

**“The Best Possible Sanction:”  
Kim Jong-un and the Quest for Credible Nuclear Deterrence**

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Abstract

In 2017, North Korea under Kim Jong-un has made significant strides toward the capabilities needed for a credible nuclear deterrent. This article analyzes the most recent achievements of the North Korean nuclear weapons program, including its September 2017 nuclear test and its three long-range missile tests in the latter half of 2017. Observers should not discount Pyongyang’s nuclear weapons and long-range missiles. However, other capabilities such as intelligence, surveillance, and reconnaissance and targeting require further development to achieve the full range of capabilities associated with a credible nuclear deterrent. Because of the high costs associated with the development of robust strategic intelligence and targeting capabilities, Pyongyang may be willing to settle for lower levels of capability in these areas, which may still be sufficient to guide nuclear attacks. As a result, policymakers must move to a bargaining strategy that acknowledges the reality of North Korea’s nuclear capability, marking a significant policy shift among regional allies. Pyongyang’s long-held desire to drive a wedge between the U.S. and its regional allies may be coming to fruition. Kim Jong-un has shrewdly played his hand from a position of weakness and succeeded where many others failed—a high-risk path upon which he still walks. China’s minimum credible nuclear deterrent may be a model for Kim Jong-un’s development of North Korean nuclear capability.

Keywords: nuclear weapons, credibility, deterrence, survivability, North Korea, China, United States, intelligence, surveillance, reconnaissance, targeting

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## Introduction

According to at least one respected analyst of East Asian security issues, the “game” is over and Kim Jong-un, North Korea’s supreme leader, has won.<sup>1</sup> The “game” in question is the acquisition of nuclear capabilities robust enough to strike targets in the continental United States. Despite evidence accruing to the contrary over some years, the mainstream view of North Korea’s nuclear capability up until quite recently was very close to denial: it would be far too inconvenient for North Korea to have such a capability. Not long after the calling of the game in Kim Jong-un’s favor mentioned above, Pyongyang conducted its sixth nuclear test. This test was widely assessed to have been of a thermonuclear device based on the observed magnitude of the generated seismic disruption.<sup>2</sup> Even more recently, Pyongyang tested a massive intercontinental ballistic missile (ICBM) claimed to be able to carry a “super-large heavy warhead,”<sup>3</sup> further cementing its claim to hold the entire United States at risk. Because of this nuclear posturing, North Korea is at the top of the list of security challenges to the United States, with some in the Trump administration speculating that the time for diplomacy is running out, leaving only a military showdown.<sup>4</sup>

More than just as the security threat *du jour*, North Korea’s nuclear threat is an essential issue for two additional reasons. First, if the capability is legitimate, there must be a transition in the tactics used to deal with Pyongyang, away from a carrot approach (e.g., relaxation of sanctions and granting of concessions) and toward a stick approach (i.e., deterring the use of nuclear weapons). Second, there is a real chance that North Korea, beset by economic sanctions and strapped for cash, becomes a leading proliferator of nuclear weapons. Such a regime would likely have few scruples about selling a device to ISIS, al Qaeda, or any other group with funds.<sup>5</sup> Secretary of State Rex W. Tillerson, speaking at the Atlantic Council on December 12, 2017, stated that North Korea “would not just use the possession of nuclear weapons as a deterrent. This would become a commercial activity for them.”<sup>6</sup> For all of these reasons, a nuclear North Korea is unlikely to be a problem that gets better with time.

What, then, is the significance of North Korea’s new capabilities? Why has Kim Jong-un pursued such a risky path, a path that others have tried to travel but failed, to seek these weapons? Lastly, how should the United States and its allies deal with Pyongyang’s nuclear dictator? To answer these questions, this paper proceeds in four parts. First, it defines the term deterrence and explains the concept of credibility in a nuclear

context. Then it examines why North Korea is so bent on developing a deterrent, in this specific case, a nuclear deterrent. Third, it explains the essential elements of a credible nuclear deterrent and introduces China's minimum credible nuclear deterrence posture as a possible model emulated by Pyongyang. Finally, it analyzes the implications of North Korea's attainment of a credible nuclear deterrent. The paper concludes that because Kim Jong-un has probably attained an acceptable minimum level of nuclear deterrence against the United States, no sanction imposed or concession granted is likely to convince him to divest of the capability.\* The United States and its allies in East Asia must deal with North Korea as a nuclear-armed state with deterrence, for unlike Saddam Hussein and Moammar Qaddafi, Kim Jong-un has not only successfully developed the ultimate weapon, but also the means with which to deliver it across globe-spanning distances.

