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NUCLEAR DETERRENCE AND NORTH KOREA—DISSUASION OR PERSUASION?

by

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December 2019

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The threat of nuclear war has been a possibility since the first atomic device was invented during World War II. From the end of World War II through the Cold War period, the greatest risk of nuclear proliferation was between the main superpowers at the time, the United States and the Soviet Union. U.S. nuclear deterrence doctrine promised mutually assured destruction (MAD): if the Soviets were to launch a nuclear missile at the United States, the United States would retaliate in such a way to ensure the annihilation of the Soviet Union.

The global economic, social, and political environment has changed since the end of the Cold War; however, the threat of atomic warfare still exists with the emergence of the Democratic People's Republic of North Korea as a nuclear threat. This thesis explores the question of whether the doctrine developed during the Cold War is still valid: Is the U.S. nuclear strategy sufficient to deter North Korea from attacking the United States and its allies in the East Asian region? In formulating an answer to the question, the author analyzed the motivations, perceptions, and intentions of North Korea's regime from the country's formation to present day. While it is clear that the original Cold War MAD doctrine will not work for North Korea, it is recommended that the right combination of MAD elements, conventional forces, UN sanctions, and negotiations will provide a chance for the denuclearization of the Korean Peninsula to become a reality.

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NUCLEAR DETERRENCE AND NORTH KOREA—DISSUASION OR PERSUASION?

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ABSTRACT

The threat of nuclear war has been a possibility since the first atomic device was invented during World War II. From the end of World War II through the Cold War period, the greatest risk of nuclear proliferation was between the main superpowers at the time, the United States and the Soviet Union. U.S. nuclear deterrence doctrine promised mutually assured destruction (MAD): if the Soviets were to launch a nuclear missile at the United States, the United States would retaliate in such a way to ensure the annihilation of the Soviet Union.

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LIST OF ACRONYMS AND ABBREVIATIONS

CIA	Central Intelligence Agency
CISAC	Center for International Security and Cooperation
DOD	Department of Defense
DPRK	Democratic People's Republic of North Korea
FBI	Federal Bureau of Investigation
IAEA	International Atomic Energy Agency
ICBM	intercontinental ballistic missile
LUA	Launch Under Attack
MAD	mutually assured destruction
NATO	North Atlantic Treaty Organization
NPT	Treaty on the Non-Proliferation of Nuclear Weapons
NSC	National Security Council
ROK	Republic of Korea
THAAD	Terminal High-Altitude Area Defense
UN	United Nations

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EXECUTIVE SUMMARY

The threat of nuclear war has been a possibility since the creation of the first nuclear bomb on July 16, 1945.[1] Throughout the Cold War, the presence of nuclear weapons shaped the foreign policies of the countries engaged in the war. The global economic, social, and political environment shifted at the end of the Cold War; however, the threat of nuclear war has not declined. In fact, nuclear proliferation has only increased and some of these countries are American adversaries.[2] The Democratic People's Republic of North Korea (DPRK) stands out as major threat in the East Asia region for the United States; it refuses to participate in the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and continues to work toward nuclear weaponization. The new setting also creates possibilities for terrorist organizations that may benefit from such nations. The present-day environment brings uncertainty into whether the previous U.S. nuclear doctrine that developed during the Cold War is sufficient as a deterrent for such nations. This thesis then examines U.S. doctrine in the context of the current East Asian region. Does the U.S. doctrine need modification due to the current security environment?[3]

Upon the development of nuclear weapons by the United States followed soon by the Soviets, the United States developed a doctrine of nuclear deterrence in the mid-1960s to apply in the context of the Cold War.[4] Under this doctrine, "the superpowers would refrain from attacking each other because of the certainty of mutual assured destruction, better known as MAD."[5] The concept was straightforward: to persuade an

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[1] "51f. The Manhattan Project," U.S. History, accessed May 19, 2019, http://www.ushistory.org/us/51f.asp.

[2] David Ochmanek and Lowell H. Schwartz, *Challenge of Nuclear-Armed Regional Adversaries* (Santa Monica: RAND, 2008), xi, https://ebookcentral.proquest.com/lib/ebook-nps/detail.action?docID=357890.

[3] "Nuclear Weapons," United Nations Office for Disarmament Affairs, accessed June 26, 2018, https://www.un.org/disarmament/wmd/nuclear/.

[4] "Cold War: A Brief History, Nuclear Deterrence," Atomic Archive, accessed June 9, 2019, http://www.atomicarchive.com/History/coldwar/page15.shtml.

[5] Atomic Archive.

adversary that the risks and costs of the proposed action were too great.[6] This doctrine was designed to achieve a balance by the presence of nuclear and conventional weapons that could ensure total destruction of the Soviet Union. Although several instances almost brought the world to the "brink of nuclear war,"[7] the doctrine effectively prevented nuclear war. Therefore, the doctrine is deemed effective.

The North Korean regimes had a different take on the need for nuclear weapons. Their interpretation of the need was based on their historical perceptions due to the wars in the region that produced arms development as "critical to regime survival."[8] Spurred on by the close military alliance between the United States and South Korea during the violent Korean War, the Kim regime sought a way to ensure the survival of his regime. His solution was to develop a nuclear capability that could balance out the United States and its allies. The Kim regime also sought to increase its stature in the world through a stance of a nuclear power. The end of the Soviet Union, an important ally and the expanded Chinese relations with the West, produced further insecurities in the regime that has speeded up its nuclear development in the past decade.

The development of nuclear-armed North Korea raises the question of whether the Cold War deterrence doctrine is an effective deterrence against North Korea. To make that determination, the United States first has to identify what type of adversary North Korea is and its motivations. The United States has to determine what degree of threat exists and how to mitigate that threat. More recently, a rash of inflammatory rhetoric between President Trump and Kim Jung-un has complicated matters, which has casted a shadow over the intentions of either leader.

This thesis analyzes the aforementioned factors to determine if (1) North Korea could be deterred from expanding its military capabilities, and if so, (2) could the Cold

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[6] Richard Bush et al., *U.S. Nuclear and Extended Deterrence: Considerations and Challenges* (Washington, DC: Brookings, 2010), 1, https://www.brookings.edu/research/u-s-nuclear-and-extended-deterrence-considerations-and-challenges/.

[7] Ben Brimelow, "9 Times the World Was at the Brink of Nuclear War—and Pulled Back," Business Insider, April 25, 2018, https://www.businessinsider.com/when-nuclear-war-almost-happened-2018-4.

[8] "North Korea Nuclear: U.S. Intelligence Report Says Regime to Keep Weapons," BBC News, January 30, 2019, https://www.bbc.com/news/world-us-canada-47051606.

War doctrine work to deter North Korea, and (3) if not, what type of changes would ultimately result in deterrence. The United States, United Nations, and other industrialized countries have taken broad steps to deter North Korea's nuclear development through the imposition of economic and military sanctions but are these effective tools? To answer these questions, the thesis analyzes the factors that shape the mindset of the North Kore regime. The thesis explores North Korea's history from its inception to the present, as well as the impact of economic woes including the great North Korean famine to gain an understanding of its policy-making foundations. It also analyzes the relationship between North Korea, the United States, and South Korea to provide an understanding of the threat the U.S.-South Korean alliance presents to North Korea.

The information presented in this thesis leads to three recommendations to policy makers in regard to what approach would most likely deter North Korea from initiating a nuclear attack against the United States. These recommendations also address whether denuclearization of North Korea is a possibility.

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I. INTRODUCTION

The threat of nuclear war has been a possibility since the weapons were invented during World War II. From the end of World War II through 1991, the Cold War period, the greatest risk of nuclear proliferation was between the United States and the Soviet Union as the main superpowers at the time. During that period, an arms race ensued between the two superpowers that led to an emergence of the American nuclear deterrence doctrine to prevent a Soviet nuclear attack in the United States. This doctrine put a process in place that would ensure that if the Soviets were to launch a nuclear missile at the United States, the United States would retaliate in such a way to ensure the total destruction of the Soviet Union, and the costs would far outweigh the perceived benefits for the Soviets. This strategy appeared to work since no country used nuclear options during this period.

The global economic, social, and political environment has changed since the end of the Cold War; however, the threat of nuclear war has not declined. In fact, nuclear proliferation has increased the number of countries that have the weapon, which therefore increases the chances for using it. Several other countries now have the capability to launch a nuclear missile, and some of these countries are currently identified as U.S. adversaries.[1] One such adversary is the Democratic People's Republic of North Korea (DPRK) that considers the United States to be a threat; a position it developed during the Cold War and has refused to participate in the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). The new setting requires some consideration of such nations that are outside the NPT, as well as the possibility of terrorist organizations that may benefit from such nations' relationship with the United States. The present-day environment brings uncertainty into whether the previous U.S. nuclear doctrine is insufficient as a deterrent for such nations that have developed a weapon and are American adversaries. This thesis then explores the broader question of whether the original doctrine developed during the

[1] David Ochmanek and Lowell H. Schwartz, *Challenge of Nuclear-Armed Regional Adversaries* (Santa Monica, CA: RAND, 2008), 12, https://ebookcentral.proquest.com/lib/ebook-nps/detail.action?docID=357890.

Cold War is still valid in the current global political and economic setting by asking the important question of whether the current U.S. nuclear strategy is sufficient to deter North Korea from attacking the United States and its allies in the East Asian region. Does the U.S. strategy need modification? Although regional conflict plays a significant role in shaping the current security environment, the nuclear issue remains a global threat.[2]

The research for this thesis is conducted through an examination of past reports, academic literature, professional journals, and other data that provides a background on the evolution of the various versions of deterrence, as well as data related to the interpretation of U.S. doctrine by foreign governments and terrorists. This research is significant because it re-assesses the existing U.S. doctrine in the new context of global threats. It identifies if any gaps have emerged in the nuclear doctrine due to the changing post–Cold War setting. Its importance is apparent; not understanding the shifts in the changing global setting could lead to an intentional or unintentional nuclear attack.

A. RESEARCH QUESTION

- Is classic nuclear deterrence still applicable today?

The Cold War setting in which classic nuclear deterrence was designed has clearly changed over the years. Any nuclear exchange between the superpowers had global implications, both politically and economically. Today's security issues emerge out of a regional setting (i.e., North Korea) where the actors are not superpowers, yet they impact global security due to expanded global economies, as well as environmental concerns. A nuclear exchange would affect the region but also impact economies across the world. This thesis examines whether U.S. deterrence doctrine developed in the Cold War against threats from superpowers applies to deterring threats from regional powers, such as North Korea. Is the current U.S. deterrence strategy sufficient to deter North Korea from attacking U.S. territories or the mainland and its allies, such as South Korea and Japan? What changes, if any, are necessary to make U.S. doctrines effective against North Korea? This topic is important because currently the United States and its regional

[2] "Nuclear Weapons," United Nations Office for Disarmament Affairs, accessed June 26, 2018, https://www.un.org/disarmament/wmd/nuclear/.

allies face a potential threat from North Korea, as demonstrated by recent threats by Kim Jong-Un toward the United States and its allies.[3] It is also significant because the United States and North Korea are currently engaged in diplomacy to normalize relations and U.S. deterrent strategy is important to negotiate from position of strength.

B. LITERATURE REVIEW

The purpose of this literature review is to determine how the nuclear framework developed in Cold War world has changed and to assess whether the American nuclear deterrence doctrine is still appropriate today. The following literature is necessary to understand the doctrine, as well as the new setting; it provides the framework to study the contemporary issues that faces the world. The review is divided into the following sections: defining deterrence doctrine, does deterrence work, does deterrence create more harm than good, and is North Korea a nuclear threat to the United States or its allies? Gathered from a diversity of research from academics, policy analysts, and journalists, the literature provides a framework for understanding the problem confronting the United States in the changed global nuclear context.

1. Defining Deterrence Doctrine

The Department of Defense (DOD) defines deterrence as "the prevention of action by the existence of a credible threat of unacceptable counteraction and/or belief that the cost of action outweighs the perceived benefits."[4] Classical deterrence doctrine is based on ensuring that nuclear war is deemed so costly that only a misguided leader would consider the use of nuclear weapons to be a means of conflict resolution.[5] During

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[3] Jonathan Kaiman, "North Korea Threatens to Turn U.S. Mainland into a 'Theater of Nuclear War'," *Los Angeles Times*, August 9, 2017, http://www.latimes.com/politics/washington/la-na-essential-washington-updates-north-korea-threatens-to-turn-u-s-1502294652-htmlstory.html. Also note that the Korean war ended with an armistice agreement but not with a formal agreement. U.S. forces are still deployed on the 38th Parallel and have been since 1953.

[4] Joint Chiefs of Staff, *Department of Defense Dictionary of Military and Associated Terms*, JP 1-02, amended (Washington, DC: Joint Chiefs of Staff, 2015), 67, www.hsdl.org/?abstract&did=750658.

[5] Frank Zagare and D. Marc Kilgour, *Perfect Deterrence* (New York: Cambridge University Press, 2000), 17, https://books.google.com/books?id=9lWUxFvn9dMC&pg=PA7&dq=classical%2Bdeterrence%2Bdoctrine&hl=en&sa=X&ved=0ahUKEwj0luKf3NLYAhVPMd8KHXmsDXcQ6AEIMjAB#v=onepage&q=classical%20deterrence%20doctrine&f=false.

the Cold War, "the Soviet Union produced a situation of mutual deterrence, often referred to as 'mutual assured destruction,' by ensuring that its nuclear forces targeted the United States."[6] Realist scholars, such as Hans Morganthau, Henry Kissinger, and Inis Claude, suggest that such a balance of capabilities is the basis for classical deterrence doctrine in that parties with the same strike capabilities will not engage in an attack due to a fear of destructive retaliation.[7] The balance of terror builds on the balance of power. The balance of terror is defined as "the balance of power between nations that are equipped with nuclear weapons, stemming from their fear of mutual annihilation in a nuclear war."[8] However, when one actor has no significant advantage, motivation does not exist to disturb the stability.[9] Michael Barretta's analysis of Glenn Snyder's theory of stability–instability paradox hinges on a comparison of deterrence and nonproliferation doctrine.[10] Barretta's research provides numerous sources on variations of other deterrence theories including the theories of flexible response and assured destruction.[11] This research examines the current U.S. doctrine in the current context. Does the definition supported by Snyder or Barretta work in the North Korean case, or does a better functional definition exist?

2. Does Deterrence Work?

Scholars have debated whether American deterrence still works in the current global context, particularly in understanding the case of North Korea. Some experts suggest that the absence of any nuclear attacks on the United States is evidence that nuclear deterrence is working. Other scholars suggest that deterrence is working in both

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[6] Richard Bush et al., *U.S. Nuclear and Extended Deterrence: Considerations and Challenges* (Washington, DC: Brookings, 2010), 1, https://www.brookings.edu/research/u-s-nuclear-and-extended-deterrence-considerations-and-challenges/.

[7] Zagare and Kilgour, *Perfect Deterrence*, 7.

[8] *Dictionary*, "Balance of Terror," accessed June 27, 2018, http://www.dictionary.com/browse/balance-of-terror.

[9] Herman Kahn, *On Thermonuclear War* (Princeton: Princeton University Press, 1960), 12.

[10] Michael A. Barretta, "Nuclear Proliferation and the Stability-Instability Paradox" (master's thesis, Naval Postgraduate School, 1995), 4, https://calhoun.nps.edu/handle/10945/31401.

[11] Michael A. Barretta, "Nuclear Proliferation and the Stability-Instability Paradox" (master's thesis, Naval Postgraduate School, 1995), 34.

directions. While U.S. deterrence doctrine applied against North Korea has succeeded in deterring North Korea, the same is true for North Korea in deterring the United States. A panel that convened at Stanford's Center for International Security and Cooperation (CISAC) in 2017, consisting of experts, such as Scott D. Sagan, Mira Rapp-Hooper, and Vipin Narang, concluded that Kim Jong-un's objective is to preserve his regime and that he recognizes a nuclear confrontation with the United States would result in its destruction. While Kim Jong-un has refrained from perpetrating a nuclear attack against the United States, equally North Korean nuclear deterrence has enabled regime survival despite U.S. efforts to undo it through kinetic means.

Fred Kaplan suggests that North Korea is moving rapidly to build its nuclear arsenal to deter other countries from attacking its regime.[12] North Korea believes that a regime in possession of such a powerful weapon can be the ultimate deterrent against regime change.[13] In essence, rather than having deterrence being applied against them, they are the ones dictating deterrence. Another scholar asserts that "there is pretty broad agreement that Kim Jong Un wants a nuclear arsenal, including a nuclear-armed ICBM that could put cities and targets in the United States at risk, to deter an attack and to ensure survival and prevent regime change."[14] North Korea seems closer in meeting its objective. Nuclear capability enabled North Korea to have two summit meetings with the United States at the time of this writing. These meetings present a problem because if North Korea is dictating deterrence, it serves to weaken the U.S. deterrence strategy by taking away its control. This weakening is problematic because it generates doubt as to the appropriateness of U.S. deterrence doctrine's viability to North Korea, since by having these weapons; North Korea is not at a disadvantage. North Korea may be dictating terms to the United States.

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[12] Fred Kaplan, "Don't Panic about North Korea's Nukes: The Hysteria Is Only Making Things Worse," *Slate*, September 5, 2017, http://www.slate.com/articles/news_and_politics/war_stories/2017/09/why_nuclear_deterrence_will_still_work_on_north_korea.html.

[13] Zack Beauchamp, "The Case for Letting North Korea Keep Its Nukes," Vox, updated September 8, 2017, https://www.vox.com/world/2017/9/8/16256880/north-korea-nuclear-weapons-test-containment.

[14] Beauchamp.

Several other sources suggest that the deterrence theories of the Cold War era are still applicable and effective today. James Lay provided one of the earliest records of a need for a deterrence strategy to combat the threat from the USSR. In *A Report to the National Security Council*, Lay provides valuable background and evidence of the growing nuclear threat posed by the USSR, as well as recommended alternatives to mitigate the Soviet nuclear threat. The report suggests that the goal of the Soviet Union was world domination. Lay suggests that to meet its goal of world domination, the Soviet Union might launch a surprise nuclear attack.[15] NSC 68 summarizes that the struggle remains between the superpowers (i.e., the United States, China, and Russia), and as a result, an understanding exists as to the consequences of certain actions between the parties; in other words, deterrence is working involving the previous adversaries around which it was designed. Does this deterrence then also apply to regional actors, such as North Korea?

Significant literature also addresses what aspects of the current doctrine need modification for today's changing setting. Several pieces of literature examine the *National Posture Review* and the *National Security Strategy of 2002* and discuss their merits. Paul Brown explores the elements of the 2001 *Nuclear Posture Review*, which has served as the leading policy guide in the post-Cold War era. He provides justification for modifying this policy document to include a strategy that denies access to nuclear weapons and components to non-state and terrorist organizations.[16] Marco Lyons also looks at data included in the *Nuclear Posture Reviews*. Lyons's research builds on the assumption that the U.S. deterrence strategy has changed since the Cold War due to a number of factors. Such changes include adjusting strategy to remove the Soviet Union as the primary focus and instead modify what are termed "strategic capabilities to better address the threats of the current security environment while reducing U.S. reliance on

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[15] James S. Lay, *A Report to the National Security Council—NSC 68* (Washington, DC: White House, 1950), 6, https://www.trumanlibrary.org/whistlestop/study_collections/coldwar/documents/pdf/10-1.pdf.

[16] Paul Brown, "U. S. Nuclear Deterrence Policy: Do We Have It Right?" (master's thesis, U.S. Army War College, 2008), 4, https://www.hsdl.org/?view&did=232638.

nuclear weapons."[17] North Korea is part of the current security environment. George Robinson also presents a thesis that discusses the possibility of a change in the fundamental understanding of what deterrence is. He discusses the role of the *National Security Strategy of 2002* in framing the deterrence doctrine for the country. Robinson suggests that the U.S. deterrence doctrine should consider the threats to be from those who have the ability to strike, and not merely the intention to strike.[18] In other words, by possessing nuclear weapons, North Korea has the ability to strike. As a result, North Korea qualifies as a threat that deterrence doctrine must address. The question is whether the doctrine needs to be modified for North Korea.

Different types of responses can be employed, from a full nuclear response to a combination of nuclear and conventional. Mark Barbero's research, which analyzes nuclear credibility and capability as essential components of deterrence doctrine, also discusses the doctrine of flexible response, which provides the United States more options in response to an attack.[19] Thérèse Delpech's research suggests that a nuclear deterrence doctrine should include improving mutual understanding and refers to bilateral dialogue taking place around the world.[20] This dialogue referred to Japan and Taiwan fears about their security since they can only be assured of the U.S. commitment if they clearly understand U.S. capabilities and intentions.[21] While this dialogue has been hampered by distrust among the parties involved, Barbero suggests that the deterrence doctrine will be more effective if the response is not purely nuclear in nature. Robert Einhorn and Steven Pifer also suggest that some elements of the current deterrence doctrine may need to be modified for the current security environment. Einhorn and Pifer

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[17] Marco Lyons, "U.S. Nuclear Policy, Strategy, and Force Structure: Insights and Issues from the 1994, 2001, and 2010 Nuclear Posture Reviews" (master's thesis, Naval Postgraduate School, 2014), 100, https://calhoun.nps.edu/handle/10945/43951.

[18] George Robinson, "Deterrence and the National Security Strategy of 2002: A Round Peg for a Round Hole" (master's thesis, Naval Postgraduate School, 2003), 37, https://calhoun.nps.edu/handle/109 45/6149.

[19] Mark Barbero, "A Cost/Benefit Matrix Model of Nuclear Deterrence" (master's thesis, Naval Postgraduate School, 1975), 24, https://calhoun.nps.edu/handle/10945/20797.

