

THE KOREAN JOURNAL OF SECURITY AFFAIRS

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Jiyong Zheng, Hao Xue, Xingxing Wang

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Focus on Chemical Weapons Convention and Biological Weapons Convention**

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Contributors

Jiyong Zheng currently serves as Professor and Director at the Center for Korean Studies, Fudan University, and Chief Expert of the Major Program of the National Social Science Foundation of China, and Vice Chairman of the China Association of Korean Studies. His research focuses on domestic politics in the two Koreas, bilateral and multilateral relations related to the Korean peninsula and policy-making process in DPRK, China and ROK. He can be reached at zhengjiyong@fudan.edu.cn.

Hao Xue is a Ph.D candidate of Fudan University and Retired lieutenant colonel of PLA. His major mainly focuses on the Korean Peninsula and Korea-U.S. relations. He can be reached by hxue21@m.fudan.edu.cn.

Corresponding author: **Xingxing Wang**, is a professor of School of International Relations and Public Affairs, Shanghai International Studies University. She received Ph.D in Seoul National University and jointly finished in University of California, Los Angeles. She finished post-doctor program in SAIS, Johns Hopkins University and was a visiting scholar in Harvard University and Kim Il Sung University, DPRK. Her research mainly focuses on Korean peninsula issues and Northeast Asian relations. She can be reached by wangxingxing@shisu.edu.cn.

Ki-Chul Park

After graduating from the Korea Military Academy, Lieutenant Colonel Park, Ki-Chul received a Ph.D. from the Department of Political Science and International Relations at Korea University. While serving as a biological weapons inspector in the Arms Control Verification Team of the Ministry of National Defense, he also served as a government representative at the Biological Weapons Convention (BWC) Beijing Expert Meeting (2009) and Manila Conference (2010) hosted by the UN Geneva Office of Disarmament. The main research fields are regime theory, regime effectiveness, and the non-proliferation of weapons of mass destruction. The most recent research included: “Study on the success or failure of the WMD non-proliferation regime: Focusing on the determinants of the implementation of great powers” (Journal of East Asian Studies, 2021); “The Role and Responsibilities of the United Nations System to Prepare for the Next Pandemic in the Post Covid-19 Era” (Future Horizon Plus, 2021). Currently, he is serving as a countering weapons of mass destruction planning officer at the U.S. Eighth Army Headquarters. Also, he is serving as an adjunct professor for graduate school of policy studies at Korea University.

Jaewoo Choo is Professor of Chinese foreign policy in the Department of Chinese Studies at Kyung Hee University. He is a graduate of Wesleyan University (BA in Government) and Peking University (MA & Ph.D. in International Relations). He is also a director of China Studies Center at Korean Research Institute for National Strategy, and was a research fellow at the National Security Policy Institute and International Trade Institute. He was a visiting professor at Sam Nunn School of International Affairs at Georgia Tech (2011-12), and a visiting fellow at East Asia Institute of the National University of Singapore (2005, 2006, 2007-8), and the Brookings Institute (2014). Research interests are Chinese foreign policy, multilateral security cooperation, US-China relations, and China-North Korea relations. Recent publications include first-ever book in Korea on the history of US-China relations titled *US-China relations for Koreans: From Korean War to THAAD Conflicts* (Seoul: Kyung-In Publishing House, 2017), and *US and China's Strategy on the Korean Peninsula: Reading from the Facts* (Seoul: Paper & Tree, 2018), and *US and North Korea Relations: The Fate of the History* (Seoul: Gyeonggye, 2022). He's currently working on book manuscripts on China-North Korea relations in the post-Cold War era (in both Korean and English).

Dr. DongJoon Park is a senior researcher at the Peace and Democracy Institute (PDI) at Korea University. He received his Ph.D from the department of government at Georgetown University in August 2020. His research interests include, reputation in international relations, credibility, deterrence and coercion, and American foreign policy. He currently lectures at Korea University and has held research positions at the Institute for Conflict and Security Studies at the George Washington University, the Iimin International Relations Institute (IIRI) at Korea University, and Pacific Forum.

Kwang Ho Chun is a Professor of International Studies, Jeonbuk National University. He was previously a Course Leader and Associate Professor in Asia Pacific Studies, University of Central Lancashire, an Assistant Professor at the Defence Studies Department, King' s College London and the Defence Academy of the United Kingdom. He also taught as an Assistant Professor at Unité de science politique et des relations internationales, Universit? Catholique de Louvain, Belgium. He completed his BA and MA at Kyung Hee University, Seoul, Korea before completing his MA in European Studies, and Ph.D. in International Relations at Katholieke Universiteit Leuven, Belgium. His research interests are grand strategy, asymmetric warfare and irregular warfare. He has published more than 14 books and monographs with more than 100 journal articles.

E-mail: khchun@jbnu.ac.kr

Sangbeom Yoo is professor and Chair of Security Policy Department at Korea National Defense University where he has been teaching U.S. foreign policy and international conflicts since 2013. He received his Ph.D. from the state University of New York in 2012. His recent Publications include “The Study on the Use of Forces of U.S. during Trump’s Administraion,” The Journal of International Relations (2021, Co-authored), “Asymmetric Fear and Its Effect on Alliance: Comparative Studies Between the Perception of Koreans and Americans,” Korea Observer (2019) and other book chapters such as Asian Strategic Review (2019, 2020, 2021). His Area of interests are National Security, Third party intervention, Military provocations, and U.S. foreign policy.

E-mail: jsf4th@mnd.go.kr

Ilsoo Bae is ROK army colonel and expected to be a professor at Military Staff College (as of December 1, 2022). He graduated from the Korea Military Academy (1989). He also received a Master's degree in Military Studies from Daejeon University (2004). He received a Ph.D. in National Security Studies from Sangmyung University (2022). He has been a research fellow at Defense Reserve Force Research Institute, Sangmyung University. His main research interests focus on non-traditional security, national strategy, human security, reserve forces, and cyber security. He is writing special articles on human security-related topics for military journals. His recent articles include, "A Study on the Importance of Human Security and the Effect of National Security in COVID-19 Pandemic," "An Analysis of the Effects and Implication of Humam Security regarding National Security," "4Th Industrial Revolution and paradigm shift on Overseas Deployment of Republic of Korea Armed Forces," "A Study on Response to Cyber Theaters Using Artificial Intelligence," and so on.

E-mail: ilsoo45@naver.com

Jiwon Yun is a Professor in the Department of National Security, Sangmyung University. She was a Professor at the Pierson College of Diplomacy and Security, Pyeongtaek University (March 2005–February 2019). She graduated from Ewha Women's University (1988) and received a Master's degree in International Relations from the University of Aberdeen (1993, UK). She received a Ph.D. in Political Sciences from Glasgow University (2001, UK). She has served as an Advisory Council Member in the Ministry of National Defense. Her major research interests focus on defense policies and Northeast Asian regional security and diplomacy issues relating to U.S. and Russian foreign policies as well as Eurasia, and North Korea. She has authored and co-authored many scholarly articles while co-translating several books including, *Korea and International Politics on Movies*, *Northeast Asia Security Order & Diplomacy under the New Globalism*, and *Korea & International Cooperation in the Global Era* among other titles. Also, her recent articles include "Changes in International Security Environment and Paradigm Shifts in Overseas Dispatch of Korean Troops: Expanding the Roles of the Cheonghae Unit," "The Origin of Territorial Disputes in Northeast Asia and Japanese Perceptions of the Russo-Japanese War: A Literature Review," "Russia's Arctic Policy: Focusing on the Construction of the Arctic Route and Its Challenges," and so on.

E-mail: yyun0916@naver.com

Geunho Song is a former Professor at Korea Defense Language Institute, Joint Forces Military University. After graduating from the Korea Air Force Academy and Hankuk University Foreign Studies(HUFS), he completed US Air Command and Staff College, US Air University. He received a Master's Degree from Korea National Defense University with a major in national security, and a Doctoral Degree in North Korean studies from Dongguk University. His main fields of are space race, space operations, China issues, and North Korea military issues. Recent paper include "A Study on North Korea's Space Development Threats Analysis and a Proposal on Korea Armed Forces' Countermeasures (KIDA, 2021)", "South Korea-U.S. Space Cooperation: Space Development Cooperation Issues and Suggestions on Ways to Strengthen Cooperation (Sejong Institute, 2021)" and "A Study on the Space Development Race between South and North Korea and suggestions for South Korea's space policy (KNDU, 2021)."

E-mail: tbmsong@naver.com

Tae-Hyung Kim is a Professor of Political Science and International Relations at Soongsil University in Seoul. He received Ph. D. in political science from the University of Kentucky. His research interests are nuclear proliferation and nuclear deterrence, security of East Asia, security of South Asia, and non-major powers' foreign policy. His recent academic publications include "The Current Topography of Nuclear Weapons and International Politics"(2022, in Korean), "The Development of Indo-Pakistan Rivalry and the Role of the US During the Cold War: The 3rd In-Pa War and the Nixon Foreign Policy"(2022, in Korean), "North Korea's Nuclear and Missile Development and Crisis Stability in the Korean Peninsula: Lessons, Pitfalls, and Workable Strategy"(2020), *Understanding Indo-Pakistan Conflict: The Nuclear Development and the Change of Security Strategy* (2019, in Korean).

E-mail: tkim2002@ssu.ac.kr

Restructuring the World Order: China's Perspective

Jiyong Zheng, Hao Xue, Xingxing Wang

Abstract

China-U.S. relations have entered a downward spiral. The structural conflict between China and the United States is related to how the two countries view the new world order in the future. This article tries to explore the roots and essence of the United States' perception of China, discuss how China views the future world order, and analyze the risks of U.S. behavior toward China and China's propositions and claims for the future world order.

Keywords: *China-U.S. Relations, World Order, Perception*

China and the U.S. are falling into extreme competition and escalating strategic paranoia. Such uncertain and unstable competition has not only brought great uncertainty to China -U.S. relations but also brought confusion and anxiety to the whole world. Despite communication between the top leaders, the huge structural conflict between the two countries is deepening and the future of the world order is still uncertain.

Farsighted scholars at home and abroad analyze the prospects of competition and conflict between China and the United States. In his *Destined for War: Can America and China Escape Thucydides' Trap*, Harvard Professor Graham Allison points out that history shows “when a rising power threatens to displace a ruling power, the resulting structural stress makes a violent clash the rule, not the exception”; and “on the current trajectory, war between the US and China in the decades ahead is not just possible, but much more likely than currently recognized.”¹⁾ His thinking coincides with those of some American strategists who hold that the United States shall make mental preparation for containing China’s rise through war. In their article *How America Can Shore Up Asian Order*, Kurt M. Campbell and Rush Doshi, key makers of the current American diplomacy, point out that America’s global leading role is fading, and the United States can reforge its leadership by solving the challenges brought by the rise of China.²⁾ In his interview on TV, Dan Coats, the Trump-era Director of National Intelligence, says that China undoubtedly has the intention to replace the American global hegemony and reshape the world order; however, there are still many doubts about whether Chinese leadership has developed concrete and plausible strategies to make that happen. Meanwhile, Chinese scholar Wu Xinbo holds that the China-US competition is distinguished from previous great power competitions in terms of the essential economic strength and respective social governance capacity³⁾ This article holds that the current China-US competition is mainly due to America’s anxiety of growing insecurity and failing strength as well as its consequent impulsive behaviors. America’s series of blind actions deviate from the United States’ strategic tradition and the global political morality, undermining the credibility of the United States and stimulating China to respond with tough measures.

The structural conflicts between China and the U.S. do not stem from historical or current conflicts and contradictions but from their different perceptions of the future world. That is, how China and the U.S. view the future new world order, which is at the center of China -U.S. relations. Therefore, to discuss how China views the future world order, it is necessary to first explore the roots and essence

1) Allison G. *Destined for war: Can America and China escape Thucydides' trap?* Boston: Houghton Mifflin Harcourt, 2017.

2) Campbell K M, Doshi R. *How America Can Shore Up Asian Order*, *Foreign Affairs*, 2021, 12.

3) Xinbo, Wu. On China-US strategic competition. *World Economics Politics*, 2020, 5: 96-130.

of America's perception of China, analyze the risks of America's behavior toward China, and put forward China's positions and claims, so as to describe China's views on the future world order.

I. The roots of America's perception of China

America's new perception of China emerged as its relative power declined in the face of the rise of China and other countries. The U.S. has never faced such difficulties and disappointments. From China's perspective, the dilemma of the U.S. lies in the following aspects:

First, an unprecedented sense of unease hits the U.S. After World War II, the U.S. stood at the top of the world. Through the end of the Cold War, the U.S. believed that its world hegemony has been very stable, with the dominating position throughout science and technology, humanities, military, economy, and all other domains.⁴⁾ In the 1980s, Japan appeared to overtake the U.S. in the economy for a while, but it was soon wiped out with the Plaza Accord. The collapse of the Soviet Union made the U.S. believe that its place in the world was completely unchangeable and unimaginable. America even developed a sense of Anglo-Saxon superiority that all other races or ethnic groups are bound to serve them.⁵⁾ Based on the assumption that it will hold the first position in the world forever, the U.S. has made arrangements for the global economy, politics, and military and has also adjusted its economy and finance accordingly. The systems of the U.S. at that time were considered to be the "end" of the global systems (such as Fukuyama et al).⁶⁾

However, this kind of cognition also leaves potential dangers for the development of the U.S. , such as financial, racial, and social problems. The development of the world situation was far beyond the imagination of the U.S.; the unipolar illusion lasted less time than the U.S. estimated. Along with the development of multi-polarization, especially the rapid geometrical development of China, Europe, and India , the global political situation went beyond the imagination and out of control of the U.S. In the face of such a rapid transformation of its international and domestic image,⁷⁾ the U.S. was completely unprepared to adapt to the huge shift from its number-one status to the new reality,

4) Beckley M. China's century? Why America's edge will endure. *International Security*, 2011, 36(3): 77-78.

5) Zhuang, Guotu. "Huntington's view of ethnic culture and its interpretation of international relations". *World Ethno-National Studies*. 2004, 2(6):1-8.

6) Fukuyama F. *The end of history and the last man*. Simon and Schuster, 2006.

7) Goldman E. *Power in Uncertain Times*, Stanford University Press, 2010.

and could not accept the huge fear and anxiety caused by it.⁸⁾

Second, the U.S. is subject to a profound lack of self-confidence, distrust of the outside world, and strategic anxiety. The strategy of the U.S. is intertwined with and influenced by both internal and external factors. Based on its strength, the U.S. has always been very confident in its economic, military, and political power. Based on this confidence, the U.S. also has confidence in its international strategy and successively trusts in its alliances and friends. In practice, however, the so-called "power" of the U.S. is not entirely based on real "strength" but rather on propaganda and imagination. For a long time, the U.S. has been beset with internal problems. The endogenous economic and financial system has led to a highly financialized economy and industry hollowing out, resulting in numerous social problems and a serious decline in physical production capacity.

Also, as to international affairs, the U.S. has consumed its own strength and overused its military, economic, and diplomatic means around the world for decades to maintain the "strong America" virtual image. At the same time, the U.S. is reluctant to commit resources to maintain the international public goods and brings serious damage to the authority of the international organizations, which in turn erodes America's own international image and morality.⁹⁾ These consequently hurt America's internal affairs, and the vicious circle leads to a serious decline in America's power. The U.S. has lost its confidence and trust in and outside the country, turning into a strategic failure mentality.

Third, as a strategic failure and strategic anxiety lead to more extreme approaches, the U.S. lost the sense of rules. For a long time, the U.S., which always ranks first in the world due to its strength, has formed an inaccurate perception of the totalitarianism of the international society. Therefore, when dealing with domestic and international issues, there has been a polarization of means and methods; that is, any state will be either a friend or an enemy of the U.S. Its friends will be under the control of the U.S., and for its enemies, it will use force and military means. The middle zone other than "friend or foe", has all but disappeared.¹⁰⁾ The psychology of strategic failure consumes the strategic patience of the U.S., which makes the U.S. prefer resorting to violence when dealing with domestic and foreign problems¹¹⁾. Thus, in the face of catch-up from China, Europe, Russia, India, and the like, the U.S. sees only two options for

8) Yan, Xuetong. "The instability of China-US relations." *The Chinese Journal of International Politics* 3.3 (2010): 263-292.

9) Jisi, Wang, and Hu Ran. "From cooperative partnership to strategic competition: A review of China-US relations 2009-2019." *China International Strategy Review* 1.1 (2019): 1-10.

10) Hersman R K C. *Friends and foes: how Congress and the president really make foreign policy*, Brookings Institution Press, 2012.

11) Xinbo, Wu. "US Security Policy in Asia: Implications for China-US Relations." *Contemporary Southeast Asia* (2000): 479-497.

them: to become an ally or quasi-ally of the U.S. or to fall into the inevitable Thucydides trap. The strategic anxiety generated by new situations that the U.S. had never encountered led it to believe that time was no longer on its side. Thus, the U.S. was using unprecedented means to escalate the crisis and advocate force to meet challenges that the U.S. had never experienced.

Fourth, the U.S. has demonstrated a serious lack of morality and responsibility. Whether it refers to internal or international matters, the U.S. has shown a serious moral deficiency, lack of basic decency, and arrogance toward its people, allies, neighbors, or enemies.¹²⁾ They swing arbitrarily from one extreme to the other when dealing with social issues such as the BLM.

On the external problems, they willfully resort to threats of force, sanctions, and confrontation, show a serious lack of respect, and are unwilling to solve problems through rational and reasonable means. They try to solve problems through the "easy way" with regimes or even races or individuals. All of these reflect the lack of morality and responsibility in the U.S. have evolved into poverty of strategy. In addition, as the world's largest power, the U.S. is expected to show great power responsibility in maintaining the international system and world order and take care of the needs of other countries, which, in turn, would ensure its international status and the resulting economic security and political interests. However, due to the totalitarianism of the internal system of the U.S. and the de-democratization caused by extreme freedom, the ability and desire of the national leaders went seriously alienated, and the U.S. could not assume its due responsibilities as a great power, let alone take care of the interests of other countries.¹³⁾

The above changes have simplified and roughed up the policy options of the U.S. The Biden administration has proposed the "three Cs" solution, cooperation, competition, and confrontation, which is reflected in the handling of China -U.S. relations.¹⁴⁾ The three constituent parts are as follows: (1) China and the U.S. are in competition, sometimes confrontation, but the U.S. is willing to maintain political dialogue and exchanges; (2) the U.S. and China are in competition and confrontation, but the U.S. may discuss cooperation, when necessary, but the cooperation must be in the interests of the U.S., not China's or mutual interests; (3) the U.S. can establish a crisis management mechanism to avoid conflicts caused by competition or confrontation.

12) Kane J. *Between virtue and power: the persistent moral dilemma of US foreign policy*, Yale University Press, 2008.

13) Neiwert D. *Alt-America: The rise of the radical right in the age of Trump*, Verso Books, 2017.

14) Xinbo W. China-US Strategic Competition under the Biden Administration, *China Int'l Stud.*, 2021, 87: 5.

II. Risks of the U.S. behavior toward China

The National Security adviser Sullivan said on Nov. 7, that the object of the Biden administration is to shape the international environment so that it is more favorable to the interests and values of the U.S. and its allies and partners as well as like-minded democracies. It is not to bring about some fundamental transformation of China itself. But at least so far, there have been no fundamental changes in China-U.S. relations. The risks posed by the U.S. policy toward China continue.¹⁵⁾ This is mainly reflected in three aspects.

First, strategic anxiety and strategic blindness' impact on strategic rationality. The U.S. is immersed in its own imagination, and the strategic anxiety caused by the echo chamber of "fear of China" has led to serious strategic blindness¹⁶⁾, especially the risk of losing its strategic rationality on the Taiwan issue. There are three reasons for this.

(1) The U.S. does not have a correct understanding of China; nor does it have a correct understanding of itself. Until now, the U.S. has not realized the strength and fragility of China, let alone the inherent contradictions and structural problems of its own. It is true that China has come a long way, but the lessons of Chinese history have always been the logic of internal causes. What China is worried about is that people's livelihood is not good enough to cause problems. Its development logic is internal and is committed to internal stability and economic improvement. Reminding or forcing China to turn to external concerns is an unwise strategy.¹⁷⁾ The absolute power of the U.S. has not changed significantly, but the external environment is changing. America's "inadequacy" is only a relative decline in its ability to control. This is historically inevitable, but the U.S. is not so weak as to become a "second-rate" or "third-rate" nation.¹⁸⁾

(2) The U.S. does not manage its international affairs and its internal affairs properly. Although the U.S. will continue to be strong, the diversification of international affairs is a big trend, which will no longer be as absolutely affected by the U.S. as in the past. This is also the inevitable and new normal of the development of the international community. America should adapt to this change. In the same way, the U.S. fails to recognize that changes within the U.S. are the

15) Perthes V. Dimensions of rivalry: China, the United States, and Europe, *China International Strategy Review*, 2021, 3(1): 56-65.

16) Zakaria F. The new China scare: Why America shouldn't panic about its latest challenger, *Foreign Aff.*, 2020, 99: 52.

17) Foot, Rosemary, and Amy King. "Assessing the deterioration in China-US relations: US governmental perspectives on the economic-security nexus." *China International Strategy Review* 1.1 (2019): 39-50.

18) Sieber S D. *Second-rate nation: From the American dream to the American myth*, Routledge, 2015.

foundation of changes outside the U.S. For a long time, U.S. foreign policy has been based on internal stability and high-speed growth. However, under the current situation, the domestic economic and social problems in the U.S. have caused governance difficulties. Economic decline and social instability seriously restrict the options of external policies of the U.S.¹⁹⁾

(3) America's ideas are polarized and stubborn. Although the Biden administration has been in office for several months, in terms of overall China policy, the Biden administration is still following the policies of the Trump era.²⁰⁾ Its policy toward China and perception of China are still being held hostage by fanatical anti-China sentiment, and internal political struggles and polarized political ideas dominate the decision-making process. The populist and extreme Trumpism not only obscures the real nature of the China-U.S. issue but also dilutes efforts to stabilize China-U.S. relations. Rational voices and basic facts are distorted by extreme emotions in policy decision-making. Even if such policy shockwaves can be corrected in the future, the extreme perception of China in American society and politics will not fade away.

Second, undermining the world order through militarism and revisionism. In its choice of approach, the U.S. has adopted a more dangerous camp dichotomy. The question is not whether the world is heading for a “new cold war” but rather that the U.S. is taking an approach that carries a high risk of dragging the world into an imaginary “Cold War” or even a regional hot war.

(1) To replace liberalism with like-minded partners to ensure hegemonic legitimacy. To ensure the legitimacy and continuity of hegemony, the U.S. has redefined many core concepts, such as “democracy”, “freedom” and “human rights”, and replaced them with more generalized concepts.²¹⁾ The most obvious of these is to define democracy in the egoistic way; that is, any country will be “democratic” as long as it is different from China in an attempt to preemptively occupy the conceptual high ground of these traditional Western values. Moreover, the U.S. has interpreted this generalized value as “of the whole world,” characterized China as a “challenger” to the existing order, expanded the competition between China and the U.S. into China's struggle with the “whole world”, replaced universal values with ideology, and covered and replaced democratic values with American interests. In addition, the U.S. is morally discrediting China, characterizing values different from the U.S. as “immoral” and claiming legitimacy through the legal system.²²⁾

19) Daojiong, Zha. "Non-traditional security and China-US relations." *Asian Perspective* (2020).

20) Haar R. Some aspects of Trumpism are here to stay, *Observant*, 2020.

21) Zhao, Quansheng. "America's response to the rise of China and Sino-US relations." *Asian Journal of Political Science* 13.2 (2005): 1-27.

22) Johnston A I. The failures of the ‘failure of engagement’ with China, *The Washington Quarterly*, 2019, 42(2): 99-114.

(2) To rebuild the military and intelligence system with militarism as a multiplier of war power against China and to maintain its traditional balance of power. The Biden administration is rebuilding its global military and intelligence capabilities with the strategy of containing China by strengthening alliances in terms of values (the D10 club of democracies) and geopolitics (Quad and Quad Plus).