## **Definitions**

Deterrence has a straightforward definition, but in practice is a complex concept. Keith Payne wrote that it "is a strategy of issuing threats to cause another to decide against an unwanted behavior." There is more to deterrence than just the mere issuance of a threat and the subsequent decision by the target audience whether to yield. Successful deterrence requires navigation of an array of conditions, steps, and opportunities for missteps, to include gaining and maintaining the attention of the involved parties and mutual recognition and understanding of the threat. A rational calculation of expected risks, costs, and benefits in the context of a decision-making process then takes place, generating a decision to yield to the threat, and finally the implementation of the resolution.<sup>7</sup> It is not hard to imagine how quickly such a chain of necessary steps,

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\* This paper's title derives in part from a deliberation held in Washington, D.C., at the dawn of the nuclear age. As decision makers debated the use of the first atomic weapons to bring about an end to World War II in the Pacific, a great deal of discussion centered on ethical matters, in particular whether the United States should issue a warning to Japan before first use of the bomb. In a memorandum dated July 2, 1945, Secretary of War Henry L. Stimson proposed that President Harry S. Truman issue a warning to Japan combined with an offer of terms backed up by "the best possible sanction," the atomic bomb. With North Korea, the shoe is now on the other foot, with Pyongyang also possessing "the ultimate sanction." See Louis Morton, "The Decision to Use the Atomic Bomb," *Foreign Affairs* 35 no. 2 (January 1957): 334-353.

communications, and analyses could be derailed at any number of points, even during peacetime.

What is a practitioner's viewpoint on the concept of deterrence? Earlier this year, General John E. Hyten, commander of United States Strategic Command, the combatant command tasked with maintaining and (if need be) using the nation's strategic nuclear weapons, explained the fundamentals of deterrence very simply. A country deters another by credibly communicating a capability to impose costs, deny benefits, or both.<sup>8</sup>

General Hyten's explanation of deterrence introduced the concept of credibility. Herman Kahn and Thomas Schelling, two of the premier theorists of nuclear deterrence during the Cold War, had differing thoughts about credibility. Kahn favored making a deterrent threat that left little to chance (i.e., a threat backed by a very high level of credibility), while Schelling thought that deterrence could be achieved by making a threat that left something to chance (i.e., a less credible threat that was still sufficient because, after all, it was a nuclear threat).<sup>9</sup> Payne's view is that adversaries in the post-Cold War era will attempt to take advantage of Western nations' aversion to collateral damage and the perception of nuclear weapons as inhumane to operate below a threshold at which the United States is willing to make good on its nuclear deterrent threats, calling its credibility into question.<sup>10</sup> For North Korea, based on the widespread view of the regime as ignorant of human rights to a degree due to the state's use of Nazi-like concentration camps and its willingness to starve its people to build its nuclear program,<sup>11</sup> such compunction likely exists in tiny amounts, if at all.

### **Why is Deterrence So Crucial to Pyongyang?**

Kim Jong-un and North Korea's authoritarian leaders value their own survival and regime continuity over all else.<sup>12</sup> Pyongyang, based on analogical reasoning from past cases involving Saddam Hussein of Iraq and Moammar Qaddafi in Libya,<sup>13</sup> as well as the U.S.-led air campaign in Kosovo in 1999,<sup>14</sup> likely perceives the United States as a credible regime-change threat to the heart of North Korea's most deeply-held values. The DPRK frequently invokes the so-called "hostile policy" of the United States towards Pyongyang, in which the United States refuses to recognize North Korea's sovereignty, among various other transgressions.<sup>15</sup> In Iraq and Libya, each country's leader failed to obtain a credible nuclear capability before the U.S. and its allies undertook military action that

either directly aimed at or which incidentally resulted in their removal.<sup>16</sup> “It’s a fantasy that [Pyongyang is] going to willingly give up their nuclear programs so long as Kim is in power,” said Vipin Narang, a professor of political science at the Massachusetts Institute of Technology. “[Kim] saw the fate of Saddam and Gaddafi - why would he give up his nuclear weapons?”<sup>17</sup>

The U.S. air war in Kosovo showed Pyongyang that it needed to escape from international isolation and become a nuclear power to avoid the same fate.<sup>18</sup> North Korea has long maintained a significant non-nuclear deterrent in the threat of its long-range artillery forces deployed near the demilitarized zone and their capability to strike to the greater Seoul metropolitan area (a danger that may also include chemical or biological capabilities<sup>19</sup>). However, based on the increasing lethality of non-nuclear precision strike weapons used by the United States during post-9/11 wars,<sup>20</sup> it appears that Pyongyang no longer perceived its non-nuclear deterrent as enough to counter the U.S. “hostile policy.” Instead, North Korea chose to consummate a nuclear capability, while continuing to maintain one of the world’s largest standing military forces. Pyongyang may now perceive that, in possessing multiple means that can threaten the United States and its allies with unacceptable damage (i.e., credible threats), its new level of influence outweighs the negative costs it has paid during its dogged, multi-decade pursuit of a deterrent capability.