[20] Thérèse Delpech, *Nuclear Deterrence in the 21st Century: Lessons from the Cold War for a New Era of Strategic Piracy* (Santa Monica, CA: RAND, 2012), 28, https://www.rand.org/pubs/monographs/ MG1103.html.

[21] Delpech, 27.

suggest that Russian leaders no longer believe that a nuclear conflict *cannot* be won, which thus weakens the threat of deterrence.[22] Einhorn and Pifer also discuss the existence of the new B-61 nuclear bomb that has the potential for greater accuracy and degrees of lethality. This type of flexibility with a nuclear warhead could remove some of the inhibitions against using the weapon.[23] The doctrine appears to be working; however, some modification may be warranted. Einhorn and Pifer indicate some members of the group recommend that the United States maintain its current policy of Launch Under Attack (LUA) rather than launch after a confirmed detonation.

Pifer discusses a 2010 nuclear posture review in preparation for the New Strategic Arms Reduction Treaty, which was agreed to on February 5, 2011. Pifer indicated that President Obama attempted to cut the number of nuclear warheads while maintaining a sufficient nuclear deterrence and looking for alternative forms of deterrence. Pifer's literature specifically targets the choices that President Trump has to face now because of the emergence of North Korea as a nuclear actor. Policy issues need to be researched and consolidated regarding the number of nuclear warheads needed, as well as what it will take to maintain a level of deterrence. This thesis fills a gap, which exists in analyzing the potential effectiveness of iterations of deterrence doctrine. This analysis is critical to determining what iteration will be effective for deterring North Korea.

One of the interesting theories to develop recently is one related to the sole purpose objective of nuclear deterrence.[24] Keith Payne indicates that in some cases, nuclear assurance is achieved using nuclear deterrence.[25] Payne also explores the predictability of a functioning deterrence doctrine in the modern age and places the lack of predictability on the change in the environment since the Cold War. What complicates matters is that regimes, such as North Korea, have an unpredictable leader. Jong-un's

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[22] Robert Einhorn and Steven Pifer, *Meeting U.S. Deterrence Requirements* (Washington, DC: Brookings, 2017), 3, https://www.brookings.edu/research/meeting-u-s-deterrence-requirements/.

[23] Einhorn and Pifer, 3.

[24] Steven Pifer, *Nuclear Arms Control Choices for the Next Administration* (Washington, DC: Brookings, 2016), 1, https://www.brookings.edu/research/nuclear-arms-control-choices-for-the-next-administration/.

[25] Keith Payne, "On Nuclear Deterrence and Assurance," *Strategic Studies Quarterly* (Spring 2009): 73, http://mx1.nuclearfiles.org/menu/key-issues/nuclear-weapons/issues/policy/PDFs/payne.pdf.

impulsive actions could result in instability in the region. Continuing with the nuclear weapons program will result in additional sanctions on an already economically weakened nation, and possible military response, which could destabilize the region. Neighbors, such as China, seek stability in the region, as well as domestic stability, and part of that is an alliance with North Korea.[26] Richard Bush presents a discussion of a modification of the classic deterrence doctrine that focuses on mutual assured destruction. Bush also discusses the validity of another iteration of the classic doctrine: extended deterrence.[27] Delpech suggests that as long as nuclear weapons are around, deterrence is the best way to manage those who possess them. However, deterrence becomes challenging when accounting for what is described as reckless leaders and unpredictable nations.[28] They may cause what Delpech describes as the growing disrespect for international law and accepted rules of behavior.[29] Most studies have indicated that deterrence works because adversaries know how each other will act; however, it is not clear everyone will.[30]

Jasen Castillo suggests that in the past, the United States has influenced changes of leadership in rogue nations. Due to the hatred toward America, some nations may actually be encouraged to share their nuclear weapons with terrorist groups, and do not fear retaliation because they believe the United States will be unable to trace the nuclear attack back to them.[31] These nations may also take the risk of using these weapons if the survival of their regimes is in jeopardy. These scenarios could lead to the failure of deterrence doctrine. Rogue nations, therefore, may be motivated to share nuclear arms and deterrence does not recognize this scenario.

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[26] Holly Ellyatt, "Stability and Strategy: Why Is China so Easy on North Korea?" CNBC, December 6, 2017, https://www.cnbc.com/2017/12/01/china-easy-reaction-to-north-korea.html.

[27] Bush et al., *U.S. Nuclear and Extended Deterrence*, 1.

[28] Delpech, *Nuclear Deterrence*, 1.

[29] Delpech, 162.

[30] Bush et al., 1.

[31] Jasen J. Castillo, "Nuclear Terrorism: Why Deterrence Still Matters," *Current History* 102, no. 668 (December 2003): 426–431.

Meanwhile, Al Mauroni bases his study on the Truman National Security Project. Mauroni explores why nuclear weapons should be reduced and only minimal deterrence is relevant.[32] Since there has not been a nuclear attack had not occurred, minimal deterrence is working. Mauroni feels that the Truman study is skewed and requires balanced clarification of the report's conclusions.[33] Derrin Culp, in his important article, also suggests that deterrence does not work, adding to Wilson's theory by pointing to weaknesses in his three fundamental claims. Those claims are "first nuclear deterrence rests upon a fatally flawed fundamental premise, second; deterrent threats are inherently not credible, and third; nuclear deterrence has a complete record of failure."[34] These claims suggest that deterrence may result in achieving an objective not originally envisioned. Several other analysts suggest that deterrence doctrine does not work in the current environment, which is composed not only of global actors but also of regional actors. Deterrence is directed at both global and regional actors although an unintentional impact may happen to other actors. For example, North Korea is a regional actor but if deterrence fails, global implications will also result. Global actors, such as Russia and China, could become involved in any conflict because of alliances with regional actors (North Korea).

Georgio Bertolin's essay traces the evolution of nuclear deterrence doctrine and debates whether deterrence from the Cold War era is still relevant today. He suggests, "Nuclear weapons are still among the most powerful and intimidating weapons with which states can arm themselves, and the stability of a system based on deterrence still remains attractive, although since the end of the Cold War maintaining this system has become far more complicated."[35]

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[32] Al Mauroni, "Deterrence in the Post-Cold War Era," *Armed Forces Journal*, December 2013, http://armedforcesjournal.com/deterrence-in-the-post-cold-war-era/.

[33] Mauroni.

[34] Derrin Culp, "Part I: A Critical Examination of 'The Myth of Nuclear Deterrence,'" *Nonproliferation Review* 19 (2012): 51–65, https://doi.org/10.7916/D8Z03JVP.

[35] Georgio Bertolin, "To What Extent Is Nuclear Deterrence Important in the Post–Cold War World?" 5, *E-International Relations*, 2013, http://www.e-ir.info/2013/06/04/to-what-extent-is-nuclear-deterrence-important-in-the-post-cold-war-world/.

The literature presented appears to indicate the current doctrine is still effective but needs to be modified to address the contemporary environment, which results from a change in focus from Russia to regional players, such as North Korea. Although many narrow escapes happened, which could have resulted in nuclear weapons being used or detonated, nuclear deterrence appeared to be effective when applied against Russia in the past. Since no nuclear attacks have occurred, no known cases have resulted in which deterrence did not work. In addition to the change in actors since the application of the doctrine against Russia (i.e., global to regional), changes to the current environment including the geopolitical environment, changes in alliances, and the rise and fall of regional regimes, will dictate any required modification in the application of deterrence strategies.

3. Does Deterrence Create More Harm than Good?

This section explores the impact of U.S. deterrence activities in the region. Several scholars have debated whether U.S. presence and activities lead to further tensions at the global level; at times, it appears that a demonstration of nuclear strength by the United States only seems to infuriate North Korea. The exchange of rhetoric between the United States and North Korea has led to increased tension on a regional level. Michael MccGwire discusses the negative impact of U.S. nuclear deterrence policies over the years. In particular, MccGwire points to the negative impact upon U.S. deterrence doctrine foreign policy, arms control, military policies, and international relations.[36] MccGwire suggests that the manner in which U.S. deterrence was communicated during arms control negotiations with the Soviet Union during the Cold War has created an atmosphere of mistrust between the parties and actually fueled the arms race.[37] Russ Wellen further adds support to MccGwire's research who concludes that rather than nuclear deterrence being a tool to prevent a nuclear attack, it has had the

[36] Michael MccGwire, "Nuclear Deterrence," *International Affairs* 82, no. 4 (July 2006): 772–783, http://www.jstor.org.libproxy.nps.edu/stable/3874158?seq=1#page_scan_tab_contents.

[37] MccGwire.

opposite effect and serves as a catalyst for an arms race.[38] Such ideas are relevant when discussing nuclear capabilities of superpowers and also apply to regional actors, such as North Korea.

The possession of nuclear weapons can also deter conventional wars since an adversary does not know what the catalyst can be for the opponent to deploy nuclear weapons. Russia has designed its nuclear deterrence doctrine based on a "no first use" policy. This policy then implies that it would only use nuclear weapons in response to nuclear weapons being used against Russia. U.S. arms control experts contend that the "no first use" option is not needed because the "United States and its allies have the means to counter any realistic conventional military threat with superior conventional military, economic, and alliance capabilities."[39] In 2002, Russia added a de-escalatory option to its deterrence strategy. "De-escalatory nuclear strikes allow Russia to respond with a limited nuclear strike if confronted with a large-scale conventional attack that exceeds its defense capabilities."[40] This strategy effectively nullifies an adversary's conventional capabilities by knowing that Russia may employ nuclear weapons if it considers itself to be overwhelmed by conventional forces. Although the option of resorting to de-escalatory strikes appears to contradict the intent of the "no first use" option, the resulting uncertainty also provides a credible deterrence to a conventional war. An adversary does not have a clear idea of what action can result in a Russian nuclear response.

An improperly communicated deterrence doctrine could be interpreted as a form of nuclear terrorism by highlighting the importance of the language in the document. Wilson discredits the effectiveness of the current American doctrine and makes an

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[38] Russ Wellen, "Nuclear Deterrence: Giving Common Sense a Bad Name," *Foreign Policy in Focus*, 1, 2016, https://fpif.org/nuclear-deterrence-giving-common-sense-bad-name/.

[39] Daryl G. Kimball, "U.S. Should Adopt No First Use Nuclear Launch Policy," *Arms Control Association* (blog), November 15, 2017, https://www.armscontrol.org/blog/2017-11-15/us-should-adopt-no-first-use-nuclear-launch-policy.

[40] Constance Baroudos, "Nuclear Deterrence: Still Relevant against Russia," *The National Interest* (blog), April 27, 2016, https://nationalinterest.org/blog/the-buzz/nuclear-deterrence-still-relevant-against-russia-15961.

interesting comparison between nuclear deterrence and terrorism.[41] Wilson suggests that terrorism works by "killing civilians to shock societies and states into complying with a terrorist's demands."[42] Wilson surmises that horrifying governments into complying is what deterrence is all about. By implication, this approach is tantamount to committing or threatening an act of terrorism. Complementing Wilson, Culp suggests the threat of nuclear retaliation does not create deterrence, but rather promotes resistance, and as such, is a form of terrorism.[43]

4. Is North Korea a Nuclear Threat?

Nuclear deterrence may encourage regional actors to continue to develop their arms in hopes of equalizing the strategic balance specifically in the region, which leads to a continuing nuclear race in the region. John Borrie, Tim Caughley, and Wilfred Wan suggest it is difficult to know how deterrence is perceived from the viewpoint of North Korean leadership given the unpredictable nature of Kim Jong-un. North Korea's actions with continued missile testing demonstrate "inherent contradictions in the notion of stability founded upon nuclear deterrence."[44] With the introduction of North Korea into the list of countries with a nuclear capability, can the Cold War doctrine continue to work? Vipin Narang suggests that "if the U.S. believes North Korea seeks to preserve its regime—a status quo intention—then deterrence theory works much like it did with the former Soviet Union."[45] With competition among regional actors, such as North Korea, South Korea, and Japan, the United States already has the nuclear stockpile and no need to develop additional weapons in response to any buildup by the regional actors.

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[41] Ward Wilson, "NPR15.3: The Myth of Nuclear Deterrence," *Nonproliferation Review* 15, no. 3 (November 2008): 430.

[42] Wilson, 430.

[43] Culp, "Part I," 59.

[44] John Borrie, Tim Caughley, and Wilfred Wan, "What North Korea Means—and Doesn't—for Nuclear Deterrence," The Diplomat, 2, September 14, 2017, https://thediplomat.com/2017/09/what-north-korea-means-and-doesnt-for-nuclear-deterrence/.

[45] Clifton Parker, *Why Nuclear Deterrence Can Work on North Korea* (Stanford, CA: Center for International Security and Cooperation, 2017), 45, https://cisac.fsi.stanford.edu/news/why-nuclear-deterrence-can-work-north-korea.

With the introduction of North Korea as a nuclear power in 2007, concern resulted over the deterrence effect of the rhetoric communicated by President Trump. Recently, North Korea's Deputy Ambassador Kim In-ryong stated to the United Nations (UN) that North Korea has no choice but to proceed with its nuclear program because of the president's rhetoric. Upon hearing President Trump's speech to the United Nations, Kim Jong-un responded, "[President Trump's] remarks which described the U.S. option through straightforward expression of his will have convinced me, rather than frightening or stopping me, that the path I chose is correct and that it is the one I have to follow to the last."[46] Scholars, such as Clifton Parker, suggest such threats actually destabilize the working deterrence. He argues that as additional actors are added to the number of nuclear-capable nations, such as North Korea, deterrence is still applicable on the assumption that North Korea wants to preserve its regime.[47] James Winnefeld and Michael Morell also suggest that the current deterrence with North Korea will work as well. They argue that the United States should not threaten to destroy the regime, "It stands to reason that the only thing that would cause them [North Korea] to actually use nuclear weapons would be a direct and imminent threat to their survival."[48] "Ultimately, an effective deterrence policy depends on clarity, consistency, coherence, and communication."[49] It appears reasonable that communication is the key and that threatening North Korea may lead to potential conflict. *Politico* contends, "U.S. military officials increasingly worry that a mistake or miscommunication—even more than an intentional act of war—could start a nuclear conflict in Korea."[50] The 2018 Singapore Summit between the United States and North Korea has stimulated long needed dialog between the two countries. However, significant moves have not been made toward meeting the United States' goal of the denuclearization of the Korean Peninsula. Many

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[46] Parker, 4.

[47] Parker, 3.

[48] James Winnefeld and Michael Morell, *Realism and North Korea* (Cambridge, MA: Belfer Center for Science and International Affairs, 2017), 3.

[49] Parker, *Why Nuclear Deterrence*, 4.

[50] Bryan Bender and Jacqueline Klimas, "How the U.S. and North Korea Could Stumble into World War III," *Politico*, January 6, 2018, https://www.politico.com/story/2018/01/06/north-korea-nuclear-war-264526.

believe that what came out of the summit were vague declarations of principles, a series of photo opportunities, and a surprise that President Trump decided to suspend several joint U.S.-South Korea military exercises.[51] Two months later, the diplomatic momentum had seemingly hit a wall.[52] North Korea made no major concessions toward denuclearization. U.S. officials, such as Sen. Marco Rubio, who sits on the Senate Intelligence and Foreign Relations committees, states his doubts that anything was going to be accomplished and does not feel Kim is going to ever give up his nuclear arsenal.[53] This section supports the contention that North Korea remains a nuclear threat. Unless substantial changes occur to North Korea's nuclear program and the regime's attitude toward the United States improves, North Korea remains a regional power threat to the United States and its allies. This thesis then explores options the United States has for future interaction and co-existence with a nuclear North Korea.

C. RESEARCH DESIGN

1. Selection of Criteria for Analysis

The literature selected for research is from the various schools of thought on the subject, which focuses on academia, public policy, journalists, and government officials. The section looks at the sources that appear to have credibility based on reputation, peer review, and the number of times the source is referenced in other sources. It also examines works of authors considered experts in their fields.

2. Scope and Limitations

The nuclear deterrence structure is composed of several components. These components include air-launched, land-based, and submarine-based missiles. This thesis does not focus on a single component but addresses deterrence as a complete entity. One

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[51] Zack Beauchamp and Jennifer Williams, "4 Winners and 4 Losers from the Trump-Kim Summit in Singapore," Vox, June 12, 2018, https://www.vox.com/2018/6/12/17450974/trump-kim-jong-un-summit-winners.

[52] Nate Kerkhoff, "Commentary: The Gap between the U.S. and North Korea Hasn't Closed since the Singapore Summit," Channel NewsAsia, August 20, 2018, https://www.channelnewsasia.com/news/commentary/united-states-and-north-korea-can-t-agree-on-peace-10618770.

[53] Martin Matishak et al., "White House Not 'Starry-Eyed' about North Korea, Bolton Says," *Politico*, August 5, 2018, https://www.politico.com/story/2018/08/05/bolton-north-korea-trump-nuclear-763197.

of the gaps in the research is the inability to interpret the U.S. deterrence doctrine from the viewpoint of North Korea, partially because of a lack of literature written in English. How an adversary interprets the doctrine is critical in providing insight into what actions it may be willing to take. This gap is mitigated by looking at the North Korea perspective through available literature and news articles on the behavior of the country's leadership. However, this review is limited by English-only reports or translations available in English.

3. Steps of Analysis

The research is based on past reports and data that provide a background of what the previous policies had been, as well as any data related to the interpretation of U.S. policy by foreign governments and terrorists. As the United States has not experienced any attacks, the research also reviews data related to any narrow escapes and buildup of nuclear arms in North Korea. This case study sheds light on whether the U.S. deterrence doctrine is effective on a regional level. The descriptive method is useful because it allows for learning from past behaviors to understand how it may influence future outcomes. The prescriptive paradigm is used to recommend what policy changes, if any, are needed.

4. Output

The final product includes a list of recommendations for current policy-makers. The U.S. federal government may consider these recommendations wholly or partially and incorporate appropriate changes to the existing deterrence doctrine applied to the case of North Korea.

II. THE COLD WAR AND ITS IMPACT ON NORTH KOREA'S NUCLEAR AMBITIONS

The central purpose of this thesis is to understand whether the current U.S. deterrence doctrine is sufficient to deter North Korea from attacking the United States, South Korea, or Japan. To make that determination, it is necessary to look at the evolution of the current deterrence doctrine, which emerged out of the Cold War. The current doctrine emerged out of the global strategic setting at the end of World War II. This doctrine was initially designed to address primary nuclear threat from the Soviet Union and later China after it developed nuclear capabilities. This doctrine was a response plan to prevent an attack that could be perpetrated by the Soviet Union against the United States and its allies. The background on the development of the American deterrence document in this chapter helps determine if this doctrine is sufficient enough to present a capable deterrence to the threat posited by North Korea.

A. EXPANDED TENSIONS, THE COLD WAR AND THE DEVELOPMENT OF THE U.S. DETERRENCE

The diplomatic history of the United States and Russia began at World War I when the two nations were allies in the battle against Germany. President Roosevelt recognized the need to have the Russians as an ally in the fight against the Germans. To that end, "Roosevelt confided that he 'would hold hands with the devil' if necessary."[54] World War II brought about different challenges as the two nations diverged on strategy and the distribution of military resources when it came to the persecution of war against the Germans.[55] One of the most significant issues that came up was the promised assistance by the allies in fighting the Germans on the western front during World War II. The Soviets were desperately holding on and requested assistance for a promised

[54] "U.S.-Soviet Alliance, 1941–1945: Milestones: 1937–1945," Office of the Historian, Department of State, accessed July 12, 2018, https://history.state.gov/milestones/1937-1945/us-soviet.

[55] "Revelations from the Russian Archives, The Soviet Union and the United States, World War II: Alliance," Library of Congress Information Bulletin, June 15–July 16, 1992, https://www.loc.gov/exhibits/archives/sovi.html#worw.

invasion of France by the allies in 1942. The delay of the invasion by the allies until 1944 almost severed the alliance and initiated the building of mistrust between the allies.

As a result of the mistrust of the Soviets, the allies were uncertain as to the need to keep the Soviets apprised of their plans to end the war. The sharing of information was crucial to maintain a strong reliance; however, also apprehension also increased about how the Soviets would react if they found out they found out they were not being made aware of allied strategic developments. As the war progressed, the tensions between the Soviets and the Americans expanded, "driven by a complex interplay of ideological, political, and economic factors, which led to shifts between cautious cooperation and often-bitter superpower rivalry over the years."[56] The allies saw the urgent need to develop a new bomb before the Germans, and in 1942, the United States and Great Britain began the development of an atomic weapon.[57] The American effort to produce a bomb was code named the "Manhattan Project." This effort also had the support of the British and Canadian governments.[58] The United States did not notify the Soviets of this joint development effort, due to their possible intentions in Eastern Europe, which enhanced the existing mistrust between the allies and the Soviets. As the secret plan to build the bomb took shape in the United States, the Soviet espionage agencies got wind of the "Manhattan Project" even before the Federal Bureau of Investigation (FBI) knew of the secret program's existence.[59] Consequently, despite facing a common enemy (Germany), the Soviet Union launched an extensive espionage effort to uncover the military and defense secrets of the United States and Great Britain. When the bomb was developed, the United States decided to use it against Japan. Japan was targeted because the allies were contemplating invading Japan after the surrender of Germany in May

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[56] Library of Congress Information Bulletin, "Revelations from the Russian Archives, The Soviet Union and the United States, Internal Workings of the Soviet System, The Soviet Union and the United States."

[57] "Key Issues: Nuclear Weapons: History: Pre Cold War: Manhattan Project," Nuclear Files: Library: Correspondence: Harry S. Truman: Letter, August 11, 1945, http://www.nuclearfiles.org/menu/key-issues/nuclear-weapons/history/pre-cold-war/manhattan-project/.