First, the U.S. is reconstructing the racial alliance system with Anglo-Saxon blood as the core of its alliance strategy. Such as the Five Eyes alliance and the latest AUKUS are ethnic-based blood alliances.²³⁾ Second, based on the blood-race alliance, the U.S. is repairing and strengthening the existing alliance system and repairing the cracks and deficiencies of the past to establish a more powerful military alliance system. Third, it is expanding and piecing together a new alliance system. In addition to the blood-race alliance system, the U.S. not only strengthened and patched up the existing alliance system but also expanded and pieced together a new network of alliances.²⁴⁾ Fourth, while the U.S. is building a new network of allies, it is also asking members of the network system to provide public goods that were previously supplied by the U.S. On the one hand, it solves the dilemma that the U.S. is unable to provide public goods; on the other hand, it tests the loyalty of members. Driven by this idea, the newly established groups such as QUAD and Democratic Dialogue formed a nested system with AUKUS and other blood ethnic alliances as its core – with the existing alliance system as the backbone and the expansion of a new network of allies as its extension to confront the "non-American" countries.

(3) To challenge multilateralism with bespoke or ad hoc arrangements. The U.S. is replacing multilateralism with bespoke or ad hoc arrangements which it uses to cover up its unilateralism with the appearance of multilateralism and to isolate countries such as China that do not conform to it.²⁵⁾ First, to counter China and other countries, the U.S. takes a pseudo-multilateralism with clear direction, characterized by taking the U.S. as the core and adopting the unilateral thinking of the U.S. as the means to fight against other parties in a multilateral way with one voice. Second, bespoke or ad hoc arrangements attach great importance to collective action, mainly in the form of multiple countries against one or a few countries. Third, a bespoke or AD hoc arrangement emphasizes the relevance of actions and involves a variety of fields. It takes the form of collective hunting in which gangs "hunt" a certain country or in a certain field.

23) Lau, Lawrence J. "The China-US trade war and future economic relations." *China and the World* 2.02 (2019): 1950012.

24) Kutty S N, Basrur R. The Quad: What it is—and what it is not, *The Diplomat*, March, 2021, 24.

25) Medeiros, Evan S. "The changing fundamentals of US-China relations." *The Washington Quarterly* 42.3 (2019): 93-119.

Third, undermining the world order through military measures and geopolitics. More dangerously, the U.S. is disrupting the world order with military measures and geopolitics. In other words, the U.S. had broken the old order before it had planned to establish a new one.²⁶⁾

(1) American diplomacy is getting worse. Since the Trump administration, U.S. diplomacy has entered a cycle of deterioration, not only ignoring the economic and development needs of other countries but also trying to reap the economic and financial gains of other countries through unprincipled financial plunder. At the same time, the U.S. has downgraded its diplomatic strategy to purely defense needs, ignoring the security needs of other countries, merely serving the security of the U.S., and integrating the security and diplomacy of other countries into its own security and diplomatic needs.

(2) The U.S. prioritizes military issues in ways that aggravate security dilemmas, and the bottom line of war is approaching a critical point. The U.S. is adopting a similar approach to North Korea's "military-first politics", weaving military networks such as militarizing India and the Pacific and militarizing the South China Sea, loosening military controls over Japan, India, and the ROK, and allowing Taiwan to trample on the bottom line of cross-strait relations. More seriously, the U.S. has deliberately lowered the threshold for the use of tactical nuclear weapons while increasing its nuclear superiority and has continuously breached the red line and bottom line of the balance of power among nuclear powers in the past on intermediate-range missiles and nuclear issues.²⁷⁾ Third, the U.S. also condones regional conflicts and regional wars and inflames regional problems by weaving all kinds of military alliances and alliance systems.

(3) The U.S. also intends to intensify the risk of major power conflicts. In addition to the Taiwan issue, which is colliding with the China-U.S. consensus and the cross-strait bottom line, the U.S. intends to exacerbate and maintain civil, ethnic, and geo-political conflicts in global military issues. In the U.S.-Russia relations, the U.S. intends to break the military tacit understanding with Russia and squeeze Russia's geographical space with the eastward expansion of NATO. Also, the U.S. is attacking China's military tolerance threshold in its neighborhood and on the sea intentionally by inflaming all kinds of geo-problems to split regional ties and create contradictions and conflicts.²⁸⁾

26) Haass R. How a world order ends: And what comes in its wake, *Foreign Aff.*, 2019, 98: 22.

27) Finaud M. Why New Thinking Is Needed on Negative Security Assurances, *Arms Control Today*, 2017, 47(8): 12-16.

28) Wuthnow J. Beyond imposing costs: Recalibrating US strategy in the South China Sea, *Asia Policy*, 2017 (24): 123-138.

III. How to think about the real world

China's understanding of the new order is based on its historical traditions and lessons, as well as its understanding of American solutions. It is more concerned about whether such a situation will lead to conflicts between China and the U.S. or even global instability.

First, China's historical traditions and lessons. China has thousands of years of struggle experience and painful lessons. On the way of ending wars and pursuing peace, China has countless cases, which cost tens of millions of Chinese lives. The replacement of the old order can take many forms and have many consequences, but China's experience shows that few of these outcomes are as planned and there are no immutable eras or regimes. At present time, due to the China-U.S. relations likely to remain on an unstable course, all kinds of conditions have changed in different ways, but their essence has not changed significantly.

(1) Endogenous growth and matured replacement are the optimal results. China's experience and historical traditions are different from those of the West. China believes that the growth of a new order and transformation of the system will be more stable and at the lowest cost through endogenous growth. The consequences of violence, plunder, and oppression can only be greater violence.²⁹⁾ China cannot afford the war and turmoil that the transformation of the order will bring.³⁰⁾

(2) Unlike external perceptions, China does not have a strong bearing capacity for new orders. In other words, China is neither ready to become the world's largest power to lead the world³¹⁾; nor has it developed into a great power qualified to lead the world. China has no ambition to dominate the world. It still respects the current world order and the global political and military system. It still respects the leadership of the U.S. in the Asia-Pacific and the world. It does not intend to challenge this position and replace the U.S. as the new hegemony.

(3) At the same time, China also believes that there is a need for innovation in today's world order. The current order is the result of the traumatic experience of the two world wars and the precipitation of decades after World War II, including the history of the Cold War and the development of countries in the world. It has been systematized and worked well though it still has many problems. The necessary innovation is fundamentally different from building a totally new one.

29) Zhao, Suisheng. "A New Model of Big Power Relations? China-US strategic rivalry and balance of power in the Asia-Pacific." *Journal of Contemporary China* 24.93 (2015): 377-397.

30) Tsai K S. Adaptive informal institutions and endogenous institutional change in China, *World Politics*, 2006, 59(1): 116-141.

31) Jianfei, Liu. "Sino-US relations and building a harmonious world." *Journal of contemporary China* 18.60 (2009): 479-490.

Just like the rapid collapse of the U.S. in Afghanistan, the rapid decline of the U.S. will lead to unpredictable serious chaos and disasters in the current world order.³²⁾ China does not want to see such a situation and therefore hopes that the U.S. can maintain the basic stability of the world order during the transition period.

(4) Transformation of the international order is a worldwide problem, especially in today's complex conditions, because the uncertainty brought by the transformation is completely unpredictable. Although China is one of the most important actors, it is not the only choice or solution to the transformation of order. Only with the joint participation of countries including China and the U.S. can we find the solution that has the least impact on the world. Especially when the current U.S. policy is to regard China as "a problem to be solved", the fact to be clear is that solving the China problem or eliminating China is an extreme idea, and it is impossible to solve all the problems faced by the U.S. New problems and even bigger problems may arise. China is the object of cooperation, not a list of problems to be solved.

Second, the U.S.' "three Cs solution" ("competition, cooperation, and confrontation" policy) is to further divide the world, not to unite nations. In China's logic, the solution proposed by the U.S. is undesirable due to serious differences in the starting point. There are four reasons:

(1) The fundamental logic of the so-called "three Cs solution" is zero-sum. This approach will only further allow countries and actors to go their own way and pursue their own interests separately instead of strengthening coordination and cooperation. Under the circumstances of this approach, not only China and the U.S. will strengthen their competitive situation against each other, but also most of the other actors, which do not have the all-time-space conditions and capabilities to compete with China and the U.S., can only choose to rely on China or the U.S., resulting in a de facto camp confrontation.³³⁾

(2) the U.S. seems to have many options for this approach, but its real purpose is to build domestic consensus through strategic competition with China, stimulate public opinion and negative factors in decision-making, and solve the domestic social and economic problems.³⁴⁾ This will lead to narrow decision-making orientations and fewer policy options, which will eventually lead to extreme policies that further intensify China -U.S. competition.

(3) The current implementation effect of the U.S. policy is to force countries outside China and the U.S. to take sides, which makes other countries confused.

32) Regilme Jr S S F. The decline of American power and Donald Trump: Reflections on human rights, neoliberalism, and the world order, *Geoforum*, 2019, 102: 157-166.

33) Jisi W. The Plot against China?: How Beijing Sees the New Washington Consensus, *Foreign Aff.*, 2021, 100: 48.

34) Liping, Xia. "The Development of the "One Belt and One Road" and its Impact on China-US Relations." *Chinese People's Association for Peace and Disarmament. Beijing, China* (2015).

The competition between the two countries has evolved into a confrontation and competition between the U.S. and its followers and those countries that are unwilling to participate in such a competition. This is the situation about which other countries worry most.

(4) China and the U.S., which have an important influence on the world situation and future international order, should consider not only their own benefits but also the collateral damage that the implementation of their new policies may bring about. At the same time, the competitive relationship between the two countries should not only reduce losses but also consider how to enhance cooperation and benefits for the world. These policies serve as guardrails and borders for China-U.S. relations, and they are responsible, sustainable, and high-quality policies.³⁵⁾

Third, will the competition between China and the U.S. inevitably lead to conflicts? The China-U.S. relationship is a new style that has never appeared before and cannot be described in a simple term. On the whole, the imminent situation between China and the U.S. is neither a cold war nor a hot war; rather, it is a new change in the style of integration to a greater extent. However, under the current U.S. policies, competition between China and the U.S. has seen risk-reduction events such as video talks between top leaders and meetings and negotiations between high-level diplomats. However, on the whole, if the U.S. does not change its existing policy of suppressing China, the disorderly and irresponsible competition between the two will bring extremely high risks, increasing the possibility of armed conflicts in some parts will increase.

In general, the global order, including China-U.S. relations, could be at risk if malicious competition between China and the U.S. is not managed effectively.

(1) The reshaping of the supply chain and value chain unilaterally carried out by the U.S. will bring about the division of the world and even the result of co-extinction. The ongoing re-integration of the economic and trade system by the U.S., especially the reshaping of the supply chain and value chain, is not aimed at optimizing and upgrading the existing economic and trading system but at trying to contain China's development by cutting off its economic ties with the outside world.³⁶⁾ Therefore, the result is very obvious: it will forcibly divide the world economic and trade system into an either/or adversarial trading regime. This approach will not only bring about the collapse of the WTO and other existing trading systems but will also cause chaos in the global economic, trade, and financial systems. The end result will be co-destruction, not symbiosis.

35) John R. Allen, Ryan Hass, Bruce Jones. *Rising to the challenge: Navigating competition, avoiding crisis, and advancing US interests in relations with China*, 2021.

36) Hao, Qi. "China debates the 'new type of great power relations'." *The Chinese Journal of International Politics* 8.4 (2015): 349-370.

(2) The U.S. politically suppresses and isolates China, separates China from the world, constantly engages in "gangism" with other countries, and deliberately emphasizes political "non-Americanism." These actions will accelerate the political division of various actors and regions, bring about serious political and geographical divisions and serious confrontations, and intensify political confrontations and conflicts within and between various actors.³⁷⁾ If this state continues, political chaos will become common in world politics, and there will be political confrontations and armed group conflicts that are even more serious than camp confrontations during the Cold War.

(3) The U.S. is playing an extremely dangerous chicken game by confronting China through military collectivization and risk-taking.³⁸⁾ To quickly restore and enhance the military power balance against China, the U.S. military confrontation against China has surpassed the US-Soviet confrontation during the Cold War and crossed all China-U.S. policy borders in history. For example, on the Taiwan-related issue and the South China Sea issue,³⁹⁾ the U.S. deliberately provokes the topic of "Taiwan independence" to test China's bottom line of force. The military confrontation between China and the U.S. currently only has the final decisive card. In addition, there is the U.S.' shadow in all global geopolitics.

IV. How to Build a New Order

Undoubtedly, China-U.S. relations are evading responsibility to each other for the current situation, including military security, trade and finance, and political structures that are in an unhealthy state and irresponsible. This state of affairs is unsustainable and dangerous. The U.S. has already put forward what the U.S. believes is the "three Cs solution" to deal with China-U.S. relations. How does China think of a healthy, responsible, and sustainable relationship with the U.S., and what is the new world order that China is trying to build? There are generally some of the followings.

First, strategic understanding and strategic choice. The instability of China-U.S. relations has made all countries in the world realize that the fate of mankind is at a crossroads. Any new order must be established based on history and reality, especially to avoid falling into the Machiavellian style.

37) Carothers T, O'Donohue A. How to understand the global spread of political polarization, 2019.

38) Perlez J, Myers S L. US and China are playing "game of chicken" in South China Sea, *New York Times*, 2018, 8.

39) Xie, Hao. "The Impacts of the Taiwan Issue on Sino-US Relations." *Open Journal of Political Science* 4.04 (2014): 237.

China believes that, under the new order, China-U.S. relations should also be a healthy, responsible, and sustainable bilateral relationship.

(1) Health and responsibility are premised on strategic mutual trust; the bottom line of strategic competition is not to move towards strategic confrontation. On this issue, China and the U.S. have decades of experience in dealing with each other; both sides have a deep understanding of each other's bottom line.⁴⁰⁾

(2) The basis of mutual trust is to respect each other's strategic core interests, which is a ballast stone. This respect means that the U.S. respects that China and other countries have the same development opportunities and living space as the U.S. does and that they also have the right to pursue a happy life like the U.S. does.⁴¹⁾ In other words, if even China's right to "eat meat" is restricted, this China-U.S. relationship is highly unhealthy, nor is it an action responsible for 1.5 billion people.

(3) Competition is normal, but it is as long as it does not affect the cooperative relationship. Healthy competition is necessary at all times. However, the competition currently proposed by the U.S. is based on cutting off cooperation with China or even forcing other countries and important actors not to cooperate with China. The U.S. has even kidnapped Chinese individuals to gain a competitive edge, including suppressing South Korea's Samsung and Taiwan's semiconductor industry to gain high-tech leadership.⁴²⁾ This is not competition but coercion, which is unhealthy behavior.

(4) The extensive decoupling of the U.S. undermines the basis of competition. Over the years, the U.S. has used various decoupling tactics, such as complete decoupling, partial disengagement, and strategic recoupling, to engage in various clique operations that exclude China and even form various secret groups culturally to exclude China.⁴³⁾

If the competition between China and the U.S. is not managed and controlled, under such infinite competition without borders, the future of China and the U.S. and the direction of the world will be worrisome. There are three possible prospects for the competition between China and the U.S.: 1. The vicious confrontation between China and the U.S. continues, countries around the world have to choose to stand on the sidelines. The new order is divided between the Anglo-Saxons and the non-Anglo-Saxons and will cause a greater degree of

40) Shengli L, Fan Y. The evolution of national security concept in China over the past 70 years: cognition, connotation and countermeasures, *Journal of International Security Studies*, 2019, 37(6): 3-29,153.

41) Layne C. The US–Chinese power shift and the end of the Pax Americana, *International Affairs*, 2018, 94(1): 89-111.

42) Bown C P. How the United States marched the semiconductor industry into its trade war with China, *East Asian Economic Review*, 2020, 24(4): 349-388.

43) Jisi, Wang, and Hu Ran. "From cooperative partnership to strategic competition: A review of China–US relations 2009–2019." *China International Strategy Review* 1.1 (2019): 1-10.

confrontation and frequent wars; 2. China surrenders and becomes part of the world system dominated by the U.S., carrying out large-scale institutional reforms, and racial transformation will make non-Anglo-Saxons, including Chinese, become an "inferior" ethnic group; 3. the U.S. fails, whose internal problems eventually erupt, and the world plunges into a new state of anarchy until a new order emerges.

Cases 2 and 3 are less likely while case 1 is more likely. However, no matter what the situation is, it will seriously impact the existing system, and the consequences are unpredictable and hard to control. Therefore, what is better than the above three situations is to repair and improve the existing order; that is, "good governance," which guarantees the benign dialogue and interaction between the big powers and also ensures the interests of small countries and the corresponding right to speak. It will ensure the stability and improvement of the international system, promote mutual trust and cooperation, and reform the existing international system rather than de-functionalize it.

Second, strategic empathy and the responsibility of great powers. The biggest problem for China and the U.S. is that they do not care about the thoughts of other countries, and lack strategic empathy for each other and other countries.⁴⁴⁾ As traditional security issues continue to grow, and non-traditional issues become more complicated, the intensification of China-U.S. disputes, coupled with the rise of populism mixed with nationalist sentiments around the world, has brought up more and more uncertainties to the whole world.⁴⁵⁾ Under this circumstance, unilateralism that advocates zero-sum will encounter greater opposition, and unilateralism that pretends to be multilateralism, so-called pseudo-multilateralism, will also be countered, and national Darwinism will be abandoned. The concept of a "Community with a Shared Future for Mankind" will gain more respect. The era of democratization of the world order and international relations has arrived. By the nations, for the nations, of the nations will become the standards of the new international order, and respect for every country and actor and the concept of win-win will become the most important standard of the new international order.

Under the new situation, the construction of a new world order requires a redefinition of the concept of great powers in the world system. Unlike in the past, great power or big power should have three characteristics. Firstly, a great power must have international responsibilities. While pursuing its own national interests, it should also take into account the interests of other actors, such as other countries or regions. On this issue, neither China nor the U.S. is perfect. Secondly, great

44) Nacht, M., S. Laderman, and J. Beeston. *Strategic competition in China-US relations*. No. LLNL-TR-759677. Lawrence Livermore National Lab.(LLNL), Livermore, CA (United States), 2018.

45) Wang Z. From crisis to nationalism?, *Chinese Political Science Review*, 2021, 6(1): 20-39.

powers need to provide the world with international public goods to ensure the stability of the system. Yet, the international public goods provided must have a general sense of security and comfort and should not harm or affect the interests of other actors. Thirdly, great powers must have an independent decision-making system, which is not subject to the manipulation of domestic or international actors. The decision-making system of major powers should remain sustainable and should not be broken due to changes in the political system or changes in interest groups, which will lead to instability in the international system.

Third, strategic stability and strategic approach. The third understanding of building a new order is to maintain the current strategic stability and keep this unsatisfactory status quo from further deterioration until a reasonable new plan and a new path are found. To achieve this, multiple efforts are required.

The establishment of a new order requires maintaining strategic openness and diversity. China is fully aware that the following are essential elements for constructing a new order.

(1) The relationship between countries is not a multiple-choice question but has open answers with multiple possibilities. It cannot fall into the logic of either-or and life-and-death, and it is not a world where there is no other choice except for China and the U.S. China and the U.S. should not create such an environment or force other actors to make such choices.⁴⁶⁾

(2) In the new order, the United Nations and other international organizations should play a new role. Decades of history have proved that the great powers have a special role, and the United Nations has extremely important management functions. Although it is not satisfactory, its role is irreplaceable. The weakening of the joint role or a world order without the United Nations must be a jungle world, where the strong can eat the weak, and it will become the norm for big powers to override weak and small countries.⁴⁷⁾

(3) Regardless of the size, mutual respect comprises the basic prerequisite for the credibility of the new order. If respect for small and weak countries cannot be achieved, a new order cannot be established.

Therefore, for the current China-U.S. relations, to jointly build a new world order, the following three issues need to be addressed together.

(1) Damage control operations . As great powers, China-U.S. relations are related to global stability and are also the pillars of global politics. It is necessary to make a complete analysis of the problems between the two countries; that is, make a list of the positive and negative factors in their relations.

46) Le Thu H. China's dual strategy of coercion and inducement towards ASEAN, *The Pacific Review*, 2019, 32(1): 20-36.

47) Kacharaya A, Plesch D. The United Nations: Managing and Re-shaping a New World Order, *Global Governance*, 2020, 26(2): 221-235.

(2) Seriously manage China-U.S. competition, control risks, and turn crises into opportunities. China and the U.S. should transform competition into a stabilizing device for the world situation and a driving force for healthy development, not the other way around.⁴⁸⁾ At the same time, China and the U.S. should also take measures to control various risks brought about by competition and reduce the cost and collateral damage of competition among major powers, especially possible conflicts and military confrontations.

(3) Reasonably allocate resources. They should put forward feasible plans, allocate as many resources as possible in areas where cooperation can be made, build cooperation platforms, and transform competition into cooperation. Or they should at least reduce competition or reduce the intensity of competition as much as possible.

V. Conclusions

Since the Biden administration, the rule-based international order advocated by American politicians is actually the rules made by the U.S. to exploit the world. It can be interpreted that the basis of the win-win setup is that the U.S. must be the one that wins the most. Thus, China will be blamed for undermining the international order if China wins more. The U.S. advocated international rules, punishing the rule-breakers. However, this kind of punishment does not work as before for China, which made the U.S. fall into deep anxiety.⁴⁹⁾

Based on the above perspective of China, firstly, the results of the China-U.S. competition will be relatively pessimistic. The U.S. policy has not changed, if not worsened. There is still no bright future in sight. Secondly, the process of constructing a new order is very complicated and will encounter various difficulties. It is hard to predict what will happen in the future. However, if some fundamental strategic orientation issues are not resolved, it is far more difficult than imagined. Thirdly, the U.S. has exhausted all kinds of methods to contain China, and the results have become worse one after another. The development of China cannot be stopped.⁵⁰⁾ It is because China's development has its own internal logic, but the U.S. cannot recognize this logic. It always holds the idea of cutting off this development momentum and ignores the basic logic of China's common development with the world. Therefore, the U.S. must fail. Finally, the

48) Hass R. Principles for managing US-China competition, 2018.

49) Zhao, Suisheng. "A New Model of Big Power Relations? China-US strategic rivalry and balance of power in the Asia-Pacific." *Journal of Contemporary China* 24.93 (2015): 377-397.

50) Wei, Da. "A restructuring international order and the paradigm shift in China-US relations." *China International Strategy Review* 1.1 (2019): 21-32.

development of the world order also has its own logic. At present, the U.S. has various advantages; however, the law of the development of things is moving forward and will not move as the U.S. hopes. The democratization and multi-polarization of the world order are the general trends, which cannot be changed by the U.S. What the U.S. does can only make its internal problems more complicated and the world situation more complicated. There may even be wars in some areas, but in general, the reconstruction of the world order is inevitable.

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A Case study on the Success and Failure of Weapons of Mass Destruction Nonproliferation Regimes: Focus on Chemical Weapons Convention and Biological Weapons Convention

Ki-Chul Park, Jaewoo Choo

Abstract

What factors determine the success and failure of Chemical Weapons Convention (CWC) and Biological Weapons Convention (BWC)? What factors and conditions enhance the effectiveness of weapons of mass destruction (WMD) nonproliferation regimes? Does correlation exist between the regime effectiveness and the great power's support for the said regimes? If so, under what circumstances does the great power support or reject regimes?

This study seeks to identify the determinants of the success and failure of nonproliferation regime of weapons of mass destruction (WMD) under the U.N. system. The international efforts to ensure the life and safety of mankind from WMD have led to create 19 WMD nonproliferation regimes starting with the Geneva Protocol in 1925. Among 19 WMD nonproliferation regimes, only four regimes (CWC, INF, NPT, IAEA) have strong implementation power and are considered successful while five regimes (PTBT, Tlatelolco, CTBTO, IND NNT, Pelindaba) have not been ratified by states parties and thus have not gone into effect.

Case studies of successful regimes and failed regimes reveal the factors that enhance the regime's ability to implement, and illustrate why the great power selectively supports or rejects particular regimes and helps strengthen the implementation. This study reveals the factors that impel the great power to support or reject the nonproliferation regime of WMD, which can be a very useful tool to evaluate the regime's effectiveness and predict the future of regimes.