### **Establishing Credible Nuclear Deterrence**

What are the basic building blocks of a credible nuclear deterrent? This paper proposes there are three main components: 1) a functional nuclear device; 2) some means of delivering such a device to a selected target; and 3) a targeting capability sufficient to provide locational information about chosen targets. Additionally, if a nation intends to hold a minimum credible nuclear deterrent and not a force based on seeking parity with potential foes, it also needs to take measures to increase the survivability of its nuclear forces.

First, this section will briefly discuss how states create a nuclear capability. While technically feasible, it is unlikely that a state would develop a new nuclear capacity using only scientific means short of testing. Development of nuclear weapons, while a rare occurrence in the world since the Nuclear Non-Proliferation Treaty (NPT) came into force in March 1970, is typically done in a manner opaque to the casual observer. A *de facto* moratorium on nuclear tests anywhere on earth has been in

place since negotiations for the Comprehensive Nuclear-Test-Ban Treaty (CTBT) ended in 1996. States already possessing nuclear arsenals, such as the United States, use science-based tools and methods, including advanced supercomputers, experimental platforms, diagnostic equipment and other means, to simulate the internal dynamics of a nuclear weapon explosion in order to ensure their arsenals are safe and reliable without having to resort to nuclear test explosions.<sup>21</sup> Only three states have defied the CTBT's moratorium on testing: Pakistan, India, and North Korea.<sup>22</sup> Moreover, Pyongyang is the only one to test in the twenty-first century. To detect test blasts, the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) maintains an International Monitoring System (IMS) consisting of more than 300 locations globally which gather seismic, hydroacoustic, infrasound, and radionuclide data. The IMS sites are networked together, able to tip and cue other assets to a detected event, and can also be used to sense when tsunamis take place in the ocean.<sup>23</sup>

It is of little use to have a nuclear device without the means with which to deliver it to the site of employment. Nation-states have traditionally approached this through building one or more parts of what is known as the "triad" of nuclear delivery capabilities. The three components of the triad are land-based missiles, sea-based missiles, and air-delivered weapons, which could be gravity bombs or air-launched cruise missiles. The United States and Russia are the two states of the "big five" nuclear weapons nations which have robust delivery capabilities across all three "legs" of the triad. China functionally maintains a dyad, with primarily land- and sea-based missiles (and a more limited air-delivered capability), and the United Kingdom and France, possessing only sea-based missiles, each have a monad.

Finally, one needs the capability to "sense" the environment and to develop targets for a credible nuclear deterrent. The growth of a robust, mature national-level intelligence, surveillance, and reconnaissance (ISR) capability has historically been an expensive, time-consuming proposition. Space-based surveillance systems, thought to be the holy grail of technical collection capabilities, can take decades and billions of dollars to field. However, it is not clear that this is still the case, at least at the level of fidelity the DPRK needs to launch its ballistic missiles toward the capitals or critical infrastructure of its potential adversaries. The United States spends billions of dollars each year on ISR so that it can achieve pinpoint-accurate weapons delivery, minimizing collateral damage. North Korea only needs to put a nuclear warhead close enough to its aim point to sow

chaos, disruption, and terror. Pyongyang can have such a capability at a fraction of the cost of a cutting-edge, all-seeing, always-on system.

### *Case Study: China*

North Korea's efforts to develop a credible nuclear deterrence bear a remarkable resemblance to China's progress to do the same in the 1960s and 1970s. China conducted its first atomic test in 1964, quickly followed in 1967 by its first hydrogen bomb explosion, making it the fastest nation to go from atomic to thermonuclear capability. Like North Korea, China had been in pursuit of nuclear weapons for a long time before achieving its first successful test blast. After being threatened with U.S. nuclear weapons in the Korean War and subsequently in the Taiwan Strait Crises of 1954 and 1958, Beijing knew that it needed its own nuclear capability to avoid coercion. Soviet assistance in the 1950s was instrumental in getting the Chinese nuclear program up and running, but the program foundered for a time after the Sino-Soviet Split in the early 1960s. Still, Chinese scientists pressed forward, and by 1964 provided Chairman Mao a successfully tested nuclear device.<sup>24</sup> North Korea's nuclear program comparatively took much longer to bear fruit, having gotten underway probably in the 1950s, with its first test only taking place in October 2006.

