

# Russian and Chinese use of Low-yield Battlefield Nuclear Weapons: Stories of the Future

A Monograph

by

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## Abstract

Russian and Chinese use of Low-yield Battlefield Nuclear Weapons: Stories of the Future, by LTC Jonathan P. Graebener, 40 pages.

The end of the Cold War dramatically reduced the risk of nuclear confrontation between the United States and the former Soviet Union. Due to the decreased nuclear threat, the US military focused less on preparing to fight on a nuclear battlefield, and instead focused on other areas such as peacekeeping, safeguarding nuclear materials, counter-insurgency operations (COIN), and nation-building. Now, with renewed great power competition with Russia and the People's Republic of China (PRC), the possibility of nuclear weapons on the future battlefield once again becomes a concern to America and its allies. Even more concerning, both Russia and the PRC are modernizing their nuclear arsenal, and both possess the capability of employing low-yield battlefield nuclear weapons against US and allied military ground forces.

The research within this monograph attempts to describe plausible scenarios in which Russia and the PRC would employ low-yield battlefield nuclear weapons against American ground forces. Taking a futurist, science-fiction approach, the two scenarios presented tell a compelling story of two brigade commanders' recollection of their experiences against the employment of nuclear weapons against their brigades in the year 2035; one focused on a Russian employment scenario, and the other on a PRC inspired scenario.

Both tell their story, ten years later (in 2045), in an effort to prepare for an interview with the Center of Military History. Using back casting (the opposite of forecasting), the two former commanders' journey through their early childhood, military career, important relationships, and their own demons in order to come to terms with what amounts to facing the worst experience anyone on earth could face. In the end, as both our characters come to terms with their own hardships, they illuminate how unprepared the US Army and arguably its allies are to the employment of low-yield battlefield nuclear weapons by either Russia or the PRC.

It is important to remember that the scenarios presented are not meant to be a prediction of the future. Rather, they serve as a glimpse into a plausible future to spark innovation, foresight, and futures influenced strategy development.

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## Abbreviations

ADM	Army Design Methodology
AOR	Area of Responsibility
A2/AD	Anti-access/Aerial-Denial
BRI	Belt and Road Initiative
CCP	Chinese Communist Party
CG	Commanding General
CIA	Central Intelligence Agency
CMH	Center of Military History
COIN	Counter-insurgency Operations
COVID-19	Novel Coronavirus Pandemic –2019
CSM	Command Sergeant Major
CTC	Combat Training Center
CUB	Commander’s Update Brief
C2	Command and Control
C2S	Command, Control, and Synchronize (fictional)
DIME	Diplomatic, Information, Military, and Economic instruments of national power
DMZ	Demilitarized Zone
DPRK	Democratic People’s Republic of Korea
FOB	Forward Operating Base
GPV	Russian State Armament Plan
HADR	Humanitarian Assistance and Disaster Relief
IBCT	Infantry Brigade Combat Team
JRTC	Joint Readiness Training Center
KGB	Komitet Gosudarstvennoy Bezopasnosti

LSCO	Large-Scale Combat Operations
LSU	Louisiana State University
LYBNW	Low-yield Battlefield Nuclear Weapon
MDTF	Multi-domain Task Force
MDMP	Military Decision-Making Process
MHD	Military History Detachment
NATO	North Atlantic Treaty Organization
NDS	National Defense Strategy
NFU	No First Use [Policy]
NGW	New Generational Warfare
NKPA	North Korea People's Army
ODS	Operation Desert Storm
OPLAN	Operational Plan
PLARF	People's Liberation Army Rocket Force
PRC	People's Republic of China
ROK	Republic of Korea
SECDEF	Secretary of Defense
SGICTC	Synthetic Global Integration of Collective Training Concept [fictional]
SRBM	Short-Range Ballistic Missile
SSM	Surface-to-surface missile
TAC	Tactical Command Post
USEUCOM	US European Command
USFK	US Forces Korea
USINDOPACOM	US Indonesia-Pacific Command
USMA	US Military Academy, West Point, New York
USSR	Union of Soviet Socialist Republics



VAMC	Veterans Administration Medical Center
WARNO	Warning Order
WMD	Weapons of Mass Destruction

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## Introduction

They had been raised to believe the world was without tigers, then sent to face those tigers with a stick. On their society must fall the blame.

—T.R. Fehrenbach, *This Kind of War*

The end of the Cold War dramatically reduced the risk of nuclear confrontation between the United States and the former Soviet Union. Due to the decreased nuclear threat, the US military focused less on preparing to fight on a nuclear battlefield, and instead focused on other areas such as peacekeeping, safeguarding nuclear materials, counter-insurgency operations (COIN), and nation-building. This focus allowed US Army nuclear doctrine and readiness to atrophy. Now, with renewed great power competition with Russia and the People's Republic of China (PRC), the possibility of nuclear weapons on the future battlefield once again becomes a concern. Russia has clear intentions to expand its influence into Eastern Europe, and the PRC continues to extend its influence in the South China Sea and Pacific region. Additionally, the United States, Russia, and PRC are currently modernizing their nuclear stockpiles. Although all-out nuclear war is highly unlikely between the US and one or both of its competitors, the use of nuclear weapons on the future battlefield is plausible. Although plausible, the question becomes, does Russia and/or the PRC have the capability and political will to use nuclear weapons on the battlefield, and what are the likely scenarios in which Russia and the PRC would employ non-strategic nuclear weapons against American ground forces?

### Russian Nuclear Doctrine and Capability

In June 2020, Russian President Vladimir Putin signed an executive order outlining Russia's nuclear doctrine. In the order, Putin describes the strategic conditions where his country employs nuclear weapons. Under section three of the order, Putin declares:

The Russian Federation reserves the right to use nuclear weapons...[when] aggression against the Russian Federation with the use of conventional weapons when the very existence of the state is in jeopardy...[and] might, if necessary, inform the military-political leadership of other states and/or international organizations about the Russian

Federation's...decision taken to use nuclear weapons, as well as about the fact that nuclear weapons have been used.<sup>1</sup>

The Russian President's executive order clearly shows his country will consider using nuclear weapons as a first use option. This declaration indicates that Putin and Russia possess the political will to use nuclear weapons when they perceive there is a threat to the existence of the Russian state.

Not only does Russia possess the political will to use nuclear weapons, it currently possesses the capability. Most concerning is Russia's stockpile of low-yield battlefield nuclear weapons (LYBNW); especially tailored to meet a threat against adversary ground forces.<sup>2</sup> In a 2020 issue of the *Bulletin of Atomic Scientists*, Hans M. Kristensen and Matt Korda estimate Russia possesses approximately 900 LYBNWs ready for employment through surface-to-surface missiles (SSM); including the SS-26 Iskander missile capable of carrying a nuclear payload anywhere from ten to 100 kilotons, and a range up to 350km.<sup>3</sup>

## PRC Nuclear Doctrine and Capability

The PRC's nuclear doctrine is also officially documented. In 2019 the Chinese Communist Party (CCP) published its national security defense white paper reinforcing the PRC's "no first use policy [NFU]." Within the white paper, the CCP states:

China is always committed to a nuclear policy of no first use of nuclear weapons at any time and under any circumstances, and not using or threatening to use nuclear weapons against non-nuclear-weapon states or nuclear-weapon-free zones unconditionally...China pursues a nuclear strategy of self-defense, the goal of which is to maintain national strategic security by deterring other countries from using or threatening to use nuclear

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<sup>1</sup> Vladimir V. Putin, Executive Order 355, "On Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence," *Kremlin* (June 2, 2020), accessed January 16, 2021, [https://www.mid.ru/en/foreign\\_policy/international\\_safety/disarmament/-/asset\\_publisher/rp0fiUBmANaH/content/id/4152094](https://www.mid.ru/en/foreign_policy/international_safety/disarmament/-/asset_publisher/rp0fiUBmANaH/content/id/4152094).

<sup>2</sup> For this monograph, the definition of a LYBNW is, "...a nuclear weapon with a yield of less than 15 kilotons and used to create tactical or operational effects against military targets, primarily ground forces, within a specified theater. The use of such weapons also has strategic implications."

<sup>3</sup> Hans M. Kristensen and Matt Korda, "Russian Nuclear Forces 2020," *Bulletin of the Atomic Scientists*, 76:2 (DOI: 10.1080/00963402.2020.1728985, 2020): 113, <https://www.tandfonline.com/doi/pdf/10.1080/00963402.2020.1728985?needAccess=true>.

weapons against China.<sup>4</sup>

Despite the CCP's seemingly rock-solid stance on nuclear weapons employment, not everyone in Washington believes the honesty of the CCP's NFU policy, and much like the Soviet Union NFU touted during the Cold War, believe it is nothing more than a deception.

Although the CCP officially states a NFU policy, there are some US strategic leaders that disagree. In an interview with reporters in the summer of 2020, Admiral Charles A. Richard, commander of US Strategic Command, stated that the CCP's nuclear modernization efforts are "inconsistent" with their no-first-use policy.<sup>5</sup> This inconsistency includes projections that the PRC will more than double their nuclear stockpile by the end of the decade, develop intermediate-range ballistic missiles that can quickly be armed with nuclear warheads, and increase the readiness of the People's Liberation Army Rocket Force (PLARF).<sup>6</sup> Further, the PRC's continued secrecy surrounding their nuclear weapons program adds doubt to the CCP's true intent behind the policy for weapons employment. Continued expansion of the PRC nuclear stockpile, nuclear modernization efforts, readiness of nuclear forces like the PLARF, and non-disclosure of nuclear weapons policy, coupled with actions in the South China Sea, only leads to the obvious assumption that the CCP possesses the political will to employ nuclear weapons if the regime feels threatened; actions speak louder than words.