By comparing successful cases of the CWC with failures of the BWC, this research asserts that four determinants influence the great power's decision to support or reject regimes: 'non-restraint,' economic interests, the technology gap, and bargaining. Regardless of the counterparts' aims and the type of weapon, the great power provides full support to strengthen the effectiveness of a regime that i

will not constrain its freedom of behaviors; ii) will enhance economic interests; iii) concerns the field where there is a relatively narrow technology gap between the great power and regional powers; and iv) necessitates bargaining with regional powers to garner support.

The implications of this study can be applied to the BWC, which remains weak in responding to North Korea's biological threats on the Korean peninsula. Moreover, provided that future pandemic may not be of naturally occurring diseases but of artificial biological terrorism and deliberate attacks, measures to strengthen the implementation of the Biological Weapons Convention must be urgently needed to respond to large-scale biological incidents including the next pandemic that will require transnational responses.

Keywords: *Weapons of Mass Destruction, Nonproliferation Regimes, Regime Effectiveness, Biological Weapons Convention, COVID-19*

I. Introduction

What factors and conditions contribute to the success of WMD nonproliferation regimes? Are great power's participation and commitment key factors in enhancing regime effectiveness? If so, under what conditions does a great power take a cooperative or coercive stance toward the regime? This study aims to explain the success and failure of WMD non-proliferation regimes by presenting the factors and conditions that affect regime effectiveness and examining theories, hypotheses, and points of contention set forth by existing studies. This study explains the phenomenon wherein great power selectively supports regimes based on certain conditions by identifying the independent variables of factors and conditions. Thus, this research addresses questions of why certain treaties and regimes such as the Chemical Weapons Convention (CWC) are enjoying success as a strengthened regime and why others such as the Biological Weapons Convention (BWC) are comparably insignificant or meager in strength.

This research question, in effect, helps identify any independent variables that make WMD regimes effective. To this question, I assert that the effectiveness of WMD regimes strongly correlates with "Entry into Force (EIF)," "Standing Implementation Organization (SIO)," and "Verification Protocols (VP)". Such aspects are needed not only in establishing regime universality for legitimacy and violation monitoring, but also in supervising the implementation of each member state. When categorizing the aforementioned WMD regimes, I detect a pattern of effective regimes and their common characteristics.

What factors or conditions allow WMD nonproliferation regimes to become successful? Does great powers' participation affect the effectiveness of such nonproliferation regimes? If so, under what conditions do great powers cooperate with or coerce regional powers in the WMD nonproliferation regimes to increase their influence?

To answer the above questions, I posit that there are specific conditions in which the great power supports or rejects WMD regimes and that correlation exists between the great power's strategy and posture and the global distribution of power. Before initiating this research, I assume the following premises derived from a power-centric view of international regimes: i) the great power seeks political security and economic interests; ii) There is no greater authority above states; and iii) a power imbalance exists between the great power and regional powers.

In this study, I examine two WMD nonproliferation regimes in-depth: the CWC as an example of effective (or successful) regimes and the BWC as an example of non-effective (or failed) regimes. I chose the aforementioned cases for the following reasons. Since regime effectiveness can vary across the CBW regimes, I selected the CWC and BWC to demonstrate this. By studying and comparing these regimes, we can identify factors 'most similar' or 'most different' between both successful and

failed regimes.

Under the military dominance based on nuclear weapons which provide deterrence power over chemical and biological weapons threats, the great power has exerted its influence to regulate the weak states or actors not to proliferate WMD programs. However, it is not sufficient to explain regime effectiveness. Factors and conditions, the representative determinants for great power's commitment to the WMD regimes, were analyzed in four ways: 'nonrestraint,' economic interest, bargaining, and the technology gap. In other words, if the regime does not restrict the great power's freedom of behavior, or if it undrestands the pursuit of the economic benefits, the great power has strengthened the regime's effectiveness; otherwise, it has weakened regime effectiveness. These four determinants serve as the underpinnings of my hypotheses that the regime effectiveness is likely to increase when the regime fulfills the determinants for great power's commitment, which is, then, verified through the subsequent research process.

II. Theoretical Debates on Regime Effectiveness

Regimes, in essence, are institutions or rules that determine the decision-making process. As an international relations theory, regime theory is derived from liberal tradition that argues that international institutions or regimes affect the behavior of states or other international actors.¹⁾ Kenneth Abbott first broached the connection between regime theory and international law in 1998.²⁾ He did not differentiate between legal regimes and nonlegal regimes, still less between hard law and soft law. But many case studies adduced in support of this bold proposition made it clear that the 'regimes' under consideration were founded on legal instrument or had the customary international law status.

In the international arena, institution has been used interchangeably with regime. Krasner defines a regime as a set of explicit or implicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given issue-area.³⁾ Oran Young outlines another plausible definition for regimes. He treats regimes as "more specialized arrangements that pertain to well-defined activities, resources, or geographical areas and often involve only some subset of the members of international Society."⁴⁾ Many international lawyers have concluded that regime

1) Volker Rittberger, and Peter Mayer, *Regime Theory and International relations* (Clarendon: Oxford Press, April 1995), 12.

2) Kenneth W. Abbott, *Modern International Relation Theory: A Prospectus for International lawyers* (New Haven: Yale University International Law Press 14, 1989), 355.

3) Stephan D. Krasner, *International Regimes* (Ithaca: Cornell University Press, 1982), 2.

4) Oran R. Young, *International cooperation: Building Regimes for Natural Resources and the Environment*, (Ithaca, Cornell University Press), 13.

theory can contribute to international law as well as international relations. Volker Rittberger is the father of German school of regime theory; one of his purposes is to bring the American and German schools closer together. To that end, the conferences that produced the volume were held to bring together American scholars such as Robert Keohane, Stephen Krasner, French Kratochwil, Duncan Snidal and Oran Young with present and former participants in Rittberger's Center for International Relations/Peace and Conflict Studies at the University of Tubingen. Other noteworthy participants include Harald Mueller of the University of Frankfurt, Andrew Hurrell of Oxford University, and Christer Joensson of the University of Lund.⁵⁾

Not all approaches to regime theory, however, are neoliberal. Realist scholars such as Joseph Grieco have developed hybrid theories that take a realist-based approach to this fundamentally liberal theory. They argue that "realists do not say cooperation never happens. just that it is not the norm: it is a difference of degrees." Neoliberalist, interest-based approaches to regime theory state that international cooperation is achievable without a hegemonic power because a convergence of expectations exists. Regimes facilitate cooperation by establishing a standard of behavior that signals to other actors that a given individual state is, in fact, cooperating. When all states expect each other to cooperate, the probability of sustaining cooperation increases dramatically. Neoliberalists highlight the interactive nature of state relations, refuting that realists neglect the extent to which nations share interests. According to the neorealist view, realists solely rely on the classical "prisoner's dilemma" to model the world in which defection becomes the dominant strategy for both parties due to the pay-off structure. The difference between the model and reality is that states are not same as the prisoners in the dilemma. States can and must continually cooperate with one another whereas prisoners cannot see one another again. One state's decision today can have repercussions in unexpected ways in the unforeseeable future. Mutual cooperation is thus rational: the sum of relatively small cooperation yields greater gains over time as opposed to the seemingly large, yet in the long run meager, gains available from one-time exploitation of an opponent followed by an endless series of mutual defections.⁶⁾

Realists such as Joseph Grieco propose power-based theories of regimes based on the hegemonic stability theory. Regime theory may appear to be directly opposite to the hegemonic stability theory at times, but realists also refer to hegemonic stability when discussing regimes to explain the change. When used in such ways, realists conclude that a strong hegemonic power is what makes for a successful and effective regime. Liberals and realists, therefore, reach two opposing conclusions.

5) Volker Rittberger, and Peter Mayer, *Regime Theory and International relations* (Clarendon: Oxford Press, April 1995), 12.

6) See Robert Axelrod, *The Evolution of Cooperation* (New York: Basic Book, 1984)

Regarding the nature of international cooperation and the role of international institutions, liberals believe that international institutions bring about an environment conducive to the convergence of states and their interests, which, in turn, facilitates cooperation through regimes. Realists, on the other hand, believe that regimes are simply reflections of the power distribution in the present international system. In other words, realists view regimes as the creation of powerful states designed to serve their own security and economic interests, and those regimes have no independent power over states.⁷⁾

Susan Strange, a realist scholar, argues that institutions such as the World Bank, the General Agreement on Tariffs and Trade (GATT), the International Monetary Fund (IMF), and other organizations established following World War II are merely tools that further American grand strategy. Among the variants of realism, neorealism, also referred to as structural realism, is set forth by Kenneth Waltz in his *Theory of International Politics* and is considered the most powerful. The core difference between traditional realism and neorealism lies in the emphasis placed on the international system for explaining world politics. The system and its structure are determined by the ordering principle, namely the absence of overarching authority (i.e., anarchy), and the distribution of capabilities (or power) among the states. Only the states' material capabilities matter in truth; their identities and interests are largely given and fixed. While no one disputes that anarchy poses severe constraints on state behavior, there seems to be no agreement on how it is defined and how likely states are to cooperate and international order is to form among both neorealists and neoliberals.⁸⁾ This exercise renders crucial implications for global governance theory since most definitions involve questions of government, authority, and governance in some ways.⁹⁾ Likewise, how power distribution shapes state behavior and provides order in international politics – either through the formation of balances of power or through a hierarchy of relations between states with unequal power – underscores that order is a product less of state actions and much less of international institutions than of system structure. In neorealist theory, the possibility for international cooperation is logically slim, though not impossible. As Waltz posits,¹⁰⁾

7) David A. Baldwin, "Neoliberalism, Neorealism, and World Politics," in David A. Baldwin(ed.), *Neorealism and Neoliberalism, The Contemporary Debate* (New York: Columbia University Press, 1993)

8) David A. Baldwin, "Neoliberalism, Neorealism, and World Politics," in David A. Baldwin(ed.), *Neorealism and Neoliberalism, The Contemporary Debate* (New York: Columbia University Press, 1993).

9) Helen Milner, "The Assumption of Anarchy in International Relations Theory," *Review of International Studies* 17 (Cambridge University Press, January 1991), 67-85.

10) Kenneth N. Waltz, *Theory of International Politics* (New York: Columbia University Press, 1979), 105.

When faced with the possibility of cooperating for mutual gain, states that feel insecure must ask how the gains will be divided. They are compelled to ask not 'will both of us gain' but rather 'who will gain more.' If an expected gain is to be divided, say, in a ratio of two to one, one state may use its disproportionate gain to implement a policy intended to damage or destroy the other. Even the prospect of large absolute gains for both parties does not increase capability.

In contrast to the neorealist emphasis on relative gains from cooperation, neoliberalism stresses that actors with common interests try to maximize their absolute gains.¹¹⁾ Charles Lipson pointed out that relative gains are more important when discussing security, as opposed to economic issues, rendering cooperation more difficult to achieve, harder to maintain, and more dependent on others and, thus, making states prefer the greater control and increased capabilities.¹²⁾ Many neorealists do not recognize the emergence of international regimes and institutions and believe their importance has been exaggerated. Others such as John Mearsheimer are not only skeptical about international institutions but also outright disdainful. In his view, institutions are merely an arena for pursuing power relationships. They have "minimal influence on state behavior and thus hold little promise for promoting stability in the post-Cold War world."¹³⁾ Reliance on such institutions, therefore, is apt to lead to more failures than successes. Whilst not all neorealists would go as far as Mearsheimer does, it is clear that many believe international institutions do not have independent effects that merit deeper study. Although there are many criticisms regarding neorealism and its inability to explain the system change and failure to incorporate variables apart from the international system structure, it continues to exert a strong influence on scholars of international relations.

In contrast to the rationalist approach above, scholars of the cognitive school critique rationalist theories on the ground that liberals and realists both use flawed assumptions. These include assertions such as 'nation-states are always and forever rational actors,' 'interests remain static,' and 'different interpretations of interests' power are not possible.' Cognitivists also argue that even when the rationalist theories employ iterated game theories where the future consequences affect present decisions, they ignore a major implication of such iteration: learning. Consequences from an iterated game enable actors to look backward to the past as well as forward

11) Arthur A. Stein, "Coordination and Collaboration: Regimes in an Anarchic World," *International Organization*, Vol. 36, No. 2 (Cambridge: MIT Press, spring 1982), 318.

12) Charles Lipson, "International Cooperation in Economic and Security Affairs.," *World Politics* 37 (Cambridge: Cambridge press, October 1984), 15-18.

13) John J. Mearsheimer, "The Fables Promise of International Institutions.," *International Security* 21/1 (Cambridge: MIT Press, 1995), 49.

to the future. Therefore, one's decisions today are not the same as one's decisions tomorrow not only because the actors are taking the future into account but also because one is taking past lessons into account.

Finally, cognitivists use a post-positivist methodology that does not correspond to their analytic purposes. The post-positivist methodology does not believe that social institutions or actors can be separated from their socio-political context for analytic purposes. Thus, the cognitivist approach is sociological or post-positivist rather than rationalist. In sum, for the cognitivists, not only interests or power matter but also perceptions and environment matter.¹⁴⁾

III. Success of WMD Regime: CWC

CWC's 20 years of history can be described as a resounding success. The factor behind CWC's impressive success is one of the most ambitious multilateral disarmament treaties in force today. Over 190 states support the convention, and the SIO, the OPCW secretariat, has performed over 3,000 routine inspections and has yet to find significant breaches of its strict classification procedures outlined by the Annex. In addition, member states have enacted legislation to implement the CWC and enforce its provisions on the national level. Currently, many national authorities have a better understanding of scheduled chemical activity within their borders and of activities involving all toxic chemicals and precursors. The significance of this achievement cannot be overstated.¹⁵⁾

1. *Determinants of the great power's commitment on the CWC*

1) Nonrestraint

The CWC, a global regime that extended from the Wyoming Treaty, does not seek to constrain the great power's behavior. From its inception and onwards, the United States and the Soviet Union participated in the process of designing the convention, including its preamble, articles, and annex on implementation and verification so that the end result would not become a shackle to their interests. Chemical weapons, in their nature, are inexpensive and are relatively easy to produce, even by small terrorist groups, to create mass casualties with small quantities. This means that the great powers and other regional powers can freely reproduce and, in some situations, even use these weapons when they are willing.

U.S. President Bill Clinton deposited the U.S. instrument of ratification for the Chemical Weapons Convention (CWC) with the United Nations on April 25, four

14) Hans Clever, Andreas, Peter Mayer and Volker Rittberg. *Theories of International Regimes*. (New York: Cambridge University Press, 1997), 6.

15) Daniel Feakes, "Evaluating CWC verification System," *CWC Review Conference*, 2002, 19.

days before the treaty entered into force. This last-minute action, made possible by the Senate's approval of the resolution regarding 'advice and consent to ratification,' allowed the United States to become a founding party to the convention. Prior to the final vote, former senator Joe Biden submitted five motions to strike each of the five "killer" conditions, which were removed by majority votes.

The first condition that the Senate rejected required ratification by China, Iran, Iraq, Libya, North Korea, Syria, and all state sponsors of terrorism before the United States could join the convention. The second condition prohibited the deposition of U.S. instruments of ratification until the president could certify that Russia had also ratified the treaty, which was found to be highly improbable before the April 29 deadline. Furthermore, the condition required Russia to forgo all activity on its chemical weapons program and required certification of Russian compliance with the 1990 U.S.-Russia Bilateral Destruction Agreement. The third condition required presidential certification that the Central Intelligence Agency has a high degree of confidence in detecting "militarily significant" violations, which were defined to be the acquisition or storage of 'one ton of chemical agents.' The administration had previously pointed out the benefit of CWC to intelligence efforts and said it would not be able to deposit the U.S. instruments of ratification under such an exacting condition. The fourth condition required the president to bar inspectors from states deemed to be sponsors of international terrorism and from states in violation of the U.S. nonproliferation and export and import laws. The last condition the Senate rejected called for amending the convention by eliminating Article X and changing Article XI to permit trade restrictions on exchanges and cooperation on chemical technologies.¹⁶⁾ After receiving confirmation that the CWC will never restrain the United States and its freedom of action, U.S. Senate ratified the CWC and entered it into force.

2) Economic Interests

The drive behind great powers' extensive support for CWC is economic interest. Great powers select which regimes they support based on economic interests. Washington sought chemical nonproliferation and disarmament not only to maintain stability but also to lower the maintenance expense of its chemical arsenals.

In response to a congressional request, the GAO examined the Department of Defense's cost estimates for destroying and demilitarizing existing stockpiles of unitary chemical munitions and producing proposed binary chemical munitions. The U.S. Army Toxic and Hazardous Materials Agency estimated the total program costs for construction and operation of demilitarization facilities at every chemical munition storage site to be about \$1.7 billion. However, the estimated cost of the

16) Eric J. Leklem, "Senate Gives Advice and Consent; U.S. Becomes Original CWC Party," Arms Control Association, April 1997: <https://www.armscontrol.org/act/1997-04/press-releases/senate-gives-advice-consent-us-becomes-original-cwc-party> (Retrieved on 20 Oct 2020)

demilitarization and destruction program could vary by as much as 30 percent. The Chemical Warfare Review Commission projected that the total production costs for three binary systems over the next eight years would amount up to \$2.749 billion, including \$178 million for research and development, \$312 million for facilities, and \$2.259 billion for production.¹⁷⁾ This estimated maintenance cost for the chemical arsenal would have increased further had the decision been delayed.

Aging chemical arsenals are not only a bottomless pit to waste funds but also a safety liability. As evidenced, abandoned chemical weapons in Iraq have wounded U.S. soldiers due to leakage during the Iraq War. Aging chemical arsenals, in this sense, have the potential to incur massive costs to a society, both economically and socially. Any major leakage is likely to lead to massive disasters and claim many lives, and chemical weapons do not discriminate between civilians and soldiers. Such a disaster would lead to societal panic, and the recovery costs would be economically burdening. All in all, decrepit chemical arsenals prove more burden than an advantage.

3) The Bargaining

Under the CWC, bargaining between the great power and regional powers was established. Through the bargaining process, the great power provides compensation to the state parties that declared and destroyed chemical weapons. This bargaining promotes the regime effectiveness of CWC. First, the CWC supports the national implementation of the Convention by providing training, organizing exchanges and workshops, and facilitating on-site assistance with declarations and legislation. This support program leads to positive effects in other fields, contributing to economic and technological development. Second, the CWC provides a wide range of capacity-building activities that aim to support the scientific and economic development of its member states. International cooperation and capacity building are promoted in many areas, ranging from legal assistance to chemistry professional training programs. Third, the CWC provides training programs to build the capabilities of its members to ensure their preparedness to respond to the threat of a chemical incident. Fourth, the CWC provides financial support to member states whose economy is in transition through scientific exchanges and internships and the exchange of laboratory equipment. Finally, the organization funds research projects and scientific and legal conferences relevant to the Convention. The CWC can provide technical assistance to member states including assistance with the destruction of chemical weapons and independent chemical analysis. The Organization offers audits of national laboratories to support the establishment of quality assurance systems.¹⁸⁾ These benefits, in the end, provided for the state parties

17) The United States General Accounting Office, Fact sheet to the Honorable Marvin Leath, House of Representatives, "Chemical Munitions Cost Estimates and Production," October 1985: <https://www.gao.gov/assets/90/86883.pdf> (Retrieved 20 Oct 2020)

of the CWC, contribute to facilitating bargaining between the United States and regional powers.

4) Technology Gap

In the production chain of chemical weapons, largely, civilian technologies and materials can be diverted for military use. Furthermore, the technology and infrastructure required to produce chemical weapons are considerably less expensive than those required for nuclear weapons. Consequently, any nation whose chemical industry is sufficiently advanced can easily manufacture chemical weapons agents even in civilian chemical plants. Facilities used to manufacture fertilizers, insecticides, pharmaceuticals, and petrochemicals can rapidly be turned into the producer of chemical weapons agents.¹⁹⁾ Chemical and biological weapons are not only of interest to nations. Increasingly, terrorist groups will turn to these weapons. The Aum Shinri Kyo sect that released sarin gas in the Tokyo subway system had a surprisingly well-developed technical infrastructure. This included front companies purchasing material and equipment, advanced laboratories, extensive chemical manufacturing facilities, and several hundred tonnes of 40 different kinds of chemicals. One estimate suggested that the materials together could have produced about 50 tonnes of chemical weapons agents to kill as many as 4.2 million people. In fact, it would be possible to produce lethal chemical or biological weapons in sufficient quantities to use in terrorist attacks with far more modest resources than those of the Aum Shinri Kyo sect. The level of technological sophistication required would be comparable with that already seen in sophisticated bombs that have been used against civilian aircraft. Another source pointed out that the technical challenge is equivalent to the clandestine production of chemical narcotics or the refinement of heroin.²⁰⁾

The technology used in manufacturing chemical weapons is not cutting-edge but more akin to the level of the technology during World War I. The recipe to compound chemical agents can be acquired even through the Internet. In the field of chemical science, the technology gap between the great power and regional powers is narrow. This means that the great power has little to lose while mutual on-site inspections are conducted. The less advantage a great power has to relinquish, the more likely it is to support the regime, thus leading to greater effectiveness.

18) Official OPCW Homepage: <https://www.opcw.org/work/achieving-universality-convention> (Retrieved 20 Oct 2020)

19) Lord Lyell, "Chemical and Biological Weapons: The Poor Man's Bomb," North Atlantic International Secretariat, 4 Oct 1996: <https://fas.org/irp/threat/an253stc.htm> (Retrieved 18 October 2020)

20) Ibid.

IV. Failure of WMD Regime: BWC

1. *Determinants for Great Power's Commitment to the BWC*

1) Nonrestraint

The U.S. administration eventually concluded that any biological threat could be countered with U.S. nuclear arsenal.²¹⁾ Nixon administration hoped that the end of biological weapons program could bolster the image of the United States as a whole. In light of rising opposition to the use of non-lethal chemicals in Vietnam and other events such as the Skull Valley sheep kill in Utah,²²⁾ Nixon's statement purposely omitted some chemical agents while others were simply overlooked. As an exception to the no-first-use policy, which his statement reaffirmed, Nixon made a difference between riot-control agents and herbicides.²³⁾ Both agents were used in Vietnam. The other major omission in Nixon's statement was about toxins.²⁴⁾ Since the U.S. Army wanted to continue studying SEB (*Staphylococcus enterotoxin*), we can infer that the great power avoids what regime stipulates when regime restrains its behavior.

There is no barrier between offensive and defensive biological programs because of "biological dual-use specialty." It means any biological agent can be used for peaceful purposes, such as medicine, prevention, protection, or for non-peaceful purposes, such as development and production of biological weapons.²⁵⁾ The biological dual-use specialty could be used as an excuse for the great power not to support the BWC.

2) Economic Interest and Technology Gap

The U.S. has a dominant position in the market with 48.2% of the firms in the

21) Eric Croddy et al. *Chemical and Biological Warfare: A comprehensive Survey for the Concerned Citizen*, Singapore, 2002, p.238

22) The Dugway sheep incident, also known as the Skull Valley sheep kill, was a 1968 sheep kill that was connected to U.S. Army chemical and biological warfare programs at Dugway Proving Ground in Utah. Six thousand sheep died on ranches near the base, and Army testing chemical weapons was widely blamed for the incident, although alternative accounts have been offered. A report, commissioned by Air Force Press Officer Jesse Stay and first made public in 1998, was called the "first documented admission" from the Army that a nerve agent killed the sheep at Skull Valley.

23) Jeanne Guillemin. *Biological Weapons: From the Invention of State-sponsored Program to contemporary Bioterrorism*, Colombia University Press, 2005, pp.122-127.

24) Albert J. Mauroni, *America's Struggle with Chemical-Biological Weapons*, Greenwood Publishing Group, 2000, pp. 49-60.

25) Permanent Mission of The People Republic of China to the United Nations and other International Organization in Vienna, "Dual-Use Biological Agents and Related Equipment and Technologies Export Control List (<https://www.fmprc.gov.cn/ce/cgvienna/eng/dbtyw/fks/t127628.htm>) Retrieved on 15 August 2020.