China's first delivery capability came with the fielding of a small, silo-based intercontinental ballistic missile (ICBM) force in the early 1970s.<sup>25</sup> Later, Chinese missile forces made the transition to a force dominated by successive generations of road-mobile missiles, which could be launched from makeshift launchpads in many places across China. At first, the road-mobile missiles were only capable of reaching regional targets, but by the 2000s, the capability had advanced to the point that they could strike targets at intercontinental range.<sup>26</sup> Despite several of its earliest nuclear tests being bombs dropped from aircraft, present day China does not have an air-delivered nuclear capability (though all it would require is a policy change that would allow the air force to assume a nuclear role).<sup>27</sup> Finally, China also worked to create an at-sea deterrent capability. Its first ballistic missile submarine (SSBN) struggled with the same problem its early road-mobile missile forces did: the range of the missile itself was not sufficient to hold intercontinental targets at risk. The second-generation missile boat design appears to have corrected this shortcoming. Further, there are four copies of it, compared to only one submarine in the initial Chinese SSBN cohort, making it a much more capable platform.<sup>28</sup> The DPRK also has a ballistic missile submarine, perhaps comparable in capability to the first-

generation SSBN. The submarine, called the *Gorae*, has conducted at least one successful test launch of a ballistic missile, but rarely takes to the sea and would likely not be a particularly potent weapon in combat due to design flaws and the limited range of its missile system.<sup>29</sup>

Owing to China's strategy to only use its nuclear weapons in self-defense and never extend nuclear deterrence to any other state,<sup>30</sup> Beijing from the start never intended to develop a force analogous in size to that of the United States or the Soviet Union. China's 45 nuclear tests pale in comparison to the United States, which conducted more than 1,000, and the Soviet Union, which carried out more than 700.<sup>31</sup> By not seeking numerical parity, the implication was that the weapons China did possess would need to be more survivable and secure than those of nuclear states whose arsenals bulged with tens of thousands of devices.<sup>32</sup> To do this, China shifted the emphasis from its early delivery capability, the silo-based ICBM, to road-mobile missiles capable of being moved from place to place by large, multi-axle trucks called transporter-erector-launchers (TELs).<sup>33</sup> China also began to develop missiles fueled with solid propellant.<sup>34</sup> These missiles required less time to launch, meaning they would remain vulnerable on a launch pad for a far shorter period, thus reducing their chances of being detected by adversary ISR capabilities or, worse, targeted and destroyed on the ground before launch.

China took additional measures to try to keep other nations from detecting their relatively few nuclear forces, sometimes referred to as denial and deception. The idea was to avoid revealing indicators of where their facilities were located by disguising or camouflaging them. Deception works by creating fake ICBM silos or other nuclear facilities that are easier to detect than the real ones, hoping to throw adversaries off the trail of the real facilities and thus keeping them from being destroyed long enough to employ their weapons. A third survivability measure is to harden facilities with reinforced concrete or to create deeply buried facilities far underground which could only be reached via a tunnel or other opening, making them virtually invulnerable to destruction by a conventional attack. North Korean delivery vehicle capability has skipped the step of using fixed facilities, which are easier to target and destroy, and gone straight to road-mobile missiles housed in hardened underground facilities before launch. The DPRK is still in the process of phasing out liquid-fueled missiles. They also follow the Chinese "playbook" on denial and deception.



Finally, with regards to ISR capability development, China has followed the rich nation-state approach. In conjunction with its world-class manned spaceflight program, Beijing has placed a wide variety of reconnaissance satellites in orbit, which could be used to facilitate targeting of locations globally. Pyongyang has haltingly attempted to conduct space launches, but its track record is spotty, and it will not soon emulate China in this regard.

### **Implications and Analysis**

Has North Korea achieved a credible nuclear deterrent? Based on the criteria established and discussed above, the short answer is yes. The longer answer is, not entirely. The remainder of this section briefly analyzes each requirement in turn, examining North Korea's achievements toward the goal of a nuclear deterrent and assessing their implications.

With six nuclear tests under its belt, it is relatively clear that Pyongyang has developed a workable nuclear device design, and based on the September 2017 test, likely that it has not only atomic but also thermonuclear capabilities. Frankly, this is the most significant hurdle in developing a credible nuclear deterrent—one that relatively few nations ever achieve. That North Korea was able to do so despite the measures aligned against it, while not admirable, is impressive.