[58] *Encyclopædia Britannica*, "Manhattan Project," April 26, 2018, https://www.britannica.com/event/Manhattan-Project.

[59] Marian Smith Holmes, "Spies Who Spilled Atomic Bomb Secrets," Smithsonian Institution, April 19, 2009, https://www.smithsonianmag.com/history/spies-who-spilled-atomic-bomb-secrets-127922660/.

1945, but an invasion of Japan would have resulted in an unacceptable number of allied casualties. Secretary of War Henry L. Stimson reported that if an invasion could be avoided, it would "save 500,000 to 1,000,000 lives."[60] MacArthur reasoned that dropping the atomic bomb would bring the war against Japan to a close without the loss of additional U.S. casualties. President Truman and some of his advisers hoped the development of the atomic bomb and its use could send an additional message of American nuclear superiority to the Soviets.[61]

Shortly after the government introduced the atom bomb to the U.S. military arsenal, it also initiated a diplomatic arsenal; the welding of this new weapon reshaped the power of the U.S. diplomatic tools available.[62] "Possession of this weapon by the U.S. would essentially dictate control of foreign policy."[63] With the obvious monopoly on nuclear weapons, the United States had the ability to employ "atomic diplomacy."[64] This strategy allowed a nuclear nation to use the threat of nuclear warfare to achieve diplomatic goals. However, the plan did not last long as the Soviets developed their own atomic bomb by 1949.

The Potsdam Conference in 1945 presented the first signs of problems in the U.S.-Soviet relations where mistrust between the nations began to grow. President Truman debated whether to notify the Soviets of the power of this new weapon for fear of how the Soviets would view this new weapon. In the end, a decision was made to notify

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[60] Chalmers M. Roberts, "Our Boys or the Bomb? Truman's Agonized Appraisal of the Cost of Invading Japan," *Washington Post*, October 16, 1994, https://www.washingtonpost.com/archive/opinions/1994/10/16/our-boys-or-the-bomb-trumans-agonized-appraisal-of-the-cost-of-invading-japan/a5f01be9-acff-4469-b5b7-abe89475d73a/?utm_term=.bc2aa9b1fd8b.

[61] "Was the U.S. Justified in Dropping Atomic Bombs on Hiroshima and Nagasaki during the Second World War? You Debate," History Extra, July 14, 2014, https://www.historyextra.com/period/second-world-war/was-the-us-justified-in-dropping-atomic-bombs-on-hiroshima-and-nagasaki-during-the-second-world-war-you-debate/.

[62] Sergey Radchenko, "Did Hiroshima Save Japan from Soviet Occupation?" 2, Foreign Policy, September 23, 2016, https://foreignpolicy.com/2015/08/05/stalin_japan_hiroshima_occupation_hokkaido/.

[63] "The Cold War," Atom Central, accessed August 18, 2018, http://www.atomcentral.com/the-cold-war.aspx.

[64] William Burr, "The Atomic Bomb and the End of World War II," National Security Archives, last updated August 4, 2015, https://nsarchive2.gwu.edu//NSAEBB/NSAEBB162/index.htm.

them.[65] The Soviet leader seemed unimpressed, most likely because his spies had already informed him of the accomplishment.[66] Soviet Marshal Georgii Zhukov, who was also present when Stalin received formal notification of the bomb, stated, "It was clear already then that the U.S. Government intended to use the atomic weapon for the purpose of achieving its imperialist goals from a position of strength in the cold war."[67] The apprehension expressed by Truman about informing Stalin, the reactions of Stalin and Zhukov to the news, as well as the Soviets' espionage effort highlighted the mistrust between the two nations. The conference exposed suspicions about the intentions of the parties as they discussed the design of post-war Europe. "George Kennan, one of the intellectual authors of the Marshall Plan, also saw the Soviet response as indicative of a Soviet desire to seize the substantial industrial and human resources of Europe."[68]

Disagreement occurred between the allied leaders in how territories should be shared that led to further tensions. Germany was divided into four zones; the Soviets taking the eastern portion, France getting the southwest portion, Great Britain getting the northwest portion, and the United States getting the southern portion.[69] Italy, Germany's ally, possessed colonies in Africa. Stalin also attempted to put Soviet claims to those colonies, which Winston Churchill summarily rejected. The biggest question, however, was what should be Poland's fate?[70] Stalin demanded that Russia should retain the part of Poland they occupied because of the Nazi-Soviet Pact of 1939.[71] The original agreement was that Poland would have free elections to determine their form of government;

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[65] Gene Dannen, "Truman Tells Stalin, July 24, 1945," Atomic Bomb: Decision, accessed August 18, 2018, http://www.dannen.com/decision/potsdam.html.

[66] Dannen.

[67] Dannen.

[68] Scott D. Parrish and Mikhail M. Narinsky, *New Evidence on the Soviet Rejection of the Marshall Plan, 1947: Two Reports* (Washington, DC: Woodrow Wilson International Center for Scholars, 1994), 1, https://www.wilsoncenter.org/sites/default/files/ACFB73.pdf.

[69] "The End of WWII and the Division of Europe," Center for European Studies, A Jean Monnet Center of Excellence at the University of North Carolina at Chapel Hill, accessed May 17, 2019, https://europe.unc.edu/the-end-of-wwii-and-the-division-of-europe/.

[70] Terry Charman, "How the Potsdam Conference Shaped the Future of Post-War Europe," Imperial War Museums, January 10, 2018, https://www.iwm.org.uk/history/how-the-potsdam-conference-shaped-the-future-of-post-war-europe.

[71] Robert James Maddox, "Truman, Poland, and the Origins of the Cold War," *Presidential Studies Quarterly* 17, no. 1 (1987): 27–41, http://www.jstor.org/stable/27550393.

however, it became apparent that the Soviets did not intend to follow through on that promise. The Soviet's involvement in Poland reiterated the U.S. position that the Soviets could not be trusted.

The Soviets did not trust the United States either and their intentions behind spreading democracy. A State Department report noted:

> While President Roosevelt harbored no illusions about Soviet designs in Eastern Europe, it was his great hope that if the United States made a sincere effort to satisfy legitimate Soviet security requirements in Eastern Europe and Northeast Asia, and to integrate the U.S.S.R. into the United Nations, the Soviet regime would become an international team player and moderate its authoritarian regime.[72]

After the end of World War II, the U.S.-Soviet relationship continued to deteriorate because of the Soviet occupation of eastern Poland and the conflict with Finland. At that time, President Roosevelt condemned the Soviets as a "dictatorship as absolute as any other dictatorship in the world."[73] President Truman feared the goal of the Soviet Union was to spread communism throughout the world.

The United States has used atomic diplomacy several times since the end of World War II. An example of this type of diplomacy was in 1953, when President Eisenhower threatened to use nuclear weapons to end the Korean War.[74] A second application of this type of diplomacy was in 1962, when the Soviets deployed nuclear missiles to Cuba to try to "force U.S. concessions on Europe."[75] "Khrushchev put missiles in Cuba in part to achieve psychological equality and constrain American foreign policy."[76]

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[72] Office of the Historian, Department of State, "U.S.-Soviet Alliance, 1941–1945: Milestones: 1937–1945."

[73] Office of the Historian, Department of State.

[74] Chester J. Pach, Jr., "Dwight D. Eisenhower: Foreign Affairs," Miller Center, 2, July 26, 2017, https://millercenter.org/president/eisenhower/foreign-affairs.

[75] "Atomic Diplomacy," Office of the Historian, Department of State, accessed October 17, 2017, https://history.state.gov/milestones/1945-1952/atomic.

[76] Richard Ned Lebow and Janice Gross Stein, "Deterrence and the Cold War," *Political Science Quarterly* 110, no. 2 (Summer 1995): 172, https://doi.org/doi:10.2307/2152358.

Mistrust became the foundation of the deterrence doctrine in a world where nuclear war became a possibility. Joseph Stalin and President Truman "saw the world as being divided into two camps: imperialist and capitalist regimes on the one hand, and the Communist and progressive world on the other."[77] This viewpoint created additional friction between the United States and the Soviets, as well as mistrust of each other. These two perspectives launched the Cold War, which shaped the world for the next four decades. The Cold War presented a situation in which the two countries could not address each other with trust, respect, and dignity.

In 1947 and 1948, the civil wars in Greece and Turkey brought concern among the Western allies of the opportunity for Soviet expansion. From 1947 through early 1949 of the Cold War, the United States threatened "massive retaliation" and "assured destruction" as a means of controlling Soviet aggression.[78] In 1949, the North Atlantic Treaty Organization (NATO) was created to provide security agreements for the United States and their allies in Western Europe. NATO and the United States were employing a doctrine of massive retaliation as European allies were placed under the U.S. nuclear umbrella. NATO's primary purpose was "to unify and strengthen the Western Allies' military response to a possible invasion of Western Europe by communist Soviet Union and its Warsaw Pact allies including Poland, Romania, Hungary, and East Germany."[79] NATO was initially composed of the United States and 11 other nations including Germany, France, the United Kingdom, and Turkey. "From the early 1950s, NATO relied partly on the threat of massive nuclear retaliation from the United States to counter the Warsaw Pact's much larger ground forces."[80]

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[77] "Revelations from the Russian Archives, The Soviet Union and the United States, Internal Workings of the Soviet System, The Soviet Union and the United States," Library of Congress Information Bulletin, June 15–July 16, 1992, http://www.loc.gov/exhibits/archives/sovi.html.

[78] Amy F. Woolf, *U.S. Nuclear Weapons: Changes in Policy and Force Structure*, CRS Order Code RL31623 (Washington, DC: Congressional Research Service, 2008), 10, http://handle.dtic.mil/100.2/ADA 486245.

[79] David G. Haglund, "North Atlantic Treaty Organization," *Encyclopædia Britannica*, accessed July 12, 2018, https://www.britannica.com/topic/North-Atlantic-Treaty-Organization.

[80] Haglund.

B. U.S. DETERRENCE DOCTRINE: THE ORIGINAL DESIGN AND PURPOSE

The Cold War produced a setting in which it became essential for the United States to produce a plan to address and deter a nuclear attack. Deterrence theory (also known as rational deterrence theory), that emerged out of this setting, argued that "in order to deter attacks, a state must persuade potential attackers that: first, it had an effective military capability; second, that it could impose unacceptable costs on an attacker, and third, that the threat would be carried out if attacked."[81] This theory is also known as mutually assured destruction (MAD), which is a principal of "deterrence in which opposing parties with nuclear arsenals recognize that each could annihilate the other and therefore do not attack."[82] MAD was linked to what an adversary would consider acceptable losses. Losses above that threshold would effectively deter an adversary from attacking. "Defense Secretary Robert S. McNamara defined 'unacceptable' as the Soviets losing 50% of its population and industry in a retaliatory strike."[83] Several U.S. policy makers did not agree with the 50% assessment because they believed the Soviet regime was ruthless and would be willing to sacrifice a larger amount of its population to achieve world dominance. U.S. military planners at the Pentagon felt that losses of 20–30 million U.S. casualties in a nuclear war are "acceptable losses."[84] What these numbers implied was that to deter a Soviet attack, the Soviets had to be convinced that a retaliatory strike would be large enough to destroy 60 million people

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[81] Stephen L. Quackenbush, "Deterrence Theory: Where Do We Stand?," *Cambridge Core, Review of International Studies* 37, no. 2 (April 2011): 742, https://www.cambridge.org/core/services/aop-cambridge-core/content/view/S0260210510000896.

[82] Richard J. Samuels, "Mutually Assured Destruction (MAD)," in *Encyclopedia of United States National Security*, ed. Richard J. Samuels (Thousand Oaks, CA: SAGE Publications, Inc., 2005), 2, doi: 10.4135/9781412952446.n384.

[83] Lebow and Stein, "Deterrence and the Cold War," 159.

[84] Michio Kaku and Daniel Axelrod, *To Win a Nuclear War* (Montreal, Quebec, Canada: Black Rose Books, 1987), 23, https://books.google.com/books?id=yOP2v_vy2GIC&pg=PA23&lpg=PA23&dq=acceptable losses in a nuclear strike&source=bl&ots=dfizTwMgbj&sig=WU2W5X06XFd-jlu5JgQyVWVLNG4&hl=en&sa=X&ved=2ahUKEwianev3tpLeAhVMo1kKHZntDJIQ6AEwBnoECAEQAQ#v=onepage&q=acceptable losses in a nuclear strike&f=false.

based on 1960 population statistics.[85] This estimate of acceptable Soviet losses would have to be taken into consideration with updating or modifying the deterrence doctrine.

C. HOW THE U.S. DOCTRINE CHANGED DURING THE COLD WAR

The United States still had an obligation to protect its allies under its nuclear umbrella. To meet this obligation "the former nuclear deterrence principle was gradually replaced by a strategy of cooperative threat reduction," which included a shift from a purely nuclear response to a combination of nuclear and conventional response.[86] In 1954, "the United States sought to 'extend' deterrence and protect its NATO allies with both conventional and nuclear forces."[87] U.S. defense planners considered NATO conventional forces to be inferior to that of the Warsaw Pact. To counter this imbalance, deterrence could rely on nuclear weapons.[88] In 1953, during the Korean War, the Eisenhower administration began the buildup of nuclear weapons through National Security Council Paper #162/2.[89] This directive emphasizes spending more money for nuclear weapons and less for conventional forces to meet communist aggression. This original theory meant the Soviets should be convinced that an attack on any of the U.S. allies would be met with a nuclear response, as the safety and security of those nations would fall under the U.S. "nuclear umbrella." To respond to a Soviet attack on U.S. allies, it was critical that nuclear weapons be pre-positioned in Europe to allow for a rapid response. "In 1953, the U.S. and European allies made a conscious decision to forward-deploy U.S. tactical nuclear weapons in order to counterbalance a massive Soviet conventional superiority."[90] In addition to the bomb, a delivery system is necessary. The

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[85] "Russia Population 1960–2018," Trading Economics, accessed July 12, 2018, https://tradingeconomics.com/russia/population.

[86] Samuels, "Mutually Assured Destruction (MAD)," 3.

[87] Bush et al., U*.S. Nuclear and Extended Deterrence*, 18.

[88] Christopher Bolkcom, Shirley A. Kan, and Amy F. Woolf, *U.S. Conventional Forces and Nuclear Deterrence: A China Case Study*, CRS Order Code RL33607 (Washington, DC: Congressional Research Service, 2006), 6, https://apps.dtic.mil/dtic/tr/fulltext/u2/a462335.pdf.

[89] Pach, "Dwight D. Eisenhower," 2.

[90] Michaela Dodge, "U.S. Nuclear Weapons in Europe: Critical for Transatlantic Security," The Heritage Foundation, February 18, 2014, https://www.heritage.org/defense/report/us-nuclear-weapons-europe-critical-transatlantic-security.

aircraft of the host countries must have dual-capable aircraft that are aircraft certified to carry nuclear weapons.

One modification of the doctrine involved developing a limited strike capability. In 1974, the Schlesinger Doctrine, named after then-Secretary of Defense Schlesinger, was based on the premise that the Soviets had achieved nuclear equality with the United States. Schlesinger believed that "deterrence is not a substitute for defense; defense capabilities, representing the potential for effective counteraction, are the essential condition of deterrence."[91] Schlesinger believed that the United States should have the option of ensuring assured destruction, but also a limited destruction capability. His theory was that of a partial counterforce policy based on striking Soviet military targets with the goal of reducing collateral damage. Another feature of this limited strike "withhold method" was that it allowed strikes to be controlled in a manner that the enemy would still be left with the opportunity to reconsider its actions and cease any attack.[92]

Samuels points out that "postures changed somewhat in the 1970s and 1980s, as both the United States and the Soviet Union began to think about alternative forms of offense and defense; moving beyond MAD to a strategy of assured survival."[93] An additional shift occurred during the Carter administration, when Presidential Directive 59 was issued in 1980. This directive was signed during the period when the Soviet Union invaded Afghanistan and there was instability in the Middle East. National Security Council (NSC) aide William Odom and others believed the use of nuclear weapons to attack traditional troops could be successful and would not lead to an apocalypse. This directive essentially changed the MAD doctrine to a "war-fighting" doctrine.[94] This doctrine was based on ensuring the ability to fight a nuclear war short of an all-out exchange and was designed to give U.S. presidents more flexibility in planning for and

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[91] "James R. Schlesinger," Historical Office, Office of the Secretary of Defense, accessed July 14, 2018, https://history.defense.gov/Multimedia/Biographies/Article-View/Article/571289/james-r-schlesinger/.

[92] United States Executive Office of the President, *Policy for Planning the Employment of Nuclear Weapons* (Washington, DC: United States Executive Office of the President, 1974), 487, https://www.hsdl.org/?view&did=463396.

[93] Samuels, "Mutually Assured Destruction (MAD)," 3.

[94] Lebow and Stein, "Deterrence and the Cold War," 160.

executing a nuclear war. As thoughts moved more toward surviving nuclear exchanges, attention shifted to reducing the risk of nuclear exchanges altogether by considering disarmament.

Since the nuclear arms buildups through the 1970s, '80s, and '90s, calls for nuclear disarmaments resulted in various agreements and treaties through several presidential administrations. With the exception of President Reagan's Strategic Defense Initiative, an attempt has been made to restrict the development and testing of nuclear weapons. Proponents of disarmament "point out that the U.S. and Russia can reach each other with inter-continental ballistic missiles in minutes while the tactical gravity bombs take hours, if not days or weeks in Turkey's case, to be loaded on to planes and flown to their targets."[95] These weapons, which were located extremely close to the Soviet Union, would also present a constant reminder of the capability of a massive retaliatory strike. As of January 2018, Europe had approximately 150 nuclear weapons.[96] These weapons are both tactical and non-strategic nuclear in nature. The proximity of these weapons allowed for the rapid deployment on tactical fighter-bombers and strategic heavy bombers. Since the end of the Cold War, the NATO alliance reduced the number of nuclear weapons stored in European bases by more than 97 percent, from a peak of approximately 7,300 in 1971 to an estimated 150 that remain as of February 2018.[97] This reduction occurred for various reasons. Ernest Moniz and the former Democratic senator Sam Nunn argued, "Forward-deployed U.S. nuclear weapons in Europe increase the risk of accidents, blunders, or catastrophic terrorism and invite pre-emption. Given these added risks, it is past time to revisit whether these forward-based weapons are essential for military deterrence and political reassurance."[98]

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[95] Julian Borger, "Five NATO States to Urge Removal of U.S. Nuclear Arms in Europe," *The Guardian*, February 22, 2010, https://www.theguardian.com/world/2010/feb/22/nato-states-us-nuclear-arms-europe.

[96] Steve Andreasen et al., "Building a Safe, Secure, and Credible NATO Nuclear Posture," *Nuclear Threat Initiative*, February 15, 2018, http://www.nti.org/analysis/reports/building-safe-secure-and-credible-nato-nuclear-posture/.

[97] Andreasen et al.

[98] Julian Borger, "U.S. Wasting Billions on Nuclear Bombs that Serve No Purpose and Are Security Liability—Experts," *The Guardian*, February 15, 2018, https://www.theguardian.com/world/2018/feb/15/us-nuclear-bomb-risks-security-report.

This chapter revisited the history of the Cold War to determine how the U.S. deterrence doctrine was developed and modified to adapt to the changes in the U.S. interpretation of the communist threat posed by the Soviet Union. The United States adapted to the changing environment and its adversary's capabilities by incorporating some degree of flexibility in its doctrine throughout the Cold War. Chapter III examines North Korea's case to assess whether the U.S. deterrence approach to the Soviet Union is effective against North Korea.

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III. DEMOCRATIC PEOPLE'S REPUBLIC OF NORTH KOREA: PATH TO SANCTIONS?

This chapter recapitulates North Korea's political history, defense strategy and institutions, economic priorities, and regional status to understand its political and military responses in the past and possibly in the future, both within the region, as well as toward global powers, such as the United States. Since North Korea is a secretive regime, the purpose is to uncover the distinction between North Korea's real status in the region as against the status it portrays to the world. To analyze whether American deterrence will work or is working with North Korea, it is important to first to gain clarity on the regime. How has history defined its priorities?

A. COLONIZATION AND THE KOREAN WAR

The North Korean strong desire for self-reliance is rooted in its history of colonization. Following invasions by the Mongols and Japanese in the 16th century, Korea was branded as the "hermit kingdom" for its strong isolationist policy.[99] The past century has not been kind to the Korean people, which started from colonization to the war in the 1950s. Its history has led to a regime that is cautious and deeply defensive. The annexation of Korea in 1910 by Japan was done in part to "preserve Japan's national security by eliminating one of the most fruitful sources of disturbance."[100] Since the time of the annexation, many Koreans were subject to brutal repression by the Japanese. The Japanese general policy was to assimilate the Korean population into Japanese society, but as a labor class.[101] During World War II, Japan forced Korean men to work in wartime factories and mines due to work force and labor shortages. As the war progressed, several million Koreans worked to support the Japanese war effort. In 1938, the Japanese military began accepting Koreans into the Imperial Army and many Korean

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[99] Jeremy Kuzmarov, "The Korean War: Barbarism Unleashed," Peace History, accessed March 23, 2019, http://peacehistory-usfp.org/korean-war/.

[100] Toyokichi Iyenaga, "Japan's Annexation of Korea," *The Journal of Race Development* 3, no. 2 (1912): 201, doi: 10.2307/29737953.

[101] C. Peter Chen, "Korea in World War II," WW2DB, accessed March 23, 2019, https://ww2db.com/country/korea.

men willingly applied for admittance as volunteers. For this purpose, volunteerism was presented through the testimony of former soldier Takayama Jun'ichi who indicated he was forced to serve in the Japanese army.[102] Even though thousands applied for military service, the number of Koreans who were accepted was small. Japanese soldiers did not have faith in the fighting skills of Korean soldiers and preferred not to have them fighting on the battlefield beside Japanese soldiers. In addition to the plight of the Korean men, thousands of young Korean women were forced to become "comfort women" to provide sexual services to Japanese soldiers.[103] It can be argued that colonization by the Japanese was the beginning of the Korean sense of insecurity and a need to build a strong nation.