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<sup>4</sup> Anthony H. Cordesman, "China's New Defense White Paper: An Open Strategic Challenge to the United States, But One Which Does Not Have to Lead to Conflict," (Washington, DC: Center for Strategic and International Studies, July 24, 2019): 9, accessed January 18, 2021, <https://www.csis.org/analysis/chinas-new-2019-defense-white-paper>.

<sup>5</sup> US Department of Defense, "Transcript: Admiral Richards Discusses USTRATCOM Operations with Reporters," (Washington DC: US Department of Defense, September 14, 2020), accessed January 19, 2021, <https://www.defense.gov/Newsroom/Transcripts/Transcript/Article/2347223/adm-richard-discusses-usstratcom-operations-with-reporters/>.

<sup>6</sup> US Department of Defense, *Military and Security Developments Involving the People's Republic of China 2020: Annual Report to Congress* (Washington DC: Office of the Secretary of Defense, January 1, 2020): 55, 59, 85, <https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF>.

Unlike Russia, it is difficult to determine the PRC's capability to employ LYBNWs, but the evidence shows the PRC undoubtedly possesses the technology. A partially unclassified Central Intelligence Agency (CIA) report published in 1990 exposes the PRC's testing of a warhead for a short-range ballistic missile (SRBM).<sup>7</sup> Another unclassified report by the CIA indicates testing of nuclear artillery shells.<sup>8</sup> Regardless of what is available open-source, it is naïve to think the PRC does not possess LYBNWs. Threats to its expansion into the South China Sea, and a hard stance with Taiwanese democratic autonomy, dictate that the CCP has the capability to over-match western conventional military force. The PRC can achieve this through LYBNWs, which they certainly possess.

## Methodology

As described in the previous section, both Russia and the PRC possess the will and capability to employ LYBNWs. Employment of these weapons against and unprepared US ground force could lead to catastrophic strategic failure. So, the question is, what are the likely scenarios in which Russia and the People's Republic of China would employ LYBNWs against American ground forces? Answering this question will highlight the challenges of operating on a nuclear battlefield, and how vulnerable current US Army formations are to these weapons. Finally, the dialogue and understanding gained from these scenarios will provide insight into future force organization, equipping, and training.

Scenario development comes in many forms. The *Merriam-Webster Dictionary* defines a scenario as, "...a sequence of events especially when imagined... an account or synopsis of a

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<sup>7</sup> US Central Intelligence Agency, "China: New Nuclear Test [Deleted]," *Science and Weapons Review*, SW SWR 90-048C (McLean, VA: July 31, 1990): 1, accessed January 20, 2021, <https://nsarchive2.gwu.edu/NSAEBB/NSAEBB200/19900731.pdf>.

<sup>8</sup> US Central Intelligence Agency, "China: Possible Nuclear Artillery Test," *Proliferation Digest* (Washington, DC: Director of National Intelligence, September 14, 1995): 1-2, accessed January 20, 2021, <https://nsarchive2.gwu.edu/NSAEBB/NSAEBB200/19950914.pdf>.

possible course of action or events.”<sup>9</sup> The US Army develops scenarios using the army design methodology (ADM), and the military decision-making process (MDMP). Using ADM, Army planners develop a desired end state, and using MDMP, Army planners produce likely enemy courses of actions and friendly reactions; all of which are scenarios.<sup>10</sup> Further, Army Futures Command designed a scenario development model that analyzes strategic guidance, translates the guidance through a standard and/or dynamic scenario process, and results in either division or corps level concept of operations, or assessments (see Figure 1).<sup>11</sup> However, the US military approach to scenario development is designed to feed into a wargame, and military planners typically bound the scenarios using the *National Defense Strategy*, Secretary of Defense and Chairman of the Joint Chiefs of Staff guidance, or military doctrine. So, what if strategy, leader guidance, and doctrine are wrong?

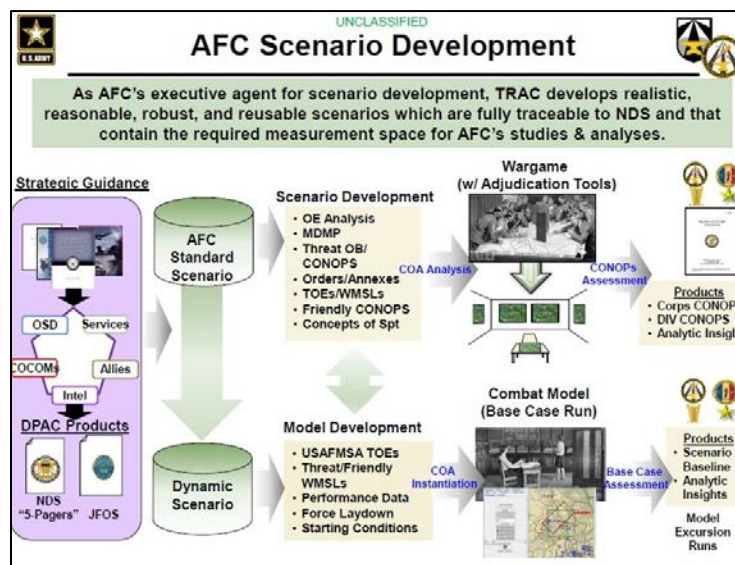


Figure 1. *Army Futures Command Scenario Development*. US Department of the Army, US Army Futures Command, “Scenario Development Overview: FA49 Qualification Course,” (Fort Leavenworth, KS: US Army Futures Command, The Research and Analysis Center, July 28,

<sup>9</sup> *Merriam-Webster Dictionary*, s.v. “Scenario,” accessed January 21, 2021, <https://www.merriam-webster.com/dictionary/scenario?src=search-dict-hed>.

<sup>10</sup> US Department of the Army, *The Operations Process*, ADP 5-0 (Washington DC: Department of the Army, July 2019): 1-16, 2-17.

<sup>11</sup> US Department of the Army, “Scenario Development Overview: FA49 Qualification Course,” (Fort Leavenworth, KS: US Army Futures Command, The Research and Analysis Center, July 28, 2020): 7.

2020).

Bounding future scenario development can lead to epic failure. Again, what if the strategists, senior leaders, and doctrine have it wrong? Maree Conway, author of *Foresight Infused Strategy* writes, “The future is not predetermined, inevitable or fixed. There are always alternative futures. Conventional planning approaches assume a single linear future and result in ‘bet the farm’ strategies.”<sup>12</sup>

Acknowledging this shortfall, the field of futuring provides a pathway to answer a research question. Edward Cornish, founder of the World Future Society, defines futuring as, “The act, art, or science of identifying and evaluating possible future events...”<sup>13</sup> On its face, the term futuring seems novel and out-of-the-box thinking; but it is not. Futuring gained popularity in the 1960’s with the RAND Corporation; influencing US limited war and nuclear strategy.<sup>14</sup> Despite US military scenario development’s usefulness in future force development and acquisition; this monograph will set aside military scenario development methods, processes, and models in favor of the futuring approach to scenario development. Doing so will un-bound the typical military-political guiderails and allow for a novel method to see through the telescope of time into a plausible future.

One aspect of futuring that captures the imagination is science-fiction. It does so because it allows the reader to enter into a world sometimes unimaginable in current reality. Science-fiction is unbounded by military and political doctrine and strategy, and, if done well, tells a compelling story that can influence generations. Cornish asserts, “It can be argued that [Jules Verne] did more than any other single individual to make the moon landing of 1969 a reality.”<sup>15</sup>

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<sup>12</sup> Maree Conway, *Foresight Infused Strategy: A How to Guide for Using Foresight in Practice*, (Melbourne, Australia: Thinking Futures, 2019): 34.

<sup>13</sup> Edward Cornish, *Futuring: The Exploration of the Future*, (Bethesda, MD: World Futuring Society, October 2005): 294.

<sup>14</sup> *Futuring: The Exploration of the Future*, 68.

<sup>15</sup> *Futuring: The Exploration of the Future*, 176.



Although unbounded, a science-fiction approach to the future is not untethered. Again, referring to Maree Conway, there are six possible futures to explore when developing future scenarios: preposterous (won't ever happen), possible (might happen), plausible (could happen), projected (default future), probable (likely to happen), and preferable (want to happen) (see Figure 2).<sup>16</sup>

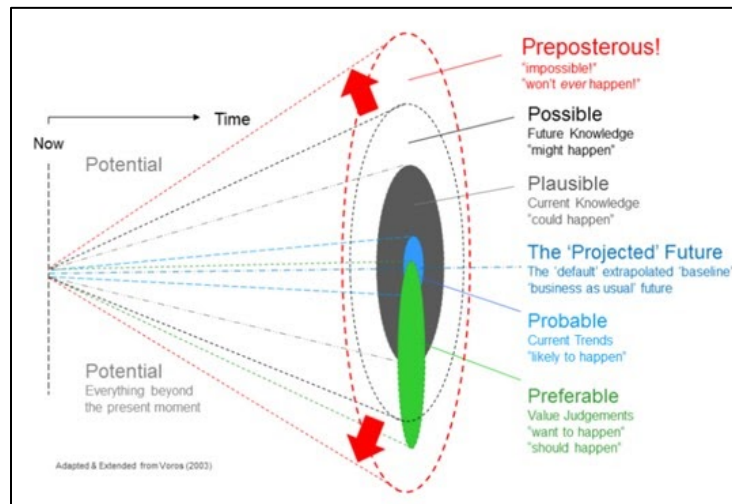


Figure 2. *Futures Cones*. Figure by Joseph Voros, February 24, 2017, “The Futures Cone, use and history,” *The Voroscope*, <https://thevoroscope.com/2017/02/24/the-futures-cone-use-and-history>.