Regarding delivery capability, the multiple 2017 ICBM test launches suggest that this is another area in which Pyongyang has made incredible progress. While the world does not know with certainty how accurate these missiles are, nor if they will function as designed at globe-spanning distances, the safe bet is to assume that they are accurate enough and that the characteristics they displayed when fired at lofted trajectories will carry over to a traditional ballistic missile launch profile. There is also no certain knowledge on whether the warheads placed on such a missile would survive reentry into the earth's atmosphere, but again, countries must act with pessimism and prepare for the worst.

On the ISR front, it is unlikely that the DPRK possesses fine-grained targeting fidelity on locations in the continental United States based on its own capabilities. However, this is not an insurmountable obstacle, given that striking anywhere in the country with a nuclear missile would be a disaster of the first order. Additionally, commercially-available satellite imagery or even online mapping software might be adequate for North Korea's targeteers to be able to place a missile into Akron, for instance.

Finally, regarding survivability, Pyongyang has learned lessons from its on-again, off-again patron in Beijing about denial and deception, hardened and deeply buried facilities, and mobility. North Korea's measures have complicated the task faced by U.S. and allied targeteers in trying to neutralize its nuclear forces on the ground before launch. The one exception is the increased time necessary to fuel and launch liquid-fueled missiles, which remain in the DPRK inventory.

Much like global warming, Pyongyang's newfound nuclear capability is an inconvenient truth for the United States and its allies, achieved through decades of determined effort. Whereas in previous decades the United States held real leverage to push for Pyongyang's denuclearization, now that the capability has been consummated, even if only in a nascent form, such leverage has likely evaporated. Now, the United States' bargaining strategy must change to adapt to the new reality: Kim Jong-un has paid a high price to achieve this capability, and he will not likely give the weapons up short of *molon labe* ("come and get them"<sup>35</sup>). The best likely outcome that can be achieved at this point is an agreement to freeze further development of the program, which will come only at a steep cost: removal of U.S. troops from the Korean Peninsula and the splintering of the U.S.-Republic of Korea (ROK) alliance, or something of equivalently significant value.

### ***Implications for the Alliance***

While the U.S.'s attention has been on the Korea issue for decades, waxing and waning over time as circumstances shifted, Pyongyang's declaration of a credible nuclear threat against the U.S. homeland has qualitatively changed and intensified that attention. Now it is among the highest priority issues facing the national security, defense, and intelligence communities in the United States. In the short term, this shift in attention could have a salutary effect on the U.S.-ROK alliance. Suddenly, initiatives which could not find an administrative sponsor or funding under the old "status-quo" dynamic between the partners are likely benefactors of the attention, newfound purpose, and perhaps most importantly of all, the funding that being at the top of the pile of priorities brings.

However, even if the allies can find a way around the new threats of Pyongyang to a peaceful resolution of the current crisis, the long-term implications for the alliance are more troubling. First, there is bound to be a period of disillusionment and disaffect on the side of the ROK once the

levels of attention and funding being lavished on Korea issues by the United States “regress to the mean.” Even if the alliance returns to more or less the same levels of cooperation, resourcing, and attention that characterized it up until 2016, many South Koreans will likely interpret that as a net loss. The unfortunate result will be a loss of trust and assurance at a critical period, as the alliance attempts to deal with continued threatening rhetoric (if not actions) from Pyongyang that can be expected to continue even if Kim Jong-un backs down during the current tensions.

Second, for Seoul and other allies and partners in the region, that the United States could only be fully energized once Pyongyang’s nuclear saber held the potential to inflict unacceptable damage to the U.S. homeland itself cannot be a comforting prospect. If one believes that North Korea could have delivered a nuclear weapon against South Korea or Japan by non-missile means (such as on a freighter or fishing vessel), then the citizens of South Korea and Japan could have been living for a decade or more under the same kind of North Korean nuclear threat only now reaching those in the United States. American troops stationed in South Korea and Japan have shared in this same vulnerability, which is one of the key reasons these troops are stationed where they are. However, the asymmetry between risking tens of thousands of troops and their families compared to with the risk to at least tens of millions of citizens in Seoul and Tokyo, not to mention all the infrastructure, commerce, culture and more infused in their respective polities, is stark. This calls into question the United States’ bedrock guarantees enshrined in nuclear and non-nuclear assurances extended to South Korea and Japan. In retrospect, how assured do Seoul and Tokyo feel? It is hard to quantify, but the implication is that trust in the alliance is negative. The lesson is that the U.S. talks a good game, but when it comes down to action, only its own interests really matter.

