to choose not to escalate, the U.S. and South Korea would retain the ability to engage in strikes against the Kim regime in the future.

If North Korea were to escalate after U.S. strikes, the U.S. would assume operational control of the South Korean military and would then prosecute a broader campaign seeking to overthrow the Kim regime and reunify the Korean Peninsula.⁷⁹ This campaign should start with U.S. air strikes on North Korean artillery and missile bases using less advanced A-10 and F-16 fighters currently stationed at Osan and Kunsan airbases.⁸⁰ These strikes would attempt to limit

⁷⁷ "What the U.S. Would Use to Strike North Korea?" *Stratfor*, May 25, 2016, accessed November 15, 2016, <https://www.stratfor.com/analysis/what-us-would-use-strike-north-korea>.

⁷⁸ Of course, "acceptable losses" would be difficult for the U.S. or its allies to define publicly or explicitly under these circumstances because it would necessarily greenlight aggression below that threshold and invite criticism from domestic audiences. "Unacceptable" losses would probably include large-scale attacks on civilian population centers, especially Seoul or Tokyo. For description of the effort to deter North Korea, see: Alex Lockie, "Here's how a preemptive strike on North Korea would go down," *Business Insider*, March 17, 2017, accessed March 22, 2017, www.businessinsider.com/us-preemptive-strike-north-korea-2017-3.

⁷⁹ Under the current U.S.-R.O.K. alliance, the U.S. assumes wartime operational control of the South Korean military. For more details on this arrangement, see: Michael O'Hanlon and Bruce Klingner, "Steadying Allied Defenses in Korea," *Brookings Institution*, October 22, 2014, accessed April 3, 2017, <https://www.brookings.edu/opinions/steadying-allied-defenses-in-korea/>.

⁸⁰ Eaglen, "US military force sizing for both war and peace."

the effect of North Korea's artillery while U.S. and South Korean ground forces advance North. U.S. Marines on Okinawa would conduct flanking operations, and U.S. special forces would seek to dismantle the Kim regime.⁸¹ Crisis diplomacy with China, which likely would have been initiated during if not before the original U.S. strikes, would be necessary at this point to prevent Chinese intervention on North Korea's behalf. In the event of deterrence failure post-strike, the U.S. and South Korea would seek to reunify the Korean Peninsula by force.

Assessing Strategic Patience

From the outset, the Obama administration's policy of "strategic patience" does not seem likely to succeed in halting or even slowing North Korea's march toward a nuclear deterrent. Indeed, the policy emerged in the wake of the failures of both the Six-Party Talks, which were discontinued in spring of 2009, and the 2012 Leap Day Deal, under which the United States gave North Korea 240,000 tons of food aid in exchange for a cessation of work on nuclear facilities at Yongbyon and on which Kim Jong Un quickly reneged.⁸² After these bitter failures, the Obama administration calculated that it had little to gain and much to lose politically by pursuing diplomacy with the Kim regime. Consequently, there have been no official negotiations with North Korea over denuclearization.⁸³

Furthermore, even if negotiations were to resume, it seems unlikely that North Korea would give up its nuclear program given present circumstances and the United States' official

⁸¹ Bruce Klingner, "Top 10 Reasons Why the U.S. Marines on Okinawa Are Essential to Peace and Security in the Pacific," *Heritage Foundation*, June 14, 2011, accessed April 3, 2017, www.heritage.org/asia/report/top-10-reasons-why-the-us-marines-okinawa-are-essential-peace-and-security-the-pacific.

⁸² See: Scott A. Snyder, "U.S. Policy Toward North Korea," *Council on Foreign Relations*, January 2013, accessed February 26, 2017, www.cfr.org/north-korea/us-policy-toward-north-korea/p29962. Robert E. Kelly, "Why an Iran Deal for North Korea Won't Happen," *the Diplomat*, August 4, 2015, accessed November 15, 2016, thediplomat.com/2015/08/why-an-iran-deal-for-north-korea-wont-happen/.

⁸³ Snyder, "U.S. Policy Toward North Korea."

diplomatic position. Although former Secretary of State has suggested that a nuclear deal with North Korea might be modeled after the Joint Comprehensive Plan of Action,⁸⁴ colloquially known as the Iran Deal, North Korea has little incentive to give up its nuclear weapons in the status quo and every incentive to continue proliferation; the North's economy is far better adjusted to international isolation, its nuclear weapons have already been built, and it expended far more resources in constructing its nuclear weapons compared to the Islamic Republic.⁸⁵ Indeed, the economic sanctions imposed so far appear to be a paper tiger. One study finds that despite the existence on paper of far-reaching sanctions on trade, finance, and travel, only 83 of 192 nations had submitted implementation reports to the United Nations related to the sanctions by 2010 which suggests that many U.N. countries lack the resources or technical know-how to enforce the sanctions.⁸⁶ Moreover, even if sanctions were to be effectively enforced, it is unclear whether these sanctions could ever persuade the Kim regime to give up nuclear weapons. The Kim regime has proven ambivalent if not overtly hostile towards economic liberalization, and its disregard for the welfare of its own citizens has not raised any visible domestic opposition.⁸⁷ In fact, sanctions may even help the Kim regime to maintain its legitimacy by restricting the amount of outside information entering the country.⁸⁸ The Kim regime elite could continue to survive through drug smuggling, illicit weapons sales, and counterfeiting just as it always has.⁸⁹ It is currently unlikely that North Korea would agree to dismantle its nuclear weapons in

⁸⁴ Goodenough, "Kerry: 'Successful' Iran Nuclear Deal a 'Model' For How to Deal With North Korea."

⁸⁵ Ibid.

⁸⁶ Masahiko Asada, "A Solution in Sanctions: Curbing Nuclear Proliferation in North Korea," *Harvard International Review* (2011): p. 18-21.

⁸⁷ Jennifer Lind and Daniel Byman, "Pyongyang's Survival Strategy: Tools of Authoritarian Control in North Korea," *International Security* (2010): p. 44-74.

⁸⁸ Stephan Haggard and Marcus Noland, "Sanctioning North Korea: The Political Economy of Denuclearization and Proliferation," *Asian Survey* (2010): p. 539-568.

⁸⁹ Mitchell Lerner, "Patience, Not Preemption, on the Korean Peninsula," *the Diplomat*, April 24, 2013, accessed April 17, 2017, thediplomat.com/2013/04/patience-not-preemption-on-the-korean-peninsula/?allpages=yes.

exchange for sanctions relief and as a result, “strategic patience” is unlikely to achieve the U.S.’s primary stated goal of preventing North Korea from developing a nuclear missile capable of hitting the United States.

Despite strategic patience’s failure to contain North Korean nuclear and missile proliferation so far, the policy has in many ways laid the groundwork for helping the U.S. and its allies to live with North Korean nuclear weapons in the short- to medium-term future. While the North may continue to engage in provocative action, much to the chagrin of policymakers in Japan and South Korea, some analysts suggest that U.S. nuclear guarantees have ensured that North Korea’s provocations remain in the “gray-zone” to avoid triggering a major armed conflict.⁹⁰ North Korea continues to face steep hurdles to creating a credible nuclear deterrent. North Korea’s long range missile capabilities remain untested, all of its known long range delivery systems under development have long windows of vulnerability to U.S. or allied pre-emptive strike, and its re-entry vehicles are inaccurate and vulnerable to U.S. national missile defenses.⁹¹ As a result, North Korea is not likely to have a survivable nuclear deterrent capable of striking the U.S. homeland for at least another ten years, even assuming that no significant breakthroughs in U.S. missile defense technologies occur during that time.⁹² This mitigates the fear that Japan or South Korea might face nuclear proliferation pressures of their own because neither state will have to worry about whether the U.S. would trade Seoul or Tokyo for Honolulu or Los Angeles. Nuclear weapons mounted to regional ballistic missiles would certainly enhance North Korea’s ability to cause destruction in the region, but the North can already do tremendous damage using its conventional artillery. Perhaps more importantly, the Kim regime seems to

⁹⁰ Andrew O’Neil, *Asia, the US and Extended Nuclear Deterrence: Atomic umbrellas in the twenty-first century* (New York: Routledge, 2013), 69, Kindle Edition.

⁹¹ Schilling and Kan, “The Future of North Korean Nuclear Delivery Systems.”