The Koreans suffered many deaths during World War II. As World War II progressed, the United States examined the feasibility of invading mainland Japan as a means of ending the war. U.S. officials determined that an invasion could result in the loss of between 1.7 and 4 million allied casualties with up to 800,000 dead, which was deemed too heavy a cost.[104] President Truman made the decision to drop the atomic bombs on Hiroshima and Nagasaki to prevent the need for an invasion and to send a message to the Germans of U.S. military capabilities. Koreans were unwitting victims of this bombing because of the movement of Korean people to the Japanese mainland as laborers. An estimated 22,000 Koreans were killed in the bombing of the two cities. Fortunately, 50,000 Koreans survived the bombings.[105] After the horrific experience of surviving a nuclear detonation, it would appear prudent to assume that North Korea would do whatever it took to ensure that such nuclear destruction would not be repeated.

During the Potsdam Conference, the allies considered the creation of the two Koreas in the aftermath of World War II. The Democratic People's Republic of Korea

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[102] Kiriyama Keiichi, "A 1944 Korean Rebellion within the Japanese Army: The Testimony of Lieutenant Cheon Sanghwa," *The Asia-Pacific Journal—Japan Focus* 7, issue 21, no. 4 (May 23, 2009): 1–9, https://apjjf.org/-Kiriyama-Keiichi/3151/article.html.

[103] Hiroka Shoji, "Why the 'Comfort Women' Issue Still Matters, 70 Years Later," *The Diplomat*, June 19, 2018, https://thediplomat.com/2018/06/why-the-comfort-women-issue-still-matters-70-years-later/.

[104] "Operation Downfall—The Campaign to Conquer Japan Would Have Dwarfed the D-Day Landings," *Military History Now*, November 6, 3013, https://militaryhistorynow.com/2013/11/06/the-campaign-to-conquer-japan-would-have-dwarfed-the-d-day-landings/.

[105] "Koreans Also Died from the Hiroshima and Nagasaki Bombings," *History News Network*, August 12, 2005, https://historynewsnetwork.org/article/13653.

was established in 1948 at the conclusion of World War II under the leadership of Kim Il Sung, when the United States and the Soviet Union divided control of the Korean Peninsula after defeating the Japanese; the two countries agreed to draw the line at the 38th parallel. Kim Il Sung, the leader of the newly created North Korea had in the past fought against the Japanese with the Chinese in guerrilla warfare while serving in the Northeast Anti-Japanese United Army during World War II. In the south, the Republic of Korea (ROK) was created and led by the American ally Syngman Rhee who was educated at George Washington University and Harvard and had close ties with the United States. In 1948, North Korea was a democratic system of government in name only; it has remained a communist state under a dictatorship since then. Kim Il Sung ruled from 1948-1994 and was known as the "Great Leader."[106] In 1949, both Soviet Union and United States troops withdrew from the Peninsula under a prearranged agreement although the skirmishes between the two Koreas had already started, as parties on either side did not accept the partition. The United States also hoped that the current separation was a temporary arrangement, and at some point, the entire Peninsula would unite as one Korea.[107] At the Cairo Conference in November 1943, the United States, Great Britain, and China had agreed that Korea should ultimately become free and independent.[108] The Soviet Union did not attend the conference. Stalin was concerned that meeting with Chinese Generalissimo Chiang Kai-shek could damage an existing security agreement between the Soviet Union and Japan.[109]

As a result of mistrust of Soviet intentions, the United States was now concerned with communism and was prepared to do whatever was necessary to prevent it from spreading. Kim Il Sung's invasion of the south on June 25, 1950, was designed to merge the North and South under one rule. According to Biography.com's research on Kim IL

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[106] "Kim Jong Il," Biography, last updated April 16, 2019, https://www.biography.com/people/kim-jong-il-201050.

[107] "The Potsdam Conference," The Korean War, accessed November 24, 2018, http://thekoreanwar 1945.weebly.com/the-potsdam-conference-1945.html.

[108] "Cairo Conference 1943," Yale Law School, Avalon Project, December 1, 1943, http://avalon.law. yale.edu/wwii/cairo.asp.

[109] "Cairo Conference (1st: 1943). 11/23/1943–11/26/1943," National Archives and Records Administration, accessed July 14, 2018, https://catalog.archives.gov/id/10503196.

Sung, this invasion started the Korean War.[110] According to archived records at the Harry S. Truman Library, President Harry Truman felt that the invasion was the "first step in a communist campaign to take over the world."[111] The Korean War was the first battle of the Cold War and allowed the United States and the Soviet Union to provide military resources in support of North and South Korea. Some scholars such as Adam Richards suggest this type of military action was referred to as a "proxy war."[112] As the April 1950 National Security Council report NSC-68 urged, the United States use whatever means possible to contain the spread of communism.[113] With the issuance of NSC-68, no doubt whatsoever existed that the United States would respond to acts of aggression by the communists.

The initial attack took the South Korean government by surprise, and in response to the unexpected aggression, the United States orchestrated a massive assembling of forces. Prompted by the United States, the UN Security Council passed Resolution #83, which called upon all UN member nations to help repel the invasion. Fourteen UN countries including the United States, the United Kingdom, Canada, and Australia committed 300,000 troops to repel the invaders. The United States provided almost 90% of the troops. One of the first significant battles was the battle for the port city of Busan. In this battle, the South Korean army and just four ill-equipped U.S. divisions managed to hold off the North's battalions for six weeks. BBC News reported that more U.S. troops died in this battle than in any other operation during the war.[114]

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[110] "Kim Il-Sung," *Biography*, last updated April 16, 2019, https://www.biography.com/people/kim-il-sung-9364759.

[111] "Truman Library, The Truth about Korea," Harry S. Truman Presidential Library & Museum, accessed July 14, 2018, https://www.trumanlibrary.org/whistlestop/study_collections/koreanwar/documents/index.php?documentid=ki-18-4&pagenumber=3.

[112] "United States Involvement in the Korean War: Causes and Effects," ch. 9, lesson 2, Study.com, accessed June 4, 2018, https://study.com/academy/lesson/the-korean-war-causes-and-effects.html.

[113] Alan Brinkley, John Michael Giggie, and Andrew Huebner, *The Unfinished Nation: A Concise History of the American People* (New York: Mcgraw-Hill Education, 2016), 759.

[114] "The Korean War: Cornered June–Sept 1950," BBC News, accessed December 15, 2018, http://news.bbc.co.uk/2/shared/spl/hi/asia_pac/03/the_korean_war/html/cornered.stm.

Carl Posey states that as the number of U.S. casualties increased, President Truman contemplated the possible use of nuclear weapons but decided against it.[115] North Korea began to experience military setbacks, which resulted in increased concern for North Korea's security in the presence of the United States. As the United States and South Korean forces finally began to repel the North Korean troops, U.S. General MacArthur ordered a pursuit of the retreating North Korean soldiers past the 38th parallel, even though China warned that it would enter the war if the United States crossed the 38th parallel. As the allies advanced, North Korea's hatred of the United States increased. If the allies were able to cross the 38th parallel successfully, that crossing would constitute an invasion of North Korean sovereignty. In a losing gamble, MacArthur continued the pursuit of the fleeing North Korean soldiers and shortly after crossing the 38th parallel, a Chinese army of 300,000 troops entered North Korea, which expanded the war and caused significant casualties. According to BBC News in 1953, President Eisenhower announced his willingness to use nuclear weapons to end the conflict.[116] Eisenhower's threat did not deter the communists; however, this application was probably the first of nuclear deterrence threatened against U.S. adversaries since the end of World War II. This statement by Eisenhower planted the seed in the mind of the North Korean dictator that nuclear weapons might be of value to his regime.

The North Korean civilian population also faced great difficulties during the Korean War. During this time, the North Koreans believed that the United States was responsible for dividing their country in two. They also considered themselves as victims of atrocities committed by the United States, which formed the foundation of North Korea's hostile relationship toward the United States. North Korea viewed the bombing and napalming of North Korean towns during the war as atrocities against defenseless civilians. Rakesh Krishnan Simha provided an example of such an atrocity indicating the bombing of the village of Sinuiju, which resulted in the death of an estimated 30,000

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[115] Carl A. Posey, "How the Korean War Almost Went Nuclear," Air & Space Magazine, July 2015, https://www.airspacemag.com/military-aviation/how-korean-war-almost-went-nuclear-180955324/.

[116] "The Korean War: Fighting for a Truce Jan 1951–Jul 1953," BBC News, accessed December 15, 2018, http://news.bbc.co.uk/2/shared/spl/hi/asia_pac/03/the_korean_war/html/truce.stm.

civilians.[117] Blaine Harden of *The Washington Post* stated that the bombings during the war were long, leisurely, and merciless, even by the assessment of America's own leaders.[118] According to Zachary Keck of *The National Interest* "American planes dropped 635,000 tons of bombs on North Korea, including 32,557 tons of napalm."[119] Keck also indicated that these staggering numbers were "compared to 503,000 tons of bombs dropped in the entire Pacific theatre of World War II."[120] The number of Korean dead, injured, or missing by the end of the war approached three million people. Tom O'Connor of *Newsweek* cited a 1984 interview with Air Force General Curtis LeMay, head of the Strategic Air Command during the Korean War, who claimed U.S. bombs inflicted so much damage that an estimated 20 percent of the population was destroyed.[121] The *Encyclopædia Britannica* entry on the Korean War indicates that the war lasted for three years and resulted in the deaths of 400,000 North Korean soldiers, 640,000 U.S. and UN soldiers, and a combined estimated 1.6 million civilians.[122]

The U.S. bombing campaign not only resulted in devastating the North Korean civilians, but also began to cultivate hatred for the United States. Historians dispute just how important the level of destruction resulting from the bombing really was in shaping North Korea's animosity against the United States.[123] Some criticized the extraordinary level of bombing as racist and unjustified elsewhere in the world. U.S. media did not

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[117] Rakesh Krishnan Simha, "Korean War: How the MiG-15 Put an End to American Mastery over the Skies," Russia Beyond, April 27, 2017, https://www.rbth.com/blogs/continental_drift/2017/04/27/korean-war-how-mig-15-put-end-american-mastery-over-skies-751633.

[118] Blaine Harden, "The U.S. War Crime North Korea Won't Forget," *Washington Post*, March 24, 2015, https://www.washingtonpost.com/opinions/the-us-war-crime-north-korea-wont-forget/2015/03/20/fb525694-ce80-11e4-8c54-ffb5ba6f2f69_story.html?utm_term=.400ce4e3ee08.

[119] Zachary Keck, "How American Air Power Destroyed North Korea," The National Interest, August 12, 2017, https://nationalinterest.org/print/blog/the-buzz/how-american-air-power-destroyed-north-korea-21881.

[120] Keck.

[121] Tom O'Connor, "This Is Why North Korea Hates the U.S." *Newsweek*, February 9, 2018, https://www.newsweek.com/us-forget-korean-war-led-crisis-north-592630.

[122] *Encyclopædia Britannica*, "Korean war," accessed April 5, 2019, https://www.britannica.com/print/article/322419.

[123] Max Fisher, "Americans Have Forgotten What We Did to North Korea," Vox, August 3, 2015, https://www.vox.com/2015/8/3/9089913/north-korea-us-war-crime.

consistently report this destruction and the impact of the war on civilians.[124] However, it did allow the Kim regime to designate the United States as the primary enemy against the people of Korea, and justify a highly defensive and secretive regime that fell under the communist umbrella, and became closer to China and Russia. Both the North Korean regime of Kim Il-Sung and the South Korean regime of Syngman Rhee were "unstable, rejected the legitimacy of the other, and considered itself Korea's sole rightful ruler."[125]

In 1953, an armistice was signed that created a ceasefire of hostilities. The U.S. objective in fighting the Korean War had not been the total defeat of North Korea; rather, it has a limited goal of protecting South Korea. In other words, the objective was to hold back Communist expansion as authorized by the United Nations.[126] The negotiations took place during 158 meetings over two years and 17 days.[127] "During the meetings, all parties sought to make an agreement that would suspend open hostilities, arrange the release and repatriation of prisoners of war and prevent all sides from entering areas under control of the other."[128] This agreement was not a formal peace treaty, but essentially returned the border between the north and south to the 38th parallel while establishing a demilitarized zone. This armistice is still in force today, although North Korea still considers the war ongoing and seeks to reunite the two peoples. Although, China and Russia support North Korea, it has remained insecure about the American presence in the region and U.S. nuclear strength.

Kim Il Sung began to realize the importance of nuclear weapons in the face of the U.S. presence in the region. Kim Il Sung first showed interest in building a nuclear capability to deter the United States from attacking North Korea right after the Korean war; however, it became deeply motivated by the expansion of South Korean power and

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[124] Harden, "The U.S. War Crime North Korea Won't Forget."

[125] Liam Stack, "Korean War, a 'Forgotten' Conflict That Shaped the Modern World," *New York Times*, January 1, 2018, https://www.nytimes.com/2018/01/01/world/asia/korean-war-history.html.

[126] "United Nations in Korea," Harry S. Truman Presidential Library & Museum, accessed June 8, 2018, https://www.trumanlibrary.org/dbq/unitednations.php.

[127] Walter T. Ham IV, "Armistice Anniversary Marks Milestone for Alliance," U.S. Army, July 24, 2013, https://www.army.mil/article/107916/armistice_anniversary_marks_milestone_for_alliance.

[128] Katie Lange, "The Korean War Armistice Explained," DoDlive, July 27, 2018, http://www.dodlive.mil/2018/07/27/the-korean-war-armistice-explained/.

the end of the Cold War, which weakened its alliances and expanded American power globally.[129] In the 1960s, the Soviet Union transferred nuclear technology and hardware to allow North Korea to develop a nuclear peaceful energy program.[130] Those early nuclear reactors allowed North Korea to gain the technical sophistication, as well as a source of fissile material. "Kim Il-Sung twice asked Chinese ruler Mao Zedong for help but he refused both times."[131] Both China and Russia also refused to provide the direct technology needed to build a bomb; training was as far as they were willing to extend their help. "Denied an easy path to a nuclear bomb, North Korea set about patching together an indigenous nuclear weapons program."[132]

In the 1970s, North Korea obtained a Soviet-era Scud missile from Egypt and reverse-engineered it to develop a delivery system. To add to North Korea's concern about its defense, in the early 1970s, South Korean President Park Chung-hee began to investigate possibilities of nuclear weapons.[133] "President Park Chung-hee reportedly instructed South Korean scientists to build nuclear bombs by 1977."[134] The Ford administration was deeply concerned about South Korea, then a military dictatorship, having access to nuclear weapons and pressured it to abandon those ambitions.[135] South Korea eventually ratified the NPT in April 1975, in large part because of pressure from the United States and Canada, a move that, in theory, forced it to drop its program.[136] In October 1983, under the Reagan administration, the United States invaded the island of

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[129] Olivia B. Waxman, "North Korea Nuclear Program History: It Started in the 1950s," *Time*, March 7, 2017, http://time.com/4692045/north-korea-nuclear-weapons-history/.

[130] Julie Vitkovskaya and Joby Warrick, "North Korea's Nuclear Weapons: What You Need to Know," *Washington Post*, March 9, 2018, https://www.washingtonpost.com/news/worldviews/wp/2018/03/06/5-things-to-know-about-north-koreas-nuclear-weapons/?utm_term=.05171860367c.

[131] Rahul Kalvapalle, "How Did North Korea Get Nuclear Weapons?" Global News, May 13, 2017, https://globalnews.ca/news/3448765/north-korea-nuclear-weapons/.

[132] Kalvapalle.

[133] Adam Taylor, "Why Doesn't South Korea Have Nuclear Weapons? For a Time, It Pursued Them," *Washington Post*, July 31, 2017, https://www.washingtonpost.com/news/worldviews/wp/2017/07/31/why-doesnt-south-korea-have-nuclear-weapons-for-a-time-it-pursued-them/?utm_term=.ea7b81beb9b7.

[134] William Burr, "Stopping Korea from Going Nuclear, Part I," National Security Archive, March 22, 2017, https://nsarchive.gwu.edu/briefing-book/nuclear-vault/2017-03-22/stopping-korea-going-nuclear-part-i.

[135] Burr.

[136] Taylor, "Why Doesn't South Korea Have Nuclear Weapons?"

Grenada. "The Kim Il Sung regime saw this invasion as an early warning sign: If the United States could view this small island as a threat, so too could it eventually train its sights on North Korea."[137] In addition, China had made overtures toward the United States by then and Russia was clearly too engaged in Afghanistan to aid North Korea, which increased the regime's insecurities. The feeling in the DPRK was that "without an effective deterrent, any regime perceived as a threat would be little match for American military might."[138] Kim Il Sung surmised that the only way of countering the perceived U.S. threat was to obtain nuclear weapons "Kim Il Sung can be credited for propelling the nation's nuclear program forward—but he did not live to see his country conduct its first nuclear test due to his death in 1994."[139]

As the Kim regimes continued solidifying their control of North Korea, he placed greater emphasis on obtaining nuclear weapons capability. Kim Jong Il, referred to as "Dear Leader," ruled from 1994–2011, was followed in succession by his son, Kim Jong Un, who expanded his father's vision of nuclear security for the nation.[140] Kim Jong Il "accomplished the milestone his father had dreamed about, by exploding two crude nuclear devices in 2006 and another in 2009."[141] Kim Jong Il's son Kim Jong Un is currently ruling after his father's death in 2011. Kim Jong Un originally continued his father's plan for nuclear weapons but has recently departed from his father's sole "military first" approach and is instead engineering a "dual track" policy to advance his nuclear program and economy, which is possibly a result of the famine that hit the

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[137] Benjamin R. Young, "The Reagan-Era Invasion that Drove North Korea to Develop Nuclear Weapons," *Washington Post*, August 9, 2017, https://www.washingtonpost.com/news/made-by-history/wp/2017/08/09/the-reagan-era-invasion-that-drove-north-korea-to-develop-nuclear-weapons/?utm_term=.0ef7b36bd0cc.

[138] Young.

[139] Kaitlyn Schallhorn, "North Korea's Nuclear Weapons Program Has Grown with Each Kim Regime," Fox News, accessed March 31, 2019, https://www.foxnews.com/politics/north-koreas-nuclear-weapons-program-has-grown-with-each-kim-regime.

[140] Charlie Campbell, "North Korea: A Family Tree of the Kim Dynasty," *Time*, February 24, 2017, http://time.com/4681304/north-korea-kim-family-album/.

[141] Choe Sang-Hun and David E. Sanger, "Kim Jong-Il, North Korean Dictator, Dies," *New York Times*, December 19, 2011, https://archive.nytimes.com/www.nytimes.com/2011/12/19/world/asia/kim-jong-il-is-dead.html.

country in the 1990s.[142] Kim Jong Un believes that nuclear weapons are the linchpin of North Korea's defensive strategy, which are designed to protect North Korea from invasion by the United States and others but also to protect the country's economy by becoming a superpower.[143] It is not necessarily a question of personalities, which the media highly focuses on, but rather a determination by the personalities of the leaders combined with the changing strategic setting in the world and the region itself.

B. SOVIET COLLAPSE AND CHINA'S OPENING: THE NEW POST-COLD WAR REALITIES

The Soviet Union and China emerged as the strongest supporters of North Korea during the Cold War. However, the end of the Cold War led by the collapse of the Soviet Union in 1991 and China's establishing diplomatic relations with South Korea in 1992, threatened that arrangement for North Korea. West German Chancellor Helmut Kohl's call for free elections in East Germany eventually brought German reunification in 1989.[144] "President Bush immediately endorsed the plan and pressed Kohl to accept NATO membership for a reunified Germany." Some historians believe that the Soviet Union's acceptance of the reunification marked the end of the Cold War; however, for North Korea, it expanded its insecurities. The fall of the Berlin Wall served to strengthen North Korea's insecurity in the weakening of its communist sponsor and the growing threat from NATO. Soon after the collapse of Soviet Union in 1991, North Korea lost one of its strongest supporters. Furthermore, in 1991, China, North Korea's second largest supporter, also extended diplomatic recognition to South Korea. This recognition served to weaken the China-North Korea relationship. In addition, China had made it clear that it would prefer that North Korea did not have nuclear weapons. These events pushed an insecure North Korean leadership to accelerate the development of nuclear weapons for its own security.

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[142] Heesun Wee, "How Kim Jong Un Wants to Develop His Economy and Secure His Regime," CNBC, June 11, 2018, https://www.cnbc.com/2018/06/11/how-kim-jong-un-wants-to-develop-his-economy-and-secure-his-regime.html.

[143] Mark Bowden, "How to Deal with North Korea," *The Atlantic*, August 9, 2017, https://www.theatlantic.com/magazine/archive/2017/07/the-worst-problem-on-earth/528717/.

[144] Lee Edwards and Elizabeth Edwards, "German Reunification: A Return to One Germany," History, June 20, 2018, https://www.historyonthenet.com/german-reunification/.