The scenarios for this monograph take a science-fiction approach, and fall into the plausible future category. Plausible futures, “...are based on knowledge we currently have and our understanding of how that knowledge will evolve over the next 10-20 years.” Therefore, the following scenarios will not be preposterous, and will adhere to what is known about current and future Russian and PRC global strategy, nuclear policy, doctrine, orders of battle, and modernization efforts.

Described through back-casting third-person narrative, our main characters, US Army Colonels (Retired) Michael “Mike” Wells and Ryan Camm, prepare to give an oral history to the Center of Military History (CMH) on their personal experiences in the US European Command (USEUCOM), and US Indo-Pacific Command (USINDOPACOM) area of responsibility (AOR)

<sup>16</sup> Joseph Voros, “The Futures Cone, use and history,” *The Voroscope*, February 24, 2017, <https://thevoroscope.com/2017/02/24/the-futures-cone-use-and-history>.

respectively.<sup>17</sup> They both outline their experiences with LYBNWs against their ground combat units. As an aside, these scenarios are not meant to predict the future; rather, they serve as a glimpse into a plausible future to spark innovation, foresight, and futures influenced strategy development.

## Russian Scenario:

### The Russia Letter

On a humid, early spring morning in Columbus, Georgia, located just outside the gates of Fort Benning, Georgia, Colonel (Retired) Michael “Mike” Wells sat on his front porch enjoying his typical breakfast of black coffee, toast, and scrambled eggs. While eating his breakfast, he opened an official letter from the CMH. The letter, post-dated a week earlier, April 25, 2045, read:

*Colonel (Retired) Michael Wells,*

*The US Army Center of Military History requests you accept an invitation to provide an oral history regarding the actions of your brigade combat team, 3d Brigade, 101<sup>st</sup> (3/101) Airborne Division (Air Assault), near the former Polish town of Drawsko Pomorskie, Poland during the summer of 2035.*

*The US Army has a long tradition of using oral history to preserve historical information and to enrich its official written histories with material otherwise unavailable in the documentary record. Your Infantry Brigade Combat Team (IBCT) was the first ground force to face the devastating effects of a nuclear weapon since the United States dropped atomic weapons on Hiroshima and Nagasaki in 1945.*

*The Center of Military History is sensitive to the timing and subject of the interview request, as it was only a decade ago when the hostile actions by Russia against your IBCT (and the United States and NATO) occurred. We at the Center of Military History understand that the losses incurred due to the attack are still fresh in your mind, and we also acknowledge the after-action interview you conducted after the incident while still on active duty. However, based on the limited number of your leadership still alive from the event, and given the time for personal reflection, we believe it is prudent to follow up on your first-hand account of the actions during that time so that our nation will forever possess an accurate account of what happened.*

*If you agree to the interview, it will take place at the Center of Military History located at Fort McNair, VA, and you will be put in contact with a member of one of our military history detachments (MHD). As of now, we are aiming to conduct three two-hour*

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<sup>17</sup> Foresight Infused Strategy: A How to Guide for Using Foresight in Practice, 118.

*sessions with you over the course of three days. The Center of Military History administration section will coordinate travel and lodging.*

*Please contact the Center of Military History administration section with any questions you may have, and we look forward to meeting with you in the near future.*<sup>18</sup>

As Mike set the letter down and transformed his toast and eggs into a breakfast sandwich, he began to reflect on what the CMH was asking of him. His first thought was one of frustration. As mentioned in the letter, he already gave the senior army and joint leadership an after-action review. Hell, he even testified to the House and Senate Armed Services Committees! No longer hungry for breakfast, Mike decided the best way to come to grips with the Army's request was to step away from it for a while.

Lucky for Mike, he was a soldier for life, and maintained a physical and virtual network of friends, academics, professionals, and service-members who he contacts when things get tough. After reading the letter from CMH, Mike reached out to one of his most trusted confidants for advice, retired Command Sergeant Major (CSM) Carl Mattson. Carl was Mike's CSM while commanding 3/101, and like most noncommissioned officers was always a voice of reason, played devil's advocate, and never sugar-coated anything. This was why Mike cherished his unvarnished perspective. After speaking with Carl, Mike realized that although he already conducted an after-action review with senior and strategic leaders, ten more years of life experience gave him a different perspective and understanding of the events that led up to and occurred during the summer of 2035. That night, through fresh eyes, he began to gather his thoughts for the upcoming interview.

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<sup>18</sup> Stephen J. Lofgren, *U.S. Army Guide to Oral History*, (Washington, DC: Center of Military History United States Army, 2006): iv, 8-9, 11, 24, 46-48, <https://history.army.mil/html/books/oral/oral.html>. This letter is completely fictional. Although informed by the *US Army Guide to Oral History*, it does not represent any official correspondence between the author and the Center for Military History.

## From Army “Brat” to Brigade Commander

Born in 1988, one year prior to the fall of the Berlin Wall, US Army Captain Joseph and Tracy Wells gave birth to Michael Grant Wells at the Wuerzburg US Army Hospital in the Federal Republic of Germany (formerly West Germany). Mike grew up as an “army brat” (a child of a US military servicemember), and loved all things military. Throughout his childhood he wanted nothing more than to serve his country as a US Army officer.

After high school, and a lot hard work and dedication, Mike received an appointment to the US Army Military Academy class of 2010. Although he shared the same devotion to the nation as his father, he naturally did not want to follow in his footsteps and serve as an armor officer. Therefore, upon graduation, Mike Wells commissioned as a second lieutenant in the infantry corps. Despite his displeasure with his son’s decision, Colonel (Retired) Joseph Wells, respected his son’s decision, and it subsequently made for good back and forth “digging” during holiday get togethers.

Like many retired officers, Mike remembered his time in uniform fondly. After reporting to his first duty station, serving as a platoon leader in the storied 82d Airborne Division, he deployed to Operation New Dawn in Iraq; his first and only combat deployment prior to summer 2035. Service in the 82d Airborne Division, company command in the 3d Infantry Division, battalion command in the 10th Mountain Division, and a myriad of other memories contributed to his fondness. However, one of the proudest moments in his career was his selection to serve as commander of the 3/101 Airborne Division (Air Assault); as only the highest performing officers earned the distinction of commanding a brigade combat team. Like many officers awaiting command, Mike was both optimistic and scared shitless of what would unfold under his command.

## Early Command

Colonel Mike Wells took command of the 3/101st Airborne Division (Air Assault) in the summer of 2034. Like many new brigade commanders, he spent countless hours learning his organization, implementing change, providing direction, supporting his commanding general's (CG) intent of maintaining combat readiness, preparing for large scale combat operations (LSCO), and taking care of soldiers. Mike always knew that command was sometimes a game of wins and losses. Some days he drove the organization in the direction of his vision (win the fight, never quit, treat people with dignity and respect), other days he dealt with losses (suicide, sexual assault/harassment, racism). Despite this, Mike's brigade was the next IBCT on the patch chart for a rotation at one of the three combat training centers (CTC). Like most light infantry brigades, his rotation was at the Joint Readiness Training Center (JRTC) in the humid swamps of Fort Polk, Louisiana. In the spring of 2035, Colonel Wells took his brigade to the JRTC, and knew it would be a, "...premiere crucible training experience, [to] prepare units to fight and win in the most complex environments..."<sup>19</sup>

The training at JRTC came a long way since his first rotation as a second lieutenant back in 2010. The synthetic global integration of collective training concept, spearheaded by the US Army in 2025, allowed for the full realization and practice of honing the skills to execute LSCO. Leveraging improvements in virtual and constructive technology, CTC rotations no longer focused just on the brigade combat team, but instead integrated units at the National Training Center in California, Joint Multinational Readiness Center in Germany, service and joint training exercises, multinational training exercises across the geographic combat command areas of responsibility, and home-station training. With these technological improvements, corps and higher headquarters could command, control, and synchronize (C2S) larger than brigade ground

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<sup>19</sup> US Army Joint Readiness Training Center (JRTC), "JRTC Operations Group," accessed February 5, 2021, <https://home.army.mil/polk/index.php/units-tenants/jrtc-operations-group>.

forces without having to consolidate in a physical area. By early 2034, SGICTC gave the US Army overmatch in conventional LSCO against any military in the world.

As always, JRTC fulfilled its promise. During his rotation, Mike and his brigade faced conventional, unconventional, and hybrid threats. This included chemical weapons attacks on his ground forces, and cyber-attacks against his C2S digital network. Mike left the JRTC both humbled by the world-class opposing force that continually battered his IBCT over fourteen days, but also confident that he and his IBCT would meet any threat the world could throw at them. Mike knew that the confidence gained through the JRTC rotation was important, because his brigade was going to be one of the first called to respond to the next global crises.