⁹² Ibid.

have calculated that until and unless North Korea acquires the capability to reliably strike the U.S. homeland, any aggression beyond the gray-zone would prompt U.S. retaliation which would almost certainly spell the end for the Kim regime.⁹³ The greatest potential threat to U.S. interests – the prospect that North Korea develops a reliable nuclear deterrent – is currently far enough away that strategic patience will continue to be a workable alternative for at least the next decade.

Due to this long time horizon, strategic patience may yet prove effective. North Korea could, as Obama administration officials gambled, experience significant domestic political change during this time which would make the regime more amenable to denuclearization. For example, some have noted that globalization has begun to reach North Korea through trade with China. If North Korean citizens' knowledge of and access to the outside world grows large enough, it may cause them to feel a sense of relative deprivation foster discontent with the Kim regime.⁹⁴ Even if this discontent does not result in revolution, it could certainly result in moderation of the North Korean leadership. The Obama administration's policy of strategic patience seemed to rely on faith that a more globally integrated, moderate North Korean regime might be more tempted to accept a "sanctions relief for disarmament" nuclear deal for which strategic patience calls.

While perhaps too early to definitively rule out, the notion that North Korea might eventually pick economic growth over security by giving up its nuclear weapons currently seems unfounded. North Korean leadership believes that nuclear weapons provide security from regime change in a way that economic growth cannot. North Korea's perception that the U.S. disposed

⁹³ O'Neil, *Asia, the US and Extended Nuclear Deterrence: Atomic umbrellas in the twenty-first century*.

⁹⁴ "Awareness Of Outside World Growing In North Korea," *National Public Radio*, June 15, 2010, accessed March 21, 2017, www.npr.org/templates/story/story.php?storyId=127836840.

of Gaddafi in Libya even after Gaddafi had ostensibly renounced the Libyan nuclear program in the interest of promoting economic growth heavily reinforces this belief.⁹⁵ Fortunately, strategic patience does not necessarily need to rely upon hope that North Korea will eventually collapse. Investing in additional homeland missile defense capabilities and pursuing trilateral missile defense cooperation with Japan and South Korea, as outlined in the previous section, would enhance deterrence contra the North by deepening strategic ties between the allies.⁹⁶ Continued bilateral and trilateral military exercises – particularly rehearsals of OPLAN 5015, which centers on pre-emptively destroying North Korean nuclear missiles – will also improve inter-operability and improve alliance ties.⁹⁷ Nonetheless, it is important to keep in mind that even in a worst-case scenario in which North Korea develops the capability to reliably target the U.S. homeland, U.S. extended deterrence guarantees to Japan and South Korea can and should still persist. China's acquisition of nuclear weapons has not voided the U.S. defense commitment to Japan or even Taiwan, so it stands to reason that a nuclear North Korea with a comparable nuclear arsenal would not necessarily require South Korea or Japan to develop nuclear weapons of their own, provided that the U.S. clearly demonstrates its commitment to maintain the status quo.⁹⁸

Strategic patience should not rely upon blind faith that North Korea will collapse on its own; should the Trump administration continue strategic patience, it should seek to buy more time and

⁹⁵ Andrei Lankov, "Why Nothing Can Really Be Done about North Korea's Nuclear Program," *Asia Policy* (2017): 104-110.

⁹⁶ Rinehart, Hildreth and Lawrence, *Ballistic Missile Defense in the Asia-Pacific Region: Cooperation and Opposition*, 19-20.

⁹⁷ Anna Fifield, "In drills, U.S., South Korea practice striking North's nuclear plants, leaders," *Washington Post*, March 7, 2016, accessed February 26, 2017, https://www.washingtonpost.com/world/in-drills-us-south-korea-practice-striking-norths-nuclear-plants/2016/03/06/46e6019d-5f04-4277-9b41-e02fc1c2e801_story.html?utm_term=.2910fa156cea.

⁹⁸ O'Neil, *Asia, the US and Extended Nuclear Deterrence: Atomic umbrellas in the twenty-first century*

actively prepare to contain regional proliferation through expanded alliance coordination on missile defense.

Strategic patience has had several positive externalities from the U.S. perspective. The alliance with the U.S. has emboldened South Korea to play a more global security role. South Korea has generally provided a relatively large number of forces to international peacekeeping missions for a country of its size, and it has supported U.S.-led initiatives such as the reconstruction effort in Afghanistan and counter-piracy missions in the Gulf of Aden.⁹⁹ This support has the effect of granting many U.S.-led operations legitimacy by mitigating the perception that the U.S. is acting alone. It is likely that if the United States did not provide security guarantees to South Korea, the South would be forced to re-orient its military units currently devoted to global security missions back toward peninsular operations to meet the North Korean threat on its own.¹⁰⁰ Strategic patience and U.S. military presence in South Korea more specifically enable South Korea to contribute to the provision of global public goods.

Strategic patience has also served to mitigate tension between South Korea and Japan. The two countries have historically maintained a tense – if not openly hostile – relationship. South Korea is perhaps naturally inclined to view Japan with suspicion due to the harsh conditions that the former endured under Japanese colonization from 1910 until the end of the Second World War.¹⁰¹ This suspicion can sometimes manifest itself in disputes over “history issues.” Most recently, the two countries prosecuted an extensive diplomatic row over conservative Japanese textbooks’ treatment of the Japanese Imperial Army’s use of Korean

⁹⁹ Scott Snyder, "South Korea's Emerging Global Security Role," *World Politics Review*, March 23, 2010, accessed February 26, 2017, www.worldpoliticsreview.com/articles/5316/south-koreas-emerging-global-security-role.

¹⁰⁰ *Ibid.*

¹⁰¹ "Korea as a Colony of Japan, 1910-1945," *Asia for Educators*, Columbia University, accessed February 26, 2017, afe.easia.columbia.edu/main_pop/kpct/kp_koreaimperialism.htm.

“comfort women.”¹⁰² U.S. alliance ties to Japan and South Korea, however, allow the U.S. to play a role in mediating these disputes and ensure that disputes remain limited by giving the U.S. unique leverage.¹⁰³ The hidden implication is that neither Japan nor South Korea can afford to escalate historical arguments beyond words lest the U.S. view them as an instigator and side with their opponent to the detriment of more important security needs.¹⁰⁴ In this sense, U.S. uses alliance ties to ensure that the two countries focused on a common threats – North Korea – instead of coming to view each other as threats.¹⁰⁵ This U.S. role has had tangible results: South Korea and Japan have participated alongside one another in several trilateral military exercises and jointly engaged in a trilateral missile defense exercise at RIMPAC 2016.¹⁰⁶ Termination of strategic patience – either through retrenchment or elimination of the North Korean threat – would compromise this arrangement. Strategic patience’s emphasis on the maintenance of close alliance ties to both Japan and South Korea serves to mitigate tensions between the U.S.’s two East Asian allies.

Certain elements of “strategic patience” have had the negative externality of creating stress in the U.S.-China relationship. The U.S. views Chinese support for the Kim regime as hostile to U.S. interests. In his opening statement at his confirmation hearing, Secretary of State Rex Tillerson repeatedly criticized China for failing to uphold its commitment to impose

¹⁰² Robert E. Kelly, "Will the South Korea-Japan comfort women deal hold?" *Lowy Institute*, February 11, 2016, accessed February 26, 2017, <https://www.lowyinstitute.org/the-interpreter/will-south-korea-japan-comfort-women-deal-hold>.

¹⁰³ Shannon Tiezzi, "US Tries to Get Japan, South Korea to Put the Past Behind Them," *the Diplomat*, April 18, 2015, accessed February 26, 2017, thediplomat.com/2015/04/us-tries-to-get-japan-south-korea-to-put-the-past-behind-them/.

¹⁰⁴ Mina Pollman, "The Troubled Japan-South Korea Relationship," *the Diplomat*, July 27, 2015, April 3, 2017, thediplomat.com/2015/07/the-troubled-japan-south-korea-relationship/.

¹⁰⁵ Bhubhinder Singh, "Beyond Identity and Domestic Politics: Stability in South Korea-Japan Relations," *The Korean Journal of Defense Analysis*, Vol. 27 (2015): p. 26-27.