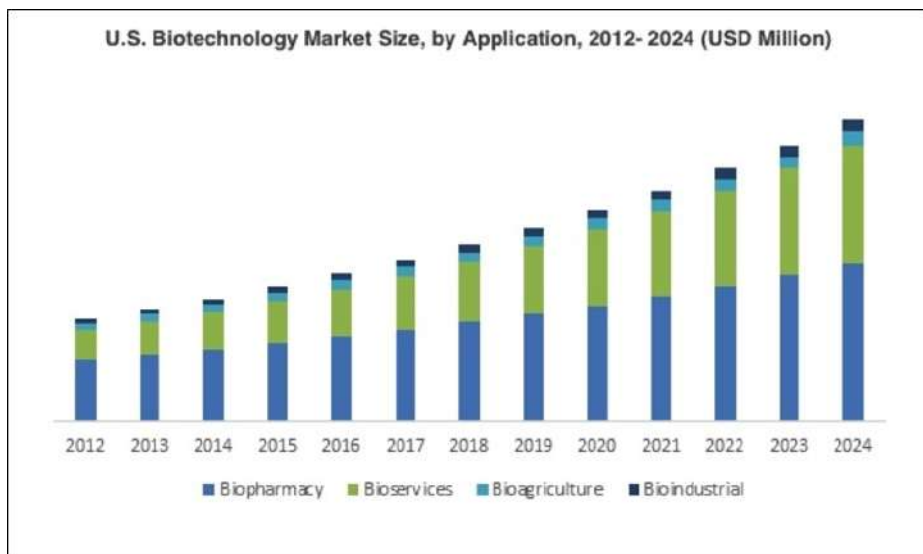
industry operating out of the U.S. firms. The firms in the Asia Pacific area hold 24% of the market, followed by Europe (18.1%) and the Middle East (1.8%). The rest of the world closes up the remaining 7.9%.²⁶⁾ According to a report from Global Market Insights, the biotechnology sector was valued at over \$330.3 billion in 2015, and its value is expected to be more than double to \$775.2 billion by 2024 at a compound annual growth rate of 9.9 %. (See Figure 2.) Biotechnology has been heralded as the potential basis of a new arena of U. S. economic hegemony.²⁷⁾ This hegemonic status of the bio-industry has been maintained due to the technology gap. If the verification protocol was established, industrial security of the U.S in the area of life science would be leaked to the developing countries closely chasing the United States. In short, the United States would have so much to lose whereas chasing countries would not.

When Obama was elected as president of the U.S, many liberalists expected that there would be policy changes to the BWC because the Obama administration planned to announce a new policy to curb the spread of biological weapons. In 2001, the Bush administration abruptly withdrew from a lengthy negotiation to create a verification mechanism. As a reason for such withdrawal, it cited, in part, the regulatory burdens that verification would place on the American pharmaceutical industry and the military's bio-defense research activities. Restarting those negotiations would also likely invite demands from Russia and Iran that could undermine the effectiveness of the broader treaty, according to experts on biological weapons. But nothing changed; the Obama administration reaffirmed the Bush administration's opposition to an international regime that would verify stockpiles of anthrax, smallpox, and other suspicious agents.²⁸⁾

26) Market Line Industry Profiles. "Global Biotechnology December 2019." Click "Quick Buy." (<https://store.marketline.com/report/ohmf8274--global-biotechnology-6/>) Retrieved on Apr. 27, 2020.

27) Thomas Reifer, "U.S. Hegemony and Biotechnology: The geopolitics and lead technology," Institute for Research on World-systems working paper #9, University of California, Riverside. 29.April. 2014

28) Mark Landler, "Obama Administration Takes a New Approach to Biological Weapons," New York Times, 8th Dec 2009(<https://www.nytimes.com/2009/12/09/world/09biowar.html>, Retrieved on 11 November 2020)

<Figure 1> U.S. Biotechnology Market Size, by Application, 2012-2024(USD Million)

Source: Global Market Insights Report, "Massive Growth for the Biotechnology Market by 2024," (https://www.contractpharma.com/contents/view_breaking-news/2018-01-26/massive-growth-for-the-biotechnology-market-by-2024/) Retrieved on 15 August 2021.

3) The Bargaining

In the BWC case, the bargaining between the great power and regional powers was hardly established. The European Union (E.U.) is supporting BWC through a Council Decision (BWC Action) and previously through E.U. Joint Action. Such Actions are time-limited projects that require coordinated actions by E.U. member states whereby human and financial resources, know-how, equipment, and so on are mobilized to attain the specific objectives set by the E.U. Council. The Actions also commit the Member States and conduct of their activity to the positions they adopt.²⁹⁾

The European Security Strategy recognized biological weapons as one of the main threats to collective security. Because only biological threats continue to grow as advances in biological technology enable easier production of more serious biological agents. Under the E.U. strategy against the proliferation of WMD, the Council adopted the Action Plan related to reinforcement, implementation, and universalization of BWC on 20 March 2006. The strains exist

29) United Nations Office at Geneva, "BWC Action: BWC and the European Union" ([https://www.unog.ch/unog/website/disarmament.nsf/\(httpPages\)/F502359025E15537C1257AC40046060E?OpenDocument&unid=7EA198C35415C020C1257F9B003E1BB1](https://www.unog.ch/unog/website/disarmament.nsf/(httpPages)/F502359025E15537C1257AC40046060E?OpenDocument&unid=7EA198C35415C020C1257F9B003E1BB1)) Retrieved on 15 August 2020.

between the E.U. and the U.S. over the future direction of the BWC regime. Those differences were most apparent in 2001 when the Bush administration rejected a verification mechanism to monitor compliance with BWC that the EU had supported.³⁰⁾ Since then, the United States has consistently resisted efforts to create international institutions to supervise the implementation of BWC because it fears these might leak U.S. industrial secrets.

Four determinants could weaken the U.S. commitment to BWC and, thus, its effectiveness.

i) BWC seriously constrains the U.S. research and development of biological technology. These efforts are needed to maintain dominance over regional powers. If the verification protocol is ratified and entered into force, U.S. could not conduct any experiments on the 67 kinds of viruses and toxins regulated by BWC;

ii) The great power seeks economic interest. The biotech industry is a source of prosperity for America's future. If the verification protocol were agreed upon and established, the U.S. Bio-industry might lose its monopoly status by leaking industrial secrets;

iii) The hegemonic position comes from the technical difference between a leading country and the chasing countries. The biotechnology gap is wider than any other field of science. The larger the technology gap, the less likely it is to reach an agreement between the parties. Technical difference or gap is directly linked to economic benefits; and

iv) It is unlikely that the bargaining will be formed in the BWC. The great power wants to regulate regional powers and weaker states but the great power does not want to be constrained by the rule of the BWC. Regional powers and weak states would not get any compensation from the great power for implementing the BWC if the great power did not support it. The regime effectiveness is inevitably low in the absence of bargaining between the great power and regional powers.³¹⁾

V. Comparative Analysis

While economic and environmental regimes are relatively successful in promoting international cooperation, WMD nonproliferation regimes tend to be state-centric and dominated by realist views. As a result, the possibility of

30) Arms Control Association, "BWC State Tackle National Implementation" Oct. 2007 (<https://www.armscontrol.org/act/2008-01/bwc-states-tackle-national-implementation>) Retrieved on 15 August 2020

31) Park Ki-Chul, "An Inquiry for Weapons of Mass Destruction Nonproliferation Regime Effectiveness: Great Power's Commitment and Implication for North Korea's Biological Weapons Threats", Ph.D. Dissertation, Korea Univ. Feb. 2021. p. 123

multilateral international cooperation remains low and, furthermore, the effectiveness of the regimes heavily depends on the great power's commitment to the regimes. In the case of the WMD nonproliferation regimes, the great power manipulates regime effectiveness to seek their freedom of behavior, economic interests, and technology monopoly. If the great power wishes to strengthen regime effectiveness, it may offer to provide economic or technical incentives to initiate a bargain with regional powers, a process that essentially spreads to the convention and promotes its acceptance by more states. In other words, the birth, change, development, and death of WMD nonproliferation regimes heavily depend on determinants that alter the level of the great power's commitment. These determinants are i) D1: nonrestraint, ii) D2: economic interests, iii) D3: bargaining, and iv) D4: the technology gap. (See Table 1)

The first determinant, D1, is the most powerful determinant among the four determinants. Gundlupet also recognized D1 as one of the three essential conditions required to garner support from the great power. D1 can be observed in the CWC, whereas cannot be seen in the BWC. The U.S aims to maintain its hegemonic status in the life science industry. To develop vaccines and remedies for harmful biological agents, it is inevitable to conduct experiments explicitly forbidden and regulated by the BWC. The strongest determinant found in the four case studies is D1, nonrestraint, which never imposes a stumbling block on the great power's freedom of behavior. D2, economic interest, is another important determinant of the great power's commitment. However, the U.S. support to the CWC contributes to economic interests by helping lower the maintenance cost for storage facilities. In contrast, the United States is highly unlikely to support the BWC as it undermines national economic interests, interests such as protecting the life science industry and ensuring its security.

D3, the bargaining part of the determinants, also presents an important notion regarding regime effectiveness. It is one of the three conditions that Gundlupet recommended as well. For example, the U.S. has a history of providing compensation to the states that relinquished their WMD programs. This pattern can be observed in the CWC. On the contrary, the bargaining can hardly be found in the BWC. Regional powers do not find it palatable to allow the U.S. to improve its own nuclear weapons and allow for it to maintain a monopoly status within the biological industry. This discord and absence of bargaining between states weakens regime effectiveness.

D4, the technology gap, is a determinant that no one has suggested so far. While studying relevant cases, I have discovered that a wider technology gap discourages the great power's commitment to the regime. The technology gap in the chemical science field is narrower than that of biological science. A narrow gap of technology contributes to enhancing regime effectiveness because implementing the regime can render undesired side effects such as weakened

<Table 1> Comparative Analysis

Determinants	CWC	BWC
D 1. Nonrestraint: The Regimes never impose serious restraint on the great power's freedom of the behaviors.	Yes	No
	· U.S. and U.S.S.R tried to establish bilateral treaty and extend it to multilateral treaty [Designed not to be restrained)	· U.S. is seriously restrained by the BWC (Dual use of the Bio-Science, Security Concerns)
D 2. Economic Interests: The Regimes never impose serious restraint on the great power's seeking economic interests.	Yes	No
	· Save maintenance cost for old production and storage facilities for chemical weapons	· U.S. seeks economic interests by maintaining dominance position in the Bio-Science · Industrial Security can be leaked to the competing States
D 3. Bargaining: The Bargaining established between the great power and regional powers	Strong	No
	· The Great power provided cooperative threats reduction fund	· No bargaining can be seen (Discord between the U.S and the E.U, Russia and Iran)
D 4. Technology Gap: Technology gap is narrow between the great power and regional powers. (No Industrial security concerns)	Narrower	Wider
	· Narrow gap in the chemical industry between the U.S. and other regional powers.	· Wide gap in Bio-Science (Industrial security concerns exists)
	↓	↓
Result	Success	Failure
Regime Success Or Failure?	· Destruction for 98% of the Existing chemical weapons (Nobel Peace Prize in 2012)	· No agreed verification protocol and It is depending on national implementation measures

Author's note: This is a summary of findings regarding four determinants of the great power's commitment for regime effectiveness. Source Park Ki-Chul, "An Inquiry for Weapons of Mass Destruction Nonproliferation Regime Effectiveness: Great Power's Commitment and Implication for North Korea's Biological Weapons Threats," Ph.D. Dissertation, Korea Univ. Feb. 2021. p. 123

industrial security and leaking secrets. It means that the state party that possesses advanced technology compared to others may have its classified technology stolen. The U.S. has more to lose than other states during on-site inspections or data exchanges. The technology gap is narrower in the CWC than in the BWC. Therefore, the regime effectiveness of the CWC is higher than that of BWC.

In summary, the regime effectiveness is likely to increase when the great power's freedom of behaviors is not regulated. The regime effectiveness is further likely to increase when great powers compensate regional powers for complying

with the regime. The determinants can be rank-ordered by weight as follows: $D_1 > D_3 > D_4 > D_2$.

VI. Implication on Korean Peninsula

The unilateral policy of the U.S. towards the international regime, based upon military dominance, has the potential to change its course under the leadership of Joe Biden. Given that the American populace chose a seasoned statesman over Trump, the world is expected to return to a predictable one where multilateral and diplomatic dividends are considered valuable. Perhaps most importantly, president Biden is no stranger to multilateralism and diplomacy; his long political career has placed him at the center of U.S. foreign policy. The U.S. has been at the forefront of the strongest assault on global multilateralism since 2017, and this is perhaps the strongest assault the United Nations has faced in its seventy-five year history. A new administration under Biden is poised to usher in the next phase of an experiment in which the United States adapts itself to a changing world. The Trump administration conducted the first phase of this shift with a forceful and at times coarse drive at times to revise the narrative that dominated the post-Cold War world. Throughout the Trump presidency, the U.S. shifted to a definitively self-centric stance, a course of action that led to both surprise and adaptation. As the new Biden administration is ushered into, perhaps, the next phase of the United States' diplomatic journey that can lead to a more cooperative stance.

The next phase of the U.S. and its shift coincides with an epoch where international cooperation is dire. Multinational collaboration is urgently needed to prevent the spread of COVID-19, and Joint Comprehensive Plan of Action (JCOPA) from which The Trump administration withdrew itself will go out of effect in 2025, allowing Iran to rebuild nuclear weapons. Under this complex situation, the U.S. leadership is put to the test again. The Biden administration has the potential to deal with both nuclear and CB threats in a single package in the WMD issue, which offers a chance to empower multilateralism. In this context, the BWC should function as designed to monitor and comply with the implementation clauses of the convention. The Trump administration's staunch stance against multilateralism only worked to North Korean advantage. The administration's indifference regarding the BWC only weakened the regime and its capabilities, thereby creating a situation upon which North Korea utilized to conceal its biological weapons program.

However, there are hopeful prospects that this will no longer serve under the new administration. President Joe Biden named Ron Klain, a veteran Democratic operative and a decades-long confidant, to be his White House chief of staff. As a lawyer with formidable experience on Capitol Hill spanning from advising

President Barack Obama to counseling corporate boardrooms, Klain served as Biden's chief of staff when he was vice president and was the likeliest choice to manage his team in the White House. He was particularly critical of Trump's handling of the coronavirus pandemic, having served as the "Ebola czar" under Obama during an outbreak of the deadly disease in Obama's second term of office. A video of Klain lecturing Trump about the pandemic was widely seen during the campaign. Ron Klain answered the question "what can the next U.S. president do to prepare for the coming pandemic?"³²⁾

First, the U.S. president must finish the undertaken work regarding WHO reforms and build a multilateral response force, keeping in mind that the Ebola epidemic became an epidemic largely because of the failure of global health institutions. Chiefly among them is the WHO, which sounded the alarm about the outbreak too late and failed to develop a coherent plan to respond to the outbreak. In a chain of events, the WHO, then, failed to mobilize the key actors to make the response function. Outrage over such failures led to a demand to reform the WHO. However, as WHO's mediocre performance on Zika suggests, the organization is far from being whole. As Ebola fades from the news, however, the pressure on WHO and its bureaucracy to reform will likely fade. Klain argues that the next U.S. president cannot let that happen: he or she must make the WHO reform a priority of the Administration at the UN, at international gatherings, and at all WHO executive committee meetings. The WHO will never have an effective quasi-military capacity to deploy its staff to where epidemic outbreaks happen. Thus, the Biden administration must work with the U.S. and its EU allies to create a global "white helmet" battalion that can enter areas where U.S. troops cannot to contain diseases and stabilize affected areas. This idea is being advanced by Germany, and it deserves strong support from the U.S.

Second, there is a dire need for a global system designed to rapidly determine which new vaccines and treatments are safe to use and to compensate any patients injured by the side effects. America is fortunate to have the world's foremost infectious disease research institution, the National Institute of Allergy and Infectious Diseases, led by incomparable Anthony Fauci. However, its work matters little and less if there is no global process to have new vaccines and treatments tested promptly, approved, and administered to the populace. During the 2009 H1N1 flu epidemic, thousands of doses of vaccines sat in warehouses due to a lack of an internationally accepted process to approve and administer new vaccines and to compensate individuals who may be affected by its side effects.

Similar problems required a series of ad hoc solutions during the Ebola epidemic. Promising vaccines and therapeutics had to be administered as part of

32) Ron Klain, "Confronting the Pandemic Threat," *Democracy, A journal of Ideas*, Spring 2016. No. 40: <https://democracyjournal.org/magazine/40/confronting-the-pandemic-threat/> (Retrieved on 1st Dec 2020)

clinical trials as the world lacked a system to authorize and fund the universal administration of these medicines. Furthermore, there were heated disputes over whether any person injured by these medicines and their side effects could receive compensation. At this point, it is necessary to mention Gavi, a global public-private vaccine alliance, facilitates millions of vaccinations each year without the aforementioned structures. However, its work mainly applies to well-established vaccines—very different from the sort of unproven, hurriedly developed vaccines and treatments that will be needed in the event of a new epidemic such as Zika and others unfound. Now is the time for the world to come together and determine how to approve new vaccines and treatments rapidly, set appropriate risk parameters, pay for such efforts, and compensate any persons injured.

Third and perhaps most importantly, the Biden administration must fund for President Obama's Global Health Security Agenda (GHSA) to continue. President Obama launched GHSA in 2011 to aid countries, primarily located in Africa and Asia, to build up their epidemic detection, treatment, and response capacities. The 2014 Ebola Supplemental Appropriations bill included a substantial boost of support for the GHSA, but the journey is ongoing. The Biden administration must continue the work to create an "African CDC" so the nations in the continent are not dependent on a CDC, which is a continent apart, to identify and track infectious disease outbreaks. Ultimately, the only way to prevent a horrific epidemic on American shores is to build national public health capacities in other countries where the threat is likely to emerge. Expanding the GHSA to additional countries and speeding up its timetable for action in the most vulnerable countries must be a critical action item for the next U.S. President.³³⁾

This is a strong signal to awaken the sleeping beauty, the BWC. This can be great momentum for the BWC to revitalize its roles and responsibility to restore the lost 30 years. The United States' return to multilateralism is increasing the likelihood of its support for the BWC. Additionally, it implies responding to North Korea's biological weapons threats. As aforementioned, North Korea is perhaps the greatest beneficiary of the ineffective BWC regime as the United States kept mum about North Korea's biological weapon threats. Recently, suspected North Korean hackers have attempted to break into the system of British drugmaker AstraZeneca as the company raced to deploy its vaccine for COVID-19. The hacking attempts targeted a 'broad set of people' including staff working on COVID-19 research but are not thought to have been successful.³⁴⁾ Though

33) Ron Klain, "Confronting the Pandemic Threat," *Democracy, A Journal of Ideas*, Spring 2016. No. 40: <https://democracyjournal.org/magazine/40/confronting-the-pandemic-threat/> (Retrieved on 1stDec2020)

34) Jack Stubbs, "Exclusive: Suspected North Korean hackers targeted COVID vaccine maker AstraZeneca-sources," *Reuters*, 27 November 2020

unsuccessful, it is worrisome that any successful attempts in the future can help North Korea develop variant biological weapons because of dual-use nature of bio-science. Against North Korea's biological weapons threats, Seoul must prepare a two-track approach that consists of prevention and mitigation. First, prevention efforts should be integrated and embedded into the BWC with other regimes such as AG, PSI, and UNSCR 1540 committee. Second, mitigation efforts should be prepared to respond to biological incidents including naturally emerging infectious diseases with a full spectrum of capabilities. Such responses include i) alarming, ii) detection and diagnosis, iii) decontamination, and iv) consequence management. Consequence management, especially, will require cooperation of inter-government agencies.

VII. Conclusion

In the field of the global WMD regimes where cooperation is expected to actively occur, the fact that the great power's commitment to the regime determines the regime effectiveness uncovers the logic of power politics. However, the United States' return to multilateralism is a notable milestone in the journey to recover the lost 30 years of the BWC. In this context, readers of this study will be able to find the direction towards which the WMD nonproliferation regime should lean. In the coming future, it is predicted with certainty that the emergence of new pandemics and the threat of biological weapons on the Korean peninsula will increase. In light of this outlook, Washington should assume a role of a leading state in preventing future biological disasters and protecting lives when the crisis happens. The U.S. silence on the BWC provides a shadow under which potential biological weapons states including North Korea can thrive.

Considering the lessons learned from COVID-19 pandemics, the Biden administration must provide the necessary support for strengthening the regime effectiveness of the BWC and enhance international cooperation for global health security. First, Washington must establish an active policy for the BWC regarding its verification protocol, Articles VII and X. Second, the Nuclear Security Summit, initiated by the Obama administration, must be extended into a WMD security Summit and made to deal with biological and chemical weapons threats. Third, the U.S. should play a key role in leading the GHSA to enhance countries' capacities to prevent, detect, and respond to infectious diseases by sharing technologies for biological security and safety.³⁵⁾

As examined throughout this study, the effectiveness of WMD nonproliferation

35) Park Ki-Chul, "An Inquiry for Weapons of Mass Destruction Nonproliferation Regime Effectiveness: Great Power's Commitment and Implication for North Korea's Biological Weapons Threats", Ph.D. Dissertation, Korea Univ. Feb. 2021. p. 144

regimes largely depends on the great power's military dominance and determination to commit. However, the global community must act upon this status quo and seek a return to multilateralism with 'enlightened selfishness.' Three decades ago, few people expected the success of the CWC. Today, the CWC is praised as one of the most successful cases in the global security regime. If actors and scholars alike remain silent regarding the BWC in this critical momentum, the BWC will not only lose three but perhaps five decades or even a century. The consequences of this silence—a future where the threat of biological weapons and killer-diseases is looming and perpetual—will become another burden that the next generation will have to face.

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The Defensive Surge: Psychological Reasons for Why Leaders Double Down on Failing Wars

DongJoon Park

Abstract

Why do leaders double down on wars and other unpopular foreign policies that the public opposes? Criticism of costly wars creates a dilemma for decision-makers as both maintaining and changing existing strategies have negative consequences for their prospect of remaining in office. To resolve this dilemma, leaders may opt to 'gamble for resurrection' to achieve victory. While valid, existing arguments that adopt the rationalist approach about the preference of leaders and the informative function of polls rely on narrow assumptions about decision-making. Psychological mechanisms broaden our understanding of how difficult policy choices are made. Specifically, this article contends that the psychological pressures created by the public's negative assessments of the competence of leaders constitute a threat to leaders' self-esteem, which, in turn, triggers psychological defensive mechanisms. Common defensive mechanisms, including reaction formation, isolation, and denial, make it more likely that leaders commit further to failing wars and unsuccessful foreign policies. These mechanisms are substantiated through an analysis of the Bush administration's Surge in Iraq in 2007. The article contributes to the literature by highlighting additional pathways through which public opinion impacts foreign policy decision-making, not only through electoral consequences but also through implicit signals regarding the public's views on leaders' ability to lead.

Keywords: *Foreign policy decision-making, Surge in Iraq, Gambling for resurrection, Political psychology, Public opinion*

Introduction

On January 10, 2007, President George W. Bush announced the “New Way Forward” and argued that the new strategy would succeed in establishing “a unified, democratic Iraq that can govern itself, defend itself, and sustain itself, and is an ally in the War on Terror.”¹⁾ The decision, commonly known as the Surge in Iraq, included the deployment of more than 20,000 additional US troops and was one of the most controversial foreign policy decisions of the President’s second term in office. Many believed it to be an ill-advised strategy. Not long after it was announced, Congress passed a nonbinding resolution that denounced the decision while the majority of the public similarly opposed the Surge.²⁾ Given such widespread opposition against the Iraq war and the Surge, why did President Bush nevertheless double down and commit more resources instead of withdrawing from a conflict that the country had become disillusioned with?