## Road to War

As a child, Mike dreamt of serving his nation, while renewed great power competition between the US and Russia began to silently unfold. During the 1990s, the former Union of Soviet Socialist Republics (USSR), was in complete disarray, both in national identity and infrastructure. The newly formed Russian Federation (Russia) was a ghost of its former self. Out of this chaos rose an autocratic leader from the former Komitet Gosudarstvennoy Bezopasnosti (KGB) by the name of Vladimir Vladimirovich Putin. By the early 2000s, Vladimir Putin navigated his way through the new Russian bureaucracy. First transitioning from the country's intelligence community to political leadership between 1990 and 2000, appointed to prime minister in 1999, and subsequently to president in 2000.

Putin, remembering the glory days of the USSR's powerful symbol of the sickle and shield, dedicated himself to ensuring Russia remained a global influence. While the US and North Atlantic Treaty Organization (NATO) enjoyed almost two decades of global hegemony and expansion, the Putin regime created a strategy to thwart western dominance and sought to disaggregate western alliance's such as NATO. In retrospect, while attending West Point, Mike recalled learning about the early signs of this strategy.

In early 2004, while Mike was a sophomore in high school, the Baltic states of Latvia, Lithuania, and Estonia became members of NATO. Responding to NATO expansionism, Russia invaded the country of Georgia. Although militarily successful, Putin realized that to be strategically competitive in the future required modernizing Russia's military and its approach to warfare. Beginning with the Russian State Armament Plan 2020 (GPV 2020) published in 2010, Putin focused on modernizing his nuclear arsenal, and enhancing military naval and aerospace capabilities; signifying the Russian military's accelerated modernization program.<sup>20</sup> After four years of modernization, the Putin regime unveiled its new approach to warfighting known as Russian new generational warfare (NGW). The basis of Russian NGW was, "...wars are dominated by information and psychological warfare, in order to achieve superiority in troops and weapons control, morally and psychologically depressing the enemy's armed forces personnel and population."<sup>21</sup> The Russian military tested NGW through the annexation of Crimea in 2014, and subsequent cyber-attacks against Ukraine. Again, the operations were successful, and met with little to no response from NATO and western powers.<sup>22</sup> Based on GPV 2020's success, Putin authorized additional modernization goals through GPV 2027 (published in 2018), focused on improving ground force power projection, special operations forces, short-range ballistic missiles, and hyper-sonics.<sup>23</sup> By 2027, Russia achieved its conventional and nuclear modernization goals.

To counter NGW, the US Army developed and executed force modernization. Mike remembered reading the *2019 Army Modernization Strategy: Investing in the Future* while

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<sup>20</sup> US Library of Congress, CRS, *Russian Armed Forces: Military Modernization and Reforms*, by Andrew S. Bowen, CRS Report IF11603 (Washington, DC: Office of Congressional Information and Publishing, July 20, 2020): 1, accessed February 4, 2021, <https://crsreports.congress.gov/product/pdf/IF/IF11603>.

<sup>21</sup> Jānis Bēriņš, "Russia's New Generation Warfare in Ukraine: Implications for Latvian Defense Policy," Policy Paper No.02 (National Defence Academy of Latvia, April 2014): 5.

<sup>22</sup> "Russia's New Generation Warfare in Ukraine: Implications for Latvian Defense Policy," 3.

<sup>23</sup> *Russian Armed Forces: Military Modernization and Reforms*, 1.

stationed at Fort Stewart, Georgia with the 3d Infantry Division. The strategy served as the catalyst for transforming the US Army into a multi-domain force, and provided six modernization priorities: improving long range precision fires, developing next generation combat vehicles, developing future vertical lift, modernizing the network, improving air and missile defense, and improving soldier lethality.<sup>24</sup> By early 2034, the US Army (along with the other services), achieved its modernization goals described in the 2019 strategy; surprisingly months ahead of schedule.

In February 2035, emboldened by US military modernization achievements, the fielding of multi-domain task forces (MDTF) to counter NGW, and assuming the United States and NATO achieved overmatch against Russia, the National Security Council used its influence to persuade the NATO Secretary General to invite Georgia and Ukraine to accede to the North Atlantic Treaty.<sup>25</sup> By early April 2035, just as Mike and his IBCT prepared to “enter the box” at the JRTC, both Georgia and Ukraine acceded to the North Atlantic Treaty. Without warning, Russia, viewing the Georgian and Ukrainian accession into NATO as crossing a national security “red-line,” simultaneously invaded and occupied Latvia, Lithuania, and Estonia.<sup>26</sup> Using NGW doctrine, the operation took seven days and forever changed the strategic landscape in the northern hemisphere.

## Preparing for Combat

On a Sunday evening in early May, at his quarters on Fort Campbell, Kentucky, Mike received a prepare to deploy order over his top-secret encrypted personal smart phone from his

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<sup>24</sup> US Department of the Army, *2019 Army Modernization Strategy: Investing in the Future* (Washington, DC: US Department of the Army, 2019): 1,6, accessed February 2, 2021, [https://www.army.mil/e2/downloads/rv7/2019\\_army\\_modernization\\_strategy\\_final.pdf](https://www.army.mil/e2/downloads/rv7/2019_army_modernization_strategy_final.pdf).

<sup>25</sup> North Atlantic Treaty Organization, “Accession Process,” Enlargement, last modified May 5, 2020, [https://www.nato.int/cps/en/natolive/topics\\_49212.htm](https://www.nato.int/cps/en/natolive/topics_49212.htm).

<sup>26</sup> Andrew Osborne, “Putin warns NATO against closer ties with Ukraine and Georgia,” *Reuters* (Moscow), July 19, 2018, <https://www.reuters.com/article/us-russia-nato-putin/putin-warns-nato-against-closer-ties-with-ukraine-and-georgia-idUSKBN1K92KA>.



CG; less than two weeks after his brigade returned from its JRTC rotation. The order directed Mike to, "...prepare the 3/101 Airborne Division (Air Assault) for immediate deployment to the USEUCOM AOR to establish forward operating base (FOB) Drawsko Pomorskie, Poland (a North Atlantic Treaty Organization training area established in late 2019), and set conditions for the occupation of a follow-on MDTF.<sup>27</sup> On order, 3/101 Airborne Division (Air Assault), under operational control of the MDTF, will prepare for NATO led offensive ground operations against hostile Russian forces occupying allied nations in the Baltic region in order to re-establish internationally and allied recognized borders."<sup>28</sup>

In accordance with Presidential Executive Order 25599, directing concurrence from a cybersecurity specialist prior to any classified information sent over an electronic device, Mike's first contact (grudgingly not his CSM) was to his brigade's cybersecurity officer (on loan from the newly created Cyber Corps).<sup>29</sup> This was to ensure he was in compliance with federally mandated cybersecurity regulations to pass a classified warning order (WARNO) to his subordinates without compromising operational security. Within a matter of seconds, his cybersecurity officer ensured all relevant patches and systems updates were present within the cyber domain, and gave his concurrence to move forward with the mass notification (battalion to squad level leadership). Although, he loathed the fact of "asking for permission" to send a simple WARNO, Mike understood the heightened protocols required – especially after the *USS John F. Kennedy* aircraft carrier incident in 2024 where a cyber-attack shut down its engines minutes after the ships christening. After this regulated step, Mike immediately contacted CSM Mattson, and went full tilt in getting his unit in position to conduct combat operations.

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<sup>27</sup> US Department of the Army, "Army Multi-Domain Transformation: Ready to Win in Competition and Conflict (Chief of Staff Paper #1)," (Washington, DC: US Department of the Army, March 16, 2021): 12.

<sup>28</sup> US Department of the Army, *Terms and Military Symbols*, ADP 1-02 (Washington, DC: US Department of the Army, August 2018): 1-72.

<sup>29</sup> Richard A. Clarke and Robert K. Knake, *The Fifth Domain* (New York: Penguin Press, 2019): 172-173.

## Judgment Day

By early June 2035, the establishment of FOB Drawsko Pomorskie was near completion. Along with the full strength of his IBCT, elements of the MDTF were also in-position-ready-to-fire. This included a hyper-sonic capable long range artillery battery, located on the east coast of Newfoundland, Canada, a platoon of Cyber Corps defensive and offensive warriors located at an undisclosed location in Northern Virginia, and a battery of air defense assets located in western Poland, programmed to interdict any incoming missile threat Russia could muster. By June 23, 2035, Mike remembered breathing a sigh of relief; everything was moving forward according to the plan.

As Mike laid his head on a pillow, he mentally prepared himself for the arrival of the remaining forces of the MDTF that was to occur in the following morning. Although the planned conditions were in place, he was uncomfortable about the large signature the MDTF would present as units began consolidating at FOB Drawsko Pomorskie. Although NATO and USEUCOM were completely synchronized in the effort, the reality was that no army could mask its physical building of combat power; especially on the European continent. Despite this, the initial forces of the MDTF did arrive in Poland. However, Mike was correct. It did not go unnoticed by Russia.