C. FAMINE AND ECONOMIC SECURITY

The North Korean civilian population was severely impacted by a catastrophic food shortage, which affected its economic security. In the earlier years after North Korea was formed, the Soviet Union was the largest provider of food and aid. After 1991, the food, aid, and supply of cheap oil from Soviet Union stopped, which left North Korea short of resources that significantly impacted North Korean farming.[145] The government began rationing food.[146] To sustain the regime, the elite and the military prioritized food for the common people. To make matters worse, in 1995 and 1996, mass flooding washed away what fertile soil still existed, which also reduced the amount of farmable land. The shortage of food and a combination of drought, flooding, and government mismanagement decimated food production and led to famine.[147] The government then tried to adjust for the lack of food by mandating that people should eat less. Arguably, North Korea suffered in silence for many years before 1995 (the year most commonly identified as the start of the famine) when a series of natural disasters devastated crops and the government requested international assistance.[148] Once international aid began, "the distribution of food reflected quite openly the basic principles of stratification in the socialist system," which resulted in the inequitable distribution of food.[149]

Due to its secretive nature, the number of actual deaths from malnutrition is unknown, but it has been speculated that as many as one million people may have died of starvation. At the time, a *New York Times* article reported that visitors noted undernourished people walking listlessly through the streets of Pyongyang.[150] The health of North Korea's citizens has a direct impact on the economic security since goods and

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[145] Jordan Weissmann, "How Kim Jong Il Starved North Korea," *The Atlantic*, December 21, 2011, https://www.theatlantic.com/business/archive/2011/12/how-kim-jong-il-starved-north-korea/250244/.

[146] Weissmann.

[147] Paul Chisholm, "The Food Insecurity of North Korea," NPR, June 19, 2018, https://www.npr.org/sections/goatsandsoda/2018/06/19/620484758/the-food-insecurity-of-north-korea.

[148] Sandra Fahy, "Appendix: A Short History of the North Korean Famine," in *Marching through Suffering: Loss and Survival in North Korea* (New York: Columbia University Press, 2015), 183.

[149] Fahy, 193.

[150] "Fear and Famine in North Korea," *New York Times*, August 8, 1997, https://www.nytimes.com/1997/08/08/opinion/fear-and-famine-in-north-korea.html.

services cannot be produced without viable workers. Just as "soldiers are in poor physical condition and in no fit state to fight," so follows the impact of malnourished workers on maintaining and growing the economy.[151] At this point, Kim Il Sung turned to a national policy of "juche," or self-reliance, which would then allow the DPRK to become more independent from its allies.[152] However, this policy came with also developing nuclear weapons, which would provide it with independent insecurity.

D. WESTERN DIPLOMATIC ATTEMPTS AT CONTAINING THE EXPANDING NUCLEAR POWER

The United States attempted to negotiate various agreements with the North Koreans that were designed to reduce the progress of their nuclear weapons program. In 1991, as part of the Strategic Arms Reduction Treaty, "President George H. W. Bush agreed to withdraw all nuclear weapons from South Korea."[153] "As a result, on January 20, 1992, North Korea agreed to sign the Joint Declaration on the Denuclearization of the Korean Peninsula."[154] This agreement also indicated that North Korea would not "test, manufacture, produce, receive, possess, store, deploy, or use nuclear weapons."[155] South Korea also agreed to this declaration. The United States did indeed withdraw all nuclear weapons from South Korea in 1991, and thereby eliminated all U.S. nuclear weapons from the Korean Peninsula. The withdrawal of these weapons should have provided North Korea with added assurance that the threat to their regime was reduced, since nuclear weapons were not aimed at North Korea.

In North Korea's eyes, the removal of these weapons, however, did not mean that the nuclear threat had been removed. The United States still had the ability to strike with nuclear weapons from strategic bombers from military bases outside of the Korean

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[151] Justin McCurry, "'Too Many Soldiers to Feed': North Koreans Fear More Sanctions as Drought Threatens Famine," *Guardian News and Media*, August 23, 2017, https://www.theguardian.com/world/2017/aug/23/north-koreans-fear-more-sanctions-as-drought-pushes-millions-towards-malnutrition.

[152] Weissmann, "How Kim Jong Il Starved North Korea."

[153] "North Korean Nuclear Negotiations 1985–2019, Timeline," Council on Foreign Relations, 3, accessed March 31, 2019, https://www.cfr.org/timeline/north-korean-nuclear-negotiations.

[154] Council on Foreign Relations, 4.

[155] "North Korea," Nuclear Threat Initiative, last updated October 2018, http://www.nti.org/learn/countries/north-korea/nuclear/.

Peninsula, as well as with intercontinental ballistic missiles (ICBMs). In January 1992, North Korea signed the International Atomic Energy Agency (IAEA) and agreed to inspections of declared nuclear facilities.[156] One month later, however, North Korea refused to agree on the finalization of mutual inspections with the South.[157] On June 12, 1992, "South Korea announced that North Korea was already breaking the nuclear-weapon-free zone agreement by building a reprocessing facility."[158]

One of the United States' goal was to reduce and eventually eliminate nuclear weapons on the Korean Peninsula; however, North Korea continued to make progress in reaching that goal. In January 1994, North Korea's nuclear weapons program reached a major milestone. The Central Intelligence Agency (CIA) determined that North Korea might have developed two nuclear bombs, which was a significant step in the North Korean nuclear program. Since then, negotiations between the United States and North Korea, as well as talks between NATO and North Korea, are aimed at reducing and eliminating nuclear weapons on the Korean Peninsula. One of the reasons why denuclearization is so difficult to achieve is because of the North Korean view that denuclearization needs to be in the entire Korean Peninsula. For North Korea to comply, the Kim regime insisted that the nuclear umbrella over South Korea be eliminated.[159] The North Korean leadership has argued that as long as the United States pursued a hostile and threatening policy (including joint military exercises) toward the DPRK, North Korea must develop nuclear weapons capabilities for defensive purposes.[160]

These talks give the impression that North Korea was serious about eliminating nuclear weapons; however, North Korea has continued to develop its weapons. These talks included the "Agreed Framework" finalized in Geneva on October 21, 1994. The

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[156] Nuclear Threat Initiative.

[157] Nuclear Threat Initiative.

[158] "Joint Declaration of South and North Korea on the Denuclearization of the Korean Peninsula," Nuclear Threat Initiative, last updated October 26, 2011, https://www.nti.org/learn/treaties-and-regimes/joint-declaration-south-and-north-korea-denuclearization-korean-peninsula/.

[159] Kang Choi, "The North Korean Nuclear Problem: Twenty Years of Crisis," *Asia Policy* 19 (2015): 30, https://search-proquest-com.libproxy.nps.edu/docview/1687830832?OpenUrlRefId=info:xri/sid:primo&accountid=12702.

[160] Choi, 30.

Clinton administration brokered the agreement where North Korea agreed to freeze and eventually eliminate its nuclear facilities and allow the IAEA inspections to take place. In exchange, the United States agreed to provide North Korea with two light water reactors and heavy fuel oil.[161] The reactors were to be used for peaceful purposes. President George W. Bush was not satisfied with the agreement that the Clinton administration had negotiated. The North Koreans completed another missile test in 1998 and U.S. intelligence discovered North Korea was pursuing technology for a uranium enrichment program to be used for nuclear weapons.[162] President Bush used these incidents as opportunities to void the agreement. North Korea halted the construction of the light water reactors but continued with its nuclear weapons program. Although it appeared North Korea broke the terms of the agreement first, both parties believe the other party reneged on the agreement, which fueled mistrust that would continue throughout their relationship. In January 2003, North Korea withdrew from the NPT. "North Korea's stated reasons for withdrawing from the NPT were that the United States was threatening its security by its hostile policy toward North Korea."[163]

The United States and other regional nations worked to encourage North Korea to abandon their development of nuclear weapons. In April 2003, North Korea agreed to participate in discussions initiated by China. In a six-party discussion, the format was composed of countries in the region and key nations interested in the stabilization of the Korean Peninsula. These countries included China, North Korea, the United States, Japan, Russia, and South Korea. "On September 19, 2005, the fourth round of Six-Party Talks concluded and the six parties signed a Statement of Principles, whereby North Korea would abandon its nuclear programs and return to the NPT and the IAEA safeguards regime at 'an early date.'"[164] The United States indicated that it "did not

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[161] "Fact Sheets & Briefs, Chronology of U.S.-North Korean Nuclear and Missile Diplomacy," Arms Control Association, 4, updated April 2019, https://www.armscontrol.org/factsheets/dprkchron.

[162] Arms Control Association.

[163] Frederic Kirgis, "North Korea's Withdrawal from the Nuclear Nonprofileration Treaty," *American Society of International Law: Insights* 8, no. 2 (January 24, 2003), https://www.asil.org/insights/volume/8/issue/2/north-koreas-withdrawal-nuclear-nonproliferation-treaty.

[164] Arms Control Association, "Fact Sheets & Briefs," 22.

intend to attack North Korea with nuclear or conventional weapons, and Washington affirmed that it had no nuclear weapons deployed in South Korea."[165] This statement by the United States should have brought the desired guarantee of the survival of the regime. This agreement, however, did not provide the guarantee for which North Korea was looking. North Korea did not feel the Statement of Principles was viable and mistrusted U.S. actions.[166] In addition, the United States and South Korea continued to hold joint military exercises in 2005 and 2006, including Foal Eagle. North Korea viewed these exercises as the preparation by the United States for a preemptive attack with nothing else to convince it otherwise.[167] Contrary to the bold statement made by the United States in the Statement of Principles, these military exercises appeared to send contradicting messages as to the security and survival of the North Korean regime.

In 2006, unpredictably, North Korea completed its first nuclear test followed by the test firing of seven ballistic missiles. After North Korea conducted its first test, the Bush administration "tried desperately to negotiate a new accord with Pyongyang, including offering significant new concessions such as removing North Korea from the U.S. State Department list of state sponsors of terrorism."[168] The removal from this list would remove "restrictions on U.S. foreign assistance; a ban on defense exports and sales; certain controls over exports of dual use items; and miscellaneous financial and other restrictions."[169] However, those efforts ultimately failed.[170]

North Korea was looking for a tool to ensure its regime's survival and that tool came in the form of building a nuclear weapons program. In April 2009, North Korea

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[165] Nuclear Threat Initiative, "North Korea."

[166] Nuclear Threat Initiative.

[167] John S. Chu, "Military Exercises in Korea: A Provocation or a Deterrent to War? (paper, Joint Military Operations Department, Naval War College, 2006), 9, https://apps.dtic.mil/dtic/tr/fulltext/u2/a463339.pdf.

[168] Glenn Kessler, "History Lesson: Why Did Bill Clinton's North Korea Deal Fail?" *Washington Post*, 3, August 9, 2017, https://www.washingtonpost.com/news/fact-checker/wp/2017/08/09/history-lesson-why-did-bill-clintons-north-korea-deal-fail/?utm_term=.b05ba742a033.

[169] "State Sponsors of Terrorism," U.S. Department of State, accessed September 27, 2018, https://www.state.gov/j/ct/list/c14151.htm.

[170] Kessler, "History Lesson."

launched three Unha-2 rockets. It conducted another underground nuclear test in May 2009. In 2012, it successfully launched a satellite into orbit, which was a critical component in long-range missile infrastructure. In 2013, it performed another nuclear test and continued rocket launches. In 2014, it launched 30 short-range missiles. Then, it also fired two medium-range missiles. In 2015, it launched six ballistic missiles and one from a submarine. In 2016, it tested a hydrogen bomb, as well as launched a long-range missile. Also, in 2016, it launched six intermediate-range missiles, three medium-range ballistic missiles and a ballistic missile from a submarine. It then conducted a fifth nuclear test. In 2017, it launched seven ballistic missiles. It also launched three short-range ballistic missiles and conducted its sixth nuclear test. It then launched two intercontinental ballistic missiles. North Korea's current leader, Kim Jong Un, appeared to be genuinely convinced that the United States would seek a strategy of regime change, as it did with Libya and Iraq.[171] Kim did have valid concerns of such a strategy as National Security Advisor John Bolton referred to the "Libyan model of nuclear disarmament."[172] In the face of the loss of key allies, the survival of the Kim Jong Un regime was at risk, especially since China had expanded trade with the West and the Russians seem to also form new alliances. In addition to Western attempts to contain North Korea, the Kim regime is feeling pressure from its long-time allies. "In the wake of North Korea's nuclear tests in 2013, Chinese intellectuals began to publicly voice that China should abandon North Korea."[173] "They also indicated that the 1961 Sino-North Korean Mutual Aid and Cooperation Friendship Treaty, which was designed to guarantee North Korea's security, was no longer relevant."[174] The Obama administration barely bothered to restart disarmament talks, and instead adopted a stance dubbed "strategic patience."[175]

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[171] Vitkovskaya and Warrick, "North Korea's Nuclear Weapons."

[172] Uri Friedman, "The Word That Derailed the Trump-Kim Summit," *The Atlantic*, May 24, 2018, https://www.theatlantic.com/international/archive/2018/05/libya-trump-kim/561158/.

[173] Donggil Kim and Seong-hyon Lee, "Historical Perspective on China's "Tipping Point" with North Korea," *Asian Perspective* 42, no. 1 (January–March 2018): 33, 40, http://libproxy.nps.edu/login?url=https://search-proquest-com.libproxy.nps.edu/docview/1992870012?accountid=12702.

[174] Kim and Lee, 33, 40.

[175] Kessler, "History Lesson."

The revitalization of the Cold War began anew with the election of Donald Trump as the U.S. president. In a September 2017 speech to the United Nations, President Trump threatened to "totally destroy" North Korea.[176] In January 2018, Former Secretary of Defense William J. Perry declared, "we are at greater risk of nuclear catastrophe now than we were during the Cold War."[177] This "Cold War paranoia" is also quite evident as the Kim Jong Un regime continuously spins warnings of the United States' desire to destroy North Korea as Soviet Union and the United States did against each other. An August 28, 2018 North Korean state media report indicated that the United States is planning to "unleash a war" on North Korea while continuing to negotiate "with a smile on its face."[178] This statement was made after the historic Singapore Summit.

"For more than two decades, successive North Korean leaders—first Kim Il Sung, then Kim Jong Il, and now Kim Jong Un—have sought to meet a sitting U.S. president as equals and enter comprehensive talks on the future of the Korean Peninsula."[179] Such a meeting would legitimize the regime and strengthen its survivability. "Nuclear weapons, in addition to the pragmatic survival and deterrence benefits they confer, undoubtedly also bring North Korea's status."[180] In June 2018, the Singapore Summit between North Korea and the United States provided an opportunity to reduce the Cold War tensions by allowing direct talks between the two leaders. "The joint declaration issued by the two sides after the summit did not appear to make any significant progress in committing the North Koreans to a verifiable dismantling of Pyongyang's nuclear arsenal."[181] In fact,

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[176] Julian Borger, "Donald Trump Threatens to 'Totally Destroy' North Korea in UN Speech," *The Guardian*, September 19, 2017, https://www.theguardian.com/us-news/2017/sep/19/donald-trump-threatens-totally-destroy-north-korea-un-speech.

[177] Ishaan Tharoor, "A Nuclear North Korea Is Bringing Back Cold War Paranoia," *Washington Post*, January 17, 2018, https://www.washingtonpost.com/news/worldviews/wp/2018/01/17/the-challenge-of-north-korea-raises-the-specter-of-the-cold-war/?utm_term=.a737e94ecb66.

[178] Rosie Perper, "North Korea's State Newspaper Claims the U.S. Is Secretly Plotting to 'Unleash a War' While Continuing to Negotiate 'with a Smile on Its Face'," Business Insider, August 27, 2018, https://www.businessinsider.com/north-korea-rodong-sinmun-us-unleash-war-2018-8.

[179] Ankit Panda, "Trump Meeting Is Just What Kim Jong Un Has Always Wanted," *The Daily Beast*, March 9, 2018, https://www.thedailybeast.com/trump-meeting-is-just-what-kim-jong-un-has-always-wanted.

[180] Panda.

[181] Stephen Collinson, "Lingering Questions from the Trump-Kim Summit," CNN, June 13, 2018, https://www.cnn.com/2018/06/12/politics/what-really-came-out-of-the-trump-kim-summit/index.html.

since the February 2019 second summit in Hanoi, it was reported, "North Korea has started rebuilding the facilities it uses to launch satellites into orbit and test engines and other technologies for its intercontinental ballistic missile program."[182]

Denuclearization has remained a problematic point in negotiations with North Korea, which may be because of misperceptions on what the word means for the involved actors. North Korea's hesitancy in dismantling its program may be due North Korea's differing perceptions of what denuclearization entails. "Kim agreed in Singapore to work toward the denuclearization of the Korean Peninsula, which could be taken to include removal of the U.S. nuclear umbrella for South Korea and nuclear-capable forces, while the United States has been demanding that North Korea give up all of its nuclear and missile programs."[183] These differing perceptions were carried forward into the second summit in February 2019. Even though U.S. nuclear weapons have been removed from the Korean Peninsula, that nuclear umbrella afforded South Korea is still an effective way to threaten North Korea. "South Korean leaders place high value on remaining under the U.S. nuclear umbrella and have exerted great effort to have Washington provide explicit reassurances that the nuclear umbrella remains in place."[184] "The U.S. will never withdraw the nuclear umbrella extended to South Korea since it is an important nonproliferation tool to persuade more states from acquiring nuclear weapons and has been a part of the security architecture in Korea and East Asia for many years."[185] The protection under this umbrella has also served to minimize the impact of removing the nuclear weapon inventory from South Korea; North Korea knows it can still be attacked using other U.S. delivery systems. North Korea realizes that it can be attacked through the U.S. triad under the nuclear umbrella, those being via ICBMs, Ohio-

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[182] Choe Sang-Hun, "North Korea Has Started Rebuilding Key Missile-Test Facilities, Analysts Say," *New York Times*, March 5, 2019, https://www.nytimes.com/2019/03/05/world/asia/north-korea-missile-site.html?module=inline.

[183] Jeff Mason and Steve Holland, "U.S., North Korea to Seek Understanding on Denuclearization at Summit," *Reuters*, February 21, 2019, https://www.reuters.com/article/us-northkorea-usa/u-s-north-korea-to-seek-understanding-on-denuclearization-at-summit-idUSKCN1QA25O.

[184] Terence Roehrig, "The U.S. Nuclear Umbrella over South Korea: Nuclear Weapons and Extended Deterrence," *The Canadian Journal of Chemical Engineering*, 652, December 27, 2017, https://onlinelibrary.wiley.com/doi/full/10.1002/polq.12702.

[185] Roehrig, 683.

class submarines, and nuclear capable bombers.[186] "So long as the United States retains a nuclear weapons arsenal, a certain degree of ambiguity will remain; North Korea will have little confidence in a U.S. statement not to use nuclear weapons first or a pronouncement that removes South Korea from the nuclear umbrella."[187]

E. SANCTIONS

1. DPRK's Economy and the Impact of Sanctions on Economic Growth

In North Korea, the state controls all means of production, and sets priorities and directions on economic development. North Korea's primary trading partners include China, Russia, and South Korea. Other principle trading partners include India, Russia, Mexico, and Thailand. In 2015, 83% of North Korea's exports went to China.[188] North Korea's major export is coal briquettes. Other exports include textiles, apparel, mineral fuels, and lubricants. Imports mainly consist of beverages, food, and other agricultural products, mineral fuels, machinery, and textiles. Regardless of the controversies North Korea creates, it has stature and influence in the region. In April 2018:

> Kim Young Hui, a North Korean defector, who now studies at Seoul's government-owned Korea Development Bank, indicated that North Korea was viewed as a 'frontier market' full of potential economic possibilities that could offer rewards for the business community because of its central location in a booming region including economic powers of South Korea, Japan, and China.[189]

Kim Young Hui also takes a positive view of North Korea's economic potential by stating, "North Korea can be a bridge linking the Peninsula to as far as Europe via China."[190] "Imagine how much cargo could flow on that Asian highway."[191]

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[186] Roehrig, 676.

[187] Roehrig, 679.

[188] Arielle Berger, "North Korea Exports $2.83 Billion Worth of Goods—Here's Where It All Goes," Business Insider, October 4, 2017, http://www.businessinsider.com/goods-north-korea-trade-world-imports-exports-sanctions-china-2017-10.

[189] "Kim Jong Un Shifts Gear to Economy as North Korea Ditches Nuclear Tests," Straits Times, April 22, 2018, https://www.straitstimes.com/asia/east-asia/kim-jong-un-shifts-gear-to-economy-as-north-korea-ditches-nuclear-tests.

[190] Straits Times.

[191] Straits Times.

2. DPRK's Economy and the Impact of Sanctions—China's Role in Sanctions

The United States assumes that because of their relationship, China has the greatest influence on North Korea, which could be used to curb North Korea's nuclear ambitions. North Korea also realizes that its economic growth has a direct impact on China's economy. China is North Korea's most vital trading partner and primary supplier of food and energy.[192] China is also responsible for supporting the North Korean regime economically. China has traditionally defied supporting harsh international sanctions against North Korea in the hope of avoiding a regime collapse because North Korea represents a stable ally for them.[193] With the implementation of additional UN economic sanctions, the United States has attempted to pressure China into taking a larger role in exerting its influence over North Korea. China has taken a more aggressive stance in making its opposition to North Korea's actions by supporting a greater number of economic sanctions since 2006. The United States, while encouraged by China's actions, is skeptical that China will actually enforce the sanctions.[194] However, "while China appears willing to condemn North Korea's nuclear developments, analysts say its cautious policies remain focused on stability."[195]

China and Russia have added their names to the list of nations supporting sanctions, but it is not clear whether they are motivated enough to enforce the sanctions. In some instances, the language of the sanctions had to be watered down just to get Russia and China to issue an affirmative vote, as they were careful not to enact a measure that might result in the downfall of the North Korean regime. China may, however, be ready to support sanctions. For example, China "temporarily suspended coal imports

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[192] Eleanor Albert, "Understanding the China-North Korea Relationship," Council on Foreign Relations, last updated March 13, 2019, https://www.cfr.org/backgrounder/china-north-korea-relationship.

[193] Albert.