Long and costly conflicts, as well as unpopular foreign policies more broadly, pose a dilemma for leaders. Growing opposition against wars as a result of accumulating human and economic costs incentivizes leaders to terminate conflicts, especially in democratic countries.³⁾ But doing so may result in defeat, or at least the perception of defeat, which also adversely affects leaders’ prospects of remaining in office.⁴⁾ Faced with this conundrum, leaders may choose to “gamble for resurrection” by doubling down to obtain victory.⁵⁾

This explanation relies on rationalist assumptions about leaders’ preferences to

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- 1) The White House, “Fact Sheet: The New Way Forward in Iraq”, January 10, 2007, available at <https://georgewbush-whitehouse.archives.gov/news/releases/2007/01/20070110-3.html> (accessed on March 23, 2021).
 - 2) David Stout, “House Passes Iraq Resolution with 17 Votes from G.O.P.,” *The New York Times*, February 16, 2007; Frank Newport, “Public Opposes Troop Surge by 61% to 36% Margin,” *Gallup News Service*, January 9, 2007; Dana Blanton, “FOX News Poll: Most Think Troops Surge is Bush’s Last Chance in Iraq,” *Fox News*, January 18, 2007.
 - 3) Hein E. Goemans, *War and Punishment: The Causes of War Termination and the First World War* (Princeton, NJ: Princeton University Press, 2012); Elizabeth A. Stanley, *Paths to Peace: Domestic Coalition Shifts, War Termination and the Korean War* (Stanford, CA: Stanford University Press, 2009).
 - 4) Bruce Bueno De Mesquita, Randolph M. Siverson, and Gary Woller, “War and the Fate of Regimes: A Comparative Analysis,” *American Political Science Review*, Vol. 86, No. 3 (1992), pp. 638-646; Sarah E. Croco and Jessica L. P. Weeks, “War Outcomes and Leader Tenure,” *World Politics*, Vol. 68, No. 4 (2016), pp. 577-607; Alexandre Debs and Hein E. Goemans, “Regime Type, the Fate of Leaders, and War,” *American Political Science Review*, Vol. 104, No. 3 (2010), pp. 430-445.
 - 5) George W. Downs and David M. Rocke, “Conflict, Agency, and Gambling for Resurrection: The Principal-Agent Problem goes to War,” *American Journal of Political Science*, Vol. 38, No. 2 (1994), pp. 362-380; Sarah E. Croco, “The Decider’s Dilemma: Leader Culpability, War Outcomes, and Domestic Punishment,” *American Political Science Review*, Vol. 105, No. 3 (2011), pp. 457-477.

stay in power and the informative aspect of polling as an indicator of how the electorate will likely vote in future elections. In contrast, this article explores whether psychological mechanisms caused by negative reviews of leadership also affect decision-making. In addition to foreshadowing election results, public opinion also conveys the public's evaluation of the leadership, judgment, and overall competence of their leaders.⁶⁾

This article argues that this latter aspect, in particular, makes it less likely for leaders to withdraw from wars and end unpopular foreign policy initiatives because doing so is perceived as a tacit acknowledgment of the public's beliefs about his or her ineptitude. Furthermore, questions about one's ability to lead in the form of polling data threaten a leader's self-esteem, which consequently triggers psychological defensive mechanisms. Common responses such as reaction formation, isolation, and denial add to the likelihood that leaders will double down and "gamble for resurrection".

To Terminate or Escalate and the 'Decider's Dilemma'

While public opinion influences a wide range of foreign policy decisions such as trade,⁷⁾ immigration policy,⁸⁾ and climate change,⁹⁾ the decision to use force has perhaps received the most attention. Two arguments on the subject are widely accepted. First, protracted conflicts erode public support for military action as the costs of war accumulate over time. This was one of the primary lessons of US involvement in the Korean and Vietnam Wars.¹⁰⁾ Factors such as the public's perception about the necessity and righteousness of military interventions, success on the ground, and elites' ability to frame and provide cues for the public mitigate the degree to which initial support garnered through the rally 'round the flag effect

6) Michael A. Bailey and Clyde Wilcox, "A Two-Way Street on Iraq: On the Interaction of Citizen Policy Preferences and Presidential Approval," *American Politics Research*, Vol. 44, No. 1 (2016), pp. 3-27.

7) Alexandra Guisinger, "Determining Trade Policy: Do Voters hold Politicians Accountable?" *International Organization*, Vol. 63, No. 3 (2009), pp. 533-557; Daniel Y. Kono, "Does Public Opinion affect Trade Policy?" *Business and Politics*, Vol. 10, No. 2 (2008): 1-19.

8) Gallya Lahav, "Public Opinion toward Immigration in the European Union: Does it Matter?" *Comparative Political Studies*, Vol. 37, No. 10 (2004), pp. 1151-1183; Jack Citrin, et al. "Public Opinion toward Immigration Reform: The Role of Economic Motivations," *The Journal of Politics*, Vol. 59, No. 3 (1997), pp. 858-881.

9) Sara L. Wiest, Leigh Raymond, and Rosalee A. Clawson, "Framing, Partisan Predispositions, and Public Opinion on Climate Change," *Global environmental change*, Vol. 31 (2015), pp. 187-198.

10) John E. Mueller, "Trends in Popular Support for the Wars in Korea and Vietnam," *American Political Science Review*, Vol. 65, No. 2 (1971), pp. 358-375.

devolves into opposition.¹¹⁾ Nonetheless, “aggregate support for foreign military operations declines as casualties rise” under most conditions.¹²⁾

Second, war outcomes substantially impact leaders’ tenure. Because “governments are held responsible for jeopardizing the well-being of citizens,” defeat in war harms leaders’ prospect of remaining in office.¹³⁾ This logic applies to both democratic and non-democratic leaders. Even though autocrats may placate their electorate and soften the fallout, they are still thought to be sensitive to war outcomes since their removal from office is likely to be more hazardous, even if it is less likely.¹⁴⁾

These political consequences create “the decider’s dilemma.”¹⁵⁾ On the one hand, leaders may choose to terminate the war and comply with the wishes of the public to minimize “the distance between their policy and the policy preferences of voters”, thereby improving their chances of reelection.¹⁶⁾ But early withdrawal from wars is likely to be construed as defeat, harming their prospect of maintaining power. On the other hand, leaders may continue to fight in the hopes of achieving victory. But this exposes them to continued criticism and calls for democratic responsiveness. Neither option guarantees victory on the battleground or in voting booths.

The ‘gambling for resurrection’ hypothesis argues that rational leaders resolve this dilemma by doubling down and even committing additional resources into protracted and unpopular wars. Using game theory models, Downs and Rocke first

11) Christopher Gelpi, Peter D. Feaver, and Jason Reifler, “Success Matters: Casualty Sensitivity and the War in Iraq,” *International Security*, Vol. 30, No. 3 (2005/2006), pp. 7-46; Christopher Gelpi, Jason Reifler, and Peter D. Feaver, “Iraq the Vote: Retrospective and Prospective Foreign Policy Judgments on Candidate Choice and Casualty Tolerance,” *Political Behavior*, Vol. 29 (2007), pp. 151-174; Richard C. Eichenberg, “Victory has many Friends: US Public Opinion and the Use of Military Force, 1981–2005,” *International Security*, Vol. 30, No. 1 (2005), pp. 140-177.

12) Patricia L. Sullivan, “Sustaining the Fight: A Cross-Sectional Time-Series Analysis of Public Support for Ongoing Military Interventions,” *Conflict Management and Peace Science*, Vol. 25, No. 2 (2008), p. 114.

13) Bueno De Mesquita, Siverson, and Woller, “War and the Fate of Regimes,” p. 638. Also see, Croco and Weeks, “War Outcomes and Leader Tenure”; Debs and Goemans, “Regime Type, the Fate of Leaders, and War.”

14) Giacomo Chiozza and Hein E. Goemans, “International Conflict and the Tenure of Leaders: Is War Still “Ex Post” Inefficient?” *American Journal of Political Science*, Vol. 48, No. 3 (2004), pp. 604-619; Jessica L. Weeks, “Autocratic Audience Costs: Regime Type and Signaling Resolve,” *International Organization*, Vol. 62, No. 1 (2008), pp. 35-64.

15) Croco, “The Decider’s Dilemma.”

16) Lawrence R. Jacobs and Benjamin I. Page, “Who Influences US Foreign Policy?” *American Political Science Review*, Vol. 99, No. 1 (2005), p. 109. Also see, Brandice Canes-Wrone, “From Mass Preferences to Policy,” *Annual Review of Political Science*, Vol. 18 (2015), pp. 147-165; Matthew Baum, “How Public Opinion Constrains the Use of Force: The Case of Operation Restore Hope,” *Presidential Studies Quarterly*, Vol. 34, No. 2 (2004), pp. 187-226.

explored the idea that escalation is preferred in situations where “removal may be all but inevitable if the executive makes peace.”¹⁷⁾ Based on this logic, Croco argues that culpable leaders should always opt to keep fighting because they face punishment if they lose “regardless of the additional resources invested in the war.”¹⁸⁾

Additional Causes of the Gamble: The Role of Psychological Defensive Mechanisms

The arguments summarized above have shown that increasing opposition against costly wars and the political consequences of defeat create a dilemma for leaders. The rationalist approach, while valid, may be inconclusive in some cases as both the decision to continue fighting and the decision to terminate the war have negative electoral consequences. The ‘gambling for resurrection’ hypothesis resolves the tension but relies on assumptions about leaders’ perceptions. For example, leaders may hold different beliefs about whether the “removal threshold” has been crossed despite being provided identical information.¹⁹⁾ Moreover, the hypothesis assumes leaders to be optimistic about the likelihood of success of their gamble, even though their strategy has failed so far.

These aspects of the ‘gambling for resurrection’ hypothesis, and the rationalist approach in general, suggest the need to incorporate psychological approaches into the analysis. This contribution has been central to the recent behavioral revolution in international relations. Compared to earlier studies that focused on explaining deviations from rational behavior, psychological approaches are increasingly being utilized to complement existing rationalist arguments by adding mental pathways that result in the same outcome through supplementary mechanisms.²⁰⁾

From this perspective, I explore the psychological impact of the public’s opposition against foreign policy decisions, including war and conflicts abroad, and how it might influence leaders’ choices as an ancillary piece of the overall puzzle. The rationalist approach concentrates on the informative nature of polling as an indicator of how the public is expected to vote in future elections. However, polls also send a clear signal about how the nation views the leadership, judgment, and overall competence of its leaders. The public’s perceptions of presidential leadership “have implications for presidents ... above and beyond the effects of job approva

17) Downs and Rocke, “Conflict, Agency, and Gambling for Resurrection,” p. 375.

18) Croco, “The Decider’s Dilemma,” p. 461.

19) Downs and Rocke, “Conflict, Agency, and Gambling for Resurrection,” p. 375.

20) Hafner-Burton, et al., “The Behavioral Revolution and International Relations”; Alex Weisiger, “Rationality and the Limits of Psychology in Explaining Interstate War Duration,” *Polity*, Vol. 50, No. 2 (2018), pp. 215-224.

l”²¹⁾ that are inherently personal; “the pain of the rebuff to his self-image forces deep introspection.”²²⁾

I contend that the public’s beliefs about leaders’ incompetence conveyed through polling result in the decision to double down through two psychological mechanisms. First, leaders become less likely to terminate a conflict because doing so is perceived as confirming the public’s perception of their incompetence. In addition to conforming to the preferences of the public, it would also be an implicit admission of failure and ineptitude, a message that leaders will likely perceive as sealing their own political fate. This element essentially means that the removal threshold is crossed psychologically as anything but a complete victory is thought to result in the loss of power.

Second, leaders are also more likely to double down on their foreign policy because criticism of their capacity to lead constitutes psychological threats to their self-esteem that trigger defensive mechanisms. The preservation and protection of one’s self-esteem is a fundamental motive that can lead to various adaptations, responses, and biases. Defensive mechanisms are a category of these psychological reactions, defined as mechanisms or processes “to defend itself against the threatening implications of internal or external events that clearly violate preferred views of oneself.”²³⁾ Defensive mechanisms are unconscious but direct psychological adaptations that tend to reject the threat rather than accommodate it.²⁴⁾ In the case of leaders in charge of unpopular wars, these mechanisms compel leaders to want to prove the public wrong by doubling down on their efforts.

Among the various defense mechanisms, reaction formation, isolation, and denial have been confirmed the most by studies in psychology.²⁵⁾ Reaction

21) Jeffrey E. Cohen, *Presidential Leadership in Public Opinion* (NY: Cambridge University Press, 2015), p. 20.

22) Dick Morris, *Behind the Oval Office: Winning the Presidency in the Nineties* (NY: Random House, 1997), p. 11.

23) Roy F. Baumeister, Karen Dale, and Kristin L. Sommer, “Freudian Defense Mechanisms and Empirical Findings in Modern Social Psychology: Reaction Formation, Projection, Displacement, Undoing, Isolation, Sublimation, and Denial,” *Journal of Personality*, Vol. 66, No. 6 (1998), pp. 1082; Phebe Cramer, “Defensiveness and Defense Mechanisms,” *Journal of Personality*, Vol. 66, No. 6 (1998), pp. 879-894.

24) In contrast, self-affirmation refers to efforts to essentially “[explain] ourselves to ourselves” to justify our behavior as “adaptively and morally adequate”. Meanwhile, coping mechanisms, though similar to defensive mechanisms, “involve a conscious, purposeful effort.” All three types of responses are psychological efforts to “relieve stress and perceived adversity.” Claude M. Steele, “The Psychology of Self-Affirmation: Sustaining the Integrity of the Self,” *Advances in Experimental Social Psychology*, Vol. 21 (1988), p. 266; Phebe Cramer, “Coping and Defense Mechanisms: What’s the Difference?” *Journal of Personality*, Vol. 66, No. 6 (1998), p. 921.

25) Baumeister, Dale, and Sommer, “Freudian Defense Mechanisms and Empirical Findings in Modern Social Psychology.” The authors also review four other types of defensive

formation occurs when individuals accused of displaying a socially unacceptable trait respond by deliberately exhibiting opposite characteristics.²⁶⁾ Second, isolation involves “creating a mental gap or barrier between some threatening cognition and other thoughts and feelings.”²⁷⁾ Lastly, denial refers to the “refusal to face certain facts.”²⁸⁾

These mechanisms increase the likelihood that leaders double down rather than withdraw from unpopular wars. Faced with public opposition, reaction formation causes leaders to visibly demonstrate their willingness to comply with the public’s demands. But such gestures are likely to be superficial and not result in substantial changes in policy as behavior due to reaction formation is often “exaggerated, compulsive, and inflexible.”²⁹⁾ Meanwhile, leaders will engage in isolation by presenting the decision to double down as an entirely new strategy that is unrelated to past failures. Lastly, denial causes leaders to ignore or downplay existing problems and instead focus on relative successes that contribute to their optimistic assessments of doubling down.

In sum, I argue that the psychological pressures precipitated by public opposition against conflicts abroad make leaders more likely to ‘gamble.’ Leaders become more reluctant to terminate wars as they fear that it will only confirm the public’s belief about their own incompetence. Meanwhile, defensive mechanisms triggered by perceived threats to leaders’ self-esteem make them more likely to double down on their foreign policy. These mechanisms do not occur in a vacuum but rather co-exist and interact with rational motivations in a way that makes one outcome more likely than the other, thus complementing arguments for why leaders double down on unpopular decisions.

mechanisms that were originally mentioned by Freud: projection, displacement, undoing, and sublimation. They conclude, however, that the three mechanisms above appear “to be the best supported mechanisms that normal people have been shown to use to protect their self-concepts against threats.” p. 1113.

26) Ibid, 1085. A commonly cited example is how people often over-compensate when accused of being racist. For example, see, Donald G. Dutton and Robert A. Lake, “Threat of Own Prejudice and Reverse Discrimination in Interracial Situations,” *Journal of Personality and Social Psychology*, Vol. 28, No. 1 (1973), pp. 94-100.

27) Baumeister, Dale, and Sommer, “Freudian Defense Mechanisms and Empirical Findings in Modern Social Psychology,” 1099. The authors offer the example of an individual switching the conversation to a different topic when they become uncomfortable.

28) Ibid, 1107. Denial has received the most attention in international relations and materializes when states and leaders “pretend that an event will not happen or avoid the value trade-offs required in deciding between mutually exclusive options.” Rose McDermott, *Political Psychology in International Relations* (Ann Arbor, MI: University of Michigan Press, 2004), p. 172.

29) Neel Burton, “Why People are so often the Opposite of What they Appear,” *Psychology Today*, available at <https://www.psychologytoday.com/us/blog/hidden-and-see/201203/why-people-are-so-often-the-opposite-what-they-appear> (accessed on March 20, 2021).

Verifying the Mechanisms: The Surge in Iraq in 2007

This section process-traces how the decision to surge troops in Iraq was reached in 2007. The case study seeks to demonstrate the existence of the mechanisms outlined above and the impact they had on President Bush's decision-making. To reiterate, the main argument of this study predicts that the psychological pressures generated by the public's negative assessment of the President's leadership and ability to manage the war in Iraq triggered defensive mechanisms that contributed to the decision to implement the Surge. The following section first describes the decision-making process chronologically, and the subsequent section analyzes how President Bush internalized negative polling information in ways that triggered defensive mechanisms that contributed to the decision to Surge in Iraq.

The Need for a New Strategy in Iraq Grows in 2006

By most accounts, the story of the Surge begins in earnest in mid-2006.³⁰⁾ Concerns about the situation in Iraq had been growing despite some progress made the previous year through national elections and the approval of a new constitution.³¹⁾ Cautious optimism was shattered, however, by the terrorist attack at the golden dome Mosque in Samarra in February 2006. The Bush administration remained hopeful that stability could be sustained; there was even the sense that "they'd dodged a bullet" when the Shia population did not immediately react.³²⁾ But the bombing would be a prelude to the violence in Baghdad that worsened later that summer, which forced the Bush administration to fundamentally revisit its strategy in Iraq.

In the Spring, the White House continued to emphasize publicly that progress was being made and that it would maintain its strategy in Iraq. But behind the scenes, President Bush began telling his closest advisers that he thought the administration needed "to take another look at the whole strategy."³³⁾ By May, civilian officials

30) Feaver asserts that it began earlier in the Fall of 2005, but there is no indication that the administration was seeking to revise its strategy before the Samarra bombing. Rather, the administration was focused on buying time to ensure that their stand-up/stand-down strategy work by bolstering public and elite support for the "National Strategy for Victory in Iraq (NSVI)" White Paper published in late 2005. Peter D. Feaver, "The Right to be Right: Civil-Military Relations and the Iraq Surge Decision," *International Security*, Vol. 35, No. 4 (2011), pp. 99-100..

31) US State Department, "Iraqi Elections: January 30, 2005," January 25, 2005, available at <https://2001-2009.state.gov/r/pa/scp/2005/41206.htm> (accessed on April 20, 2021); CNN, "Milestone elections begin in Iraq," *CNN*, January 31, 2005, available at <https://edition.cnn.com/2005/WORLD/meast/01/29/iraq.main/> (accessed on April 20, 2021).

32) Frederic W. Barnes, "How Bush Decided on the Surge," *Weekly Standard*, February 4, 2008.

33) George W. Bush, *Decision Points* (NY: Crown Publishers, 2010), p. 364; Peter Baker, *Days of Fire: Bush and Cheney in the White House* (NY: Doubleday, 2014), p.459.

within the National Security Council (NSC) were in agreement that a top-down reassessment of US strategy was necessary.³⁴⁾ One early attempt at reevaluating Iraq policy was an “unusual” meeting at Camp David between administration officials and outside experts on June 12 arranged by the National Security Advisor Stephen Hadley.³⁵⁾

Hadley had hoped the meeting would jump-start the review process by discussing a wide range of recommendations proposed by the participants.³⁶⁾ It failed to do so, however, and instead served as cover for President Bush’s surprise trip to Iraq the following day. The president had been encouraged by recent good news, including the death of Abu Musab al-Zarqawi earlier that month, which had “reenergized the president’s commitment to the existing strategy in Iraq.”³⁷⁾ Observers later recalled that the Camp David meeting was a missed opportunity that delayed the White House’s assessment of its strategy in Iraq.³⁸⁾

The situation particularly in Baghdad continued to deteriorate throughout the Summer, and by the Fall various branches of government had launched separate reviews of the war.³⁹⁾ Within the NSC, Deputy National Security Advisor Meghan O’Sullivan led an internal review and later wrote a memo that discussed the various options available.⁴⁰⁾ Senior Director for Defense Policy and Arms Control William Luti conducted a study in which he recommended a “surge” in US forces to “enhance security in Baghdad and other insurgent hotspots.”⁴¹⁾ The Joint Chiefs of Staff (JCS), headed by Chairman General Peter Pace, convened the “Council of Colonels” to likewise review the situation and assess whether the strategy in Iraq was working.⁴²⁾ The State Department also began formulating a revised strategy that focused on increasing US diplomatic efforts and outreach in the region.⁴³⁾

At the same time, opinions outside the administration were also becoming more vocal. Jack Keane, a retired Army General, had been trying to change the military

34) Feaver, “The Right to be Right,” p. 101.

35) Ibid.

36) Jean E. Smith, *Bush* (NY: Simon & Schuster, 2016), p. 495; Baker, *Days of Fire*, p. 463; Thomas E. Ricks, *The Gamble: General David Petraeus and the American Military Adventure in Iraq, 2006-2008* (NY: Penguin, 2009), pp. 42-45.

37) Ricks, *The Gamble*, p. 44.

38) Baker, *Days of Fire*, p. 467; Ricks, *The Gamble*, p. 44; Feaver, “The Right to be Right,” p. 101.

39) The Battle of Baghdad began in July. The twelve-month period from mid-2006 to mid-2007 would prove to be “the bloodiest 12 months that American troops had seen thus far in the war, with 1,105 killed.” Ricks, *The Gamble*, p. 45.

40) Bob Woodward, *The War Within, A Secret White House History 2006-2008* (NY: Simon & Schuster, 2008), pp. 191-192; Baker, *Days of Fire*, p. 487; Feaver, “The Right to be Right,” p. 102.

41) Woodward, *The War Within*, p. 170; Feaver, “The Right to be Right,” p. 103.

42) Ricks, *The Gamble*, p. 90; Woodward, *The War Within*, p. 159; Feaver, “The Right to be Right,” p. 102.

43) Feaver, “The Right to be Right,” pp. 104-105.

strategy in Iraq outside the chain of command since the Summer. He later expressed his concerns directly to Secretary of Defense Donald Rumsfeld and General Pace in mid-September.⁴⁴⁾ He also frequently conversed with General Ray Odierno, who was the “sole senior official in the active-duty military speaking out for an increase in troops” in Iraq.⁴⁵⁾

Reviews within the Bush administration coalesced in early November after the 2006 Midterm elections and the resignation of Secretary Rumsfeld. President Bush ordered NSC Deputy Advisor J.D. Crouch to begin a formal White House review on November 10.⁴⁶⁾ Over the following two weeks, US officials involved in the process discussed various options, which were then presented to the President at an NSC meeting held on November 26. At the meeting, Crouch stated that the ultimate goal remained the accelerated “transfer of security responsibility to the Iraqis.” But the White House review had determined that while it was previously assumed that political progress in Iraq would lead to greater stability, it now appears that “political and economic progress is unlikely absent a basic level of security.”⁴⁷⁾

Members of the NSC, including Hadley, O’Sullivan, and Luti, concluded that this required a “significant surge in US forces.”⁴⁸⁾ But though it was presented as the “emerging consensus,” others viewed the idea of deploying additional American troops with considerable skepticism.⁴⁹⁾ Instead, officials including Secretary of State Condoleezza Rice and General Pace suggested minor revisions to the existing strategy and advocated for a gradual drawdown of US troops from Iraq. Their views closely resembled the findings of the Iraq Study Group (ISG), which had been commissioned by Congress in March. The ISG report, published on December 6, sought to encourage President Bush to withdraw from the war in Iraq.⁵⁰⁾

Though President Bush had left the NSC meeting on November 26 undecided, numerous sources suggest that he was leaning towards the Surge by this time.⁵¹⁾ Less than a week after the ISG report was released, he met with outside experts at the White House on December 11. The group included General Keane, who had attended a three-day conference at the American Enterprise Institute (AEI) a couple

44) Ricks, *The Gamble*, pp. 88-89; Woodward, *The War Within*, pp. 131-133; Baker, *Days of Fire*, p. 488.

45) Ricks, *The Gamble*, p. 91.

46) Woodward, *The War Within*, p. 207; Baker, *Days of Fire*, pp. 508-510; Feaver, “The Right to be Right,” p. 103.