Vividly, Mike remembered June 24, 2035. This is the day Russian forces, without warning, launched a SS-26 Stone, ten-kiloton SSM on his IBCT while it prepared for the arrival of the MDTF at FOB Drawsko Pomorskie. Russian forces launched the LYBNW from within Russian territory, just south of Kaliningrad. US Army air defense systems were unable to acquire the missile, because at least 100 swarming diversionary projectiles overwhelmed the air defense tracking system. The effects were immediate, devastating, and horrifying; vaporizing everyone within 150 meters of the blast (Mike later found out, the warhead was an airburst warhead to mitigate fallout). Further, everyone within 500 meters of the blast, received a lethal dose of

radiation, and those that did survive would most likely succumb to cancer. The third lethal ring of the blast accounted for the burn and crush injuries; especially to those who took shelter in existing buildings. Within a blink of an eye (for some their last), Mike's IBCT was combat ineffective, and over 10,000 civilians were either dead or injured.<sup>30</sup>

The detonation not only took human life, it also neutralized combat material. Because the US Army did not invest in hardening ground-based equipment against a nuclear strike, the nuclear blast wiped out anything requiring a semiconductor. This included almost every piece of equipment tied to the network within the IBCT; including combat vehicles, vertical lift, the command and control (C2) network, local air and missile defense, and soldier lethality systems. Faced with decimation of his IBCT, and with no communications with his higher headquarters, Colonel Wells ordered what was left of his brigade to withdraw from FOB Drawsko Pomorskie, "...by any means possible." As Mike retreated from the battlefield, making his way west with what remained of his command, he remembered asking himself, "What the fuck just happened?"

## The Day After

As Mike finalized his thoughts for what he would provide to the military history detachment during his oral history interview, he couldn't help but remember the strategic impact of the events that unfolded almost ten years prior. First, the NATO training center located at Drawsko Pomorskie became uninhabitable (at least for a few decades). Second, unable to respond with a proportional nuclear response, without further escalation to global thermonuclear war, the US and NATO ceded the Baltic States to Russian control, and allowed a coerced withdrawal of Georgia and the Ukraine from the North Atlantic Treaty Organization. In the aftermath, the US government leveraged sanctions against Russia, and conducted targeted missile strikes against periphery objectives within Syria. However, after June 2035, NATO lost almost all credibility as

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<sup>30</sup> NUKEMAP uses three categories to determine casualty estimates. For this estimate the target was Drawsko Pomorskie, Poland. The nuclear yield was ten-kilotons, and the nuclear weapon was an airburst to determine casualty estimates, <https://nuclearsecrecy.com/nukemap/>.

a force of deterrence against Russia and other adversary nations. Like Russia in the mid-1990s, by 2045, NATO was in complete decay, and a shell of its former self.

At the operational and tactical level, the US Army's strategic modernization strategy, published in 2019, did not account for LYBNW. Mike's rotation at the JRTC included chemical and cyber-attacks, but his formation, and equipment, were not prepared to operate in a nuclear environment. When faced with a nuclear attack, units were ill-prepared, equipment failed, and leaders could no longer command and control their formations. In retrospect, Mike couldn't help but tell himself, "How could we [the US Army] be so stupid...we saw this coming..."

## PRC Scenario

### The PRC Letter

As Colonel (Retired) Ryan Camm left the Veterans Administration Medical Center (VAMC) in Hampton, Virginia, he couldn't help but feel proud of his mental health progress following the events he and his IBCT endured ten years earlier in 2035. Ryan credits the group therapy sessions, provided by the VAMC, for helping him cope with his post-traumatic stress disorder. Because of his group therapy sessions, he no longer saw the bright flash in his mind's eye that so haunted him for many years after the incident. Bright flash abated; the therapy could not bring back his eyesight. The event left Ryan blind, but he was content with his life after retiring from the US Army.

If therapy was the reason Ryan could again gain a solid and restful night of sleep, it was his wife Jane that kept him optimistic about the future, and what they could still achieve together. As was his routine after therapy sessions, Mike used his probing cane (also known as a white cane) to navigate from the Behavioral Health Center at Hampton VAMC to the parking lot on Franklin Boulevard. Using his cane, he knew (in true military fashion): twenty-eight feet west of the exit, twenty-one feet north on sidewalk, 212 feet east on the pavilion, eighty-seven feet

northeast before Franklin Boulevard, and finally eighteen feet northwest on walking path.<sup>31</sup>

Always, at the end of the eighteen feet of walking path, awaited his bride, Jane; patiently in the driver seat of the family's hybrid.

It was at this moment, when Jane felt Ryan was in a "good place," she decided to share the letter sent weeks earlier from the Center of Military History. Trembling as she read the letter, Jane orated the written request.

*Colonel (Retired) Ryan Camm,*

*The US Army Center of Military History requests you accept an invitation to provide an oral history regarding the People's Republic of China (PRC) military actions against your brigade combat team, 2d Brigade, 25th (2/25) Infantry Division (ID), in the former Democratic People's Republic of Korea during the summer of 2035.*

*The US Army has a long tradition of using oral history to preserve historical information and to enrich its official written histories with material otherwise unavailable in the documentary record. Your Infantry Brigade Combat Team (IBCT) was the first ground force to face the devastating effects of a nuclear weapon since the US dropped atomic weapons on Hiroshima and Nagasaki in 1945.*

*The Center of Military History understands the physical and psychological impact the attack took on your unit and you personally. However, the Center of Military History is equally interested in the impacts on the PRC, following the US response to the attack. If you agree to the interview, it will take place at the Center of Military History located at Fort McNair, VA, and you will be put in contact with a member of one of our military history detachments (MHD). As of now, we are aiming to conduct three two-hour sessions with you over the course of three days. The Center of Military History administration section will coordinate travel and lodging.*

*Please contact the Center of Military History administration section with any questions you may have, and we look forward to meeting with you in the near future.*<sup>32</sup>

As always, Jane was right. Ryan was ready to talk about his combat action in North Korea during the summer of 2035. It was a subject he repeatedly shared in group therapy, and a subject he knew must be shared with the military historians and the rest of the world.

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<sup>31</sup> Distances calculated using Google.maps, <https://www.google.com/maps/@37.0146781,-76.3306858,108m/data=!3m1!1e3>.

<sup>32</sup> *U.S. Army Guide to Oral History*, iv, 8-9, 11, 24, 46-48, <https://history.army.mil/html/books/oral/oral.html>. This letter is completely fictional. Although informed by the *US Army Guide to Oral History*, it does not represent any official correspondence between the author and the Center for Military History.

## Early Years

Ryan grew up in a small community in central Louisiana. Born to working class parents, he was a standout high school student-athlete-community leader. Ryan possessed the character and values Americans expected of a commissioned officer, and more than anything, wanted to serve his nation. Early on, Ryan committed himself to service in the military, and strove to gain admittance into the US Military Academy (USMA) at West Point, New York. Despite his dedication and hard work, Ryan did not receive an appointment to the USMA. Instead, he joined the Reserve Officer Training Corps (ROTC) detachment while attending Louisiana State University (LSU) in Baton Rouge, Louisiana.

After his first year at LSU, Ryan settled on majoring in international studies with a focus on Asia. In 2009, the beginning of his sophomore year, he began to understand the Chinese Communist Party's long-term strategic aims. One of the most impactful readings in his Asian studies was a book entitled *Unrestricted Warfare*, authored by Qiao Liang and Wang Xiangsui, positing the character of future warfare fundamentally changed after Operation Desert Storm (ODS) in 1991, with, "...more than 500 kinds of new and advanced technology of the 80s ascend[ing] the stage to strike a pose, making the war simply seem like a demonstration site for new weaponry..."<sup>33</sup> Based on his research, Ryan interpreted the technology unleashed by America and its allies during ODS amounted to a modern day release of a zero-day exploit; basically a weapon that is used once, but is quickly countered in the future.<sup>34</sup> In his follow-on studies and research, Ryan assessed the CCP based their future strategy on countering the US Desert Storm zero-day exploit.

Reinforcing his zero-day exploit theory, Ryan specifically remembered the CCP's national defense strategy (NDS) in 2006. In 2006, the Chinese Communist Party NDS touted:

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<sup>33</sup> Qiao Liang and Wang Xiangsui, *Unrestricted Warfare* (Beijing: PLA Literature and Arts Publishing House, February 1999): 11.

<sup>34</sup> *The Fifth Domain*: 21-24, 36, 38.

To uphold world peace, promote common development and seek cooperation and win-win is the common wish of the people around the world and an irresistible trend of our times. Committed to peace, development and cooperation, China pursues a road of peaceful development, and endeavors to build, together with other countries, a harmonious world of enduring peace and common prosperity.<sup>35</sup>

However, he recalled that by 2019, the CCP NDS tone changed significantly, stating:

The world today is undergoing profound changes unseen in a century. As economic globalization, the information society, and cultural diversification develop in an increasingly multi-polar world, peace, development and win-win cooperation remain the irreversible trends of the times. Nonetheless, there are prominent destabilizing factors and uncertainties in international security. The world is not yet a tranquil place.<sup>36</sup>

Hindsight being twenty-twenty, by 2045, Ryan was not surprised by the CCP's change in its strategic approach. However, it took reflection on his life and career to fully understand the implications the CCP had on him, his unit, and America, and prepare him for his CMH interview.