[194] Uri Friedman, "Why China Isn't Doing More to Stop North Korea," *The Atlantic*, August 9, 2017, https://www.theatlantic.com/international/archive/2017/08/north-korea-the-china-options/535440/.

[195] Eleanor Albert, "What to Know about the Sanctions on North Korea," Council on Foreign Relations, 9, last updated February 25, 2019, https://www.cfr.org/backgrounder/what-know-about-sanctions-north-korea.

from North Korea in February 2017."[196] Additionally, China reported no "imports of coal, iron, lead, aluminum, zinc or copper from North Korea in October 2017 and with China's support, the United Nations has agreed to two rounds of sanctions since August, including bans on North Korean exports of iron, coal, lead, seafood, textiles, as well as some oil import restrictions."[197] China has the ability, if desired, to restrict trade further with North Korea as China continues to trade on exports of fuel, wheat, corn, soy oil, palm oil, rice, cotton, rubber, and stainless steel, and imports of fertilizer, log, and steel.[198]

3. DPRK's Economy and the Impact of Sanctions—What the Sanctions Are

Since 2006, the United States, the United Nations, and the European Union placed sanctions on North Korea in an attempt to make its defiance of international concern painful to the North Korean regime. Sanctions were initially imposed when North Korea tested its first nuclear weapon in 2006. The purpose of the sanctions was to stop North Korea's nuclear weapons program and bring North Korea back to talks centered on denuclearization. North Korea desires to be seen as an economic power in the region and has begun a policy of economic reform aimed at ensuring the survival of the Kim Jong Un regime.[199] The United States is optimistic that the pain inflicted on the North Korean government and people will force North Korea to abandon the development of nuclear weapons to allow economic reforms to take place and ease the suffering of its people.

With the apparent failure to deter launches of North Korean missiles using MAD plus an increase in conventional forces, the United States has also sought an economic strategy to deter North Korean nuclear missile development. The introduction of smart

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[196] Choe Sang-Hun, "China Suspends All Coal Imports from North Korea," *New York Times*, 1, February 18, 2017, https://www.nytimes.com/2017/02/18/world/asia/north-korea-china-coal-imports-suspended.html.

[197] "China Upholding UN Sanctions against North Korea, Trade Figures Show," Bloomberg, 1, November 24, 2017, https://www.bloomberg.com/news/articles/2017-11-24/china-upholds-un-sanctions-against-north-korea-trade-data-show.

[198] Bloomberg, 2.

[199] Wee, "How Kim Jong Un Wants to Develop."

and targeted sanctions seeks to make life for North Korean elites more difficult, and hope they see nuclear weapons ultimately as a liability rather than an asset.[200] Sanctions would be implemented in cooperation with other major parties, especially China. The United States is using the United Nations as a platform for economic sanctions to build upon the current deterrence. This current strategy requires participation by several key players who are cooperating to some extent.

As North Korea continued its nuclear weapons testing, the international community increased the level of sanctions to place additional pressure on the regime. North Korea remained quiet for several years until 2009, when it performed an underground nuclear test. This test resulted in additional sanctions and further restrictions on arms imports. In 2013, North Korea exploded another nuclear warhead, which resulted in an additional sanction aimed at the import of luxury goods. This particular sanction was aimed at Kim Jong Un, as most of the population could not afford these types of goods.[201] North Korea's response was to launch a preemptive nuclear strike against foreign "aggressors."[202] In 2016, North Korea performed its fourth nuclear test. The United Nations authorized the searching of ships suspected of carrying parts for North Korea's nuclear program. In 2017, North Korea conducted three more tests and claimed to have detonated a hydrogen bomb. Three more rounds of sanctions were imposed in response including freezing the personal assets of North Korea leaders, cutting exports, as well as oil imports. North Korea reacted to this round of sanctions by calling them an "act of war."[203] In addition to sanctions imposed by the United Nations, the United States also has imposed unilateral sanctions against North Korea, by executive orders through the Office of Foreign Assets Control under the U.S. Department of the Treasury. These

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[200] Choi, "The North Korean Nuclear Problem: Twenty Years of Crisis," 28–36.

[201] Colum Lynch and Joby Warrick, "U.N. Security Council Approves New Sanctions against North Korea," *Washington Post*, March 7, 2013, https://www.washingtonpost.com/world/asia_pacific/north-korea-threatens-nuclear-strike-against-aggressors/2013/03/07/1a1e1ada-8726-11e2-999e-5f8e0410cb9d_story.html?utm_term=.68d993fb64c2.

[202] Lynch and Warrick.

[203] Faith Karimi and James Griffiths, "North Korea Calls Latest UN Sanctions 'an Act of War'," CNN, December 24, 2017, https://www.cnn.com/2017/12/24/politics/north-korea-un-resolution-response/index.html.

sanctions are financial in nature and restrict North Korea's access to funds deposited in banks outside of North Korea, as well as the personal funds of the North Korean leadership. In addition, other countries and international organizations have imposed sanctions designed to encourage North Korea to abandon its nuclear weapons efforts. These nations and organizations include South Korea and Japan. The European Union also imposed its own set of sanctions aimed at North Korea's weapons of mass destruction and ballistic missile-related program.

The United Nations passed nine rounds of sanctions in an effort to encourage North Korea from moving forward with its nuclear program. Figure 1 shows some of these sanctions.

Figure 1. UN Sanctions against North Korea.[204]

[204] Source: Albert, "What to Know about the Sanctions on North Korea," 4–5.

Figure 2 provides a chronology of the major sanctions applied against North Korea.

Figure 2. Chronology of the Sanctions against North Korea.[205]

In 2017, Nikki Haley, the U.S. ambassador to the United Nations, described the latest UN sanctions on North Korea as "the most stringent set of sanctions on any country

[205] Source: Albert, "What to Know about the Sanctions on North Korea," 3.

in a generation."[206] These sanctions included a total ban on North Korea's major exports, including coal, iron, iron ore, lead, lead ore, and seafood. "In September 2017 international sanctions, if enforced could stem the flow of up to $1.3 billion" to North Korea.[207] "The U.N. ban on textile exports, North Korea's second-largest industry after coal, could cost the Kim Jong Un regime around $800 million annually."[208] Altogether, U.N. sanctions were aimed at 90 percent of North Korea's exported products.[209] In September 2017, the U.N. issued new sanctions banning textile exports and put a limit on fuel supplies. North Korea responded by indicating that the sanctions restricted its right to self-defense and were aimed at "completely suffocating its government and people through all out economic blockade."[210] Also in September 2017, a series of sanctions were aimed at several North Korean individuals and companies, as well as additional travel bans and asset freezes. Since these sanctions affected the "enjoyment of the people," North Korea called the sanctions brutal, which resulted in the imposition of human rights violations and genocide on the North Korean people.[211] In the previous month, North Korean officials indicated that sanctions might be negatively affecting key economic sectors and restricting the human rights of North Korean citizens.[212] In December 2017, the United Nations issued "new sanctions, which cut exports of gasoline, diesel, and other refined oil products by 89% and ban the export of industrial equipment, machinery, transportation vehicles, and industrial metals to North Korea."[213] It also required countries currently hosting North Korean migrant workers to send those

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[206] Krishnadev Calamur, "What's New about the Latest UN Sanctions against North Korea?" *The Atlantic*, August 7, 2017, https://www.theatlantic.com/international/archive/2017/08/north-korea-sanctions/536082/.

[207] Albert, "What to Know about the Sanctions on North Korea," 8.

[208] Albert, 8.

[209] Albert, 9.

[210] Jack Kim and Roberta Rampton, "North Korea Warns U.S. of 'Greatest Pain' After Sanctions," *Time*, September 13, 2017, http://time.com/4939166/north-korea-sanctions-great-pain/.

[211] John Revill, "North Korea Calls for a Halt to 'Brutal' Sanctions," Reuters, November 3, 2017, https://www.reuters.com/article/us-northkorea-missiles-sanctions-reactio/north-korea-calls-for-a-halt-to-brutal-sanctions-idUSKBN1D32CG.

[212] Revill.

[213] Nicole Gaouette and Elizabeth Joseph, "UN Adopts Tough New Sanctions on North Korea," CNN, December 24, 2017, https://www.cnn.com/2017/12/22/politics/un-us-north-korea-resolution/index.html.

workers home within 24 months.[214] North Korea announced this requirement was an "act of war."

4. DPRK's Economy and the Impact of Sanctions—Are the Sanctions Working?

The question arises whether Kim Jong Un's regime is willing to sacrifice the physical and financial health of its people for nuclear weapons? The answer appears to be yes. It is difficult to tell if sanctions are working because North Korea is a closed society and very little public economic data is available. The reports are conflicting as to the impact of the sanctions on North Korean citizens. "North Korea's economy declined at the sharpest rate in two decades in 2017, according to estimates from South Korea's central bank."[215] "This is an independent indicator that sanctions are beginning to effect on North Korea's economy."[216]

To determine the effectiveness of sanctions, it became necessary to determine the impact of those sanctions on its intended target. Additional information comes through reports from aid groups operating in North Korea. Reports differ depending on the access aid groups have. The reports from aid groups provide contrasting assessments of how the sanctions are affecting North Korean citizens. KorAid's director, Katharina Zellweger, indicates that sanctions are affecting the wrong people. Sanctions have served to reduce humanitarian aid, which is hurting those who need assistance the most. Instead of forcing Kim to the negotiating table, the sanctions are hurting the vulnerable that include children, pregnant women, elderly, the ill, and people with disabilities.[217] Mark Lowcock, the United Nations Under-Secretary General for Humanitarian Affairs, indicates that a

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[214] Karimi and Griffiths, "North Korea Calls Latest UN Sanctions 'an Act of War'."

[215] Cynthia Kim and Hayoung Choi, "South Korea Says Sanctions Shrank North Korean Economy at Sharpest Rate in 20 Years," Reuters, July 19, 2018, https://www.reuters.com/article/us-northkorea-economy-gdp/south-korea-says-sanctions-shrank-north-korean-economy-at-sharpest-rate-in-20-years-idUSKBN1KA085.

[216] Reuters, "North Korean Economy Sees Sharpest Decline in 20 Years as Sanctions Bite," *The Guardian*, July 19, 2018, https://www.theguardian.com/world/2018/jul/20/north-korean-economy-sees-sharpest-decline-in-20-years-as-sanctions-bite.

[217] Lee Jeong-Ho, "'Very Little Goes in': Aid for North Koreans Hampered by UN Sanctions," *South China Morning Post*, June 27, 2018, https://www.scmp.com/news/china/diplomacy-defence/article/2152600/un-sanctions-hurt-vulnerable-people-north-korea-ngos.

fifth of all North Korean children are affected by malnutrition.[218] This report is in contrast to that of another international aid organization, World Food Programme. Its Executive Director states that the signs of malnourishment and hunger have disappeared; which is in contrast to what was seen in the 1990s.[219] The North Korean government's refusal to halt its nuclear weapons program in the face of new sanctions provides the other evidence of the effectiveness of sanctions. What would follow in the coming years is a pattern of delaying and misdirection.

Over the years sanctions were imposed, the years were filled with North Korean promises, broken promises, and missile launches. The effectiveness of sanctions has always been debated. Professor John Delury has indicated that "the North Koreans are very used to suffering economically."[220] In 2018, the United States Treasury Department prepared an additional package of sanctions aimed at nearly three dozen sanction targets, including Russian and Chinese entities, but decided to hold off pending the results of the planned 2018 summit between North Korea and the United States.[221]

In February 2018, the United States imposed additional sanctions targeting 56 shipping companies, businesses, and shipping vessels. North Korea's reaction was that it considered it an "act of war."[222] However, the North Korean government indicated it was willing to talk. Could this willingness be a sign the sanctions are working? In 2018, evidence showed that energy sanctions applied against Venezuela's supply line to North Korea had encouraged North Korea to agree to hold talks on denuclearization, which could be another sign that sanctions might actually work.

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[218] Benjamin Haas, "One in Five North Korean Children Malnourished, Says UN Chief during Rare Visit," *The Guardian*, July 12, 2018, https://www.theguardian.com/world/2018/jul/12/north-korea-children-malnourished-un-visit.

[219] Jeong-Ho, "'Very Little Goes in'."

[220] Albert, "What to Know About the Sanctions on North Korea."

[221] Ian Talley, "U.S. Holds Off on New North Korea Sanctions as Summit Talks Progress," *The Wall Street Journal*, May 2, 2018, https://www.wsj.com/articles/u-s-prepares-sanctions-while-pursuing-revived-north-korea-talks-1527526255.

[222] Ali Vitali, "North Korea Condemns New Sanctions but Opens Door to Talks with U.S.," NBC News, February 25, 2018, https://www.nbcnews.com/news/world/north-korea-condemns-new-u-s-sanctions-says-blockade-would-n851021.

The international community continued to pressure China, as one of North Korea's primary allies, to take firmer action by complying with sanctions. A recent abundance of seafood has appeared in North Korea, which usually is reserved for the Chinese market. Sales in foreign currency, as well as reports from traders on the border between North Korea and China state that trade is down and traders are having trouble making ends meet. This situation may suggest that sanctions are having some effect and that the Chinese have been more willing to enforce U.N. Security Council sanctions recently.[223] North Korea has been able to trade illegally with other countries at sea, which has led to some of the inability of sanctions to work.[224] New sanctions attempt to close those loopholes and have even suggested a naval blockade, which North Korea would interpret as an act of war.

Additionally, sanctions may not have the desired effect. Instead of encouraging compliance, sanctions may instead embolden Kim into resistance. "Kim may interpret the sanctions as a threat to the survival of his regime."[225] For all the intended impact of sanctions as a deterrent, some negatives have arisen and include the difficulty in enforcing enacted sanctions.

F. U.S. DOCTRINE MODIFICATIONS

The United States is still using flexible deterrence as a way of deterring North Korea. With the beginning of nuclear tests, it became obvious that a modification to the deterrence doctrine must be made. MAD would not work because such an approach would have a catastrophic impact in the region and would not only result in the destruction of North Korea, but also of its allies in the region. Tactical nuclear weapons were thought to be a solution because the yield of the bomb could be detonated against a selected target that would result in limited collateral damage. The Nuclear Threat

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[223] Tom DiChristopher, "North Korea May Have Just Given U.S. Much Needed Win in War Waged with Sanctions," CNBC, March 6, 2018, https://www.cnbc.com/2018/03/06/north-korea-may-have-just-given-us-much-needed-win-in-sanctions-war.html.

[224] Alex Ward, "Why Trump's New North Korea Sanctions Matter," Vox, February 23, 2018, https://www.vox.com/2018/2/23/17044176/north-korea-sanctions-trump-war-olympics.

[225] Albert, "What to Know About the Sanctions on North Korea."

Initiative, a nonpartisan, nonprofit organization, describes tactical nuclear weapons as nonstrategic nuclear weapons typically referring to short-range smaller yield weapons intended for use on the battlefield in conjunction with conventional troops.[226] In theory, the detonation of this type of weapon would result in less amounts of radiation that could injure or kill friendly forces. "Tactical nuclear weapons were removed from the South Korean Peninsula in 1991 in a previous attempt to get North Korea to abandon its nuclear weapons program."[227] Since the removal of those weapons has not halted North Korea's missile launches, talk of possibly bringing these weapons back has resulted. As late as 2017, Defense Secretary Mattis indicated, "the U.S. and South Korea have discussed reintroducing tactical nuclear weapons as an option to defend against North Korea's nuclear weapons program."[228] It was thought that this action, instead of deterring North Korea, would instead accelerate its own development and deployment of shorter-range nuclear weapons. This acceleration seems to be one of the things that is happening.[229]

Additional approaches to deter the North Koreans includes the conventional forces of approximately 28,000 U.S. troops, Even though that number dwarfs the estimated North Korean force of 1.1 million active duty troops, their presence provides evidence of the U.S. commitment to the security of its allies in the region. This presence, in addition to joint military exercises with allies in the region, as well as any "show of force," does not seem to have deterred missile launches. These activities instead are considered provocative to North Korea because it claims these are just ways of practicing for a future invasion of North Korea.[230]

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[226] "Tactical Nuclear Weapons (TNW)," Nuclear Threat Initiative, May 1, 2002, https://www.nti.org/analysis/articles/tactical-nuclear-weapons/.

[227] Tara Copp, "Mattis: Use of Tactical Nuclear Weapons Discussed with South Korea," *Military Times*, September 18, 2017, https://www.militarytimes.com/news/your-military/2017/09/18/mattis-use-of-tactical-nuclear-weapons-discussed-with-south-korea/.

[228] Copp.

[229] Jacob Marx and Richard Sokolsky, "The Folly of Deploying U.S. Tactical Nuclear Weapons to South Korea," 38 North, December 1, 2017, https://www.38north.org/2017/12/rsokolsky120117/.

[230] Alex Ward, "North Korea Is Already Getting Concessions Ahead of Trump-Kim Talks," Vox, May 18, 2018, https://www.vox.com/2018/5/18/17368468/north-korea-trump-usa-south-korea-b52.

As a last resort, the United States deployed a Terminal High-Altitude Area Defense (THAAD) missile battery, which is designed so that if it is not possible to deter North Korea, it can be possible to shoot down its incoming missiles. The first THAAD battery was deployed in March 2017 and has a 100% success rate in test interceptions according to the U.S. Missile Defense Agency.[231] In spite of this deterrent, North Korea continued to test fire missiles.

G. CONCLUDING POINTS

This chapter, among other objectives, has provided conflicting messages in regards to the effect of sanctions on the North Korean regime, and therefore, questions as to whether sanctions are an effective type of deterrent. The initial premise among the international community was that sanctions would motivate and even force North Korea to end its nuclear weapons program. This premise resulted in differing observations as to the effectiveness of the sanctions. Most observations seemed to imply that the sanctions were impacting the civilian population and that it was only a matter of time before the regime would cave in to the demands of the international community. Other observations indicated that although the impact on civilians was substantial, the regime was very willing to continue forward until its nuclear goal was achieved. This chapter also presented the spotlight on China as one of North Korea's biggest allies and stressed the importance of the influence it could exert over the actions of North Korea. Without pressure from China, it is unclear how effective the sanctions will be. This chapter provided background for Chapter IV. This next chapter then aids in the analysis of the applicability of the current doctrine. It builds on the history of North Korea presented in Chapter III and allows for the comparison and analysis of North Korea's motivations and desired projection of its power and status to the international community, and most importantly, to the United States; all within the framework of North Korea's concern for the survival of it regime. Thus far, in 2018, no missile launches or detonations were detected.

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[231] Niall McCarthy, "Can the U.S. Intercept a North Korean Missile? [Infographic]," *Forbes*, September 5, 2017, https://www.forbes.com/sites/niallmccarthy/2017/09/05/can-the-u-s-intercept-a-north-korean-missile-infographic/#291db6733a60.

IV. APPLICABILITY OF THE COLD WAR DOCTRINE TO NORTH KOREA

Does the U.S. deterrence doctrine that emerged out the Cold War apply to the current setting? As discussed in the previous chapter, the deterrence was specially designed to address the issues arising out of the previous global strategic setting, which has now changed as the Cold War has ended. The new challenges appear to be more regional ones, as conflicts have decentralized at the end of the bipolar world. This chapter examines the central question that guides this thesis. Does the United States need to change its doctrine to address the issue that it currently faces in East Asia? Of key importance is understanding North Korea's perception and what has produced its perspective of the United States and how far the United States is willing to go to protect its interests and regional allies. The chapter also addresses whether any modifications of the deterrence doctrine is needed and the pros and cons of each type of modification. It also explores what reactions can potentially be expressed because of each form of modification and what impact the modification have on reducing North Korea's nuclear weapons capabilities. A key part of this analysis is focused on examining the impact of changing from the current doctrine to proposed future modifications of that doctrine.

A. U.S. AND NORTH KOREA RELATIONSHIP

The strategic shift in the relationship between the United States and its allies in the region has created tensions with North Korea. This shift was related to the physical deployment of nuclear weapons on the Korean Peninsula. In addition, since the first joint military exercise between South Korea and the United States expanded from Exercise Autumn Season in 1955 to the additional exercises with both South Korea and other regional allies currently, it is hoped that North Korea can gain a healthy respect for the combined force posture of the alliance.[232] Instead, each exercise has increased tensions with North Korea's interpretation of these exercises as a pretext to an attack. At the end

[232] Robert Carlin, "A Brief History of the U.S.-ROK Combined Military Exercises," 38 North, February 26, 2014, https://www.38north.org/2014/02/rcollins022714/.

of the Korean War, the United States maintained a number of nuclear weapons in South Korea. According to Hans Kristensen and Robert Norris, deployment of these weapons was designed to act as deterrence for North Korea from aggression against the United States and its East Asian allies, even though North Korea did not yet have nuclear weapons.[233] In addition, the deployment of these weapons served to display the U.S. nuclear superiority as a direct message to Russia and China. The intended goal of this display was to discourage the spread of communist influence and aggression. In addition to adding a stabilizing effect for the protection of South Korea, the positioning of missiles also has security implications for Japan. Japan's alliance with the United States and its protection under the U.S. nuclear umbrella further increased the tensions between the United States and North Korea. While South Korea also had a tense relationship with Japan, its relationship with the United States reduced the tensions between the two countries, which would be further complicated by the deployment of various nuclear weapons on the Peninsula.

In January 1958, the United States began the deployment of nuclear weapons by installing 150 warheads into South Korea.[234] According to Hans Kristensen and Robert Norris, the nuclear weapons systems included nuclear landmines, nuclear cannons, and surface-to-surface missiles. [235] Kristensen and Norris also indicated that just five years later, an additional 600 warheads were in place in South Korea.[236] Figure 3 provides a summary of the style and number of weapons maintained in South Korea by the United States during the Cold War.