¹⁰⁶ Ankit Panda, "US, Japan, South Korea Plan Missile Defense Exercise on RIMPAC 2016 Sidelines," *the Diplomat*, May 17, 2016, accessed November 15, 2016, thediplomat.com/2016/05/us-japan-south-korea-plan-missile-defense-exercise-on-rimpac-2016-sidelines/.

substantial sanctions on the Kim regime.¹⁰⁷ For its part, China fears that cutting off all support to the Kim regime could result in a U.S.-aligned unified Korea on its doorstep. China also views the closer alliance ties between the U.S., Japan, and South Korea as intended to contain Chinese power. China has cited missile defense as a particular concern; it views the high-intensity radars mounted to theater missile defenses as a threat to its second-strike capability and perceives missile defense deployments as a larger step toward expanded alliance cooperation.¹⁰⁸ In response, China has undertaken a dramatic nuclear modernization program including the development of anti-satellite, hypersonic glide, and multiple independently targetable re-entry vehicle (MIRV) systems—though it remains in question whether China’s linkage of missile defense and nuclear modernization is sincere.¹⁰⁹ Scholars of China’s nuclear program have argued that China’s nuclear modernization does not represent an attempt to overcome U.S. missile defenses but rather a bid to achieve technological parity with the West.¹¹⁰ Efforts to increase U.S. and allied security vis-à-vis the North Korean nuclear threat may have come at the expense of security between the U.S. and China, but Western analysts should take care not to substitute their own strategic beliefs for those of China’s leadership.

While the fiscal cost of strategic patience is not insignificant, it is far more efficient than many critics assert. The bulk of the costs come from the cost of military basing in the Pacific and the cost of procuring additional military equipment to deal with the North Korean nuclear threat. The costs of the former are much lower than many realize; because Japan and South Korea front

¹⁰⁷ U.S. Congress, Senate, Committee on Foreign Relations, Tillerson Confirmation Hearing, 115th Cong., 1st sess., 2017, 1-6.

¹⁰⁸ Revere, "Dealing with a nuclear-armed North Korea."

¹⁰⁹ Richard Weitz, "Arms Racing in Strategic Technologies: Asia's New Frontier," *Hudson Institute*, May 3, 2015, accessed November 15, 2016, www.hudson.org/research/11307-arms-racing-in-strategic-technologies-asia-s-new-frontier.

¹¹⁰ Jeffrey Lewis, *Paper Tigers: China's Nuclear Posture* (New York: Routledge, 2014), 9.

50% of basing costs in their respective countries, the U.S. pays only \$2 billion to base troops in Japan and \$900 million to base troops in South Korea annually, and ongoing base construction projects in the Asia Pacific will collectively cost the U.S. no more than \$7 billion by their respective completion times.¹¹¹ Not all of these troops are exclusively dedicated to confronting North Korea; a substantial amount of U.S. troops in Japan would remain to respond to Chinese territorial expansion in the South and East China Seas. Although procurement costs for theater missile defenses are not insignificant – THAAD cost \$24 billion in total to develop and purchase – these figures represent a sunk cost; the U.S. would still have needed THAAD technologies in other regions even if North Korea did not exist as a dilemma in U.S. foreign policy.¹¹² The same goes for the missile defense-capable Aegis destroyer program. A more representative statistic would examine the annual operating costs of theater missile defense; the X-Band radars deployed to Japan cost approximately \$60 million per year to operate,¹¹³ and the deployment of THAAD to South Korea will likely cost \$1.3 billion per year.¹¹⁴ In short, strategic patience is not cheap and may not immediately result in the rolling back of North Korea's nuclear weapons program, but it offers the potential to contain North Korean proliferation in the future.

Coordinated Reunification?

Instead of waiting for existing sanctions to precipitate regime change in North Korea, the U.S. could proactively seek reunification of the Korean Peninsula with South Korean and

¹¹¹ "America's East Asian Bargain," *Wall Street Journal*, April 6, 2016, accessed November 15, 2016, www.wsj.com/articles/americas-east-asian-bargain-1459985047.

¹¹² Dov S. Zakheim, "Evaluating the Opportunity and Financial Costs of Ballistic Missile Defense," in *Regional Missile Defense from a Global Perspective*, ed. Catherine Kelleher and Peter Dombrowski (Stanford: Stanford Security Studies, 2015), 269-273. Kindle Edition.

¹¹³ *Ibid.*

¹¹⁴ "Defense ministry counters health, diplomatic concerns over THAAD deployment," *Yonhap News Agency*, July 13, 2016, accessed November 27, 2016, english.yonhapnews.co.kr/national/2016/07/13/0301000000AEN20160713006700315.html.

Chinese cooperation. Under this arrangement, China would cut off all support to North Korea and offer political asylum to the North Korean elite to foment reunification, South Korea would assume political control of the North and would shut down the North's nuclear weapons program, and the U.S. would withdraw its forces from the Korean Peninsula upon reunification.¹¹⁵ Such a deal could prove satisfying to all three participants.

China's interests on the Peninsula may complicate the efficacy of a deal on coordinated reunification. China has so far proven hesitant to apply comprehensive pressure to compel its neighbor to give up its nuclear program because it perceives a destabilized or collapsed North Korea to be more dangerous than a nuclear North Korea. China's priorities on the Korean Peninsula, as defined by Xi Jinping, are "no war, no instability, no nukes," in that order.¹¹⁶ If North Korea were to collapse, its existing nuclear weapons and materials could be diverted to hostile actors,¹¹⁷ and a wave of migrants might attempt to move northward which would stress the Chinese economy.¹¹⁸ Collapse of the Kim regime would also necessarily complicate China's use of the North as a buffer between itself and the U.S. If South Korea were to renege on a coordinated reunification deal and absorb North Korea while still aligned with the U.S., it could place U.S. ground troops on China's doorstep. China fought the Korean War to prevent exactly this scenario.¹¹⁹ Even if U.S. troops were to depart from South Korea after reunification, China would lose a valuable diversion to U.S. attention and resources, and China would have no

¹¹⁵ Kydd, "Pulling the Plug: Can There Be a Deal with China on Korean Unification?"

¹¹⁶ Max Fisher, "Why China still supports North Korea, in six little words," *Washington Post*, February 12, 2013, accessed March 5, 2017, https://www.washingtonpost.com/news/worldviews/wp/2013/02/12/why-china-still-supports-north-korea-in-six-little-words/?utm_term=.7568bfe1a51c.

¹¹⁷ Reynolds, "What Happens if North Korea Collapses?"

¹¹⁸ Revere, "Dealing with a nuclear-armed North Korea."

¹¹⁹ *Ibid.*

guarantee that U.S. forces would not be reassigned to containing China elsewhere in the region.¹²⁰ These concerns could hurt the prospects for Chinese follow-through on any deal.

A deal with the U.S. and South Korea on reunification would therefore have to be designed to mitigate these concerns. The U.S. and South Korea might try to convince China that although the Kim regime has so far avoided widespread discontent despite the suffering and impoverishment of its people, China has no guarantee that the Peninsula will remain stable in the future. If many analysts are to be believed, North Korea's nuclear weapons program will increase the probability of catastrophic conflict involving North Korea, which would inevitably result in instability on China's doorstep.¹²¹ This possibility would quickly disappear if South Korea were to assume control of the North. Reunification would also benefit the Chinese economy. Reunification would quickly raise the incomes of North Korea's 25 million residents, which would boost trade between China and the newly reunified Korean state. This additional trade would be especially welcome because the gravity model suggests that gains from trade would likely be disproportionately concentrated within China's troubled Northeast region.¹²² The U.S. would, however, encounter steep barriers to assuring China of its intention to leave the Korean Peninsula non-aligned. This deal represents an obsolescing bargain for China insofar as China would have very few options for dislodging U.S. troops if the U.S. were to renege and retain its alliance with South Korea. In this regard, the U.S. faces a credibility gap. China believes that NATO expansion after the collapse of the Soviet Union violated the spirit of a Soviet-NATO agreement not to deploy forces in East Germany which may complicate a negotiated settlement

¹²⁰ Jaewoo Choo, "China's Defense Against Post-unification Korea-US Alliance: Not at Yalu but Taiwan Strait," *East Asia*, Vol. 33 (September 2016): p. 197-212.

¹²¹ Fisher, "Why China still supports North Korea."