## **Conclusion**

Contrary to stereotypes and many hopes and despite the odds, North Korea has made a tremendous achievement with its nuclear and missile program. The so-called “hermit kingdom” can do rocket science and nuclear physics at the same time. In the face of wide-ranging international censure and accompanying sanctions, it has successfully developed not only a legitimate nuclear device capability but also the delivery means by which to send it across the globe to its enemies.

Bearing that in mind, North Korea's nuclear program has not emerged from the womb fully formed and ready to operate like a turnkey solution delivered by a highly-paid contractor. Questions remain about the targeting capabilities of the systems that comprise Pyongyang's intelligence, surveillance, and reconnaissance enterprise and the survivability of its nuclear weapons reentry vehicles. Barring a full-scale nuclear test over the Pacific Ocean (something that North Korean Foreign Minister Ri Yong Ho threatened as a possibility in a September 2017 statement<sup>36</sup>), we will likely not know via public means if Pyongyang's scientists have solved all the associated technical riddles. Despite these unknowns, North Korea's nuclear weapons likely have achieved at least a minimally operational capability today.

Even though Kim Jong-il was the first North Korean leader to possess nuclear weapons, he must have died wondering what it would be like to go beyond possession to achieve a credible deterrent against America. His son, Kim Jong-un, does not need to wonder what that feels like—he has done it. Building upon his father's accomplishments, Kim Jong-un has skillfully played his hand of limited resources in a game with many opponents and succeeded in becoming one of the most famous people in the world today, chiefly on the threats of his nuclear arsenal. Only time will tell if he will also accede to the ranks of history's infamous—his porcine hand rests on the nuclear button that decides that outcome.

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<sup>1</sup> Jeffrey Lewis, "The Game Is Over, and North Korea Has Won," *Foreign Policy*, last modified August 29, 2017, accessed December 12, 2017, <http://foreignpolicy.com/2017/08/09/the-game-is-over-and-north-korea-has-won/>.

<sup>2</sup> "North Korean Missile Launches & Nuclear Tests: 1984-Present," *MissileThreat: CSIS Missile Defense Project*, last modified April 20, 2017, accessed December 10, 2017, <https://missilethreat.csis.org/north-korea-missile-launches-1984-present/>.

<sup>3</sup> Ankit Panda, "The Hwasong-15: The Anatomy of North Korea's New ICBM," *The Diplomat*, accessed December 10, 2017, <https://thediplomat.com/2017/12/the-hwasong-15-the-anatomy-of-north-koreas-new-icbm/>.

<sup>4</sup> Anna Fifield, "Retired Military Leaders Urge Trump to Choose Words, Not Action, to Deal with North Korea," *Washington Post*, December 13, 2017, sec. WorldViews, accessed December 13, 2017,

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<https://www.washingtonpost.com/news/worldviews/wp/2017/12/13/retired-military-leaders-urge-trump-to-choose-words-not-action-to-deal-with-north-korea/>.

<sup>5</sup> Jen Psaki, *The North Korean Nuclear Threat: The View From the Intelligence Community*, Carnegie Endowment for International Peace DiploPod, n.d., accessed December 13, 2017, <http://carnegieendowment.org/2017/12/08/north-korean-nuclear-threat-view-from-intelligence-community-pub-74963>.

<sup>6</sup> Rex W. Tillerson, “On ‘Meeting the Foreign Policy Challenges of 2017 and Beyond,’” *U.S. Department of State*, last modified December 12, 2017, accessed December 15, 2017,

<http://www.state.gov/secretary/remarks/2017/12/276570.htm>.

<sup>7</sup> Keith B. Payne, *The Great American Gamble: Deterrence Theory and Practice from the Cold War to the Twenty-First Century*, 1 edition. (Fairfax, VA: National Institute Press, 2008), 17–18.

<sup>8</sup> US Strategic Command (US\_Stratcom). “Gen Hyten: The fundamentals of deterrence haven’t changed. 1) Have the ability to impose cost on an adversary 2) H...

[https://twitter.com/US\\_Stratcom/status/937024178011758594011758594](https://twitter.com/US_Stratcom/status/937024178011758594011758594)”. December 2, 2017, 18:22 UTC. Tweet.

<sup>9</sup> Payne, *The Great American Gamble*, 52.

<sup>10</sup> *Ibid.*, 423–7.