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[233] Hans M. Kristensen and Robert S. Norris, "A History of U.S. Nuclear Weapons in South Korea," *Bulletin of the Atomic Scientists* 73, no. 6 (November 2, 2017): 349, https://www.tandfonline.com/doi/abs/10.1080/00963402.2017.1388656.

[234] Kristensen and Norris, 350.

[235] Kristensen and Norris, 350.

[236] Kristensen and Norris, 350.

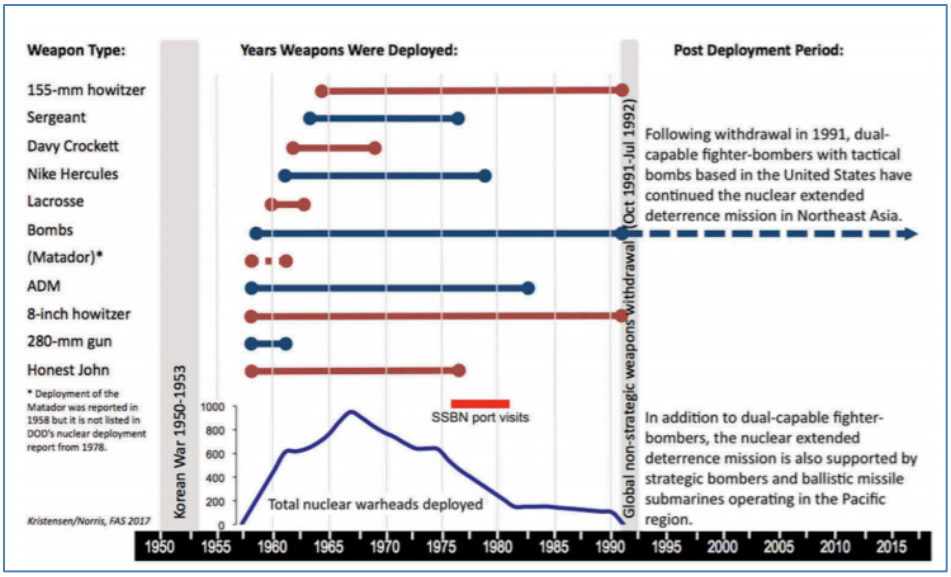

Figure 3. U.S. Nuclear Weapons in South Korea.[237]

Hans Kristensen and Robert Norris state that while most of the U.S. nuclear weapons deployed in South Korea were deployed to provide regional protection but nuclear bombs could be used for their strategic impact.[238] For example, nuclear bombs could be attached to fixed wing aircraft that would be maintained in an elevated state of readiness to hit short-range targets (550–610 miles) in Russia, China, or North Korea.[239] Kristensen and Norris indicated that on September 27, 1991, President George H. W. Bush announced the U.S. decision to "eliminate its entire worldwide inventory of ground-launched, short-range, that is, theater nuclear weapons."[240] President Bush took action primarily to improve U.S.-Soviet nuclear relations at the end of the Cold War rather than strictly for the sake of South Korea, but South Korea was impacted as a by-product. South Korea's Yonhap News Agency argued that U.S. officials said the decision to withdraw nuclear weapons was in hopes of persuading North Korea to permit international inspection of its nuclear facilities.[241] These weapons were sent back to the

[237] Source: Kristensen and Norris, 350.

[238] Kristensen and Norris, 351.

[239] Kristensen and Norris, 351.

[240] Kristensen and Norris, 349.

[241] Kristensen and Norris, 352.

United States for destruction. Although it appeared that the removal of these weapons was a huge demonstration of goodwill to the North Koreans, the overall impact was minimal. By this time, the United States had other nuclear delivery systems that could be delivered via strategic bombers and ICBMs if needed. Kristensen and Norris stated that the removal of these weapons had no impact on the coverage of South Korea or Japan under the U.S. nuclear umbrella.[242] North Korea's first response was to declare that it was still threatened by the United States; however, in 1992, it signed an agreement with the IAEA and agreed to inspections.

The United States has engaged in several rounds of diplomacy to remove the nuclear threat posed by North Korea, which have failed to prevent nuclear weapon development in DPRK.[243] In 1994, The Bureau of East Asian and Pacific Affairs under the U.S. Department of State indicated that "the United States and North Korea reached agreement on a roadmap for the denuclearization of the Korean Peninsula."[244] In 2003, the Bureau also stated the United States proposed multilateral talks to resolve the issues related to North Korean nuclear capabilities.[245] As part of those talks, several iterations of Six-Party Talks were held with the last round occurring in 2009.[246] In 2017, the United States initiated an international economic and diplomatic pressure campaign on North Korea to bring it into negotiations on denuclearization. The issue of denuclearization appeared stalled and in hopes of energizing the talks, on June 12, 2018, President Trump became the first sitting U.S. president to meet with the leader of North Korea when he met with Kim Jong Un in Singapore.[247] According to the U.S. Department of State, President Trump and Kim Jong Un signed a joint statement that agreed to the complete denuclearization of the Korean Peninsula, security guarantees for North Korea, working

[242] Kristensen and Norris, 349.

[243] U.S. Department of State.

[244] U.S. Department of State.

[245] U.S. Department of State.

[246] U.S. Department of State.

[247] U.S. Department of State.

toward a peaceful regime, and the recovery and immediate repatriation of POW/MIA remains.[248]

Evans J. R. Revere of The Brookings Institute suggests that "President Trump continues to tout the success of his North Korea policy, even as the evidence mounts that North Korea was being less than forthcoming on denuclearization."[249] It remains unclear what the United States actually gained from the summit in regards to North Korea's nuclear program. North Korea has used the fear of security of the regime as the need for a nuclear weapons program. North Korea did receive verbal assurances from the United States that a freeze of certain joint U.S.-South Korea military exercises would be suspended, the U.S. commitment to provide security guarantees, and a stated desire by President Trump that all U.S. troops would be withdrawn from South Korea.[250] The February 2019 summit presented some change in the U.S. negotiating position. Jeff Mason and Steve Holland of Reuters questioned whether Trump would withdraw all U.S. troops from the Korean Peninsula in exchange for a peace treaty that would formally end the war; however, this option did not appear to be under discussion.[251] Whether these statements are enough to halt North Korea's program is unclear, but it does negate the regime's reason for dependence on these weapons. The regime did agree to a halt to nuclear and missile testing and stated a desire for the denuclearization of the Korean Peninsula. However, it is unclear if the definition of denuclearization is the same between the United States and North Korea. Anna Fifield of *The Washington Post* interpreted President Trump's March 2018 tweet to define denuclearization as "North Korea handing over his nuclear weapons and missile systems and allowing international inspectors to

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[248] U.S. Department of State.

[249] Evans J. R. Revere, "U.S. Policy and Pyongyang's Game Plan: Will We Accept a Nuclear-Armed North Korea?" Brookings, August 23, 2018, https://www.brookings.edu/research/u-s-policy-and-pyongyangs-game-plan-will-we-accept-a-nuclear-armed-north-korea/.

[250] Jeffrey A. Bader, "What Kim Jong-Un and Trump Each Achieved in Singapore," Brookings, June 12, 2018, https://www.brookings.edu/blog/order-from-chaos/2018/06/12/what-kim-jong-un-and-trump-each-achieved-in-singapore/.

[251] Mason and Holland, "U.S. North Korea to Seek Understanding on Denuclearization at Summit."

check that the regime is keeping its word."[252] Fifield states that North Korea looks at denuclearization as eliminating nuclear weapons including the United States nuclear umbrella.[253] Neither one of these definitions will likely happen. Evans Revere of The Brookings Institute states that in the two months since President Trump's summit with North Korean leader Kim Jong-Un in June 2018, the failure of that meeting to credibly advance the U.S. goal of a non-nuclear North Korea has become obvious.[254]

Scott Neuman of NPR cited satellite imagery in July 2018 to corroborate several reports indicating that North Korea was continuing to produce fissile material needed for nuclear weapons in addition to the missiles needed to deliver nuclear warheads and a factory that produces missiles with the ability to reach U.S. bases in the Pacific.[255] Satellite imagery also presents evidence that North Korean workers are continuing to produce plutonium at the production reactor at the main nuclear site at Yongbyon.[256] Reporters for *The Telegraph* reported that North Korea may also be using a factory outside of North Korea to build new ICBMs capable of striking the United States.[257] Ankit Panda of *The Diplom*at offers a persuasive argument that a long-suspected second uranium enrichment facility was operational with the use of satellite imagery and assembled reports.[258] A July 2018 report from Reuters indicated that North Korea was continuing to produce fuel for nuclear bombs contrary to their promise to move toward denuclearization.[259] David Welna of NPR indicates a positive action by North Korea was

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[252] Anna Fifield, "North Korea's Definition of 'Denuclearization' Is Very Different from Trump's," *Washington Post*, April 9, 2018, https://www.washingtonpost.com/world/asia_pacific/north-koreas-definition-ofdenuclearization-is-very-different-from-trumps/2018/04/09/55bf9c06-3bc8-11e8-912d-16c9e9b37800_story.html?utm_term=.d647a7fb99c5.

[253] Fifield.

[254] Revere, "U.S. Policy and Pyongyang's Game Plan."

[255] Scott Neuman, "North Korea Reportedly Expanding Ballistic Missile Production Facility," *NPR*, July 2, 2018, https://www.npr.org/2018/07/02/625267839/north-korea-reportedly-expanding-ballistic-missile-production-facility.

[256] Revere.

[257] Revere.

[258] Revere.

[259] David Brunnstrom, "North Korea Making Bomb Fuel despite Denuclearization Pledge: Pompeo," Reuters, July 25, 2018, https://www.reuters.com/article/us-northkorea-usa/north-korea-making-bomb-fuel-despite-denuclearization-pledge-pompeo-idUSKBN1KF2QT.

the dismantling of parts of the Sohae satellite launching station in mid-July, which had been used to assemble space launch vehicles, develop, and test liquid-fuel rocket engines.[260]

B. EXTENDED DETERRENCE AND REGIONAL ALLIES

Se Young Jang of the Belfer Center for Science and International Affairs indicated that "extended deterrence has been a main pillar of the security alliance between the United States and South Korea since the end of the Korean War when the U.S. commitment to defend South Korea against external aggression was formalized by the Mutual Defense Treaty signed on October 1, 1953."[261] The Extended Deterrence offered in this treaty was reinforced by a U.S. increase in deploying weapons to South Korea as part of President Eisenhower's 'New Look' initiative in 1953 and the doctrine of 'Massive Retaliation' proposed by Secretary of State John Foster Dulles in January 1954. [262] This initiative was originally designed to deter both nuclear and conventional threats from the Soviet Union and China.[263] Under Extended Deterrence, the United States was obligated to defend South Korea and Japan if attacked by North Korea. To strengthen this obligation, U.S. nuclear weapons or their components have been prepositioned in both South Korea and Japan from 1955–1971. The complete removal of nuclear weapons was accomplished from South Korea and Japan in 1991.[264] Kristensen and Norris suggest the United States has continued to provide Extended Deterrence under a nuclear umbrella made up of "dual-capable fighter-bombers and strategic nuclear forces in the form of bombers and submarines."[265] As North Korean provocations continued, South Korea became increasingly concerned about its security and the commitment of the

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[260] David Welna, "Fact Check: U.S. and North Korea after Their Singapore Summit," NPR, July 31, 2018, https://www.npr.org/2018/07/31/634387644/fact-check-u-s-and-north-korea-after-their-singapore-summit.

[261] Se Young Jang, "The Evolution of US Extended Deterrence and South Korea's Nuclear Ambitions," *Journal of Strategic Studies* 39, no. 4 (April 18, 2016): 504–505, https://www.tandfonline.com/doi/full/10.1080/01402390.2016.1168012?scroll=top&needAccess=true.

[262] Jang, 505.

[263] Jang, 505.

[264] Kristensen and Norris, "A History of U.S. Nuclear Weapons in South Korea," 349.

[265] Kristensen and Norris, 349.

United States to protect the nation. This concern resulted in discussions about redeploying nuclear weapons as late as 2017 during a U.S.-South Korean defense ministerial meeting. Kristensen and Norris suggest U.S. officials contended that redeploying U.S. "tactical nuclear weapons to South Korea would provide no resolution of the crisis over North Korea's nuclear weapons, but instead would increase nuclearization of the Korean Peninsula."[266]

C. CAN THE NORTH KOREANS BE DETERRED?

When implementing a deterrence strategy, the United States must also consider the perception of vulnerability of not only South Korea, but also of Japan. Both countries must be confident in the U.S. commitment to defend their countries. In the face of programs and warnings to force North Korea to end its nuclear weapons program, North Korea continues to ignore all logic. Jonathan Pollack of the *The Brookings Institute* explores what motivates North Korea to continue its missile launches with the ultimate goal of perfecting a delivery vehicle for a nuclear warhead in a missile directed at the United States.[267] Every launch has to be viewed as a progression toward that goal. North Korean leadership paints the picture as building a deterrence to an anticipated U.S.-South Korea invasion of the North. Joshua Berlinger of *CNN* stated that "North Korea has fired 23 missiles during 16 tests since February 2017, further perfecting its technology with each launch."[268] According to Ankit Panda of *The Diplomat*, "North Korea was a country that "has long sought an end to the United States' 'hostile policy' towards North Korea and it believes that its nuclear weapons will allow it to achieve exactly this goal."[269] Another goal of these launches is to strain the U.S. alliances with South Korea and Japan. North Korea hopes that the manner in which the allies respond may weaken their

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[266] Kristensen and Norris, 355.

[267] Jonathan D. Pollack, *North Korea's Nuclear and Missile Programs: Strategies, Directions, and Prospects* (Washington, DC: Brookings, 2018), 7, https://www.brookings.edu/research/north-koreas-nuclear-and-missile-programs-strategies-directions-and-prospects/.

[268] Joshua Berlinger, "North Korea's Missile Tests: What You Need to Know," CNN, updated December 3, 2017, https://www.cnn.com/2017/05/29/asia/north-korea-missile-tests/index.html.

[269] Ankit Panda, "The Calculated Logic behind North Korea's Missile Tests," The Diplomat, September 22, 2017, https://thediplomat.com/2017/09/the-calculated-logic-behind-north-koreas-missile-tests/.

alliance. For this reason, the allies must react to any provocation in solidarity. Leif-Eric Easley of *Foreign Policy* argues that if Tokyo, for example, "estimates that U.S.-Japan-South Korea coordination is insufficient to counter North Korea, Japan may seek its own ability to strike North Korean military sites."[270] The United States would not be agreeable to Japan acting unilaterally, which then sends a signal that Japan is not confident in the United States' ability to defend it. Any increase in Japanese strike capabilities and armament may also be of concern to South Korea, which is still remindful of the Japanese occupation of South Korea during World War II.

One of the key questions surrounding the use of nuclear deterrence is whether an adversary, such as North Korea, can be deterred. During the Cold War, that same question was presented as it related to the Soviet Union. One of the factors in the discussion related to The Soviet Unions' definition of acceptable losses. During World War II, the Soviets were willing to sacrifice millions of citizens for the sake of victory. The United States would not consider the loss of millions to be acceptable. With this concept in mind, the Soviets would have a higher threshold as to what an adequate level of deterrence would be.[271] This same discussion could be applied to North Korea. CNN reported that during the Korean War, North Korea lost 406,000 soldiers.[272] Even with that large a number of deaths, North Korea was resistant to signing the armistice until pressured by China and the Soviets.

Since the start of the North Korean missile program, the United States attempted to impress upon the North Koreans that if the regime threatened the United States, it would respond by annihilating North Korea with U.S. nuclear power. North Korea is surely aware of the U.S. enactment of the MAD doctrine; however, this knowledge has not deterred North Korea from continuing with its nuclear weapons development

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[270] Leif-Eric Easley, "North Korea's Nuclear and Missile Tests Are Aimed at Splitting Its Rivals," Foreign Policy, September 3, 2017, https://foreignpolicy.com/2017/09/03/north-koreas-tests-are-aimed-at-splitting-its-rivals/#.

[271] Austin Long, *Lessons from Six Decades of Research on Deterrence, From Cold War to Long War* (Santa Monica, CA: RAND, 2008), 55, https://www.rand.org/pubs/monographs/MG636.html.

[272] "Korean War Fast Facts," CNN, May 1, 2018, https://www.cnn.com/2013/06/28/world/asia/korean-war-fast-facts/index.html.

program. In 2015, North Korea indicated it had obtained the ability to fit a nuclear warhead on a missile.[273] It was difficult to assess whether the MAD would deter North Korea from staging an attack on the continental U.S. because it was argued that North Korea did not currently possess that capability.[274] Dave Majumdar of *The National Interest* stated that "while some intelligence agencies and analysts believe the North Koreans already have the technology to strike the American homeland, others say that it will take some time before North Korea has the reentry vehicles and miniaturized nuclear warheads ready for operational use."[275] Some experts including Jeffrey Lewis, director of the East Asia Nonproliferation Program at the James Martin Center for Nonproliferation Studies at the Middlebury Institute of International Studies at Monterey, believe that North Korea already possesses that capability.[276] In this case, the North Koreans have obtained that capability under the shadow of the MAD doctrine, which thereby, indicates this doctrine is not an effective deterrent.

In an effort to find the proper level of required deterrence, MAD has been modified to use the threat of total annihilation along with the use of conventional force and economic and military sanctions. Since the original doctrine, modifications have been made to reduce the nuclear component and instead use a combination of nuclear and conventional forces as a deterrence. This type of strategy sends the message of massive retaliation ,and may be sufficient to topple a regime, but it will not result in the total destruction of a country. As part of that strategy, the United States maintains a small but visible conventional force in South Korea and Japan to maintain a deterrence. At the end of 2016, 23,500 U.S. troops were stationed in South Korea and 39,000 in Japan.[277]

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[273] Anna Fifield, "North Korea Says It Has Technology to Make Mini-Nuclear Weapons," *Washington Post*, May 20, 2015, https://www.washingtonpost.com/world/pyongyang-says-it-has-technology-to-make-small-submarined-mounted-nuclear-warheads/2015/05/20/0e96d0bc-fec0-11e4-833c-a2de05b6b2a4_story.html?noredirect=on&utm_term=.7d90fc03ff19.

[274] "North Korea's Nuclear Weapons: What We Know," Al Jazeera, February 20, 2018, https://www.aljazeera.com/news/2017/05/north-korea-testing-nuclear-weapons-170504072226461.html.

[275] Dave Majumdar, "Can North Korea Attack the United States Right Now with a Nuclear Weapon?" National Interest, August 14, 2017, https://nationalinterest.org/blog/the-buzz/can-north-korea-attack-the-united-states-right-now-nuclear-21899.

[276] Majumdar.

[277] Greg Price, "U.S. Military Presence in Asia: Bases, Troops in Japan, South Korea and Beyond," *Newsweek*, May 1, 2017, https://www.newsweek.com/us-military-japan-north-korea-asia-590278.

To keep this deterrence viable, the United States holds joint military exercises with South Korean military forces. One such annual exercise was codenamed "Ulchi Freedom Guardian." This annual exercise has also included other U.S. allies in the past including "Australia, Canada, Colombia, Denmark, New Zealand, the Netherlands and the United Kingdom."[278] "The drills include high-level commanders in computer-simulated defensive exercises, as well as units in the field, all practicing readiness under a scenario in which the Korean Peninsula goes from peace through a crisis stage and then into open conflict."[279] President Trump recently described the "war games" as "very provocative" and "tremendously expensive" during a recent press conference, and decided to put them on hold.[280] The North Korean government persistently described the exercises as dress rehearsals for the invasion of the Korean Peninsula and welcomed the decision to halt the games.[281] These previous exercises have not resulted in deterrence. On the contrary, the exercises resulted in North Korea being more belligerent and defiant. In 2017, North Korea's response to the joint military exercises was to launch a ballistic missile over Japan.[282] This action demonstrated how the deterrence was not working.

The United States was still employing the same MAD strategy, conventional forces, and UN sanctions, but now another strategy was added; direct negotiation. Negotiations had been attempted in 2003 with the Six Party Talks, which were aimed at ending North Korea's nuclear program through negotiations and were held between

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[278] Barbara Starr, "Pentagon Says Its Suspended All Planning for Exercise with South Korea," CNN, June 18, 2018, https://www.cnn.com/2018/06/18/politics/south-korea-us-joint-military-exercise-suspend/index.html.

[279] Starr.

[280] Ben Westcott and Ryan Browne, "U.S. Suspends Military Exercises with South Korea after Singapore Summit," CNN, June 23, 2018, https://www.cnn.com/2018/06/22/asia/us-south-korea-exercises-suspended-intl/index.html.

[281] Amanda Macias, "Here Come the Annual US-South Korean War Games that Freak out North Korea," CNBC, March 20, 2018, https://www.cnbc.com/2018/03/20/us-south-korea-war-games-that-freak-out-north-korea-coming-soon.html.

[282] Anne Gearan and Anna Fifield, "N. Korean Launch Hints at Growing Defiance," *The Mercury News*, August 29, 2017, https://www.mercurynews.com/2017/08/29/n-korean-launch-hints-at-growing-defiance/.

China, the United States, North and South Korea, Japan, and Russia.[283] The talks ended in 2009 after North Korea walked out on the meeting. On June 18, 2018, President Trump held a diplomatic summit with North Korean Supreme Leader Kim Jong-Un in Singapore and became the first sitting President to hold a summit with a North Korean leader. The summit resulted in an agreement by North Korea to work toward the "denuclearization" of the Korean Peninsula, although there were no specifics as to how or when that objective would be completed.[284] It is unclear what the definition of "denuclearization" is to North Korea. North Korea has made the same commitment for the past three decades.[285] After the Singapore summit, President Trump abruptly canceled the bilateral military training exercise between the United States and South Korea, by citing its "tremendously expensive" costs.[286] President Trump also agreed with the North Korean and Chinese assessment that the exercises were "provocative."[287] This announcement not only took South Korean and U.S. military leaders by surprise but other nations that traditionally participate in the exercises.[288] Also participating are troops from nations that contributed forces during the Korean War, including Australia, Britain, Canada, and Colombia.[289]

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[283] Jayshree Bajoria and Beina Xu, "The Six Party Talks on North Korea's Nuclear Program," Council on Foreign Relations, last updated September 30, 2013, https://www.cfr.org/backgrounder/six-party-talks-north-koreas-nuclear-program.