¹²² Xinhua, "China issues guidelines to rejuvenate northeast rust belt," November 17, 2016, accessed March 8, 2017, www.chinadaily.com.cn/business/2016-11/17/content_27404353.htm.

in Korea even though the deal did not prohibit such expansion.¹²³ This gap in trust could be overcome if the U.S. and China could agree to undergo a phased process in which the U.S. would gradually withdraw military presence and China would gradually escalate its economic sanctions. China's security concerns could be addressed under the framework of an agreement to reunify the Korean Peninsula.

South Korea would stand to gain the most from reunification. Collapse of North Korea would almost immediately remove the principal threat facing South Korea today. Although reunification does have the potential to be costly, a study by the Peterson Institute for International Economics suggests that both North and South Koreans would stand to benefit from reunification if the economic gap between North and South Korean citizens was closed through migration, rather than through private investment.¹²⁴ One barrier to South Korean acceptance of such a deal is South Korean citizens' overwhelming embrace of a cautious approach to reunification. One 2014 survey found that 70.5% of South Koreans favored reunification "dependent on circumstance" compared to 18% of South Koreans who favored reunification "as soon as possible."¹²⁵ That so many South Koreans favor reunification "dependent on circumstances" reveals that the real debate over reunification is over means, not ends. The means question is where reunification becomes divisive. Some in South Korea believe that rebuilding the North's moribund industry would pose unacceptable economic burdens on the

¹²³ Doug Bandow, "Will China Solve the North Korea Problem?" *CATO Institute*, December 6, 2016, accessed March 7, 2017, <https://object.cato.org/sites/cato.org/files/pubs/pdf/pa806.pdf> Steven Pifer, "Did NATO Promise Not to Enlarge? Gorbachev Says 'No'," *Brookings Institution*, November 6, 2014, accessed April 17, 2017, <https://www.brookings.edu/blog/up-front/2014/11/06/did-nato-promise-not-to-enlarge-gorbachev-says-no/>.

¹²⁴ Marcus Noland and Li-Gang Liu, "The Costs and Benefits of Korean Unification," *Peterson Institute for International Economics*, January 1998, accessed March 9, 2017, <https://piie.com/publications/working-papers/costs-and-benefits-korean-unification>.

¹²⁵ Bandow, "Will China Solve the North Korea Problem?"

South.¹²⁶ More immediately, however, South Korean support for reunification without a U.S. alliance could be shaken if North Korea could not be absorbed without significant bloodshed.¹²⁷ Even though a deal to reunify the Korean Peninsula would benefit South Korea the most in the long run, many practical barriers would need to be resolved to gain South Korea's approval.

Of course, the most important reaction in this equation is also the least predictable; Chinese pressure could prove insufficient to cause the collapse of the Kim regime. While Chinese sanctions would most certainly be painful – trade with China accounts for 90% of North Korea's trade and provides the North with otherwise scarce energy resources – the North has historically proven extremely resilient to famine, resource shortages, and poverty.¹²⁸ North Korea's domestic political context is also not conducive to revolution or rapid regime collapse, the threat of which would be necessary to compel North Korea's leadership to surrender to China. North Korea's civil society can be neatly divided into three categories: the bureaucracy, the military, and the rural majority. The Kim regime would likely pass on the burden of deep and comprehensive Chinese sanctions onto the rural majority, who have few opportunities to organize against the Kim regime and who therefore do not currently represent a serious threat.¹²⁹ Some lower members of the North Korean elite may suffer, but most of the Kim regime would pass the welfare costs of sanctions onto the peasantry and maintain its luxurious lifestyle through drug smuggling, counterfeiting, and illicit weapons sales.¹³⁰ Even if China, South Korea, and the

¹²⁶ Tom Phillips, "Costly and complicated – why many Koreans can't face reunification," *the Guardian*, October 9, 2015, accessed April 5, 2017, <https://www.theguardian.com/world/2015/oct/09/why-many-koreans-cant-face-reunification>.

¹²⁷ Bruce W. Bennett, *Preparing for the Possibility of a North Korean Collapse* (Santa Monica: RAND Corporation, 2013).

¹²⁸ Jennifer Lind and Daniel Byman, "Pyongyang's Survival Strategy: Tools of Authoritarian Control in North Korea," *International Security* (2010): p. 44-74.

¹²⁹ Bandow, "Will China Solve the North Korea Problem?"

¹³⁰ Lerner, "Patience, Not Preemption, on the Korean Peninsula."

U.S. could agree to the terms of a deal on reunification, it is by no means guaranteed that the North Korean regime would crumble.

Complications could arise even if sanctions were to prove effective in turning the military and bureaucracy against the Kim regime. North Korea might use or threaten to use its existing missiles and nuclear weapons in a desperate bid to compel the U.S., South Korea, and China to reverse the new sanctions. In theory, the U.S. would not have withdrawn its troops from South Korea until the latter had successfully absorbed the North; however, the U.S. may be forced to withdraw certain parts of its military presence from South Korea before the North's collapse to build trust with China.¹³¹ The U.S.'s scheduled deployment of THAAD has proven controversial, and China may demand that the U.S. stop the project as part of any deal on reunification.¹³² Without a missile defense shield, South Korea would be much more susceptible to North Korean nuclear and missile threats and a crisis involving these threats might shake South Korea's support for coordinated reunification. A crisis might also convince China that the risks of North Korean instability outweighed the benefits of reunification and U.S. withdrawal. After the imposition of sanctions, North Korea would likely precipitate a crisis that could in turn unravel even meticulously planned reunification.

Coordinated reunification could also create several negative externalities. In the process of collapse, Kim Jong Un or rogue elements of North Korea's military might sell nuclear technology, fissile material, or even nuclear weapons themselves to terrorists or other rogue states to bring much-needed revenue to shore up the Kim regime. For instance, some have speculated that if Saudi Arabia's security outlook deteriorates, it might offer North Korea oil in

¹³¹ Bandow, "Will China Solve the North Korea Problem?"

¹³² Eric Gomez, "THAAD and the Future of Strategic Stability in East Asia," *the Diplomat*, March 9, 2017, accessed March 9, 2017.

exchange for nuclear weapons technology.¹³³ Indeed, North Korea has already demonstrated a willingness to assist other rogue states in constructing nuclear infrastructure. After investigating a 2007 Israeli strike on a Syrian nuclear reactor, the State Department concluded that North Korea had likely assisted in the construction of the Syrian nuclear reactor given similarities in the reactor's design to North Korean nuclear reactors.¹³⁴ North Korea also came to be known as "Missiles R Us" in some intelligence circles due to its willingness to sell missiles to Syria, Iran, and Pakistan.¹³⁵ It is not difficult to imagine that financial desperation produced by Chinese sanctions would cause North Korea to seek other beneficiaries. Sale of nuclear technology to terrorist groups would enter uncharted waters in international affairs. While some maintain that states would never sell nuclear weapons to terrorist groups for fear of attribution and retaliation,¹³⁶ many have nonetheless speculated that sanctions-induced desperation could drive North Korea to sell nuclear weapons to terrorist organizations.¹³⁷ Those arguing that North Korea might sell its nuclear weapons to terrorists have pointed to North Korea's production and tests of bombs that primarily use highly-enriched uranium, which is much harder to detect compared to plutonium.¹³⁸ The possibility that North Korea might sell its nuclear weapons in response to escalating sanctions does, however, create a sense of urgency for sanctions proponents; if sanctions are imposed while North Korea still has relatively few nuclear weapons, North Korea

¹³³ Keck, "The Ultimate Nightmare: North Korea Could Sell Saudi Arabia Nuclear Weapons."

¹³⁴ Paul Kerr, Steven A. Hildreth, and Mary Beth D. Nikitin, *Iran-North Korea-Syria Ballistic Missile and Nuclear Cooperation* (CRS Report No. R43480) (Washington DC: Congressional Research Service, 2016), 6-7, <https://www.fas.org/sgp/crs/nuke/R43480.pdf>.

¹³⁵ Graham T. Allison, "North Korea's Lesson: Nukes for Sale," *New York Times*, February 12, 2013, accessed March 9, 2017, www.nytimes.com/2013/02/12/opinion/north-koreas-lesson-nukes-for-sale.html.