47) Baker, *Days of Fire*, p. 511.

48) Woodward, *The War Within*, p. 245.

49) *Ibid*; Baker, *Days of Fire*, p. 512. “Emerging Consensus” was the title of Crouch’s memo presented at the NSC meeting.

50) Smith, *Bush*, p. 533; Woodward, *The War Within*, pp. 264-265.

51) One such indication was the behavior of Hadley who, throughout the formal White House review process in November, insisted strongly that the option of a surge of forces must be included. Woodward notes that “when Hadley spoke emphatically, he was a pure transmission belt for Bush’s views.” Woodward, *The War Within*, p. 235.

of days earlier where the Surge option was discussed in detail. He advocated for a surge in US troops in order to implement a transition to a counterinsurgency strategy in Iraq. This further persuaded the President of the need for more US servicemen in Iraq.

President Bush met with the JCS at the Pentagon on December 13. Military leaders, including General Pace, Commander of Multi-National Force-Iraq (MNF-I) General Casey, and Commander of Central Command (CENTCOM) General John Abizaid had opposed the idea due to concerns that additional deployments would dangerously overextend the military. Understanding that he needed the support of the military, President Bush proposed that he would ask Congress to “increase the size of the Army and the Marine Corps” to alleviate the pressure of surging troops to Iraq.⁵²⁾ The White House and the Pentagon spent the remainder of the year finalizing the size of the Surge, and President Bush appointed General David Petraeus, who had just finished rewriting the US Army Field Manual on counterinsurgency, as the next MNF-I Commander.⁵³⁾ With the pieces in place, President Bush announced the Surge in early January the following year.

Public Opposition against the War and the Impact of Defensive Mechanisms on the Surge Decision

In his memoir, President Bush admits that the summer of 2006 “was the worst period of his presidency.”⁵⁴⁾ The deteriorating situation in Iraq was wearing on the president. When informed that US special forces had killed Zarqawi in early June, for example, President Bush replied that “he wasn’t sure how to take good news anymore.”⁵⁵⁾ Stephen Biddle, who attended the White House meeting on December 11, similarly recalled how the President “seemed on the verge of clinical depression.” “Everything suggested weight;” he remembered, “the tone was very somber.”⁵⁶⁾

Broad opposition against the war in Iraq among both the public and the elite was obviously a key factor. Less than a third of Americans approved of President Bush’s management of the war, while only 20 percent thought it could be won.⁵⁷⁾ In April, retired US military officers, some of whom were veterans of the Iraq war, voiced their concerns about how war efforts were being handled and openly challenged Secretary Rumsfeld’s leadership through the unprecedented “Revolt of the

52) Previously, the Bush administration had advocated for a ‘leaner military’. Smith, *Bush*, pp. 541-542; Woodward, *The War Within*, pp. 288-289.

53) Ricks, *The Gamble*, p. 121; Woodward, *The War Within*, pp. 307-309.

54) Bush, *Decision Points*, p. 367.

55) Baker, *Days of Fire*, p. 465.

56) *Ibid*, p. 517.

57) CNN, “Iraq drives Bush's Rating to new low,” *CNN*, March 14, 2006; Smith, *Bush*, p. 488.

Generals.”⁵⁸) The Republican Party’s “thumpin” loss in the November Midterm elections, therefore, came as no surprise. Exit polls showed that 36 percent of voters cast their ballots to oppose the President, while 57 percent of the voting population disapproved of the performance.⁵⁹)

The American people were sending a clear signal that they wanted the Bush administration to withdraw from the war in Iraq to prevent further losses. But criticism of the war and the pressure of the Midterm elections made it less likely that the White House would withdraw troops or make any substantial changes to its existing strategy. This was because doing so was perceived by President Bush and his administration as an admission of its own shortcomings.

The decision to replace Secretary Rumsfeld is a good example. After the Revolt of the Generals, Rumsfeld had become “a potent symbol of intransigence” within the Bush administration.⁶⁰) Officials within the Republican Party preferred replacing him before the elections as they believed it would have demonstrated to the public the administration’s willingness to respond to their concerns. But the White House concluded that it would be equally damaging to replace the embattled Secretary before the Midterms as it would be a tacit acknowledgment of the administration’s inability to effectively manage the war; it would have shown “how far off course his presidency had drifted.”⁶¹)

When Secretary Rumsfeld’s resignation was announced just a couple of days after the elections, Republicans in Congress were “spitting mad,” convinced that the timing of the decision had cost them the majority.⁶²) But the decision illustrated the White House’s focus on exhibiting confidence and competence. The electoral concerns aside, the concerted effort to project this image was strongly influenced by criticism of the war that increasingly focused on Bush’s leadership. Pundits openly questioned the President’s ability to lead, with television news segments debating whether “George Bush’s mental weakness” was “damaging America’s credibility at home and abroad.”⁶³)

58) Editorial, “The Generals’ Revolt,” *The Washington Post*, April 18, 2006; David S. Cloud, Eric Schmidt, and Thom Shanker, “Rumsfeld Faces Growing Revolt by Retired Generals,” *The New York Times*, April 13, 2006.

59) Baker, *Days of Fire*, p. 509; Peter Baker, “Rove Remains Steadfast in the Face of Criticism,” *The Washington Post*, November 12, 2006; CNN, “Exit Polls,” CNN, available at www.cnn.com/ELECTION/2006/pages/results/states/US/H/00/epolls.0.html (accessed on April 20, 2021).

60) Robert Draper, *Dead Certain: The Presidency of George W. Bush* (NY: Simon and Schuster, 2007), p. 398.

61) Baker, *Days of Fire*, p. 453, p. 481.

62) *Ibid*, 502. There were, of course, other factors to consider, most notably that President Bush only interviewed Rumsfeld’s successor, Robert Gates, on November 5, just a few days before the elections. Nonetheless, the White House had ample time to consider candidates and declined to do so due to the message it would convey.

President Bush became agitated with this perception. A question about the Revolt of the Generals in April drew an “irritated” response from a “peeved” President Bush who defiantly answered that he was the decider who “decided what is best.”⁶⁴ He frequently bickered with reporters over his use of phrases such as “stay the course” and “winning” to describe the war in Iraq.⁶⁵ Fundamentally, he was frustrated why the public failed to see the importance of the war with the clarity that he did; “I am in disbelief that people don’t take these problems seriously,” the President privately complained.⁶⁶ Criticism of the war only seemed to reinforce his belief that it was his “sheer force of will that was holding the line between winning and losing the war” that “everybody else was ready to abandon.”⁶⁷

Widespread distrust of his judgment thus appeared to threaten his self-esteem. This, in turn, seems to have triggered psychological defensive mechanisms that affected the President’s decision-making and specifically contributed to the Surge decision. Reaction formation can be found most notably in his interactions with the ISG. President Bush’s promise to cooperate with the bipartisan group proved to merely be a rhetorical tool to demonstrate his willingness to listen to outside counsel and adopt change. Members of the ISG quickly realized that the President was not seeking advice and was instead more interested in persuading the group of his view of the war.⁶⁸ The group’s report was understood to be “dead on arrival.”⁶⁹

Even after it decided to deploy additional troops to Iraq, the White House made both public and private efforts to show that it was not rejecting the ISG’s recommendations. For example, Hadley deliberately described the new strategy as “Baker-Hamilton plus a surge,” referring to a section of the ISG report that mentioned the feasibility of “a short-term redeployment or surge of American combat forces to stabilize Baghdad.”⁷⁰ But members of the ISG lamented that the “heart and soul” of the group’s report were not being fulfilled.⁷¹ Similarly, the administration stressed that the public’s concerns were being sincerely addressed in response to criticism that it was being overly stubborn and unresponsive.

Isolation made the Surge option more attractive as it helped the Bush administration focus on certain aspects of the war that had been more successful than others. The administration would hang on to certain political developments such as

63) Ibid, pp. 478-479.

64) Ricks, *The Gamble*, p. 40; Baker, *Days of Fire*, p. 453.

65) Baker, *Days of Fire*, p. 494, p. 503.

66) Ibid, p. 496.

67) Ibid, p. 507.

68) Woodward, *The War Within*, p. 214; Smith, *Bush*, p. 528.

69) Peter R. Mansoor, *Surge: My Journey with General David Petraeus and the Remaking of the Iraq War* (New Haven, CT: Yale University Press, 2013), p. 51.

70) Woodward, *The War Within*, p. 314; Baker, *Days of Fire*, p. 514.

71) Woodward, *The War Within*, p. 314.

the election of the interim government in Baghdad, the ratification of the new constitution, and the election of a permanent government. While offering a sense of hope, fixation on the next milestone that seemed achievable led to optimism that made it hard to think about the war in a more comprehensive manner.

Especially regarding the Surge and the transition to counterinsurgency tactics, the US military's experiences in Tal Afar in 2005 were pivotal, and the example of Colonel H. R. McMaster and his troops was a crucial foundation of the 'New Way Forward.'⁷² What was ironic about the episode, however, was that it was the result of a "free-lanced, almost rebellious undertaking by one Army colonel and his unit."⁷³ Focusing on the positive outcomes in isolation rather than the broader context in which it transpired bred optimism that a Surge would succeed.

Lastly, it has been well established that President Bush was in deep denial about the state of Iraq and the ongoing war. This applied to a wide range of issues including criticism over whether the initial decision to invade Iraq was appropriate given the absence of weapons of mass destruction and public outcry over the use of torture or advanced interrogation techniques.⁷⁴ These issues notwithstanding, it has also been extensively documented that the president was reluctant to hear reports that the war was being lost, and that he refused to believe these reports.⁷⁵

Collectively, the continued public scrutiny of the war in Iraq, expressed doubts about his administration's ability to lead, the outcome of the Midterm elections, and the ISG report published in early December strongly suggested that the only option available to President Bush was to end the war. But President Bush refused to accept. Rather than consider withdrawal as a possible solution, he flatly rejected it as defeat. This caused him to consider only ways in which the war could be won, and his focus contributed to the conclusion that the Surge, coupled with the transition to a counterinsurgency strategy, was not only viable but also effective. Thus, while President Bush and his advisors understood the political risks involved, the decision was not much of a 'gamble' but rather the new and 'right' way forward.

Conclusion

How do leaders resolve the electoral dilemma they face when the public turns against costly wars and other unpopular foreign policies? This article has demonstrated that psychological mechanisms play an important role in the

72) Jay B. Baker, "Tal Afar 2005: Laying the Counterinsurgency Groundwork," *Army*, Vol. 59, No. 6 (2009), pp. 61-68.

73) Woodward, *The War Within*, p. 38.

74) Bob Woodward, *State of Denial: Bush at War, Part III* (NY: Simon & Schuster, 2006).

75) Stephen B. Dyson, "George W. Bush, the Surge, and Presidential Leadership," *Political Science Quarterly*, Vol. 125, No. 4 (2010/2011), p. 576.

decision-making process. In addition to providing information about the electoral consequences of their actions and decisions, polls are indicative of the public's beliefs about the competence and judgment of leaders. These signals generate two psychological mechanisms. On the one hand, it makes it less likely for leaders to withdraw from costly wars as doing so is perceived to be a tacit acknowledgment of the public's criticism of leadership. Moreover, doubts about the competence of leaders constitute threats to their self-esteem. This triggers defensive mechanisms such as reaction formation, isolation, and denial, all of which increase the likelihood that doubling down is the right and effective option.

The empirical section has shown that these mechanisms played an influential role in the Bush administration's decision-making process in 2006 that led to the Surge in Iraq. In addition to the mechanisms described above, notable is the timing of the decision and how it was concluded in a relatively short period of time in the Winter. The midterm elections prevented meaningful reviews of the war in Iraq due to fear that any indication that the Bush administration was considering change would expose the White House's own concerns about the war, implicitly admit their mistakes, and confirm the public's doubts about leadership. Losing the elections not only appeared to relieve President Bush from such pressure but also made him more determined to show that trying to win the war by committing additional troops and resources was the right thing to do and likely to achieve success. While there were other factors at play, these psychological pressures contributed to the substance and process of the decision-making towards the surge.

Long and costly wars, and unpopular foreign policies that they represent, are problematic for leaders as it diminishes their chances of staying in office. The psychological approach adopted in this study contributes to the field's understanding of why decision-makers maintain and double down on existing policies by proposing additional mechanisms through which decisions are made. This is not intended to replace existing arguments that rely on rationalist assumptions but rather complement them to provide a more comprehensive account of leaders' choices.

Specifically, this article contributes to the literature by highlighting alternative mechanisms through which public opinion impacts foreign policy. Most work on this topic focuses on political accountability and rationalist assumptions about how leaders interpret polling information. In contrast, this study explores the psychological impact of public opinion on decision-making and how leaders internalize the messages conveyed by the public through polls. Incorporating insights from both rationalist and psychological approaches is an important endeavor that enriches our understanding of key decisions and outcomes. Empirically, this article reviews the policy deliberations in 2006 that led to the Surge decision to describe how the US strategy in Iraq evolved.

Despite these contributions, several aspects of the claims made in this article require additional research. As more information on the Iraq war and the Bush

administration is released, the decision-making process described in this article needs to be updated and verified. There is also a compelling need to compare the case with President Obama's similar Surge in Afghanistan in 2009. Future research that investigates whether similar pressures existed in the Obama administration should further confirm the existence and importance of psychological effects. If they were absent, the comparison between the cases should render a more detailed description of the conditions under which defensive mechanisms are triggered and how leaders respond to threats against self-esteem differently.

Further research could also explore to what extent the psychological framework introduced here can be generalized. While this article has specifically focused on war duration, I have suggested that the underlying logic can also be applied to other areas of foreign policy. Given this, it is necessary to examine whether the nature of opposition against ongoing wars is different from criticism of other initiatives, and particularly whether it fosters similar pressures that induce similar psychological responses. Empirically, future research will need to also compare the Obama administration's decision to deploy additional troops to Afghanistan in order to further confirm and detail the psychological pressures that compel leaders to double down.

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The Application of Non-Kinetic Effects in Modern Warfare

Kwang Ho Chun

Abstract

Over the past two decades, non-kinetic effects have become core to the warfare undertaken by democratic countries. International security and human rights issues are now prominently at the forefront of international discourse, and these political areas have influenced profoundly military applications of force. Accordingly, the strategic environment of warfare has shifted; military strategists are now forced to avoid lethality in warfare wherever possible. In contrast, asymmetric enemies, like international terrorist groups, have tended to show their military power. In this new paradigm, the United States and its allies are shifting military doctrines away from traditional concepts such as overwhelming force or air superiority and are seeking new ways to protect international peace without avoidable casualties and collateral damage. This study argues that non-kinetic effects-based operations will shape these new strategies in the next era of international security and human rights.

Keywords: *Non-kinetic Effects, Modern Warfare, Clausewitz, Asymmetric Warfare, Effect-based Operations*

I. Introduction

Military futurists and strategists are primarily interested in identifying the characteristics of future wars. Students in military academies concentrate on this subject and conduct long discussions to identify the new concepts of war. These studies ultimately contribute to doctrines, plans and programs of development, and the structure of armed forces. This is not simply a thought experiment as identifying the trends of modern warfare correctly will afford states the valuable time needed to prepare and develop their capabilities.

American specialists are some of the most active in this field, vibrantly discussing fourth-generation warfare or the next “revolution in military affairs,”¹⁾ which are interrelated with information technology. However, both concepts cannot be generalized to be incorporated into the international system because each country exists within its own unique conditions. For example, notions that are predicated on dominant power plans sustained by information technologies cannot be as readily applied to most of the actors in the international system which are one or two levels below, and they can conduct warfare only following more traditional methods such as the Clausewitz paradigm: “victory through destruction.”²⁾ Two main groups may be identified in this contemporary context: dominant power leaders who hold sophisticated military measures and those who are only equipped with conventional weapons/capabilities. We can see properties immanent for the full spectrum of “military revolutions,” characteristics for pre-industrial or industrial war and war in the information age. The cases of Kosovo, the Persian Gulf, and Afghanistan may be good examples. The NATO or the coalition forces led by the United States were equipped with some of the most advanced technologies, and they often fought against troops that were sometimes equipped with primitive or legacy weaponry and equipment. It is difficult to predict far in advance the developments in military affairs as theatres are broad and new technologies can reshape and have done the entire battlefield. However, as R&D and production now take place over decades, most of the military scenario for the first half of the new century is in large part decided – at least in terms of the main capabilities that will be utilized. Nuclear weapons may be expected to remain a means for deterrence and play a non-kinetic role like during the Cold War when this may be expected to prevent destructive wars. The characteristics of conflict will depend on the actors who will be involved and their non-nuclear

1) Michael Muolo. “Challenges in Modern Warfare.” *ISSUP Bulletin*, Institute for Strategic Studies, University of Pretoria, 2015, 3-4.

2) “The very concept of war will permit us to make the following unequivocal statements: The destruction of the enemy forces is the overriding principle of war, and, so far as positive action is concerned the principal way to achieve our object. Such destruction can usually be accomplished only by fighting.” Carl von Clausewitz, *On War*, Princeton, NJ, Princeton University Press, 2018.

military capabilities. At present, the United States dominates military affairs over the other players on the international stage, and they dictate many of the rules and dimensions of ongoing conflicts. Due to the United States and its major allies' overwhelming superiority, near-term conflicts with the engagement of Western countries will be expressed in the forms of asymmetric and limited war. However, the characteristics of conventional warfare may be reasonably assumed to be preserved especially in the relationships among the underdeveloped countries. However, dominant forms of military operations will be political – military interventions conducted by western states, which will be threaded their national interests, international security, or human rights.

Thus, the application of kinetic power or force in military operations will be limited under asymmetric warfare. In addition, the dominant power must adapt to more diverse non-kinetic measures, which will include non-lethal weaponry and information technologies that may allow them to achieve their goals whilst avoiding unintended casualties and politically costly collateral damage.

This paper will argue that non-kinetic effects are set to take a more central role in modern warfare, as carried out by the dominant powers. This is because they are faced with new kinds of challenges – asymmetric warfare and globalization in both security and military capabilities – and importantly these challenges have grown in magnitude to the point where existing doctrines are failing. The characteristics of military affairs during the Cold War, posturing and proxy wars, have receded in the first quarter of the 21st century and are generally expected to continue to do so. However, the countries that remain strongly against the United States, such as North Korea or Iran, will stay strongly motivated to acquire and bolster a capability for Weapons of Mass Destruction (WMDs) and, in particular, nuclear weapons. At the same time, previously distant theatres of warfare will become only more tied to the domestic political realities of the states deploying forces. International awareness of conflict has grown steadily and global communication networks are deepening, especially in poorer and previously unconnected areas. In 2021, this contributed to a cascading effect of new pressures that overwhelmed and reshaped entirely the military operations conducted by the United States in Afghanistan within a matter of weeks. This study will demonstrate that non-kinetic weapons are emerging as important instruments in addressing both new and persistent military challenges and establish that dominant states will conduct other non-kinetic operations with a focus on the elements of information technology that will influence people.

II. The Characteristics of Modern Warfare

i. Evolutions in the Centre of Gravity

The expression of warfare has varied over the history of human conflict. In accordance with the technological development of weapons systems in the 21st century, warfare has changed decisively and military power has pivoted around the largest leaps forwards in military technology. In the previous generations of warfare, the decisive factor was kinetic weaponry. The smoothbore musket (from the 18th century) was employed on a linear battlefield and low trained soldiers. In the late 1800s, rifled muskets, breechloaders, barbed wire, machine guns, and indirect fire were employed similarly but to a much more destructive effect. This caused a revolution in tactics, where the focus was placed on the base of the firepower and troop movement; however, the battlefield had remained linear. World War II solidified the third generation of warfare with increased firepower and three warfare environments - ground, sea, and air.³⁾ Contemporary revolutionary advances in the precision of weapon systems and information technology allowed the use of a single weapons platform, such as aircraft, to destroy multiple targets with great confidence of success. It has become fundamental to 21st-century warfare that “precision engagement” is one of the main operational concepts⁴⁾ for the highly developed states. At the beginning of the new century, the United States and its allies have achieved superiority in Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) technologies so that they can operate against any potential enemy while commanding and controlling space. New satellite technology supplemented aircraft and surface intelligence systems, delivering new levels and types of information. Precision weaponry now enhances the viability of small quantities of kinetic ammunition, which strike intended targets and reduce collateral damage and incidental injury for non-combatants. Advanced technologies allow the development of new planning guidance and concepts such as effect-based operations which allow the use of larger-scale measures, from non-kinetic arsenals.

ii. Adapting to New Challenges

The contemporary world is under a system of joint vessels. Events on one side of our planet can influence the other regions and continents. Globalization goes forward step by step and involves itself in new areas of human life. Futurologists

3) Michael Muolo. “Challenges in Modern Warfare.” *ISSUP Bulletin*, Institute for Strategic Studies, University of Pretoria, 2015, 3-4.

4) Joint Chiefs of Staff. 2000. “Joint Vision 2020. America’s Military: Preparing for Tomorrow.” Washington, D.C.: National Defense University, Institute for National Strategic Studies. <http://www.dtic.mil/dtic/tr/fulltext/u2/a526044.pdf> (accessed April 14, 2021).

seek to formulate visions, projections, and predictions about the development of politics, economics, science, and our lives while military strategists think about the nature of future conflicts in the post-Cold War era and the Information Age. In 1965, Bernard Fall expressed that the world is living in “the Century of Small Wars.”⁵⁾ Indeed, since World War II, the world has experienced enormous military conflicts between political blocs, democracy, and communism. Others have defined the newest concepts of 4th generation warfare for its accommodation of non-state actors such as transnational terrorist organizations and concentrated on direct psychological influences on the will to fight. In the future, asymmetric adversaries may strive for global dispersion, operate from networked structures, and avoid decisive engagement with conventional forces on land, sea, or air.⁶⁾ Adversaries will continue to rely on uniting principles rooted in common values of systems, profit motives, and/or cultural bonds. The scientists and strategists agree that the new battle space will have four dimensions and they create a bigger picture for the information war, which can lead to blurred distinctions between peace and war. For instance, Chun⁷⁾ has compared paradigms of “old” and “new” wars. He wrote about the military operations in the “old” war pattern were conducted by mass armies and their goal was to destroy the enemy and seize his territory. Traditionally, military forces were located in large areas, and the battlefield has had a linear structure. The warfare was conducted on the ground, at sea, and in the air. Yet, the decisive role was always played by land forces. Priority targets were soldiers and their weapons. The kinetic fire effort was concentrated on the main axis of the land force’s advance. This logic has been adopted for use on the battlefield. The main factors for victory were kinetic attacks, destruction of the enemy’s ability to conduct war, and the occupation of their territory. Chun also describes the paradigm of “new” military conflicts. He argues that military operations of the future will be conducted by small professional forces, and their aim will be disorganization of the enemy state and its armed forces, not simple destruction.⁸⁾ The battlefield will be non-linear, without discernable differences between the front and the rear areas. The warfare will be multidimensional and precise weapons will be important and useful. The political and military management centers will belong to the highest priority targets. The main fire supports effort will cumulate on the most important objects. The strategy will have supremacy over tactics and the criteria of success will be the defeat of

5) Bernard B. Fall. “The Theory and Practice of Insurgency and Counterinsurgency.” *Naval War College Review*, L21, No.1, 2013, 46–57.

6) David W. Pendall, “Effect-Based Operations and the Exercise of National Power.” *Military Review* (February 2014), 21.

7) Kwang Ho Chun. “‘A War’ and ‘The War’: Conceptualizing Modern US Security Cooperation”, *The Journal of Peace Studies*, Vol. 20, No.2, 2019, 133-148.