## Army Career

After commissioning a second lieutenant in the infantry, and marrying Jane in 2012, Ryan served as a platoon leader in the storied 3rd Infantry Regiment (The Old Guard), at Joint Base Myer-Henderson Hall, just outside of Washington, DC. The Old Guard, the US Army's ceremonial unit, is a highly selective and a prestigious unit, but it was not Ryan's first choice. This is because The Old Guard rarely leaves the National Capital Region, and Ryan had concerns he would miss out on his opportunity to serve in a combat.<sup>37</sup> At the time, his peers were serving in combat zones like Iraq and Afghanistan, and like any young officer, felt left out of the fighting. However, Ryan came to appreciate his role in honoring those who served their nation through full honors funerals and official ceremonies. Additionally, while assigned to The Old Guard, Ryan continued to study the actions of the CCP. Ryan remembered that in the first seven years of his

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<sup>35</sup> Information Office of the State Council of the People's Republic of China, *China's National Defense in 2006* (Beijing, China: Information Office of the State Council of the People's Republic of China, December 2006): 3.

<sup>36</sup> Information Office of the State Council of the People's Republic of China, *China's National Defense in the New Era* (Beijing, China: Foreign Languages Press Co. Ltd, July, 2019): 2.

<sup>37</sup> National Capital Region (NCR), *US Code 32* (2017), § 724.120, accessed April 2, 2021, <https://www.govinfo.gov/content/pkg/CFR-2012-title32-vol5/pdf/CFR-2012-title32-vol5-sec724-120.pdf>.

career, a myriad of events occurred; personally, and professionally. Personally, Ryan and Jane started a family, celebrating the birth of their first son, born in 2015, and a daughter in 2017. Professionally, after his assignment with The Old Guard, Ryan deployed with the 3rd Ranger Battalion out of Fort Benning, Georgia to Afghanistan in 2015, graduated from the Marine Expeditionary Warfare School in 2016, and in 2019, took command of an infantry rifle company in the 10th Mountain Division, at Fort Drum, New York.

Following company command, Ryan went on to serve in the 1st Infantry Division at Fort Riley, Kansas, and subsequently on the Joint Staff at the Pentagon in Washington, DC. He also commanded a battalion in the 2d Infantry Division in the Republic of Korea (ROK). In 2034, Ryan assumed command of the 2d Brigade, 25th Infantry Division at Schofield Barracks, Hawaii. His family stood by him through the years, and although there were some difficult times, they remained resilient and appreciated military life. However, as Ryan progressed through the ranks, the PRC continued to expand and exert its influence in the Pacific and around the globe.

## The Rise of China, 2013-2035

While reflecting on the events that led to the summer of 2035, he couldn't help wondering how the CCP became so dominant in the Pacific in such a relatively short amount of time. With nothing but his thoughts and memory, Ryan began to unpack and piece together the previous thirty years. This was difficult, and he knew that the best way to process his thoughts was through a model in which he, and others, were familiar.

Ryan liked cigars and quality whiskey. One night, as he sat in his office, enjoying a rare bourbon whiskey from Kentucky, he determined the best way to explain the rise of China was through the diplomatic, information, military, and economic (DIME) instruments of national power model.<sup>38</sup> He chose this model because it was practically a universal language, understood

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<sup>38</sup> US Department of the Defense, *Strategy*, JDN 1-18 (Washington, DC: US Department of the Defense, April 25, 2018): II-5 - II-8.



by American military and civilian leaders, and the international community. Using DIME, Ryan began organizing his thoughts on China's rise to power, and how this rise led to what became known as the "bright flash" in 2035.

On the diplomatic front, in 2013, president-for-life Xi Jinping, gained the presidency of the PRC, and began to consolidate power in the Pacific through programs like the Belt and Road Initiative (BRI). By 2019, firmly seated in power, Xi Jinping approved the Chinese Communist Party 2019 NDS, alluding to American involvement in the Asian region as destabilizing and untranquil. By 2033, the Chinese Communist Party NDS, boasted a regional hegemon in the Pacific (except for the Korean Peninsula, Japanese islands, and Australia), and clearly labeled America as an enemy of the PRC.

Using the information instrument of national power, and taking a page from Valdimir Putin's 2016 playbook, Xi Jinping influenced the 2024 and 2028 United States Presidential elections. Leveraging social media and the open internet, the People's Liberation Army Strategic Support Force influenced American voters to elect a president that still believed in the status quo western strategy of cooperation with the PRC.<sup>39</sup> This effort set conditions for its expanded influence in the region, and undermined American and allied domestic support for countering PRC influence.

Militarily speaking, Ryan recalled the CCP knew as far back as 1999 it could not compete with the American military through conventional means. America and its allies possessed the monopoly on force projection. Instead, from 2013 to 2035, the CCP outwardly focused its military efforts on anti-access/area-denial (A2/AD) technology. In hindsight, this turned out to be a strategic military deception. Although A2/AD was a clear deterrent to America's ability to project power, the CCP knew it was a technological blip, like the zero-day

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<sup>39</sup> Select Committee on Intelligence, Russian Active Measured Campaigns and Interference in the 2016 U.S. Election, Volume 2: Russia's use of Social Media with Additional Views, 116th Cong., 1st sess., 2019, S Rep. 116-XX, pt. II, 4, accessed on February 23, 2021, [https://www.intelligence.senate.gov/sites/default/files/documents/Report\\_Volume2.pdf](https://www.intelligence.senate.gov/sites/default/files/documents/Report_Volume2.pdf).

exploit from Desert Storm, something that would inevitably be overcome by technology. The CCP's true intention was to gain a secure second-strike nuclear capability through its nuclear weapons modernization program.<sup>40</sup> In 2030, the CCP achieved second-strike nuclear delivery and C2 modernization goals. Based on the parity achieved, the CCP pivoted from a no first use nuclear weapons policy, to an escalate to deescalate policy (similar to Russia) to protect its vital interests.

Lastly, on the economic front, the PRC implemented the BRI. At first, the world viewed the BRI as a forward-thinking mechanism to build needed infrastructure in developing nations, and a positive influence on the greater international system. However, by 2025, the CCP leveraged the influence of BRI on neighboring nations to consolidate gains in the first island chain and east Africa through the establishment of military basing. By 2030, using its increased economic power, the CCP began to exert greater economic and military influence in the second island chain, and achieved its "string of pearls" concept for Chinese economic and military dominance in the South China Sea and Indian Ocean.<sup>41</sup>

As Ryan discussed his recollection of events with his wife, Jane reminded him that when Ryan commissioned as an officer in the US Army in 2012, the PRC was on the verge of becoming a responsible international power. However, by 2035 the PRC was an authoritative regional hegemon, representing only the second nation in history (besides the US) to use nuclear weapons against another nation.

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<sup>40</sup> Caitlin Talmadge, "China and Nuclear Weapons," (Washington DC: Brookings Institute, 2019): 2, accessed August 25, 2020, [https://www.brookings.edu/wp-content/uploads/2019/09/FP\\_20190930\\_china\\_nuclear\\_weapons\\_talmadge-1.pdf](https://www.brookings.edu/wp-content/uploads/2019/09/FP_20190930_china_nuclear_weapons_talmadge-1.pdf).

<sup>41</sup> Christopher J. Pehrson, *String of Pearls: Meeting the Challenge of China's Rising Power Across the Asian Littoral* (Strategic Studies Institute, US Army War College, 2006): 3, accessed March 24, 2021, <http://www.jstor.org/stable/resrep11277>.

## From COVID-19 to Nuclear Weapons

The coronavirus pandemic of 2019 (COVID-19) impacted the Democratic People's Republic of Korea (DPRK) economy especially hard. Due to its limited medical capacity, the DPRK regime enacted strict measures to prevent the spread of the disease. This included closing the country's borders, halting trade with China, and losing much needed outside aid from non-governmental organizations.<sup>42</sup> The DPRK regime lifted the Covid-19 prevention measures in the summer of 2023, after the regime accumulated enough of the vaccine to immunize its population. However, by this time the country was bankrupt, and most of the population, except for a handful of elites, were starving. Kim Jong-Un managed to stay in power for another eleven years, but in the early summer of 2035 his regime collapsed.

Evidence of the DPRK regime's collapse was not immediately recognized by either the Republic of Korea or American intelligence agencies. The first signs of the collapse began with mass defections of North Korean People's Army (NKPA) officers and soldiers along the demilitarized zone (DMZ); including the elite border guard at Panmunjom. Interrogations of the NKPA soldiers by ROK intelligence, revealed the deteriorated conditions in the north. Within twenty-four hours of the military defections, tens of thousands of refugees began crossing the DMZ to seek assistance in the south; many were lost to mine strikes along the way.

### DPRK Collapse and Allied Response

As clear as yesterday, Ryan remembered June 23, 2035. It was a late Saturday morning, Ryan and his Command Sergeant Major were enjoying a friendly game of best ball at the Hickam Air Force Base golf course, when one of the 25th ID commanding general's drones landed on the green right before his winning putt. The "CG's Drone," carrying a secured message, represented

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<sup>42</sup> Sue Mi Terry, "South Korea Minimized the Damage from Covid-19. North Korea Maximized It.," (Washington, DC: Center for Strategic and International Studies, October 1, 2020): 4-5, accessed February 20, 2021, <https://www.csis.org/analysis/south-korea-minimized-damage-covid-19-north-korea-maximized-it>.

one the most secure forms of communication created, as it required tri-factor identification (finger-print, iris scan, and facial recognition) to de-encrypt. Immediately, Ryan knew this was not good. The message read, “In accordance with operational plan (OPLAN) 26254, the Secretary of Defense (SECDEF) orders 2/25 ID deploy to the ROK, under operational control of US Forces Korea (USFK) no later than June 25, 2035, to secure known and suspected weapons of mass destruction (WMD) sites.”