¹³⁶ Keir A. Lieber and Daryl G. Press, "Why States Won't Give Nuclear Weapons to Terrorists," *International Security*, Vol. 38, no. 1 (Summer 2013): p. 80-104.

¹³⁷ Richard N. Haass, "The Coming Confrontation with North Korea," *Council on Foreign Relations*, September 20, 2016, accessed March 9, 2017, www.cfr.org/north-korea/coming-confrontation-north-korea/p38328., June Park and Jonathan B. Miller, "Is North Korea's nuclear tech for sale?" *East Asia Forum*, November 3, 2016, www.eastasiaforum.org/2016/11/03/is-north-koreas-nuclear-tech-for-sale/.

¹³⁸ Allison, "North Korea's Lesson."

will be less likely to sell its nuclear weapons because the marginal value of each of the North's nuclear weapons will be greater than any of the North's potential buyers' willingness or ability to pay. If China agreed to cut off support to North Korea with the goal of collapsing the Kim regime, North Korea could respond by selling its nuclear weapons to other actors, multiplying the global proliferation threat.

An observer may reasonably conclude that Sino-U.S. relations would improve because of a deal to coordinate reunification. The North Korea problem has long been a thorn in the side of Sino-U.S. relations, and the issue seems set to deteriorate as North Korea develops a more potent nuclear arsenal. If, however, China were to enforce sanctions on North Korea as fully as possible, it would be fulfilling both Secretary of State Tillerson and Secretary of Defense Mattis's calls for China to carry its burden under international law.¹³⁹ Because of the high stakes involved for both countries, successful reunification could also create positive perceptions of the other as worthy negotiating partners.

Unfortunately, reunification would probably create more questions than answers for the Sino-U.S. relationship. If the North Korea threat were to disappear, the U.S. would be hard-pressed to justify its large-scale military presence elsewhere in the region, particularly in Japan. The U.S. has so far used the North Korean threat to argue that the Pacific Rebalancing is not intended to threaten China; absent the North Korea threat, Chinese policymakers could more easily portray the pivot as an attempt to contain China's rise. China has also historically used North Korea as a bargaining chip in bilateral diplomacy. North Korea offers the Chinese a problem that only China can solve, which allows Chinese leaders to use North Korea as a

¹³⁹ See: U.S. Congress, Senate, Committee on Armed Services, Mattis Confirmation Hearing, 115th Cong., 1st sess., http://www.armed-services.senate.gov/imo/media/doc/17-03_01-12-17.pdf; U.S. Congress, Senate, Committee on Foreign Relations, Tillerson Confirmation Hearing, 115th Cong., 1st sess., 2017, 1-6.

diversion to deflect U.S. criticism or pressure on a host of other issues from Chinese territorial expansion in the South China Sea to Chinese human rights abuses.¹⁴⁰ Without North Korea as a distraction, U.S. policymakers might feel emboldened to challenge China on these other issues, which would confirm Chinese leaders' suspicions that the U.S. seeks to contain China's rise. The U.S. and China would likely struggle over the details of the implications of a post-North Korea regional order which could intensify existing stresses in the diplomatic relationship.

The financial and human costs of a reunification deal would largely depend upon how negotiations define the U.S. military's role in achieving reunification itself. That result will in turn depend upon China's competing desires to rid the Peninsula of U.S. forces and avoid a costly intervention, South Korea's willingness and ability to contribute forces to a reunification mission, and the U.S.'s willingness to accept the risks of offloading WMD acquisition missions. Regardless of how these countries agree to share the burden, analysts estimate that stabilizing a post-collapse North Korea would require between 200,000 and 400,000 ground forces, with direct costs comparable to both the second Iraq War and the U.S. War in Afghanistan combined, or roughly \$1 trillion.¹⁴¹ These troops would be divided into several categories: stability missions, border control, elimination of WMD, disarmament of conventional weapons, and defeat of military resistance. By examining these missions, a likely division of labor emerges. South Korea would probably spearhead stability missions, southern border control, disarmament of conventional weapons, and defeat of military resistance because of its location and large amount of forces in theater give it an inherent advantage in these areas. South Korean leadership in these missions would also serve to establish the Korean Peninsula's autonomy. China would

¹⁴⁰ See: Bandow, "Will China Solve the North Korea Problem?"; Kydd, "Pulling the Plug."

¹⁴¹ See: Bruce W. Bennett and Jennifer Lind, "The Collapse of North Korea: Military Missions and Requirements," *International Security* (2011): p. 84-119; Stephen Daggett, "Costs of Major U.S. Wars," (CRS Report No. RS 22926) (Washington DC: Congressional Research Service, 2010), 6-7, <https://fas.org/sgp/crs/natsec/RS22926.pdf>.

assume responsibility for securing North Korea's northern border since it already has troops that have trained and prepared for such a contingency.¹⁴² The U.S. should specialize in elimination of North Korean WMD since it has the best intelligence, surveillance, and reconnaissance capabilities of these three countries, and since the U.S. would be most threatened if a terrorist group stole WMD during the chaos of reunification.¹⁴³ The cost of pursuing coordinated reunification largely hinges on the roles that U.S. forces play in providing security after the Korean Peninsula.

If U.S. forces are predominantly assigned to WMD elimination missions, the U.S. would contribute up to 10,000 personnel. The closest point of comparison for such a mission might be the U.S. campaign against the Islamic State of Iraq and Syria, the cost of which approached \$11 billion at the beginning of 2016 and the lives of nine of the nearly 5,000 U.S. service members currently serving in Iraq.¹⁴⁴ However, these costs might quickly rise if there are significant organized North Korean remnant forces. WMD elimination missions would account for the bulk of the financial and human cost to the U.S. of seeking coordinated reunification with China and South Korea.

¹⁴² *Reuters*, "China denies increasing troops on North Korean border," February 23, 2017, accessed March 9, 2017, www.reuters.com/article/us-northkorea-malaysia-kim-china-idUSKBN1620ZR.

¹⁴³ Charles Lee, "The Future of US-ROK Defense Cost Sharing," *the Diplomat*, January 21, 2017, accessed March 9, 2017, thediplomat.com/2017/01/the-future-of-us-rok-defense-cost-sharing/.

¹⁴⁴ See: Mary Pascaline, "Cost Of War Against ISIS: US Spending Over \$12 Million A Day In Fight Against Islamic State In Syria And Iraq," *International Business Times*, January 24, 2017, accessed March 9, 2017, www.ibtimes.com/cost-war-against-isis-us-spending-over-12-million-day-fight-against-islamic-state-2480149. For casualties see: "operation inherent resolve (OIR) U.S. casualty status," *U.S. Department of Defense*, last updated April 6, 2017, <https://www.defense.gov/casualty.pdf>; Helene Cooper, "U.S. to Send 600 More Troops to Iraq to Help Retake Mosul From ISIS," *New York Times*, September 28, 2016, accessed April 17, 2017, <https://www.nytimes.com/2016/09/29/world/middleeast/obama-troops-iraq.html>.

Prospects for Rolling Back North Korea's Nuclear Program by Force

The prospect of using force to eliminate North Korea's nuclear and missile facilities has recently re-entered policy discussions. During his visit to South Korea, Secretary of State Rex Tillerson announced that "all options are on the table" to stop North Korea's nuclear program, including the pre-emptive use of force to eliminate North Korea's nuclear and missile facilities.¹⁴⁵ Despite this renewed attention, this option faces serious technical and political challenges. The first and most obvious challenge would be eliminating enough of North Korea's nuclear and missile capabilities to make such a strike worthwhile. North Korean air defenses cannot detect or defend against stealth aircraft, so U.S. B-2 bombers and F-22 strike fighters could operate relatively freely in North Korean airspace even without destroying North Korean air defenses.¹⁴⁶ Notwithstanding this significant advantage, there is still no guarantee that the U.S. could eliminate North Korea's nuclear arsenal in a series of surgical strikes on the program.¹⁴⁷ Secrecy accounts for at least some of this difficulty.¹⁴⁸ While the infrastructure that North Korea needs to produce additional nuclear weapons is readily targetable, the North's existing nuclear weapons and delivery systems are well hidden. North Korea keeps its road-mobile missiles on patrol almost constantly, and when its missiles are not on patrol they are hidden in bunkers.¹⁴⁹ Since North Korea's existing nuclear arsenal is currently small, it would not be difficult for the North to enact a similar rotation for its nuclear warheads. At a minimum,

¹⁴⁵ See: Gearan and Fifield, "Tillerson says 'all options are on the table' when it comes to North Korea"; For more discussion of revival of the use of surgical strikes in military circles, see: John Power, "Trump Administration Puts Military Action Against North Korea Back on the Table," *the Diplomat*, March 3, 2017, accessed March 19, 2017, thediplomat.com/2017/03/trump-administration-puts-military-action-against-north-korea-back-on-the-table/.