8) Kwang Ho Chun. “‘A War’ and ‘The War’: Conceptualizing Modern US Security Cooperation”, *The Journal of Peace Studies*, 133-148.

political and military control and command systems, disorganization of the economy, transportation and communication nets, but, notably, without occupying the enemy's territory and destruction of infrastructure.

iii. Future Paradigms and Preparedness

How will a typical scenario within military conflicts for the first half of the 21st century be characterized? This question has been raised by many scientists, politicians, and military planners in countries all over the world. By analysing diverse concepts of contemporary military operations such as Desert Storm, Allied Force, Enduring Freedom, and Iraqi Freedom, they try to give a rational answer to this question. They try to describe the characteristics of the strategic environment in the 21st century that have made these conflicts difficult to resolve decisively. What will be the relationships between actors on the world stage? The expression of this question could come in various ways. The logic of the development of the international system suggests that the number of democratic states is gradually increasing, and politics will be driven more and more by ordinary people engaged in democratic procedures. Simultaneously, it will be growing with the power of the mass media as the eyes, ears, and voice of public opinion. Globalization will cause the events, which we treat now as very far in time and distance, to affect us directly anywhere we will live. More and more individuals and institutional actors on the international stage will need to understand the necessity for cooperation and collaboration to resolve global problems.

Information will be the cornerstone, particularly within the domestic political systems that provide tacit support for states to engage in warfare. As much as democratization may thrive in this environment, it is equally probable that repressive states will seek to obstruct and control information, and this may deepen existing rifts between different parties that are presented with vastly different realities. Inter-state military conflicts may become rarer as the worldwide community grows more and more sensitive to casualties and collateral damages. Already this century we have seen tremendous pressure placed on the United States not to enter into Iraq and Russia in response to the invasion of Ukraine; this is only likely to grow alongside interconnectivity. Perhaps, asymmetric warfare will be the dominant type of combat activity. Some specialists claim that future wars will be information wars, but this kind of warfare may be restricted to only a few highly developed states. The "old" Clausewitz paradigm that victory means to destroy the enemy is not being expressed in force.⁹⁾

Meanwhile, the classical approaches such as the one taken by ancient Chinese

9) "The shortest way to achieve one's political objectives is by the destruction of enemy's forces in a major battle. Other, non-military methods of winning are recognized but rarely effective". Michael I. Handel, "Sun Tzu and Clausewitz: The Art of War and On War Compared." Army War College Strategic Studies Institute, Carlisle Barracks PA., 2011, 22.

strategist Sun Tzu may have contemporary applicability: “to gain a hundred victories in a hundred battles is not the highest excellence; to subjugate the enemy’s army without doing battle is the highest excellence.”¹⁰⁾ The Americans rediscovered this idea after the Vietnam War, when they wanted to overcome the Vietnam syndrome. Other countries have intentions in the same direction. Scientists and military specialists reinterpreted this and adapted the classical Sun Tzu thinking to contemporary reality.¹¹⁾ The result of this research became the birth of the concept of effects-based operations, the background of which are two key components of modern warfare: a kinetic and a non-kinetic interaction in the battle space. Kinetic effects on the battlefield are achieved through the application of kinetic weapons.¹²⁾ While non-kinetic effects can be achieved through the application of appropriate weapons or non-kinetic military capabilities such as information operations or other similar activities, the challenge of effects-based operations is the ability to keep the balance between an appropriate combat estimate and kinetic and non-kinetic targeting process. This is ultimately achieved by measuring the effectiveness of military actions and then considering the relationships and dependence between the outcome of military operations and the end of the state desired by the civilian leadership. A potential enemy, in asymmetric combats, will attack with the cheapest measures and resources, target sensitive objectives, and intend to engage only with as many military forces as he can manage. He intends to destroy enemies’ will to fight by exhausting the resources: people, infrastructure, and others. Therefore, the United States and its allies are looking for an adequate and cheaper response to this threat by developing concepts of effect-based operations.

III. Effect-based Operations and Non-Kinetic Effects

i. Definitions and Conceptualization

The British Defence Command Paper describes the concept of “effect-based operations”¹³⁾ as follows:

10) Sun, Tzu. *The Art of War*. Oxford: Oxford University Press, 2021.

11) The US Secretary of Defence, Caspar Weinberger, used “old masters of war,” Sun Tzu and Clausewitz’s main ideas and announced his six tests in 1984, which are presently known as Weinberger Doctrine or Weinberger Criteria. The *Art of War* by Sun Tzu has implemented in the U.S. military colleges in the late 1970s. Michael I. Handel, “Sun Tzu and Clausewitz: The Art of War and On War Compared.” Army War College Strategic Studies Institute, Carlisle Barracks PA., 2011.

12) Kinetic weapons’ effects are transmitted, by the motion of a substance, such as a projectile, a shock wave, or heat. David W. Pendall, “Effect-Based Operations and the Exercise of National Power.” *Military Review* (February 2019), 21.

13) The newest Army doctrinal documents mention effects-based approach as “a way of thinking

Effect-Based Operations is a new phrase, but it describes an approach to the use of force that is well established – that military force exists to serve political or strategic ends. We need a new way of thinking about this that is more relevant to today’s strategic environment. Strategic effects are designed to deliver the military contribution to a wider cross-governmental strategy and are focused on desired outcomes. Our conventional military superiority now allows us choices in how we deliver the effect we wish to achieve. We have begun to develop our military capabilities so that we can provide as wide as possible a range of options to fulfil operational objectives without necessarily restoring to traditional attrition warfare.

Effect-based operations help identify which objectives the military can support to achieve strategic aims. We need to determine the target of the effect --- understanding , will, or capability and the type of the effect. It should be also determined which actions or combination of actions will help us achieve these effects. It seems that the increased importance of affecting understanding and will, those non-kinetic effects, should become much more important than kinetic effects. The relationship among the aims, objectives, effects, and actions is not simple with the boundaries among the strategic, operational, and tactical also not being so clear-cut. Note that a tactical action can render a strategic effect, or a strategic action could bring about an operational effect. The critical thing is synchronising and coordinating all of these activities. This must be achieved through coherent planning and kinetic and non-kinetic targeting. Effect-based operations seek to move away from destruction centric, attrition-based, and linear warfare. They focus on assessing the behaviour of adversaries to determine whether they will choose to surrender or not. The means or “effectors” can comprise both the use of force and the application of non-force measures such as psychological operations (Ho 2013, 2).

ii. Application in Practice

In accordance with governmental policy, the new British military contingent was deployed to Afghanistan in May of 2016 and stayed there for three years. During the summer of the same year, the total number of British troops in Afghanistan increased to 5700.¹⁴⁾ “*Counter-insurgency*” and “*securing a framework*” were the official

that encourages a broader and longer-term view of situation. It focuses on outcomes rather than activity, and advocates collaboration and synchronized actions from military and non-military forces. It requires a thorough understanding of the strategic environment in order to determine the appropriate ends and the orchestration of violent and non-violent actions to achieve the desired effects.” Ministry of Defence, UK., Defence Command Paper 1, 2021.

14) 3.300 troops to Helmand province was the most centered opium production; 1.000 troops were to reinforce the garrison in Kabul; 1.000 engineers were to build a camp; and 300 instructors

objectives of the British soldiers. They had sufficient capabilities to achieve kinetic effects: attack helicopters, artillery, and armored vehicles. They were prepared to conduct a counter-insurgency mission, but the British soldiers could act only in self-defense in accordance with the rules of engagement. This raised a question: how can they accomplish their mission by using kinetic weaponry in a place where the enemy does not wear a uniform? How are they prepared to find suicide bombers among the civilian crowd who have been trained by fanatic Taliban?¹⁵⁾

The example presented above substantiates that from the beginning of the 21st century, military forces from democratic countries are increasingly becoming involved in asymmetric warfare and miscellaneous operations other than war. Here they cannot use limited-extension kinetic weapons to achieve the designated goals due to political or humanitarian pressures. It appears that in the near future armed conflicts will only become more political, expressed as regional conflicts, people's revolutions, insurrections, undeclared wars, covert operations, and United Nations missions, but not total wars¹⁶⁾ with massive usage of kinetic weaponry. In his work "Conflict in a Changing World: Looking Two Decades Forward," Charles Dick writes, "The struggle for territory is now passé. Now competition is for influence, especially in the economic field, and national boundaries are of limited relevance to it."¹⁷⁾

IV. Non-kinetic Effects in Peace Support Operations

i. Unconventional Warfare

As we continue into the 21st century, the world is not free from phobias, crises, conflicts, and wars. Military conflicts and local wars have become the means to resolve ethnical, territorial, religious, or economic problems, especially in Africa and Asia where the nation formation process for many states is ongoing. As such events usually have regional or local dimensions, because of globalization, the international community frequently looks to take action in those situations by using

were for Afghan army training. Christina Lamb, 2016. "The Bandits Wait for The British." *The Sunday Times*, January 29, 2016.

http://www.thesundaytimes.co.uk/sto/news/world_news/article202870.ece (accessed April 14, 2021)

15) Taliban claim that they have 200 suicide bombers, who are ready to assault foreign troops. Christina Lamb, 2016. "The Bandits Wait for The British." *The Sunday Times*, January 29, 2016. http://www.thesundaytimes.co.uk/sto/news/world_news/article202870.ece (accessed April 14, 2021)

16) Whitehurst, Clinton H. "Limited Wars, Civilian Casualties, and Who Must Decide." The Strom Thurmond Institute, 2018, 8.

17) Charles J. Dick, *Conflict in a Changing World: Looking Two Decades Forward*. Camberley: Conflict Studies Research Centre, 2012, 5.

military forces. The United Nations' regulations allow for the conduct of operations that protect international peace and security or serve to resolve inter- and intra-state conflicts. International peace activities can have the following forms: preventive diplomacy, peace-making, peace-keeping, peace-building, peace-enforcement, disarmament, and economic and political sanctions. Analysis of peace operations that were undertaken since the 1990s indicates that they were primarily conducted in the regions afflicted by multicultural, ethnic, and religious conflicts. The changes in the international situation and the balance between the superpowers were additional factors that decided how they persisted. This study considers the peace operations undertaken from the 1990s onwards because the bipolar international system which characterized the Cold War has collapsed. As a result, the new players have appeared on regional stages and they have achieved independent, strong positions. Subsequently, regional conflicts have become more bloody and brutal. Human rights and international war law have often been ineffectual. Public opinion in democratic countries has strengthened and the international community has reacted by sending military forces to prevent regional conflicts, ethnic cleansing, and human rights violations. These military forces, prepared historically for classical warfare, have had to learn new tactics and techniques. The heavy equipment and kinetic weaponry, which evolved over centuries, have become often useless in peace operations. Experiences from Somalia, Cambodia, and Bosnia and Herzegovina where civilians were massacred and banished show that soldiers participated in peace operations by receiving other non-kinetic tools and changing rules of engagement.

ii. Small Wars

The types of operations described above have dominated the world system since 1989¹⁸⁾ when the Cold War had ended. However, as Bernard Fall wrote about the coming "Small Wars Century" twenty-nine years ago, this view can be updated and can be said that the coming era of military interventions on behalf of the international community will be connected with military peace operations.¹⁹⁾ What is the characteristic of these types of activities? First, it is limited use of the conventional

18) 19 military operations can be categorized as interventions. 1989: Panama – US intervention, 1990-91: Kuwait-coalition operation, Iraq-air enforcement; 1992-95: Somalia- US-led intervention, Bosnia-UN/NATO operation;1994: Rwanda- French operation, Haiti-US intervention; 1994-95 Chechnya-Russian domestic operation; 1995-2003: Bosnia-NATO led operation;1997-98: Albania – Italian led operation; 1999-2003: Kosovo – NATO operation, Chechnya- Russian domestic operation; 1999-2002: East Timor-Australian led operation; 2000-02 Sierra Leone- UK led operation; 200: Macedonia-NATO operation;2001-03: Afghanistan-international coalition;2002-03: Cote d'Ivoire-French peacekeeping operation, Salomon Islands-Australian led operation; 2003: Iraq-coalition operation by US/UK/Australia.

19) Bernard B. Fall, "The Theory and Practice of Insurgency and Counterinsurgency." *Naval War College Review*, L21(1), (2013), 46–57.

kinetic weapons only, the movement of large groups of refugees who have escaped from the conflict areas. Next, the permanent presence of the media is a new challenge for commanders and troops because war will be reported on-air through diverse broadcast platforms on the front line. They will need to try to influence public opinion about the protection of non-combatants and collateral damage and to turn to non-kinetic methods of fighting. In this context, using non-kinetic military measures, where possible, seems a reasonable solution.

iii. Limited Wars

The justification for using non-kinetic measures in modern warfare is well documented in international humanitarian law documents.²⁰⁾ One of the most important principles in modern warfare is that the “parties of the conflict shall at all times distinguish between the civilian population and combatants, and between civilian objects and military objectives, and accordingly shall direct their operations only against military objectives.”²¹⁾ Parties in the conflict will also attempt to “remove the civilian population, individual civilians, and civilian objects under their control from the vicinity of military objectives.”²²⁾ The next principle forbids attacks on objects which “may be expected to cause incidental loss of civilian life, injury of civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage.”²³⁾ On the other hand, defenders would not use civilians or civilian property “to render certain points or areas immune from military operations. In practice, this means that it is hard to conduct war fighting because of unidentified enemies located in the area, especially in cities.

In accordance with western standards, which dominate the international law system, human life is the priority for protection. Therefore, this point of view has to be reflected in the approach to the development of new weapons systems that can disable rather than kill. Developed countries will seek to avoid collateral damage and especially casualties when they are engaged in military conflict. This is because abuse of violence is considered to be barbarism in the international communities. The most recent conflicts in the Middle East (Syria, Afghanistan, and Iraq in particular) illustrate this tendency very well. The victorious coalition led by the United States, successfully or not, sought to build democracy as well as provide recovery for the infrastructure which was demolished during the war. From this perspective, there is an expectation that warfare will be conducted by developed

20) International Committee of the Red Cross (ICRC). 1949. Geneva Convention IV; International Committee of the Red Cross (ICRC). 1977. Additional Protocol of 1977 to the Geneva Conventions

21) International Committee of the Red Cross (ICRC). 1977, Article 48.

22) International Committee of the Red Cross (ICRC). 1977, Article 58.

23) International Committee of the Red Cross (ICRC). 1977, Article 51.5b & 57.2b.

countries with the increased utility of precision weapons and other non-conventional military resources.

V. Measures of Non-Kinetic Effects and Human Factors in Modern Warfare

i. The Impact of Non-Kinetic Effects

Non-kinetic effects can be delivered in one way by a group of non-explosive weapons, sometimes called non-lethal weapons. They may involve high-power microwaves or directed electromagnetic energy, which can overpower and permanently degrade computer circuitry in short pulses or cause temporary physical discomfort in other applications.²⁴⁾ NATO defines non-lethal weapon as “weapons, which are explicitly designed to incapacitate and repel personnel, with a low probability of fatality and permanent injury, or disable equipment, with minimal damage or impact on the environment.”²⁵⁾

Thus, the definition of non-lethal weapons means, in practice, less-lethal weapons. They are sticky foams, graphite bombs, cyber weapons, high-energy radio frequency strikes, calmatives, acoustic weapons, stink bombs, and anti-traction and anti-reaction chemicals.²⁶⁾ So far, any dream of “war without blood” remains naïve and harmonizes more with science fiction literature than reality partly because the development of non-kinetic weaponry tends to be considerably more expensive.

In the 21st century, the asymmetric enemy hides among the people in the cities, the towns, and other urban areas and attacks his targets unexpectedly. He uses “human shields” and civilian hostages to realize his intent. So, a traditional military response, with kinetic effects including direct and indirect fire and the maneuver of troops, will inevitably result in casualties among non-combatants and cause large damage to sensitive civilian infrastructure. Importantly, the media globally will show and pursue every act of violence conducted by military forces. The commanders and any politicians supporting the war effort will be under the pressure of public opinion and international law. The partial answer to this problem is the application of non-kinetic weapons or non-kinetic combat methods. The Americans began to develop this concept in the 1990s as a part of air power operations. It has since been adopted during Operation “Desert Storm”²⁷⁾ in which about 80,000 of

24) Clay Wilson, “Information Warfare and Cyberwar: Capabilities and Related Policy Issues.” CRS Report. Washington, D.C.: Congressional Research Service (CRS), 2014.

25) Martin Hubbard, “Non-Lethal Capabilities and the Road Ahead.” *World Defence Systems* 19(1), 2017. 105–107.

26) David W. Pendall, “Effect-Based Operations and the Exercise of National Power.” *Military Review* (February 2019), 20–31.

Saddam Hussein's soldiers surrendered after psychological actions and without shooting at US forces.

There has been a struggle among specialists about whether psychological operations are independent kinds of military activity or a part of information operations. However, the consensus seems to be growing that psychological operations are a vital part of information operations. Within the realm of psychological operations, information operations are of four main elements: deception, electronic warfare, operational security, and physical destruction. These elements are dependent on the type of conducted operation. However, many authors consider that in the new environment, psychological operations²⁸⁾ may become the dominant operational and strategic weapon.²⁹⁾ This view suggests that appreciating the value of psychological operations, many countries have developed a doctrine, and have banded specialized units within the last 20 to 30 years. NATO is a good example of this tendency. At the beginning of the 1990s, only several nations from the Alliance had the capability and trained personnel to conduct such operations. There were the United States, Germany, and the United Kingdom. As early as 2004, twenty NATO nations were able to declare that they had, or would soon have, psychological operations forces.³⁰⁾

Paradoxically, western society may be the most sensitive and vulnerable to psychological influences. For instance, the U.S. Congress had to decide to withdraw American military forces from Somalia when the media expressed anger at Somalis dragging an American body through the streets of Mogadishu.³¹⁾ In Bosnia, the Serbian media accused General McKenzie of having raped four Muslim girls. He later said that such baseless accusations had weakened his and the UN's authority

27) In the spring of 2001, the Effect-Based Operation Panel hosted by U.S. Air Force Doctrine Centre formulated the following findings: "EBO is a way of thinking or a methodology for planning, executing, and assessing operations designed to attain specific effects required to achieve desired national security outcomes. An "EBO methodology" improves our ability to use all elements of national power to achieve national policy goals." Effects-Based Operations Panel. "White Paper on Training, Planning and Systems Development for Effects-Based Operations." At the 2nd C4ISR Summit. Danvers, MA: Effects-Based Operations Panel, 2003.

28) Two acronyms that pertain to psychological operations recorded in documents or literature are PSYOP and PSYOPS. The former is found in the U.S. national documents, while the latter is used in NATO terminology and among other Alliance members.

29) Joshua Ho. "The Advent of a New Way of War: Theory and Practice of Effects Based Operations." Institute of Defence and Strategic Studies, no. 67 (December 2013), 1-28.

30) According to NATO sources, the US, Germany, Poland, the UK, France, Spain, Romania, Italy, and Turkey possessed PSYOPS capabilities in 2004, and they could conduct such operations on the tactical or operational level. The other eleven countries will develop those capabilities in the near future.

31) Pascale Combelles Siegel. "Perception Management: IO's Stepchild?" *Low Intensity Conflict & Law Enforcement* 23(2), 2015. 123-124.

and had threatened the safety of troops.³²⁾

In modern warfare, especially in peace support operations, effective communication between the commander and hostile audiences is one of the keys to success. Well-organized and well-conducted psychological operations can efficiently influence the conduct of the campaign, and limit unnecessary casualties.

VI. Conclusion

Commanding military forces are becoming more and more complex. Commanders must not only take account of how to conduct the immediate combat operation itself but must also concentrate on how to manage the broader strategic picture and take account of the whole environmental spectrum.

The technological revolution in military affairs has transformed the classical Clausewitz paradigm of victory through destruction in warfare. Humanity is now at a juncture where the development of technology has raised the destructive capacity of weapons to a point where their utilization also inflicts a tremendous toll on the user. Thus, the requirement for responsibility in using force has grown near-exponentially. Large demolitions seem like an anachronism. Now, it is not a problem of hitting the targets; the problem is finding and choosing an appropriate means to do so.

The concept of effects based-operations, which first appeared during the Gulf War in 1991, is now the central strategic concept underlining warfare in the 21st century. Non-kinetic effects on the battlefield will be expressed in all forms of modern combat operations and, thus, characterize modern warfare. Commanders increasingly need to adapt to it through the application of high technology and non-kinetic tools. At the tactical level, it is undeniable that kinetic weapons systems will remain a mainstay, but these will be supplemented and moderated by non-kinetic effects. Moreover, non-kinetic effects will be the main concentration at both operational and strategic levels. The progressively growing respect for the international system within the world community is a major driving factor moderating warfare; in this context, it stimulates the increasing value of non-kinetic effects in modern warfare. The Geneva Convention (1949) and the additional Protocols from 1977, which reflected experiences from World War II and anti-colonial movements in the 1960s and 1970s, focused on protecting non-combatants and civilians and reducing collateral damage of cities. These precedents have become a foundation and the norm for what warfare can be; the limits they set have only tightened as a function of their becoming increasingly

32) Pascale Combelles Siegel. "Perception Management: IO's Stepchild?" *Low Intensity Conflict & Law Enforcement* 23(2), 2015. 125.

embedded in international institutions and public consciousness.

As the environment, as well as the tactics of the potential enemy, shift, non-kinetic effects will become more important. Due to the military superiority of the United States and its allies under the international system, the potential enemy will approach asymmetric warfare to resist dominant superiority. The adversary will not conduct conventional wars on the open battlefield but will conduct guerrilla warfare. Civilians should be protected by international humanitarian action during military operations as they become increasingly vulnerable to the battlefield migrating to the civilian theatre. Commanders will be under permanent pressure from public opinion to avoid the use of violence wherever possible.

Non-kinetic effects will be the central strategic concept of modern warfare because of the characteristics of current and future military conflicts. Often, those conflicts will be conducted in urban areas and have a limited extent or even could be peacekeeping operations. Considering those factors, using conventional kinetic military measures will not be acceptable for political and humanitarian reasons. The use of non-kinetic methods will, therefore, be critical in asymmetric warfare and include anti-terrorist or counter-insurgency operations in order to avoid civilian casualties and unnecessary collateral damage. The information operations arsenal, which involves physical destruction, deception, operations security, electronic warfare, and psychological operations, will be the most feasible maneuver under the current concept of warfare.

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Disguised Peace and North Korea's Strategic Avoidance on the Korean Peninsula¹⁾

Sangbeom Yoo

Abstract

A recent study on the effect of the withdrawal of U.S. forces from the Korean Peninsula argues that it will not cause instability in the country by showing that no North Korean military provocation is anticipated after the withdrawal. However, I theorize that U.S. forces reduction will, rather, create relatively more peaceful circumstances because North Korea strategically will see to avoid any instability that may stop the withdrawal, which is not North Korea's real intention. Based on this concept of strategic avoidance, this paper hypothesizes a negative relationship between U.S. force reduction and North Korean military provocation, and between the actual size of the U.S. forces and the peaceful behavior of North Korea. The result indicates that peace after force reduction can be explained by strategic avoidance, which means that temporary peace is not North Korea's genuine intention but a byproduct of its devious tactics that aim to have fewer U.S. boots on the ground.

Keywords: *Strategic avoidance, North Korean local military provocations, Forward deployed U.S. forces, US grand strategy, and Force reduction and withdrawal.*

1) This paper, initially, was prepared for MPSA (Midwest Political Science Association) Annual Conference 2021 and updated by comments and suggestions of conference participants. In addition, this work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2020S1A5A2A01040922).

I. Background and Research Question

Although the withdrawal of U.S. forces from Afghanistan was planned for a while, Washington did not expect Taliban military operations to regain control of the country so quickly. This incident makes both Americans and the international community worry about the stability in the region and the American role in the world society.²⁾ This incident raises questions regarding the roles of the forward-deployed U.S. military forces in terms of regional stability and its impact on the overall international status of the United States. The presence of U.S. troops is perceived as helping establish regional stability; thus, in the Afghanistan case, chaos was expected upon the withdrawal of U.S. forces. However, some argue that this may not always be the case. The relationship between the withdrawal of U.S. forces and regional stability may not be significantly strong and there may be no systematical effect on the degree of stability affected by the level of U.S. forces.³⁾ This debate also concerns the question of whether or not the forward-deployed U.S. troops may contribute to the strategy of sustained primacy – particularly after the U.S. executive powers were assumed by former U.S. President Donald Trump. As widely acknowledged, President Trump, a political outsider, celebrity, and CEO of real estate, pursued his own political agenda as opposed to those who preceded him.⁴⁾ The Trump administration seemed to be pursuing U.S. national interests first at the expense of global concerns by popularizing the ‘America First and Make America Great Again’ slogan. This may reflect the fact that the supremacy of US international status is in decline and, thus, building up its own strength is in need.