<sup>11</sup> United Nations Security Council, *United Nations Security Council Resolution 2375*, Resolution (New York: United Nations Security Council, September 11, 2017), accessed December 10, 2017,

[http://www.un.org/en/ga/search/view\\_doc.asp?symbol=S/RES/2375\(2017\);](http://www.un.org/en/ga/search/view_doc.asp?symbol=S/RES/2375(2017);)

*Report of the Commission of Inquiry on Human Rights in the Democratic People’s Republic of Korea*, Human Rights Council (New York: United Nations General Assembly, February 7, 2014), accessed December 10, 2017,

<http://www.ohchr.org/EN/HRBodies/HRC/CoIDPRK/Pages/CommissionInquiryonHRinDPRK.aspx>; Anna Fifield, “North Korea’s Prisons Are as Bad as Nazi Camps, Says Judge Who Survived Auschwitz,” *Stars and Stripes*, last modified December 11, 2017, accessed December 15, 2017,

[https://www.stripes.com/news/pacific/north-korea-s-prisons-are-as-bad-as-nazi-camps-says-judge-who-survived-auschwitz-](https://www.stripes.com/news/pacific/north-korea-s-prisons-are-as-bad-as-nazi-camps-says-judge-who-survived-auschwitz-1.501969?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+starsandstripes%2Fgeneral+%28Stars+and+Stripes%29)

[1.501969?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+starsandstripes%2Fgeneral+%28Stars+and+Stripes%29](https://www.stripes.com/news/pacific/north-korea-s-prisons-are-as-bad-as-nazi-camps-says-judge-who-survived-auschwitz-1.501969?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+starsandstripes%2Fgeneral+%28Stars+and+Stripes%29).

<sup>12</sup> Christopher Way and Jessica L. P. Weeks, “Making It Personal: Regime Type and Nuclear Proliferation,” *American Journal of Political Science* 58, no. 3 (2014): 705–719, accessed December 2, 2017,

<http://www.jstor.org/stable/24363516>.

<sup>13</sup> Malfrid Braut-Hegghammer, *Unclear Physics: Why Iraq and Libya Failed to Build Nuclear Weapons*, 1st ed. (Ithaca: Cornell University Press, 2016).

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<sup>14</sup> Samuel Ramani, “What North Korea Learned From the Kosovo War,” *The Diplomat*, last modified October 16, 2017, accessed December 13, 2017, <https://thediplomat.com/2017/10/what-north-korea-learned-from-the-kosovo-war/>.

<sup>15</sup> Scott A. Snyder, “North Korea and the U.S. ‘Hostile Policy,’” *Council on Foreign Relations*, last modified September 7, 2012, accessed December 15, 2017, <https://www.cfr.org/blog/north-korea-and-us-hostile-policy>.

<sup>16</sup> Etel Solingen, *Nuclear Logics: Contrasting Paths in East Asia and the Middle East* (Princeton: Princeton University Press, 2007); Michael R. Gordon and Bernard E. Trainor, *Cobra II: The Inside Story of the Invasion and Occupation of Iraq*, Reprint edition. (New York: Vintage, 2007), 571.

<sup>17</sup> Anna Fifield, “North Korea Is a Nuclear State. But Can the U.S. Accept That?,” *Washington Post Blogs* (December 9, 2017),

<http://www.lexisnexis.com.ezproxy.library.tufts.edu/lnacui2api/api/version1/getDocCui?lni=5R55-3G71-JB4M->

[V43Y&csi=8075&hl=t&hv=t&hnsd=f&hns=t&hgn=t&oc=00240&perma=true.](http://www.lexisnexis.com.ezproxy.library.tufts.edu/lnacui2api/api/version1/getDocCui?lni=5R55-3G71-JB4M-V43Y&csi=8075&hl=t&hv=t&hnsd=f&hns=t&hgn=t&oc=00240&perma=true)

<sup>18</sup> Ramani, “What North Korea Learned From the Kosovo War.”

<sup>19</sup> Joby Warrick, “North Korea’s Assassination Sheds Light on Chemical Weapons Arsenal,” *The Washington Post*, July 6, 2017, accessed December 15, 2017,

[http://link.galegroup.com/apps/doc/A497840153/AONE?u=mclin\\_m\\_tufts&sid=AONE&xid=2284ce3b; Joby Warrick, “Microbes by the Ton: Officials See Weapons Threat as North Korea Gains Biotech Expertise,” \*Washington Post\*, December 10, 2017, sec. National Security, accessed December 15, 2017, \[https://www.washingtonpost.com/world/national-security/microbes-by-the-ton-officials-see-weapons-threat-as-north-korea-gains-biotech-expertise/2017/12/10/9b9d5f9e-d5f0-11e7-95bf-df7c19270879\\\_story.html\]\(https://www.washingtonpost.com/world/national-security/microbes-by-the-ton-officials-see-weapons-threat-as-north-korea-gains-biotech-expertise/2017/12/10/9b9d5f9e-d5f0-11e7-95bf-df7c19270879\_story.html\).](http://link.galegroup.com/apps/doc/A497840153/AONE?u=mclin_m_tufts&sid=AONE&xid=2284ce3b; Joby Warrick, “Microbes by the Ton: Officials See Weapons Threat as North Korea Gains Biotech Expertise,” Washington Post, December 10, 2017, sec. National Security, accessed December 15, 2017, https://www.washingtonpost.com/world/national-security/microbes-by-the-ton-officials-see-weapons-threat-as-north-korea-gains-biotech-expertise/2017/12/10/9b9d5f9e-d5f0-11e7-95bf-df7c19270879_story.html)