¹⁴⁶ "What the U.S. Would Use to Strike North Korea."

¹⁴⁷ "Derailing a Nuclear Program by Force," *Stratfor*, January 3, 2017, accessed March 19, 2017, <https://www.stratfor.com/analysis/derailing-nuclear-program-force>.

¹⁴⁸ *Ibid.*

¹⁴⁹ Melissa Hanham, "Latest Test Shows How North Korea Is Hiding Its Missiles From Us," *the Daily Beast*, April 5, 2017, accessed April 5, 2017, www.thedailybeast.com/articles/2017/04/05/latest-test-shows-how-north-korea-is-hiding-its-missiles-from-us.html.

however, North Korea probably keeps its nuclear warheads in its extensive labyrinth of bunkers and tunnels.¹⁵⁰ The U.S. could adjust for this by striking targets suspected to be involved in North Korea's nuclear program, such as the Geumchang-ri Underground Facility or a suspected bunker at Hagap, but broadening the scope of a military strike also raises the risk of escalation since a broader strike would be more likely to be misperceived by North Korea as an attempt to decapitate the Kim regime, especially if the strike included the several missile bases and rocket factories in Pyongyang.¹⁵¹ A limited military strike could do significant damage to North Korea's nuclear and missile infrastructure; however, the U.S. could probably not destroy all of North Korea's nuclear weapons and their delivery devices without raising the risk of escalation to unacceptable levels.

Even if the U.S. and its allies were theoretically able to destroy all of North Korea's nuclear weapons and their delivery devices, a military strike would not end North Korean proliferation. North Korea produces the components needed for a functioning nuclear weapon domestically, so North Korea could simply rebuild its nuclear arsenal in the months and years after a strike.¹⁵² A strike would also further convince North Korean leadership of the necessity of its nuclear weapons, which would in turn complicate any future permanent political resolution of the nuclear issue.¹⁵³ A U.S. strike limited to North Korea's arsenal and known military nuclear facilities might slow – but not halt – North Korean proliferation.

¹⁵⁰ Mike Lyons, "What would a Trump-Tillerson War with North Korea Really Look Like?" *The Hill*, March 17, 2017, accessed March 19, 2017, thehill.com/blogs/pundits-blog/foreign-policy/324527-what-would-war-with-north-korea-really-look-like-trump.

¹⁵¹ See: Max Fisher, "The Risks of Pre-emptive Strikes Against North Korea," *New York Times*, March 18, 2017, accessed March 19, 2017, <https://www.nytimes.com/2017/03/18/world/asia/us-north-korea-weapons.html>; "North Korea Facilities -> Nuclear Map," Nuclear Threat Initiative, No Date, Accessed March 19, 2017, www.nti.org/gmap/nuclear_north_korea.html.

¹⁵² Fisher, "The Risks of Pre-emptive Strikes Against North Korea."

¹⁵³ *Ibid.*

A U.S. strike on North Korea's nuclear program could also complicate the goal of preventing war on the Korean Peninsula. If North Korea perceives U.S. strikes to be the first step in a broader invasion or an attempt to decapitate the Kim regime – due to fog of war or otherwise – it could retaliate using the full range of its remaining nuclear capabilities. After a strike, most of North Korea's launch pads would be wiped out which rules out direct retaliation against the U.S. mainland at present, but North Korea could still target Seoul, Tokyo, or U.S. bases in the Western Pacific using road-mobile intermediate range missiles and/or nuclear-armed attack submarines.¹⁵⁴ If North Korea feared regime change, it would probably strike one of these high value targets and then threaten further violence to force the U.S. and its allies to de-escalate.¹⁵⁵ The U.S. would have a very limited range of options to control escalation in this scenario. Even in a best-case scenario in which the U.S. successfully conveys to the North Korean leadership that the military strike is strictly meant to target nuclear facilities, North Korea might feel the need to retaliate using its artillery or cyber capabilities to prevent future strikes on its nuclear program. North Korea's initial reaction might be limited to attempt to avoid escalation to a full-scale war and to save ammunition – and thus leverage – in the hours immediately after the strike.¹⁵⁶ This is especially the case since North Korea's conventional artillery can be mobilized much more quickly than its nuclear forces.¹⁵⁷ Nevertheless, even a "limited" North Korean reaction would have to be severe enough to deter future strikes on its nuclear arsenal and limited

¹⁵⁴ "How North Korea would Retaliate," *Stratfor*, May 26, 2016, accessed November 15, 2016, <https://www.stratfor.com/analysis/how-north-korea-would-retaliate>.

¹⁵⁵ Brad H. Roberts, "Strategic Dead End or Game Changer?" in *Regional Missile Defense from a Global Perspective*, ed. Catherine Kelleher and Peter Dombrowski (Stanford: Stanford Security Studies, 2015), 253-254. Kindle Edition.

¹⁵⁶ See: "How North Korea would Retaliate."

¹⁵⁷ David Tweed, "Trump Finds Asian Allies Cool to U.S. Attack on North Korea," *Bloomberg*, April 12, 2017, accessed April 17, 2017, <https://www.bloomberg.com/politics/articles/2017-04-12/trump-finds-asian-allies-cool-to-preemptive-north-korea-strike>.

retaliation would therefore result in an escalatory U.S. response.¹⁵⁸ U.S. strikes on the North Korean nuclear program would almost inevitably result in instability on the Korean Peninsula.

Independent of the policy's efficacy, eliminating the North's nuclear program by force would create several negative externalities. China would be incensed if the U.S. undertook a military campaign to eliminate North Korean nuclear weapons without prior Chinese consent. The North Korean nuclear program provides China with both a diversion and leverage in the bilateral relationship because it represents "a problem that only China can solve." In diplomacy, China can promise actions to rein in North Korea in exchange for U.S. cooperation on other issues of Chinese interests.¹⁵⁹ Unilateral strikes would compromise this balance, so China might hesitate to cooperate with the U.S. on other issues on the bilateral agenda even in a best-case scenario in which the North Korean state remains largely intact and violence remains limited. A larger conflict would create proportionally larger problems for the U.S.-China relationship. On the one hand, China would likely hesitate to become directly involved in a military confrontation with the U.S. over North Korea, even if the North Korean state began to collapse.¹⁶⁰ On the other hand, a collapsing North Korea would send a vast wave of refugees northward into China, and the prospect of a U.S.-aligned unified Korean Peninsula on its frontier would be intolerable for China.¹⁶¹ Both of these factors would intensify strategic rivalry and would at a minimum cause China to perceive the U.S. as a reckless superpower seeking absolute security at others'

¹⁵⁸ Fisher, "The Risks of Pre-emptive Strikes Against North Korea."

¹⁵⁹ Kuhn, "Why China Wants To Squeeze North Korea A Little, But Not Too Much."

¹⁶⁰ Alex Lockie, "How China could stop a US strike on North Korea — without starting World War III," *Business Insider*, March 16, 2017, accessed March 19, 2017, www.businessinsider.com/china-response-us-first-strike-north-korea-2017-3/#any-response-from-china-would-likely-start-with-diplomacy-5.

¹⁶¹ Kydd, "Pulling the Plug: Can There Be a Deal with China on Korean Unification?"

expense.¹⁶² Striking North Korea's nuclear and missile program would antagonize China and hurt bilateral relations.