Ryan and his CSM immediately returned to the brigade headquarters to gain a better understanding of the situation unfolding on the Korean peninsula. When he arrived, Major Mike Halling, the brigade operations officer, gave him the update. Breaking down the strategic guidance, Mike described that forty-eight hours earlier, both the US and ROK presidents, in a secret meeting, approved military intervention north of the 38th parallel to secure known and suspected WMD sites, and set conditions for humanitarian assistance and disaster relief (HADR) operations. Additionally, both presidents requested an emergency special session with the United Nations Security Council.<sup>43</sup> The PRC abstained from the vote. Lastly, the SECDEF approved OPLAN 26254, directing US military forces, in coordination with ROK military and coalition allies, to secure known and suspected DPRK WMD sites within ninety-six hours.<sup>44</sup>

With a fuller understanding of the context of the message he received on the golf course, Ryan went full tilt in mobilizing his brigade for combat operations in North Korea. Despite his twenty-three-year career in the military, and training for the off-chance the DPRK regime would collapse, he was physically shaking and unnerved. For the first time in Ryan’s career, he was both optimistic that world events would improve with the fall of the DPRK, but at the same time, scared shitless that all could go to hell. His gut feeling was not entirely wrong.

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<sup>43</sup> “Emergency Special Sessions,” United Nations, accessed February 23, 2021, <https://www.un.org/en/ga/sessions/emergency.shtml>.

<sup>44</sup> Bruce W. Bennett, *Preparing for the Possibility of a North Korean Collapse*, (Santa Monica, CA: The RAND Corporation, 2013): 207, accessed February 23, 2021, [https://www.rand.org/content/dam/rand/pubs/research\\_reports/RR300/RR331/RAND\\_RR331.pdf](https://www.rand.org/content/dam/rand/pubs/research_reports/RR300/RR331/RAND_RR331.pdf).

## Accounting for what you don't see coming

Thanks to advances in command, control, and logistics, aided by artificial intelligence, Ryan's IBCT exceeded OPLAN 26254s timeline and was in position more than twelve hours ahead of planning factors on the Korean peninsula. Aided by advances in force projection capabilities provided by the US Air Force and Navy, and years of training deploying to the ROK, 2d Brigade, 25th Infantry Division was on the peninsula and ready to execute its mission. By early morning June 24, 2035, while at USFK headquarters, Ryan learned his brigade would secure one subterranean weapons of mass destruction (WMD) storage plant at Mayu-dong, just southeast of Pyongyang. Based on the success of this operation, his brigade would execute a follow-on mission to secure two more suspected WMD storage sites at Yangdok and Wonsan.<sup>45</sup>

On the morning of June 25, 2035, ROK military forces moved north of Mayu-dong, securing key avenues of approach and establishing HADR centers to assist the local populace. At the same time, the 35th Air Defense Artillery Brigade, with its short and long-range air defense capability, moved north to expand its zone of coverage. This set conditions for Ryan's brigade to conduct its operation at Mayu-dong. Two infantry battalions secured Mayu-dong by conducting an air assault using improved vertical lift assets, supported by long-range artillery positioned at Osan Air Base, unmanned aerial drones out of Japan, radar jamming from naval assets in the Sea of Japan, and satellite coverage from multiple assets in space.

The operation was a complete success, validated the DPRK regime's stockpiling of WMDs, proved past PRC support for the North Korean regime, and verified Kim Jong Un's obsession for employing nuclear weapons against his adversaries. Inspired by success, Ryan recommended moving forward with his follow-on missions at Yangdok and Wonsan. Both political and military leadership concurred, and gave him the approval.

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<sup>45</sup> The target locations of Mayu-dong, Yangdok, and Wonsan are completely fictional. Although informed by terrain analysis of North Korea, it does not represent any understanding of official operational plans by author by the US military or its allies.

Intelligence indicated Yangdok was the location of a vast subterranean complex where the former regime conducted nuclear fuel cycle enrichment and bio-chemical weapons production. The operation to seize and search this objective was to take place on June 30, 2035. Ryan was optimistic that 2/25 ID would again prove successful. What he did not know at the time, is the CCP was not willing to cede any more North Korean soil to the ROK and its western allies.

## Communist Chinese Party and Social Media

Ryan remembered how satisfied he was following the Mayu-dong operation. However, what he and others did not account for was the open-source intelligence from China. Across multiple social media sites, hundreds of thousands of anonymous posts emanating from within the PRC warned against further occupation of terrain within the former DPRK. For example, one post, dismissed by the National Security Agency as a hoax, came from someone or group identifying itself as Ix Gnipnix (Xi Jinping spelled backwards), posting, “America and her allies, please stop, or we will be forced to bring the sword on your armies.” The intelligence community paid little attention to these types of messages, because they were not able to verify their credibility, and absorb the sheer volume of social media posts warning of Armageddon. Already occupying former DPRK territory, and the assumption by intelligence analysts that there was no credibility to the social media traffic, USFK decided to proceed with the second phase of WMD site seizure operations.

Ryan received the approval to launch the second phase of his search and seizure operation into Yangdok on the morning of June 24, 2035. His staff was operating like a well-oiled machine, and seeing their performance was extremely satisfying to Ryan and his CSM. The Yangdok operation employed the same combat power used in the Mayu-dong operation. By late afternoon, all units were in their initial positions, and prepared to execute.

Later that evening, Ryan's staff and battalion command teams executed their daily commanders update brief (CUB). This battle rhythm event was extremely useful to Ryan, as it was the only time in the day where he and his CSM were able to collectively dialogue with their IBCT's leadership. Vividly, Ryan remembered two important events at the CUB. The first, was Ryan decided his tactical command post (TAC) would C2 the operation at Yangdok. His TAC, comprised of a small cross-section of his IBCT staff, including personnel to cover intelligence, operations, fires, and a small security element, would establish their position just south of Yangdok prior to the arrival of the two infantry battalions. The second event, and Ryan acknowledged this retrospectively, was a quick intelligence update provided by his talented IBCT intelligence officer, Major Brittany Smith. Her update focused mostly on what the infantry battalions could expect in the cavernous underground facility at Yangdok, but did highlight the increased social media messaging emanating from the PRC espousing an imminent attack against ROK and her allies. Major Smith warned her IBCT commander, that the amount of social media traffic concerned her, and offered her professional assessment that the CCP would not continue to stand idly by as American forces continued to move closer to China's border.

Hearing this, Ryan became increasingly agitated, and began to question his intelligence officer's analysis of the situation. He posed questions like, "Where are you getting this information...what is your source...what is higher headquarters intelligence analysis saying?" Standing her ground, and perhaps weakening her argument, Major Smith shared that it was her gut feeling that the CCP was on the verge of taking action against American military advances in the former DPRK. As Ryan remembered this event, he recalled feeling that his intelligence officer had somehow let him down. How could her analysis be so different than USFK's or the National Security Agency?

Reflecting on the June 24, 2035 CUB, Ryan realized two things. First, the decision to forward deploy the TAC was the right one; he would still make the same decision today. Second, Major Smith's gut instinct was correct, and her analysis was accurate. Ryan clouded his own

judgement and trust in his team's advice, because he already determined the outcome of the Yangdok operation based on his IBCT's success at Mayu-dong. In the end, Major Smith was right, and unfortunately Ryan and some of his staff would pay the price.

## The Bright Flash

In the early morning hours of June 30, 2035, the PLARF launched eight SRBM LYBNWs into North Korea along main avenues approach into China. Initial intelligence estimates determined the SRBMs were most likely Chinese DF-15 short-range ballistic missiles originally thought to only carry conventional warheads.<sup>46</sup> Carrying a payload of less than one kilo-ton per missile, allied missile defense radars confirmed their launch from the Shenyang Province, China. Where the missiles originated was the easy part, attributing the decision to launch was another question. It was clear by the targets struck, the launches were not meant to destroy population centers or military units, but were clearly a diplomatic message of "halt what you are doing" in an attempt to thwart American and allied advances within the former DPRK.

Later, intelligence reports confirmed the decision to launch came from the highest levels of the CCP. Although there were less than a thousand casualties (mostly North Korean civilians), the nuclear detonations demolished critical bridges, ground lines of communication, and because of radiation concerns, made the avenues of approach off-limits to coalition forces for approximately forty-eight hours.<sup>47</sup> Ryan and most of his TAC witnessed one of the detonations near Yangdok. Although all of his staff received limited effects from the blast, Ryan lost his eyesight, and was forever blinded in the "bright flash."

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<sup>46</sup> Hans M. Kristensen and Matt Korda, "Chinese nuclear forces, 2019," *Bulletin of Atomic Scientists*, 75:4 (DOI: 10.1080/00963402.2019.1628511): 175, <https://www.tandfonline.com/doi/full/10.1080/00963402.2019.1628511>.

<sup>47</sup> US Department of Homeland Security, "News and Terrorism: Communicating in a Crisis," (Washington, DC: The National Academies, 2005): 2, accessed March 28, 2021, [https://www.dhs.gov/sites/default/files/publications/prep\\_nuclear\\_fact\\_sheet.pdf](https://www.dhs.gov/sites/default/files/publications/prep_nuclear_fact_sheet.pdf).