<sup>20</sup> Rebecca Friedman Lissner, “Nuclear Legacies of the First Gulf War,” *Survival* 59, no. 5 (September 3, 2017): 151, accessed December 12, 2017, [http://www.tandfonline-](http://www.tandfonline.com.ezproxy.library.tufts.edu/doi/full/10.1080/00396338.2017.1375265)

[com.ezproxy.library.tufts.edu/doi/full/10.1080/00396338.2017.1375265.](http://www.tandfonline.com.ezproxy.library.tufts.edu/doi/full/10.1080/00396338.2017.1375265)

<sup>21</sup> Frank G. Klotz, *Fiscal Year 2018 Stockpile Stewardship and Management Plan* (Washington, D.C.: National Nuclear Security Administration, November 2017), 1-14 to 1-15, accessed December 13, 2017,

[https://nnsa.energy.gov/ourmission/managingthestockpile/ssmp.](https://nnsa.energy.gov/ourmission/managingthestockpile/ssmp)

<sup>22</sup> “Who We Are: CTBTO Preparatory Commission,” *Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization*, accessed December 13, 2017, <http://www.ctbto.org/specials/who-we-are/>.

<sup>23</sup> CTBTO Preparatory Commission, *CTBTO Fact Sheet* (CTBTO Preparatory Commission, September 7, 2017), accessed December 13, 2017, [http://www.ctbto.org/fileadmin/user\\_upload/public\\_information/2017/CTBT\\_Ending\\_Nuclear\\_Explosions\\_07Sep\\_2017.pdf](http://www.ctbto.org/fileadmin/user_upload/public_information/2017/CTBT_Ending_Nuclear_Explosions_07Sep_2017.pdf).

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- <sup>24</sup> John W. Lewis and Litai Xue, *China Builds the Bomb*, 1 edition. (Palo Alto: Stanford University Press, 1991).
- <sup>25</sup> *Ibid.*, 214–5.
- <sup>26</sup> Eric Heginbotham et al., *China's Evolving Nuclear Deterrent: Major Drivers and Issues for the United States* (Santa Monica, Calif: RAND Corporation, 2017), 41.
- <sup>27</sup> *Ibid.*, 110.
- <sup>28</sup> *Ibid.*, 118.
- <sup>29</sup> Nick Hansen, *North Korea Ups Pace of Ballistic Missile Launches* (IHS Jane's Intelligence Review, 2017), 4, accessed December 15, 2017, [http://www.janes.com/images/assets/654/68654/North\\_Korea\\_ups\\_pace\\_of\\_ballistic\\_missile\\_launches\\_edit.pdf](http://www.janes.com/images/assets/654/68654/North_Korea_ups_pace_of_ballistic_missile_launches_edit.pdf).
- <sup>30</sup> Yunzhu Yao, "China's Perspective on Nuclear Deterrence," *Air & Space Power Journal; Maxwell AFB* 24, no. 1 (Spring 2010): 28, accessed December 15, 2017, <https://search.proquest.com/docview/375021959/abstract/976C231019D34EE7PQ/1>.
- <sup>31</sup> "Who We Are: CTBTO Preparatory Commission."
- <sup>32</sup> Lewis and Xue, *China Builds the Bomb*, 216.
- <sup>33</sup> Heginbotham et al., *China's Evolving Nuclear Deterrent*, 41.
- <sup>34</sup> *Ibid.*, 39.
- <sup>35</sup> Steven Pressfield, *Gates of Fire* (New York: Random House Publishing Group, 2007), vii.
- <sup>36</sup> "North Korea Diplomat Says Take Atmospheric Nuclear Test Threat 'Literally,'" *Reuters*, October 25, 2017, accessed February 10, 2018, <https://www.reuters.com/article/us-northkorea-nuclear-warning/north-korea-threat-of-atmospheric-nuclear-test-should-be-taken-literally-cnn-idUSKBN1CU2EI>.