Attempting to destroy North Korea's nuclear program could also strain relations with U.S. allies Japan and South Korea. Japan and South Korea would bear the brunt of the consequences of U.S. strikes because of their proximity to North Korea and the limited range of North Korea's existing missiles.¹⁶³ If a pre-emptive military operation against North Korea spiraled into an all-out conflict and citizens in Japan and South Korea saw the U.S. as the aggressor, the political foundations of each alliance would come under pressure. Evidence suggests that Japanese and South Korean citizens still do not favor conflict with North Korea. Japan's Prime Minister struggled to gain support for the revision of Article IX of the Japanese Constitution to allow Japan's Self-Defense Force to come to the aid of an ally if attacked, and despite official consideration of pre-emptive strikes by some military officials, South Korea appears likely to elect center-left candidate Moon Jae-in who favors greater diplomatic and economic engagement with the North.¹⁶⁴ A 2016 poll of 1,010 South Korean citizens also found that 64.5% of South Korean citizens felt that "maintaining peace on the Korean Peninsula" should be the primary purpose of U.S. military presence in the region compared to only 50.8% who expected the U.S. to "defend South Korea."¹⁶⁵ The Japanese and South Korean publics might view the U.S. as recklessly entrapping them into a dangerous and unnecessary conflict,

¹⁶² Kuhn, "Why China Wants To Squeeze North Korea A Little, But Not Too Much."

¹⁶³ "How North Korea would Retaliate."

¹⁶⁴ See: Power, "Trump Administration Puts Military Action Against North Korea Back on the Table"; Matt Stiles, "South Korea's upcoming presidential election could reshape its relations with North Korea — and the U.S.," *Los Angeles Times*, March 15, 2017, accessed March 19, 2017, www.latimes.com/world/asia/la-fg-south-korea-election-20170314-story.html.

¹⁶⁵ "The 4 th Japan-South Korea Joint Public Opinion Poll (2016) Analysis Report on Comparative Data," *The Genron NPO and East Asia Institute*, July 2016, accessed April 5, 2017, http://www.genron-npo.net/pdf/forum_2016_en.pdf.

especially if North Korea were to retaliate by targeting civilian population centers in either country. However, even if North Korea did not retaliate at all, U.S. strikes could damage the North Korean reactor at Yongbyon which would expose the populations of both Japan and South Korea to a radioactive leak.¹⁶⁶ U.S. military action against North Korea could harm alliance cooperation with Japan and South Korea, particularly if conflict were to erupt or if the North Korean reactor at Yongbyon were to become a radioactive health hazard.

Cost and casualty estimates vary widely because North Korea's reaction is difficult to predict. Different estimates tend to assume different North Korean reactions to U.S. strikes. As mentioned earlier, since the U.S. would limit its targets to only nuclear weapons production facilities and some missile production facilities, it may be able to avoid full-scale conflict by convincing North Korean leadership of the limited goals of such an operation. Because North Korean leaders may understand that they would not be able to control any escalation, they may limit their response to gray-zone provocations such as cyber warfare.¹⁶⁷ In this best-case scenario, strikes against North Korea's nuclear facilities would cost the U.S. about as much as the 2011 air war in Libya, or approximately \$1.1 billion.¹⁶⁸ While the U.S. was responsible for only a fraction of strikes in Libya, the no-fly zone involved a protracted campaign to keep Gaddafi's air forces grounded, rather than a single campaign to strike a series of hardened targets.¹⁶⁹ The \$1.1 billion baseline figure may increase to around \$2 billion when one considers that the U.S. might opt to use B-2 bombers carrying Massive Ordnance Penetrator bombs to

¹⁶⁶ Kwon, "The U.S.-ROK Alliance in Coping with North Korea's Nuclear Threat."

¹⁶⁷ "The Cost of Intervention," *Stratfor*, January 6, 2017, accessed March 19, 2017, <https://www.stratfor.com/analysis/cost-intervention>.

¹⁶⁸ Kevin Baron, "For the U.S., War Against Qaddafi Cost Relatively Little: \$1.1 Billion," *the Atlantic*, October 21, 2011, accessed November 27, 2016, www.theatlantic.com/international/archive/2011/10/for-the-us-war-against-qaddafi-cost-relatively-little-11-billion/247133/.

¹⁶⁹ *Ibid.*

destroy hardened targets.¹⁷⁰ In the highly unlikely scenario in which North Korea limits its retaliation to hostile rhetoric and perhaps a token cyber-attack, an operation to destroy North Korea's nuclear program would cost the U.S. much less than \$10 billion to prosecute.

However, North Korea will probably retaliate beyond gray-zone provocations even if the U.S. properly signals its limited intent. North Korean leadership would almost certainly face pressure to take serious retaliatory action to deter the U.S. and its allies from striking its nuclear program in the future because it views a nuclear deterrent as necessary for survival. Short of nuclear escalation, North Korea could use its artillery to strike targets south of the DMZ.¹⁷¹ Most North Korean artillery cannot reach Seoul, so it is more likely that North Korea would target U.S. and South Korean bases along the DMZ. Retaliation in this scenario would also be limited for several reasons. First, North Korea would not be able to use the full force of its artillery without placing these forces at serious risk.¹⁷² Second, North Korean leadership understands its conventional inferiority and would attempt to keep retaliation below the threshold of a full-fledged conflict that the North would surely lose.¹⁷³ Third, North Korea has a limited amount of artillery ammunition and short-range ballistic missiles in the short-term, so every piece fired proportionally reduces its ability to deter the U.S. and South Korea from escalating a conflict further.¹⁷⁴ If conflict remained limited to a brief exchange of artillery fire, the entire conflict would not cost much more than the Persian Gulf War, or \$102 billion in 2011 dollars.¹⁷⁵ The

¹⁷⁰ W.J. Hennigan, "Boeing delivers first batch of 30,000-pound bombs to Air Force," *LA Times*, November 16, 2011, accessed November 27, 2016, articles.latimes.com/2011/nov/16/business/la-fi-bunker-buster-bomb-20111117

¹⁷¹ "How North Korea would Retaliate."

¹⁷² See: Ibid.; "The Cost of Intervention," *Stratfor*, January 6, 2-17, accessed March 19, 2017, <https://www.stratfor.com/analysis/cost-intervention>.

¹⁷³ Kwon, "The U.S.-ROK Alliance in Coping with North Korea's Nuclear Threat."

¹⁷⁴ Alex Lockie, "Here's how a preemptive strike on North Korea would go down," *Business Insider*, March 17, 2017, accessed March 22, 2017, www.businessinsider.com/us-preemptive-strike-north-korea-2017-3.

¹⁷⁵ Daggett, "Costs of Major U.S. Wars."

U.S. casualty rate, however, might be higher because North Korea would likely target military bases. North Korea might respond to surgical strikes on its nuclear program by using its artillery in a limited fashion to signal resolve and impose costs on the U.S. and South Korea.

In a worst-case scenario, North Korea might use its nuclear arsenal. This scenario seems more likely than the preceding scenarios for several reasons. North Korea could misinterpret U.S. strikes on its nuclear arsenal as an attempt to force regime change. If this were the belief, North Korea would use nuclear weapons early on to attempt to stop the dissuade the U.S. from pursuing regime change. Even if North Korea correctly perceived the limited nature of U.S. strikes, however, its leadership might use its nuclear or chemical and biological weapons to dissuade the U.S. from striking the North's nuclear program in the future. North Korea might launch nuclear weapons at U.S. military bases in South Korea and use its remaining nuclear arsenal to threaten Seoul, Tokyo, or other U.S. bases to attempt to force the U.S. to back down. A successful North Korean nuclear attack on U.S. military bases in South Korea could cost the lives of up to 28,500 U.S. service members.¹⁷⁶ Nuclear use – successful or otherwise – could make further escalation difficult to control and the U.S. would likely expand its war aims to regime change.¹⁷⁷ General Curtis Scaparrotti, the commander of U.S. Forces in Korea (USFK) testified before the House Armed Services Committee that the casualties and cost of a full-fledged resumption of hostilities on the Korean Peninsula would be comparable to the first Korean War.¹⁷⁸ That war cost the U.S. \$341 billion in 2011 dollars and 36,914 U.S. lives – ten

¹⁷⁶ Eaglen, "US military force sizing for both war and peace."

¹⁷⁷ Steven Metz, "Strategic Horizons: Thinking the Unthinkable on a Second Korean War," *World Politics Review*, March 13, 2013, accessed April 4, 2017, www.worldpoliticsreview.com/articles/12786/strategic-horizons-thinking-the-unthinkable-on-a-second-korean-war.