[284] Julian Borger, "U.S. to Suspend Military Exercises with South Korea, Trump Says," *The Guardian*, June 12, 2018, https://www.theguardian.com/us-news/2018/jun/12/us-to-suspend-war-games-with-south-korea-donald-trump-kim-jong-un-north-summit.

[285] Borger.

[286] Amanda Macias, "Trump Says 'No Reason' for Military Exercises with South Korea despite Stalled Nuke Talks with North," CNBC, August 29, 2018, https://www.cnbc.com/2018/08/29/trump-says-no-reason-for-military-exercises-with-south-korea-despite-stalled-nuke-talks-with-north.html.

[287] "Trump Halts 'War Games' with South Korea—Why Does It Matter?" *South China Morning Post*, June 15, 2018, https://www.scmp.com/news/asia/diplomacy/article/2150900/those-are-literally-north-korean-and-chinese-talking-points.

[288] Seo-Hyun Park, and Il Hyun Cho, "The Pentagon Has Officially Canceled Military Exercises with South Korea. Here's What Comes Next," *Washington Post*, June 21, 2018, https://www.washingtonpost.com/news/monkey-cage/wp/2018/06/21/the-pentagon-has-now-officially-canceled-military-exercises-with-south-korea-heres-what-comes-next/?utm_term=.7ed1bc206da4.

[289] Lolita C. Baldor, "Pentagon Formally Suspends Military Exercise with South Korea," *Press Herald*, June 19, 2018, https://www.pressherald.com/2018/06/18/pentagon-formally-suspends-military-exercise-with-south-korea/.

The conventional forces "component of the U.S. deterrence strategy has consistently been emphasized by joint United States/South Korea annual military exercises."[290] "Joint military exercises between the U.S. and South Korea are a component of the deterrence strategy and have been a longstanding component of the two countries' defense alliance."[291] A central part of South Korea's defense policy is "The U.S.-ROK Mutual Defense Treaty signed in 1953."[292] The United States stresses that exercises including Foal Eagle and Key Resolve are an operational necessity needed to maintain the alliance's state of readiness.[293] The exercises are also about sending a message, making clear how prepared those forces are and how disastrous any attack would be.[294] Foal Eagle was a tactical exercise that includes approximately 300,000 U.S. and South Korean troops and included artillery and aircraft. Key Resolve was a computer-simulated exercise. In addition, the Ulchi Freedom Guardian exercise was planned for the fall. Ulchi Freedom Guardian was one of the largest military exercises in the world. The purpose of these annual exercises was to strengthen and project the readiness of these forces to discourage North Korea from attacking South Korea. These exercises are a visible sign of the American presence on the Korean Peninsula and offer regular reassurances to South Korea, Japan, and other allies in the region that the United States is fully prepared to deter any possible North Korean aggression.[295] Another outcome of these exercises was to strengthen the ties that bind South Korea and the United States in the demonstrated shared goals and the importance of their alliance.[296]

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[290] Mats Engman, "U.S.-South Korea Military Exercises: Provocation or Possibility?" Institute for Security and Development Policy, March 2018, http://isdp.eu/publication/u-s-rok-military-exercises-provocation-possibility/.

[291] Engman.

[292] Damen Cook, "What's the Big Deal about These US-South Korea Military Exercises?" The Diplomat, March 23, 2017, https://thediplomat.com/2017/03/whats-the-big-deal-about-these-us-south-korea-military-exercises/.

[293] Cook.

[294] Andrew Griffin, "Donald Trump Has Promised to Cancel 'Wargames'. Here's Why that's so Important," Independent, June 12, 2018, https://www.independent.co.uk/news/world/asia/war-games-what-trump-kim-jong-un-south-north-korea-us-military-exercises-why-a8394951.html.

[295] "Joint Military Exercises with South Korea Canceled," *Washington Times*, June 12, 2018, https://www.washingtontimes.com/news/2018/jun/12/joint-military-exercises-with-south-korea-canceled/.

[296] Cook, "What's the Big Deal."

"These war games, which ran for 11 days in 2018, involve some 17,500 American forces, including about 3,000 from outside the Peninsula, and 50,000 South Korean troops."[297]

North Korea must feel confident that its security is not in jeopardy and the United States should provide that assurance. Providing this assurance might give North Korea the justification to abandon its nuclear weapons program since the threat would be eliminated. North Korea has repeatedly cited U.S.-South Korea joint military exercises as part of the reason why it feels it needs to build up its military arsenal. In June, as directed by President Trump, the Pentagon announced that Ulchi Freedom Guardian had been officially cancelled. U.S. military leader are concerned that cancelling such exercises "could erode the readiness of U.S. and South Korean forces to successfully work together to defend South Korea."[298] The cancellation also resulted in making Japan distrustful of U.S. promises for the security of Japan.[299] Defense Secretary Jim Mattis issued a statement that three military exercises were suspended "in order to provide space for our diplomats to negotiate the verifiable, irreversible and complete denuclearization of the Korean Peninsula."[300] President Trump also implied that the military exercises could resume if significant progress was not made toward denuclearization.[301] In spite of the apparent apprehension of U.S. military leaders and allies, the commitment to stop some exercises might have been a key to convincing Kim Jong-Un of no U.S.-South Korea military threat, which learned the way to committing to denuclearization.[302]

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[297] Eric Schmitt, "Pentagon and Seoul Surprised by Trump Pledge to Halt Military Exercises," *New York Times*, June 12, 2018, https://www.nytimes.com/2018/06/12/world/asia/trump-military-exercises-north-south-korea.html.

[298] Thomas Spoehr, "Suspending Military Exercises in South Korea Carries Risks," The Heritage Foundation, June 12, 2018, https://www.heritage.org/asia/commentary/suspending-military-exercises-south-korea-carries-risks.

[299] Lara Seligman, "Experts Question Wisdom of Canceling U.S. Exercises with South Korea, As Mattis Makes It Official," *Foreign Policy*, June 26, 2018, https://foreignpolicy.com/2018/06/26/experts-question-wisdom-of-canceling-u-s-exercises-with-south-korea-as-mattis-makes-it-official/.

[300] Elizabeth Zwirz, "Trump Says 'No Reason' for Costly U.S.-South Korea War Games, Relationship with Kim Jong Un Is 'Very Good'," Fox News, August 29, 2018, http://www.foxnews.com/politics/2018/08/29/trump-says-no-reason-for-costly-us-south-korea-war-games-relationship-with-kim-jong-un-is-very-good.html.

[301] Alice Truong, "Trump Says His Relationship with Kim Jong Un Is so 'Warm' There's No Need for War Games," Quartz, August 29, 2018, https://qz.com/1374270/trump-suspends-korea-military-exercises-as-kim-jong-un-wanted/.

[302] Griffin, "Donald Trump Has Promised to Cancel 'Wargames'."

In exchange for the cancellation of the military exercise, North Korea agreed to dismantle the Sohae Satellite Launching Station, and on August 3, 2018, commercial satellite imagery verified that dismantlement activities were in progress.[303] This facility was used to assemble space-launch vehicles.[304] North Korea also dismantled a rocket-engine test stand used to develop liquid-fuel engines for ballistic missiles.[305] Based on the report and satellite photos by 38 North, a division of the Stimson Center, North Korea has created the appearance of taking additional steps toward denuclearization. Joseph Bermudez, a scholar of North Korea defense and intelligence affairs, said it was possible, for example, that North Korea believed it had less use for the liquid-fuel facilities at Sohae, as it continued to make progress toward developing solid-fuel rockets, which would make the dismantling a clever way to convince the United States that it was serious.[306] Bermudez said it was a positive step, but cautioned that North Korea had a history of taking actions that concealed its true intentions.[307] Was the dismantling of this facility just a good faith gesture or was it a sign that deterrence was beginning to work?

Some experts suggest that North Korea is continuing to improve its weapons program.[308] The facility was closed in 2008 because of a commitment made in the Six Party talks. Had the facility remained closed, it would have represented a major milestone to the dismantling of North Korea's nuclear weapons program. However, since the facility is in operation again, it appears that a milestone has not been reached. This chapter provides the context of the nuclear setting on the Korean Peninsula and the stated

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[303] Joseph S. Bermudez, "More Progress on Dismantling Facilities at the Sohae Satellite Launching Station|38 North: Informed Analysis of North Korea," 38 North, August 7, 2018, https://www.38north.org/2018/08/sohae080718/.

[304] David Brunnstrom, "Report Says Images Indicate North Korea Dismantling Test Site Facilities," Reuters, July 23, 2018, https://www.reuters.com/article/us-northkorea-usa-site/report-says-images-indicate-north-korea-dismantling-test-site-facilities-idUSKBN1KD2HW.

[305] Demetri Sevastopulo, "North Korea Is Dismantling Nuclear Arsenal—or Is It?" *Financial Times*, July 24, 2018, https://www.ft.com/content/881897c0-8eed-11e8-b639-7680cedcc421.

[306] Sevastopulo.

[307] Sevastopulo.

[308] Alexandra Ma, "Satellite Photos Suggest North Korea Is Upgrading a Major Nuclear Plant after Kim Jong Un Promised Trump 'Complete Denuclearization'," Business Insider, June 27, 2018, https://www.businessinsider.com/photos-show-north-korea-still-upgrading-nuclear-plant-after-trump-pledge-2018-6.

goal for ultimate denuclearization by the United States, as well as North and South Korea; however, it is not clear if all parties are in agreement with the definition of denuclearization. "North Korea for decades has been pushing a concept of denuclearization that bears no resemblance to the American definition."[309] Shin Beomchul, a senior analyst at Seoul's Asan Institute for Policy Studies stated, "It's clear that the North intends to keep its nukes and turn the diplomatic process into a bilateral arms reduction negotiation with the United States, rather than a process where it unilaterally surrenders its program."[310] Until that definition is agreed upon, it appears that North Korea is continuing its nuclear program in hopes of strengthening its bargaining position. Given this setting, it is important to understand the future options for the United States, which are discussed in the next chapter.

[309] Kim Tong-Hyung, "North Korea Says It Won't Give up Nuclear Weapons unless U.S. Removes Nuclear Threat," *Time*, December 20, 2018, http://time.com/5485553/north-korea-nuclear-weapons-us-threat/.

[310] Tong-Hyung.

V. RECOMMENDATIONS AND POLICY IMPLICATIONS

The Cold War nuclear deterrence doctrine, also known in short as MAD, was implemented after World War II to deter the Soviet Union from attacking the United States or its allies. In spite of the existence of this doctrine, a number of incidents occurred, which could have led to nuclear war. The ability to avert nuclear disaster was accomplished by implementing safeguards, but in some instances, it required simple human intervention, such as a refusal to act, and in some other cases, it was just a matter of pure luck. For instance, in October 1962, the Soviet B-69 submarine almost fired a nuclear-tipped torpedo at an American destroyer after it misinterpreted the dropping of non-lethal depth charges as the start of World War III. Failsafe procedures requiring approval by all three officers prevented the firing of the torpedo after one officer refused to comply with the order to launch. This officer's compliance would have resulted in a retaliatory strike by the United States.[311] Regardless of the reasons, since the Soviet Union and the United States did not launch nuclear tipped missiles at each other, many scholars agree the deterrence doctrine was successful.

Three decades down the line, the world faces a new setting of nuclear threats, specifically, at regional levels. North Korea's nuclear obsession is at the center of this new setting. Important factors, such as North Korea's perception that a nuclear exchange with the west in a new post-Cold War setting is survivable, has emboldened North Korea to develop its nuclear weapons capabilities. North Korea is also emboldened by the perception that China would use its military power to ensure North Korea's survival. However, some experts now believe that in the event of a nuclear war, "China would quickly send hundreds of thousands of troops into North Korea to seize control of the country's nuclear sites and prevent Kim from using the weapons."[312] These factors have validated the North Korean dictators' rationale as to the importance of having nuclear

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[311] Leon Watson, "Soviet Submariner Who Single-Handedly Averted WWIII at the Height of the Cuban Missile Crisis," Daily Mail Online, September 26, 2012, http://www.dailymail.co.uk/news/article-2208342/Soviet-submariner-single-handedly-averted-WWIII-height-Cuban-Missile-Crisis.html.

[312] Yochi Dreazen, "Here's What War with North Korea Would Look Like," Vox, February 8, 2018, https://www.vox.com/world/2018/2/7/16974772/north-korea-war-trump-kim-nuclear-weapon.

weapons. These factors also became the foundation for North Korea's belief and need for self-reliance, as it moved toward its chosen path of isolation from the world. These factors also became the foundation for the building of hatred toward the United States and North Korea's mistrust of the various U.S. administrations. The importance of these factors is clear and the United States needs to consider this importance when developing and modifying the U.S. nuclear deterrence doctrine toward North Korea.

A. IMPACT OF OCCUPATION AND THE MODERN WARS

As Charles Armstrong describes in a piece on Korean history, "Koreans often use the proverb 'when whales fight, the shrimp's back is broken' to describe their country's victimization at the hands of larger, more powerful neighbors, predominantly China."[313] World War II brought about the occupation by the Japanese, which subjected the Koreans to cruel treatment. As discussed in Chapter III, Koreans were forced into labor to support the Japanese war effort including serving in the Japanese military. This treatment fueled the insecurities of their nation and produced a desire to build a strong self-sufficient nation. Similarly, the United States and its allies killed many Koreans during the war that resulted in numerous deaths from the nuclear bomb explosions. The Koreans were in the wrong place at the wrong time because of their occupation by Japan; yet, the deaths caused by the Americans initiated their hatred for the United States that would grow over the years.

The Korean War added to their suspicious of the United States, as many North Koreans lost their lives at the hand of the U.S. and UN troops. American aircraft dropped more than 635,000 tons of bombs on North Korea, which not just impacted the military, but also the civilian population. As the perceived brutality of the American fighting effort against the North Korean civilians continued, hatred for the United States also continued to grow. Although, several historians disputed just how important the level of destruction

[313] Charles K. Armstrong, "Korean History and Political Geography," Asia Society, accessed February 20, 2019, https://asiasociety.org/education/korean-history-and-political-geography.

resulting from the bombing really was in shaping North Korea's animosity against the United States, it no doubt added to its previously existing perspective.[314]

As discussed in Chapter II, its inability to depend on consistent allies also increased North Korea's need for a better defensive capability. That capability was, in North Korea's mind, the nuclear bomb. By the end of the Korean War, North Korea was isolated from the western world, mainly because of the Kim Il Sung regime's policy of self-reliance; its two key allies were the Soviet Union and China. North Korea depended on its allies not only for military assistance, but also for economic assistance. North Korea was able to enjoy a sense of security being in alliance with two such powerful nations. The alliance, however, was weakened when the Soviet Union collapsed in 1991. That collapse resulted in a significant loss of agricultural subsidies needed by North Korea to address existing food shortages, compounded by a number of natural disasters, and became a major factor in worsening the effect of a famine.[315] North Korea's other ally, China, sought to limit its role in propping up the North Korean economy and filled only a small portion of the gap left by the Soviet Union.[316] This famine created food insecurity and showed the North Koreans that they had to depend on themselves. To make matters worse, China established relations with North Korea's enemy, South Korea, in 1992. These changes resulted in seriously degrading North Korea's sense of security, both militarily and economically. North Korea continued to move toward building a defensive nuclear capability to protect itself from the United States and expand its desire for self-reliance.

B. MISTRUST OF THE UNITED STATES AND THE DEVELOPMENT OF THE BOMB

North Korea had always insisted the United States wanted to cause the total destruction of North Korea. This perception was strengthened when, during a 2017 speech, President Trump indicated that the United States was willing to destroy North

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[314] Fisher, "Americans Have Forgotten What We Did to North Korea."

[315] Daniel Goodkind and Loraine West, "The North Korean Famine and Its Demographic Impact," *Population and Development Review* 27, no. 2 (2001): 221, www.jstor.org/stable/2695207.

[316] Goodkind and West, 221.

Korea completely if necessary.[317] North Korea was very insecure about perceived U.S. aggressive actions toward the North Korea regimes over the years and felt it needed to build a nuclear arsenal to repel any thought of invading North Korea. In the opinion of the North Korean leaders, the 1983 invasion of Grenada provided a clear sign of U.S. aggression.[318] North Korea also viewed the U.S.-South Korean military alliance as a constant threat of the eventual invasion of North Korea. The physical stationing of U.S. troops and weapons in South Korea bolstered this perception. The frequency and scope of the joint military exercises also added to sharpening the U.S. invasion strategies and readiness. As stated in Chapters III and IV, the joint military exercises were a consistent concern of North Korea in its interpretation of the exercises as a preamble to invasion. This perception bolstered North Korea's need to strengthen its nuclear weapons program.

As North Korea began developing a nuclear weapons capability, the United States, and the world, tried to find the proper approach to slow down, and eventually, put a halt to North Korea's nuclear weapons program, to include its allies Russia and China. North Korea's familiarity with the MAD doctrine imposed by a superpower, such as the United States, did nothing to deter the development of its nuclear weapons program. Instead, its program flourished under this doctrine, partly due to its reliance on the treaty North Korea had with China and Russia. Although, as stated in Chapter III, it did not help in the direct development of the program. The Russians in fact provided the technology; however, it was assumed to be for peaceful purposes. Knowing these powerful allies would come to its aid if attacked provided North Korea with a greater sense of security. The North Koreans knew that having these allies would deter the United States from attacking because of the threat of massive retaliation. MAD alone was ineffective in deterring North Korea, so in response to this failure, several variations of the U.S. strategy were employed including balancing nuclear with conventional forces, and eventually supplementing this strategy with United Nations sanctions, as well as direct negotiations. During these iterations, the North Koreans reacted in various ways. Those North Korean reactions included temporary stoppage of nuclear development, threats,

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[317] Borger, "Donald Trump Threatens to 'Totally Destroy' North Korea in UN Speech."

[318] Young, "The Reagan-Era Invasion."

missile launches, and underground tests. North Korea used various methods of delaying agreed upon inspections and compliance with signed agreements and treaties.

The severity of UN sanctions in combination with MAD and conventional forces may have been having some impact, but because the regime is so secretive, it is difficult to determine if the sanctions are working. Although any recent detonations or missile, and launches have not occurred, on August 20, 2018, the IAEA provided evidence that the nuclear weapons program had not terminated.[319] The 2018 summit between President Trump and the North Korean leader initially produced a commitment from North Korea to proceed on the road to denuclearization; however, it now appears that the product of that summit may be more broken promises.

C. RECOMMENDATIONS FOR DIPLOMACY WITH A NUCLEAR NORTH KOREA

1. Recommendation One

One of the roadblocks to arriving at an agreement with North Korea is a bilateral understanding of what denuclearization is. Currently, it appears that North Korea's definition of denuclearization is very different from the U.S. definition. Another roadblock is North Korea's perception of the nuclear umbrella and the U.S.-South Korea military alliance. North Korea views South Korea's inclusion under this umbrella as having direct access to nuclear weapons. In that viewpoint, the Peninsula retains a nuclear presence because South Korea still has access to nuclear weapons regardless of its physical presence on the Peninsula. The United States views the physical removal of all nuclear warheads as complying with the goal of denuclearization. Until both nations can agree on what that definition of denuclearization is, no commitment or path forward can result. It is impossible to work effectively toward a goal if it is not clear what that goal is. Of course, all parties need to compromise to arrive at a definition that may not be perfect, but may be satisfactory. Negotiators from both nations need to agree on this

[319] Benjamin Haas, "North Korea Is Still Developing Nuclear Weapons, Says IAEA," *The Guardian*, 1, August 22, 2018, https://www.theguardian.com/world/2018/aug/22/north-korea-still-developing-nuclear-weapons-iaea-report-un.

definition to ensure that the goal is clear, verifiable, and achievable within a specified timeframe.

2. Recommendation Two

For a binding commitment of denuclearization to be achieved, negotiators will need to determine clearly what North Korea's priorities are as it relates to its motivations in reaching an accord. It is clear that sanctions are putting stress on the North Korean economy and people. The United States must be willing to negotiate with enough flexibility to reward steps toward denuclearization with in kind reductions in sanctions. An all or nothing approach will not motivate North Korea to work toward an accord that will be lasting and achievable. This flexibility may be difficult to achieve because President Trump is a headstrong leader who values his instincts more than expert advice provided by his staff.[320] It will require a change in attitude to be open to the level of flexibility required to provide incentives for North Korea to take positive steps toward denuclearization; but it is attainable by understanding that its priorities are to survive as are ours.

3. Recommendation Three

While it is clear that the original Cold War MAD doctrine will not work for North Korea, hope still remains that the right combination of MAD, conventional forces, UN sanctions, and direct negotiations will provide a chance for the denuclearization of the Korean Peninsula to become a reality. One of the reasons the original doctrine will not work is because North Korea's greatest fear is for the survival of the regime, and not the fear of nuclear weapons being used against it. Another reason is that North Korea has the perception that such a nuclear exchange is survivable, and is therefore, worth any risk. The challenge for U.S. policy analysts and military leaders is to determine the proper formula. It will be critical that the United States and other nations to have the patience and sense of diplomacy to achieve lasting peace from nuclear proliferation. The alternative, which is nuclear confrontation, is a reality the world cannot afford.

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