## Aftermath

In the immediate aftermath, Ryan was still commander of his brigade despite his injuries. As the medical staff tended his wounds, he reflected on the complex scenario facing his unit, and attempted to articulate how to communicate to his superiors the assistance required to turn defeat into victory. Unfortunately, nothing at his, the division, or USFK level could match the response of eight LYBNWs that the CCP unleashed into the former DPRK.

Further, nothing in his IBCT could withstand a nuclear blast. Although infantry can dig in and avoid the immediate effects of a nuclear weapon, anything that resembles electronics was immediately rendered ineffective. This included every asset that allows a western army to operate as a joint force across the recognized five domains; air, land, sea, space and cyber. Perhaps more important, there was no capability at the IBCT that could deter the CCP's employment of the eight LYBNWs. In fact, if Ryan matched his brigade against LYBNWs, they would lose in every scenario. A contributing factor to this assertion was that in over twenty-five years of military service, Ryan and any unit in which he was a member, trained for operating in a post-nuclear environment. This included unit home-station training, up to the multiple rotations Ryan experienced at his career at the JRTC.

Strategic leadership struggled to determine the best way forward after the nuclear strikes. Not having a weapon like the Chinese DF-15 SRBM to respond with, the Pentagon looked across the five domains for a potential response. After considering multiple options, and weighing the strategic risk of potential nuclear escalation, the President decided to respond using an offensive cyber-attack directed at the CCP's nuclear C2 systems. The cyber-attack was successful. However, both the Pentagon and the White House understood they used their most prized zero-day exploit against the CCP, one that took years to achieve. The CCP was now vulnerable to complete annihilation by American strategic nuclear weapons. This vulnerability brought the CCP to the negotiating table, and averted global thermonuclear war.

## Center of Military History Interview

The monorail train from Hampton, Virginia to Washington, DC took less thirty minutes. An auto-drive hybrid awaited Ryan at Union Station to take him to the CMH at Fort McNair. When he arrived, a member of the MHD took Ryan to his guest room. The next morning would be the first of three sessions of his oral history. As he laid in his bed, listening to the post bugler playing taps,<sup>48</sup> Ryan remembered the “bright flash,” and thought about what he was going to share with the historians. As he fell asleep, he could not help to think how unprepared he, his unit, and equipment was to the immediate and destructive impacts of the nuclear weapons. Although the American government had a counter-strike to the CCP’s use of LYBNW in the summer of 2035, he thought to himself, could that counter-strike be effective in the future, or was it just another zero-day exploit that will eventually be overcome by technology?

## Conclusion

The end of the Cold War reduced the risk of all-out nuclear war between the former Soviet Union and NATO. In 1991, during Operation Desert Storm, the US military instrument of national power showcased the ability of American and allied capability. Desert Storm demonstrated how western armies projected and built significant conventional combat power, integrated joint and combined effects, and maneuvered large formations to win a ground war decisively in the modern era. Arguably, Desert Storm served as a double-edged sword for America and its allies. On one edge it showed the magnificent combat power America and its allies brought to modern conventional warfare. On the other edge, it added to the hubris, based on conventional overmatch, that America and its allies could maintain a global hegemon ad infinitum. Interestingly, the opposite occurred. After Desert Storm, both Russia and the PRC

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<sup>48</sup> Taps is a signal of the end of the day [9 pm], and is played alone to honor service members who paid the ultimate price. <https://www.dla.mil/Portals/104/Documents/Distribution/Reveille.pdf>.

knew they could not compete with western conventional warfare, and instead focused on how to indirectly regain and maintain influence in the European and Indo-Pacific region respectively.

In response to US conventional military overmatch and NATO expansion into Eastern Europe, Russia began modernizing its nuclear arsenal. The Putin regime leveraged its only strategic option, nuclear weapons, and openly espoused a first use policy. Further, Russia developed and exercised NGW military doctrine in a strategic campaign to chip away at the credibility of the NATO alliance. Beginning with the invasion of Georgia, and refined during the annexation of Crimea, NGW, along with other Russian military modernization efforts, continues to create an unstable environment in the European theater and amongst US allies within NATO. Lastly, Russia's investment in LYBNWs, coupled with its aim of escalate to de-escalate creates an asymmetric advantage on the tactical nuclear battlefield.

On the other side of the globe, the CCP's efforts is more concerning. By all accounts, Russia wants to maintain a voice on the international stage. However, the CCP is attempting to create a new world order with China at its center. Arguably, ODS served as the catalyst for the CCP's military modernization efforts. While the American military focused on peacekeeping, safeguarding nuclear materials, COIN, and nation-building, the CCP focused on countering US military projection, expanding PRC influence in Southeast Asia, and its influence across the globe. While America looked toward the Middle East, the CCP, accelerated under Xi Jinping, implemented a whole-of-nation approach to extend its influence by integrating the DIME instruments of national power. This whole-of nation-approach included nuclear modernization. However, because the CCP refuses to enter into any nuclear control agreements, it is difficult for the international community to understand the CCP's nuclear intentions and capabilities.

Great power competition sounds good on paper, and in the news. However, at what point does competition transition to conflict, and what tools does America and its allies possess to respond? Although America and its allies still possess overmatch in many areas to combat the Russian and CCP revisionist powers, a glaring blind-spot is operating on a nuclear battlefield; one

that does not lead to global thermonuclear war. Circling back to the object of this monograph, what are the likely scenarios in which Russia and the People's Republic of China would employ LYBNW against American ground forces?

In the first scenario, Russia employed a LYBNW when NATO expansion crossed a previously articulated red-line that Putin and his government viewed as an existential threat to Russian national security. No longer deterred conventionally by NGW due to its own military modernization efforts, US and NATO forces began building conventional combat power within Poland to counter Russian activity in the Baltic states. Putin, knowing that he did not possess the conventional force to counter NATO action, essentially bet his national will against American and NATO national will by launching a ten-kiloton nuclear SSM against a US IBCT. In the scenario, Putin's wager won the table, and resulted in numerous US casualties, exposed US military equipment vulnerabilities operating on a nuclear environment, and ultimately delegitimized the North Atlantic Treaty Organization. Further, as our main protagonist, COL (Retired) Mike Wells alluded to, American military ground forces, although proficient in large scale combat operations, were not trained to operate on a nuclear battlefield. In the scenario, a LYBNW delivered by Russia, in one day, strategically defeated an alliance that stood steadfast for almost a century.

In the second scenario, the PRC employed eight LYBNWs along major avenues approach into the North Korea from the PRC after American forces began its efforts to secure WMD sights in a failed North Korean state. In this scenario, American and ROK forces took considerably less casualties compared to the Russia scenario. However, the second scenario exposes how little America and its allies in the Pacific understand the CCP nuclear weapons program, intentions, and its response to a sudden collapse of the DPRK regime. Although most conflict scenarios with the PRC focus on Taiwan and the South China Sea, the stability of the DPRK regime cannot be viewed as a separate problem set. Interestingly, USINDOPACOM still maintains a sub-unified

combatant command, (USFK), as a mission command headquarters to focus on North Korea.

However, in the scenario presented, the PRC and DPRK are strategically connected.

Further, the scenario provides a glimpse into the potential American and allied response to such an attack. The American use of a zero-day exploit to cripple the CCP's nuclear command and control capability was arguably warranted. However, zero-day exploits take considerable time and resources to create, and have a half-life that quickly renders them useless. Undoubtedly, once the US employed their zero-day exploit, the CCP immediately went to work to harden its nuclear command and control system, and most likely had it back on-line in short order, more resilient, and even harder to exploit.

Mentioned earlier in this monograph, the two scenarios do not predict the future; rather, they serve as a glimpse into a plausible future to spark innovation, foresight, and futures influenced strategy development. As America and its allies continue to adhere to a strategy of competition between Russia and the PRC, they cannot discount the asymmetric advantage both competitive nations possess in LYBNWs. The US and its allies currently do not have a publicly known comparable nuclear deterrent. Based on what is known in open source, if faced with a LYBNW, both America and its allies would most likely respond in another domain. Additionally, US military ground forces and equipment, do not have the training nor resilience to operate in a post-nuclear weapon environment.

For decades, the US military prepared for the last war fought. This approach clearly is not sustainable for global competition. Adopting a futures-oriented scenario-based model, could lead to a military better prepared to meet training and modernization goals that achieve overmatch against rising adversaries. Lastly, and perhaps most important, is the political will to respond to adversarial advances in military competition, like the threat to use LYBNWs against American and allied ground forces by Russia and the PRC. This will be difficult for America, as the employment of these type of weapons will most likely not directly impact citizens of the United States. However, Putin, leveraging his own national political will, successfully invaded the

country of Georgia, annexed Crimea, and outwardly influenced free and fair elections within the United States. Xi Jinping and the Chinese Communist Party, continues to expand the PRCs influence in the South China Sea, and across the globe using social media.

America now finds itself at a cross-road; continue to focus on competition or transition to preparing for conflict. Although the answer is both, just as the CCP transitioned from “harmony” in 2006 to “untranquilly” in 2019, America and its allies must brace itself for a new battlefield. One that will include every awful weapon created by man, including LYBNWs. Failure to do so will result in failure. To cite T.R. Fehrenbach, “They had been raised to believe the world was without tigers, then sent to face those tigers with a stick. On their society must fall the blame.”<sup>49</sup>

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<sup>49</sup> Theodore R. Fehrenbach, *This Kind of War* (Washington, DC: Potomac Books, 2008): 84.

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