¹⁷⁸ Jung E-gil, "Another war in Korea 'would be more akin to the Korean War and World War II'," *the Hankyoreh*, February 27, 2016, accessed March 19, 2017, english.hani.co.kr/arti/english_edition/e_northkorea/732401.html.

times the amount lost in the 2003 Iraq War.¹⁷⁹ Surgical strikes on North Korea's nuclear program could inadvertently cause a resumption of full-scale conflict on the Korean Peninsula if North Korea mistook strikes as an attempt to dismantle the Kim regime.

Conclusion

There is no perfect solution for North Korea's nuclear program. In an imperfect world in which there are only bad options for the United States, strategic patience represents the best framework for approaching the Korean Peninsula in terms of efficacy, externalities, and cost. Table 1 summarizes these findings. This conclusion is based on the assessment that although strategic patience will probably not result in the de-nuclearization of the Korean Peninsula within the foreseeable future, the strategy is unlikely to create any major disruptions on the precarious Korean Peninsula. The risks of North Korean nuclear proliferation are simply not worth the risk of renewed conflict or instability on the Korean Peninsula. North Korean nuclear proliferation will be slow; as explained earlier, North Korea may gradually increase its ability to deliver a nuclear warhead to the continental U.S., but it will be well over a decade before North Korea has a credible nuclear deterrent vis-à-vis the United States.

¹⁷⁹ See: Dagget, "Costs of Major U.S. Wars"; "How Many Americans Died In Korea?" *CBS News*, June 5, 2000, accessed April 5, 2017, www.cbsnews.com/news/how-many-americans-died-in-korea/.

Table 1

	Strategic Patience	Coordinated Reunification	Surgical Strikes
Efficacy	Will not dismantle North Korean nuclear program; may result in North Korean ICBM; allows continued deterrence and assurance of Japan and South Korea	May not gain Chinese support; Chinese sanctions may not be sufficient to collapse the North; successful reunification would end North's nuclear threat	Will not destroy many of North Korean nuclear weapons; will slow production of new nuclear weapons
Externalities	Expanded U.S.-R.O.K. defense cooperation; contains R.O.K.-Japan disputes; may exacerbate existing U.S.-China rivalry	North Korea may sell its nuclear weapons; may damage U.S.-China relations	Serious damage to U.S.-China relations; strained relations with Japan and South Korea in the event of major retaliation
Cost	\$900 million annually to base troops in R.O.K.; small fraction of \$2b/annual basing cost in Japan; small fraction of theater missile defense procurement costs	\$11 billion for WMD retrieval missions; \$1 trillion total with R.O.K. bearing much of the burden	Minimum \$1.1 billion on top of annual costs of strategic patience; potentially \$341 billion and 36,000 American lives depending on North Korean response

Strategic patience will probably not denuclearize the Korean Peninsula and North Korea may eventually develop an ICBM capable of hitting the U.S. homeland, which means that strategic patience will not achieve the primary goals of the Trump administration. Still, the alternatives to strategic patience unacceptably raise the risks of a major crisis on the Korean Peninsula in the short term and such a conflict would not be worth even the denuclearization of the Peninsula. None of the policies outlined in this paper will eliminate North Korea's nuclear program without prohibitive negative externalities or costs. Coordinated reunification might have the greatest efficacy of all the options in that it would eliminate the North Korean threat, but it might also have the most detrimental negative externalities if the Kim regime were to lash out

against U.S.-aligned countries, if the Kim regime's disintegration were to culminate in a bloody civil war, or if North Korean leadership were to sell nuclear weapons technology to other rogue states or terrorists. The surgical strike option would be ineffective and would come with significant externalities and costs. Surgical strikes on North Korea's nuclear program would not permanently extinguish the threat of North Korean nuclear weapons and risk permanently damaging U.S.-China relations or worse – catastrophic North Korean retaliation. Importantly, while neither of these options appear prudent in the short term, strategic patience does not necessarily foreclose either of these options if circumstances turn against the strategy.

The externalities of strategic patience also decisively weigh in favor of the policy. While strategic patience contains some elements that strain relations with China, relations have hardly approached a breaking point over North Korea despite more forceful U.S. rhetoric on the issue. Both the coordinated reunification and pre-emptive strike options, however, could strain relations in other more severe ways. Both the U.S. and China agree in principle (if not priority) that North Korea's nuclear program is an issue. Removing that item from the agenda could cause the U.S. to re-focus engagement with China on other more contentious security issues such as human rights or the South China Sea. Dismantling North Korea's nuclear program by force could also draw serious Chinese ire, especially if military action were to result in a U.S.-aligned Korean Peninsula. Since no policy on North Korea will decisively improve U.S.-China relations and the North Korean nuclear program is unlikely to fracture relations absent a disruptive event such as a war, risky departures from the status quo are not warranted. Strategic patience also serves to mitigate security rivalry between South Korea and Japan by aligning the two against a common threat in North Korea. Strategic patience offers a net safer world than the other options.

Finally, strategic patience can be achieved at a low cost of blood and treasure compared to other options. Strategic patience's primary costs come from U.S. military presence in the region, but Japan and South Korea contribute substantial amounts of resources to defray these costs. Coordinated reunification may reduce basing costs if it were to remove the need to maintain U.S. military presence in South Korea, but even successful reunification would not necessarily remove the need for military presence in Japan. This marginal cost reduction is not sufficient to justify risking a destructive conflict in Northeast Asia or North Korean sale of nuclear technology to other rogue states or terrorists. Pre-emptive strikes on North Korea's nuclear program would not reduce basing costs at all because they would not decisively eliminate the North Korean nuclear threat. Moreover, pre-emptive strikes would pose an even greater risk of a conflict with North Korea that could cost the lives tens of thousands of U.S. service members, to say nothing of the catastrophic loss of life that would ensue if North Korea used nuclear weapons against Seoul or Tokyo in response to U.S. strikes. Table 1 summarizes the comparative efficacy, externalities, and costs of each policy. Strategic patience may not be the ideal arrangement for the United States in Northeast Asia, but it is more workable than the alternatives.

The Trump administration can take several steps both to improve the political viability of strategic patience and to mitigate the negative externalities associated with the policy. Despite Secretary of State Tillerson's announcement that "the policy of strategic patience has ended," the Trump administration has yet to materially depart from the Obama administration's playbook in responding to North Korea. This gives the Trump administration significant flexibility in determining which aspects of the Obama-era policy to continue and which to de-emphasize. For example, Trump could portray his strategy as more muscular than strategic patience to domestic

audiences if he placed greater rhetorical emphasis on strategic patience's efforts to contain North Korea. For example, Trump could point to implementation of secondary sanctions and greater alliance coordination on missile defense – in line with this paper's recommendations – as a point of contrast with Obama's strategic patience.

While Trump might receive positive reactions from his own party, some of the defense investments outlined in this paper – especially improvements in U.S. homeland missile defense and long range conventional strike systems – may prove difficult to implement in Congress. Democrats in Congress have historically accepted that the U.S. homeland missile defense system can defend the U.S. from a small attack by a rogue state, but as North Korea's nuclear arsenal expands questions might arise about the system's technical capability and cost-efficiency.¹⁸⁰ Spending more money on capabilities meant to defend Japan and South Korea might also raise hackles among isolationist or libertarian-leaning elements of Trump's base, especially after Trump criticized the two countries for failing to adequately finance their own defense.¹⁸¹ Neither of these obstacles are insurmountable, however, as Trump can ally with hawkish elements of his own party and point to North Korea's expanding nuclear arsenal as rationale for expansion of the U.S. missile defense system. Strategic patience may not be a perfect solution to North Korea's nuclear program, but it represents the least dangerous and most feasible means of living with the problem.

¹⁸⁰ Nancy Gallagher, "Congress and Missile Defense," in *Regional Missile Defense from a Global Perspective*, ed. Catherine Kelleher and Peter Dombrowski (Stanford: Stanford Security Studies, 2015), 98-100. Kindle Edition.

¹⁸¹ Jesse Johnson, "Trump rips U.S. defense of Japan as one-sided, too expensive," *Japan Times*, August 6, 2016, accessed April 4, 2017, www.japantimes.co.jp/news/2016/08/06/national/politics-diplomacy/trump-rips-u-s-defense-japan-one-sided-expensive/#.WOadbNLyviU.

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