Two distinct approaches account for the downfall of American hegemony: too much or too little engagement. The former pays more attention to unexpected outcomes that the active engagement of U.S. forces has produced while seeking to enhance the status of the United States. This is the so-called ‘restraint approach’ that is supported by the concept of principled realism that the U.S. National Security Strategy of 2017 was based on. It emphasizes a selective engagement that can maximize U.S. national interests. Over-expansion of American power produced aversion among Americans towards the pursuit of a policy of liberal hegemony that aimed at remaking the world in America’s image.⁵⁾ In a similar vein, Stephen Walt

2) Leo Blanken and Stephen Rodriguez, “The Strategic Logic of a Forever War,” *The Foreign Policy* (September 8, 2021); The Japan Times Editorial Board, “As the U.S. withdraws, Afghanistan’s neighbors must step up (July 9, 2021),” <https://www.japantimes.co.jp/opinion/2021/07/09/editorials/afghanistan-brink-collapse/> (accessed on July 15, 2021).

3) Paul C. Avey, Jonathan N. Markowitz, and Robert J. Reardon, 2018, “Do U.S. Troop Withdrawals Cause Instability? Evidence from Two Exogenous Shocks on the Korean Peninsula,” *Journal of Global Security Studies*, 3(1), 2018, p. 72.

4) Steven Hook, *U.S. Foreign Policy: The Paradox of World Power* (5th Edition) (Washington D.C.:SAGE Publications, 2017), pp.338~339.

argues that the reasons for which U.S. foreign policy repeatedly fails, especially its grand strategy after the Cold War, are attributable to institutional inertia generated by the foreign policy community, the so-called 'Blob'.⁶⁾

On the other hand, the latter line of argument presumes that the peaceful economic development that has taken place since the end of WWII is not normal but abnormal. It argues that this kind of relative peace and advancement is the outcome of active American involvement by saying that "[t]he present world order has favored liberalism, democracy, and capitalism not only because they are right and better – presumably they were right and better in the world in the 1930s, too – but because the most powerful nation in the world since 1945 has been a liberal democratic capitalist nation."⁷⁾

The debate between the two sides seems to have its own logic and it is very challenging to determine which side is more plausible in explaining the failure of U.S. foreign policy. Therefore, exploration of the narrow question that applies to both lines of argument may help explain the underlying cause of U.S. decline more thoroughly. I assume that the difference between the two side lies in the role of U.S. military forces. The retrenchment line of argument places suspicion on the use of the military and the forward deployment of U.S. forces while the Neocon side is fully supportive of the role of front line U.S. 'freedom fighters for global stability.'

Therefore, the article suggesting that forward-stationed U.S. forces may not have any utility in offering regional stability by demonstrating that U.S. troop withdrawal would not cause instability on the Korean peninsula attracted more attention.⁸⁾ This assertion seems to be very important in finding a link that indicates whether or not forward-based U.S. troops produce any positive outcomes. Based on South Korea's case, Avey et al. concluded that "US troop withdrawal does not cause greater conflict, but withdrawals are at times associated with other behaviors, such as conventional arming, nuclear proliferation, and diplomatic initiatives that could affect the future likelihood of war."⁹⁾ With an additive and constructive debate for this argument, this study investigates the effects of U.S. troop reduction on the Korean peninsula in a quantitative way while controlling other factors influencing regional stability, such as North Korean internal problems related to economic downturns, political instability, and so on. This paper will show that the argument

5) John J. Mearsheimer, *The Great Delusion: Liberal Dreams and International Realities* (New Heaven: Yale University, 2018), pp. 4~5.

6) Stephen Walt, *The Hell of Good Intentions: American Foreign Policy Elite and The Decline of U.S. Primacy* (New York: Farrar, Straus and Giroux, 2018), pp. 91~136; Patrick Porter, "Why America's Grand Strategy Has Not Changed: Power, Habit, and the U.S. Foreign Policy Establishment," *International Security*, Vol. 42, No. 4 (Spring 2018), p. 11.

7) Robert Kagan, *The Jungle Grows Back: America and Our Imperiled World* (New York: Alfred A Knopf, 2018), p.9.

8) Avey et al. (2018), p. 72.

9) Avey et al. (2018), pp. 72~73.

that Avey et al. suggested is explained by the concept of strategic avoidance which means that North Korea intentionally creates peaceful circumstances in order not to stop the withdrawal of U.S. forces on the Korean peninsula. Therefore, veiled peace during U.S. force reduction is not sustainable but temporary.

To that end, this paper surveys current literature on the subjects and constructs hypotheses on the role of U.S. forces. Then, it will present a research design and statistical model that will test the hypotheses. The final section will discuss the results of the models and their implications on the effect of U.S. troop withdrawal from South Korea on regional stability.

II. The Debate between US Forces Forward Deployed and Regional Stability

There were several attempts to examine the effects of U.S. troops on host nations with respect to economic growth, crime, relationship, and regional stability. Heo and Ye test the hypothesis that U.S. deployments help economic growth directly and indirectly, although the United States deploys troops for regional security purposes.¹⁰⁾ Similar to Jones and Kane's research, they showed a statistical result arguing that "the positive effectiveness of U.S. troop presence on investment and trade ... may be possible thanks to the improved security provided by U.S. troop deployment in the region."¹¹⁾ Tim Kane also offers the general trend of U.S. forces deployment by demonstrating that "data shows an outright decline that runs counter to conventional wisdom ... [n]ot only is America's global footprint growing smaller in raw and per capita terms, but the size of the worldwide force is trending lower as well."¹²⁾ The decline in force deployment of the U.S. also invites the debate as to whether there was either a positive or negative effect during the force's presence. Michael Allen and Michael E. Flynn devote their attention to the effect of U.S. forward deployments on the crime rate of the host nation and suggested a statistical outcome showing that "[i]n aggregate, the mere presence of troops does not increase the criminal activity in a state; however, there is a conditional effect when we account for a difference in culture between the host-state and the U.S."¹³⁾

Using spatial theory, Michael E. Flynn, Michael Allen and Julie

10) Uk Heo and Min Ye, "U.S. Military Deployment and Host-Nation Economic Growth," *Armed Forces & Society* XX(X, 2017), p. 1.

11) Heo and Ye (2017), p.25.

12) Tim Kane, "The Decline of American Engagement: Patterns in U.S. Troop Deployment," Hoover Institution Economic Working Papers (January 1, 2016), p. 11.

13) Michael A Allen and Michael E Flynn, "Putting our best boots forward: US military deployments and host-country crime," *Conflict Management and Peace Science* Vol. 30, No. 3 (July 2013)), p. 263.

VanDusky-Allen demonstrate how a host nation's foreign policy could be affected by U.S. troop deployment. They argue that "[m]ost states will not decrease their defense burdens in exchange for more US troops if internal hierarchy is strong but external hierarchy is weak. However, as external hierarchy increases in size, the host-state will decrease its defense burden in exchange for more troops."¹⁴ This finding illustrates the dynamics of interactions between Washington and host nations for burden-sharing, suggesting that the host nation's degree of dependence on the United States will, in turn, be dependent on American's commitment to neighboring states. The recent study on public opinion in host states regarding US forward bases by Michael A. Allen, Michael E. Flynn, Carla Martinez Machain, and Andrew Stravers delivers the finding that "contact with U.S. military personnel or the receipt of economic benefits from the U.S. presence correlates with stronger support for the U.S. presence, people and government."¹⁵ Jo Jakobsen and Tor G Jakobsen's research on the willingness of host-country citizens to fight for their country being affected by U.S. troop presence presents some interesting conclusions. The authors showed a statistical result that "once U.S. troop levels reach a certain threshold (between 100 and 500 troops), citizens' willingness to fight drops significantly."¹⁶ Based on this argument, people in host nations are more likely to be influenced by a non-material free-riding incentive rather than their own willingness to bear the burden.

Although it is unfeasible to survey all existing literature, there appears to be enough research to conclude that the effect of the forward-deployed U.S. forces sometimes yields positive or negative outcomes.¹⁷ However, the effect of withdrawal or reduction of U.S troops received relatively little attention although it is very important for the U.S. grand strategy. The presence of U.S. troops may not make any difference but perhaps not always so. The article published by Avey et al. drew attention to this perspective. They argue that the withdrawal of U.S. forces may not be related to immediate regional instability but negative factors causing

14) Michael A. Allen, Michael E. Flynn and Julie VanDusky-Allen, "Regions of Hierarchy and Regional Security: US Troop Deployments, Spatial Relations, and Defense Burdens," *International Interactions* Vol. 43, No. 3 (2017), p. 18.

15) Michael A. Allen, Michael E. Flynn, Carla Martinez Machain, and Andrew Stravers, "Outside the Wire: U.S. Military Deployments and Public Opinion in Host States," *American Political Science Review*, Vol. 114, No. 2 (2020), p. 326.

16) Jo Jakobsen and Tor G. Jakobsen, "Tripwires and free-rider: Do forward-deployed U.S. troops reduce the willingness of host-country citizens to fight their country?" *Contemporary Security Policy* Vol. 40, No. 2 (2019), p. 135.

17) There was a debate on how to stabilize Iraq in June 2007. The Korean Model was preferred to the Vietnam Model because the former produced economic prosperity and political stability by the US presence while the latter produced an utterly opposite outcome including losing South Vietnam after U.S. withdrawal from Vietnam War. Glenn P. Hastedt, *American Foreign Policy: Past, Present, and Future* 12thEd.(Maryland:Rowman&Littlefield,2020),p.98.

instability from a long-term perspective. This counterintuitive argument could be misunderstood as though it suggested that a reduction of U.S. forces in the Korean Peninsula does not affect the strategic calculation of active players in the region such as North Korea and South Korea, and the long-term effect may be minimal if negative factors are well-controlled. To reduce unexpected outcomes and to solidify the argument, I will use the concept of strategic avoidance that will help explain temporary peace during a U.S. withdrawal. North Korea might welcome U.S. troop reductions from the Korean Peninsula; thus, it may intentionally avoid any provocations that can stop a withdrawal. Therefore, this short-term effect may be an outcome of North Korean strategic calculations.

III. Research Design

A. Theory and Hypothesis

The concept of strategic conflict avoidance was developed for explaining diversionary war theory. When leaders have incentives to divert internal instability, these circumstances offer information to a potential target state such that they keep a low profile by cooperative means. Using quantitative data, Benjamin Fordham and David Clark corroborate the argument that strategic conflict avoidance accounts for the target state's behavior.¹⁸⁾ Although applying this logic to the Korean Peninsula is not without problems, North Korean behavior can be interpreted as strategic avoidance. The meaning of 'strategic' implies temporary or un-candid intentions in regards to its behavior and 'avoidance' stands for cooperative behavior in this research. Based on this argument, possible hypotheses are as follows:

1. North Korea is less likely to be aggressive when the U.S. force withdrawal is ongoing.
2. The aggressiveness of North Korea is negatively related to the number of U.S. troops.

If we find an observable regularity that peaceful behaviors are statistically significantly related to the periods of U.S. force reduction, not with normal periods, the existence of strategic avoidance behavior can be identified. In addition, if North Korean cooperative behaviors and U.S. troop size are negatively associated, which means North Korea acts more aggressively when there are smaller numbers of forces

18) David H. Clark, "Can Strategic Interaction Divert Diversionary Behavior? A Model of U.S. Conflict Propensity," *The Journal of Politics*, Vol. 65, No. 4 (Nov., 2003), p.1013; Benjamin O. Fordham, "Strategic Conflict Avoidance and the Diversionary Use of Force," *The Journal of Politics*, Vol. 67, No.1 (Feb., 2005), p. 131.

stationed on the Korean Peninsula, this strategic avoidance argument can be verified.

B. Model and Dependent Variables

To test these hypotheses, a statistical model is introduced:

$$CB_i = \alpha_i + \beta_1(NK \text{ Domestic Factors})_i + \beta_2(Outside \text{ Factors})_i + \varepsilon_i$$

North Korea's cooperative behaviors (CB) are affected by both internal and external factors over a certain period of time. They are measured by local military provocations committed by North Korea. How aggressive or cooperative North Korea has been can be well-expressed by these local provocations that have occurred on land, sea, and air, as well as in cyberspace. The military provocation data was collected on a monthly basis from defense-related documents.¹⁹⁾ The presence of any provocation in a certain month is coded '1'; otherwise, it is '0.'²⁰⁾ A military local provocation is chosen as a dependent variable because North Korea usually utilized these incidents to deliver political signals to South Korea and the United States. Therefore, the presence or absence of such an event is a reasonable way to capture its cooperative intention, which is difficult to be operationalized and measured.

C. Independent Variables

In this research, the main cause of temporary peace is US force withdrawal from the Korean Peninsula. The U.S. military deployed forces during the Korean War to defend South Korea from North Korea's invasion, supported by the Soviet Union initially and China subsequently, and kept them stationed even after the Military Armistice Agreement was signed in 1953. Over the years, five significant changes to the US forces troop levels downsized from 325,000 in 1953 to 28,500 at present. Based on the hypotheses, the period of force reduction will be identified and coded '1' during the period of reduction but '0' when there is no reduction. Whether a negation period should be included or not was contemplated, and it was excluded because in some instances the dialog lasted for an extended period with no agreement in some cases and, thus, without an actual reduction in forces. Therefore, this study includes only the period of force reduction. The size of US forces stationed in Korea fluctuates in number each year based on the global posture plan of the United States without official negotiation with South Korea. The Institute of Military History of

19) Sangbeom Yoo and Sangjin Kim, "The pattern of North Korea's Local Military Provocations," *The Korean Journal of International Studies*, Vol 15, No. 1 (April 2017), p. 75.

20) One of referees suggested that this research design does not explain the unstable situation on the Korean Peninsula and North Korea's frequent provocations that occurred during the time when the US considered troop reduction without actually implementing the proposed plan.

the Republic of Korea recorded these changes and the actual number of troops is coded based on these figures.

<Table 1> U.S. Force Reduction in Korean peninsula²¹⁾

1954.3 ~ 1956.12	After Korean War	325,000 => 70,000
1970.10 ~ 1971.3	Nixon Doctrine	=> 43,000
1977.6 ~ 1978.12	Carter Doctrine	=> 40,000
1992.12	End of Cold War Effect	=> 37,000
2004.8 ~ 2006.12	Global Posture Review	=> 28,500

D. Control Variables

To avoid a spurious relationship, several control variables should be included. The factors influencing North Korea's military provocations can be divided into internal and external variables based on the literature review of provocation studies. This means that sometimes assertive or cooperative behaviors can be motivated by incentives other than U.S. troop-related purposes; therefore, control variables should be taken into account. According to provocation research, a Regime Instability Period, Purge and After the Purge, Economic Conditions, Arduous March period,²²⁾ and Nuclear Tests and Missile Test²³⁾ variables are included as domestic factors. International factors include ROK-US military exercises, South Korean Elections (presidential and local), the Cold War period, and the Political Party of the US and South Korean presidents selected.

During the regime instability period, which is operationalized as the time period when a new leader of North Korea seeks to build up his political base, leaders tend to take some time to solidify their position. During this period, there should be less

21) Institute of Military History, *The 60 Year History of ROK-US Alliance* (Seoul: MND Press, 2013), 315. Though there is a concern that different size of reduction may affect the calculation of North Korea, in this paper, author assumes that actual withdrawal is sending a potential political will signaling further action should be followed.

22) Ministry of Unification, "North Korean Information-Arduous March," <https://nkinfo.unikorea.go.kr/nkp/term/viewNkKnwldgDicary.do?dicaryId=4> (accessed on March 19, 2021). A participant of MPSA 2021 suggested the inclusion of this period and natural disaster seasons. The former was included in this model, but the latter is not because of the availability of data fitting to this research.

23) These strategic provocations are included as independent variables because there could be a complementary effect between local military and strategic provocations. Sangbeom Yoo, "The Trend of North Korean Local Military Provocations and Alliance Cooperation," *The Journal of Defense Studies*, Vol. 57, No.1 (March, 2014), p.66.

assertive behaviors. In Kim Il-Sung's case, this variable is coded "1" from the end of the Korean War in July 1953 to March 1958 when the First Conference of the Workers' Party of Korea was held. The Kim Jong-Il era starts in July 1994 when the first leader Kim Il-Sung died and ends in September 1998 when Kim Jong-Il assumed the position of Chairman of the National Defense Commission. The period under Kim Jong-Un was coded "1" from the death of Kim Jong-Il in December 2011 to July 2012 when he was named Premier of North Korea. The other control variables were coded in the same manner as Kim and Yoo's 2015 work. The summary statistics of all variables are shown in Table 2.

<Table 2> Summary Statistics of Variables

Type	Obs	Mean	Std. Dev.	Min	Max
Provocations	750	0.49	0.63	0	1
Regime Building Period	750	0.15	0.36	0	1
Purge	750	0.04	0.19	0	1
After Purge	750	0.09	0.28	0	1
GDP per Capita	743	833.6	126.8	627.8	1093.4
Missile Test	750	0.03	0.17	0	1
Nuclear Test	750	0.08	0.27	0	1
Arduous March	750	0.08	0.27	0	1
U.S. Force Reduction Period	750	0.13	0.34	0	1
ROK-U.S. Combined Exercise	750	0.152	0.36	0	1
Presidential Election (SK)	750	0.04	0.19		
National Assembly Election(SK)		0.04	0.2		
Cold War		0.62	0.49		
U.S. Party		0.57	0.49	0	1
SK Party		0.8	0.4	0	1
U.S. Troop numbers		48,232	35,804	28,500	32,500

IV. Outcomes and Analysis

As mentioned above, three models were developed to test two hypotheses.²⁴⁾ Model I includes North Korean domestic factors and provocations while Model II contains international factors. Model III includes all variables of this research. The outcomes are reported in Table 3.

<Table 3> U.S. Force Reduction and North Korean Provocations

	Coefficient		
	Model I (NK Domestic)	Model II (International)	Model III (Both)
Regime Building Period	-0.19*** (-0.07)		
Purge	-0.011 (0.099)		0.014 (0.095)
After Purge	0.18*** (0.061)		0.187*** (0.065)
GDP per Capita	-0.001*** (0.0003)		-0.0004 (0.0003)
Missile Test	0.08 (0.08)		0.024 (0.089)
Nuclear Test	-0.07 (0.089)		-0.14 (0.11)
Arduous March	-0.25*** (0.096)		-0.299*** (0.11)
US Force Reduction Period	-0.11* (0.058)	-0.096* (0.05)	-0.13** (0.055)
ROK-U.S. Combined Exercise		-0.05 (0.055)	-0.04 (0.055)
Presidential Election (SK)		0.042 (0.099)	0.05 (0.091)
National Assembly Election(SK)		0.03 (0.099)	-0.016 (0.09)
Cold War		-0.3*** (0.063)	-0.36*** (0.095)
U.S. President Party		0.043 (0.042)	0.01 (0.05)

24) The numbers in the table are outcomes of OLS regression because logit and probit models represent the same directions of the coefficients.

SK President Party		0.055 (0.064)	0.07 (0.08)
U.S. Troop numbers	$-2.51e^{-06}$ *** ($1.03e^{-06}$)	$-1.15e^{-06}$ *** ($3.53e^{-07}$)	$1.66e^{-07}$ ($9.51e^{-07}$)
Constant	1.67*** (0.27)	0.69*** (0.054)	1.07*** (0.24)
N	743	741	743
R-Squared	0.066	0.061	0.089

*<0.1, **p<0.05, ***p<0.001. Robust standard errors are in parentheses

The temporary peace that is defined as North Korea's less provocative behavior during the periods of U.S. forces reduction is observable in three models while U.S. troop numbers and North Korean provocations are statistically significant in two models. North Korea makes an effort to be cooperative while the withdrawal of U.S. forces is ongoing when domestic and international factors separately are taken into account as well as when all variables are considered. The number of U.S. soldiers is negatively associated with the presence of North Korean provocations when domestic and international factors are under consideration, separately.

Domestically, North Korea's cooperative behavior is negatively related to the size of U.S. military forces according to the results of Model 1. This is a reasonable outcome because North Korea does not want to escalate and fight against increased U.S. forces. Therefore, it tries to avoid any local provocations with which a full-fledged war might start. In addition, this calculation may be substantiated when international factors are included. When the number of U.S. military troops is downsizing, North Korea avoids engaging in military provocations not to stop withdrawal while keeping its intention to have a smaller number of U.S. forces on the Korean Peninsula simultaneously.

These results tell us that there is an observable peace during the periods of U.S. troop reductions compared to other periods; Hypothesis 1 seems to be qualified as expected when international and all factors are included. The hypothesis examining general preference of North Korea toward the numbers of U.S. troops is supported only when domestic and international factors are considered separately. This result suggests that North Korea tends to have more provocative behaviors with a smaller number of U.S. troops when domestic issues and international considerations are not interrelated.

When internal and external factors are on the left side of the model, the incentive of strategic avoidance is still present while the effect of troop numbers disappears. This result from Model III implies that there is no observable trend that U.S. troop numbers affect North Korea's aggressive behavior, while a temporary peace forms and may facilitate withdrawal of U.S. forces from the Korean Peninsula. These

results suggests North Korea's preference is to have a smaller number of U.S. troops on the Korean Peninsula. Therefore, when they engage in a military provocation, they choose to do so at a time when the number of U.S. troops is smaller and restrain their hostile activity when reduction of U.S. forces is underway.

The temporary peace during U.S. troop reduction does not last long and does not come from North Korea's genuine pursuit of peace. Rather, this kind of a less assertive posture during particular periods is a calculated action plan that aims to condition circumstances friendly towards North Korea. It is too early to conclude that the withdrawal of U.S. forces from certain areas does not produce instability. Yet, it may be conclusive to state that the temporary peace coincident with U.S. troop reductions on the Korean Peninsula may not result from genuine efforts to produce peace, but strategic avoidance of unwanted stopping of withdrawal. In addition, the direction of coefficients of control variables included in the models are very similar to other research which shows that this research's models and outcomes are credible.²⁵⁾

Consistent with former research, during the regime-building period, there are fewer provocations observed while following purges the tendency is the opposite. The coefficients of these variables keep their significance in both the model with domestic-only factors and the model with domestic and international factors combined. North Korean provocation is negatively related to the economic situation, which means there are more aggressive behaviors observed when economic conditions are getting worse. However, this effect disappears when international factors are included. The effect of economic conditions is meaningful in domestic considerations for the decision-making process of North Korean military provocations. During the Arduous Period, which started in 1996 and ended in 2001, known as the National Security Crisis of North Korea caused by the death of Kim Il-Sung, the founding father of North Korea, and natural disasters leading to famine, there were significantly fewer provocations given the domestic and international situations. This may be understandable because, under extremely difficult situations, there would be no room for the leadership to focus on tasks other than survival. The expected outcomes of all other control variables affirm the validity of these models and research.

V. Conclusion

This project started with the question about U.S. grand strategy: do forward-based American troops fulfill the role of supporting the national interest of the United States? The basic assumption about the utility of these boots on the

25) Yoo (2014), p.68.

ground is that their presence will contribute to building stability in the host nation while their withdrawal may cause instability in the region and, thus, withdrawing troops costs more than keeping bases forward-deployed. Not all agree on these assumptions. Some scholars argue that forward-deployed U.S. forces are not a solution for peace but a cause of instability and, therefore, the overreach of US power should be restrained. For them, withdrawal of U.S. forces should not trigger instability in the host nation and region. This study offers a new explanation for the temporary peace during U.S forces reduction by applying the logic of strategic avoidance to the Korean Peninsula case. The statistical analysis of the case illuminates the possibility that short-term peace during U.S. force reduction is cultivated by the strategic calculation of North Korea to avoid a cessation of withdrawal. The cooperative behaviors exhibited by North Korea are not direct results of the absence or downsizing of U.S. troops, but byproducts of North Korea's preference for fewer U.S. boots on the ground. Moreover, this peace cannot last long and there is no statistically significant association between the size of force and North Korea's cooperative behavior.

Two implications can be derived from the analysis. The first one is a theoretical contribution of the concept of strategic avoidance to understand an unobservable intention. A useful analogy is the diversionary war hypothesis that suggests potential targets tend to be peaceful in order not to be a scapegoat by a strong state with internal problems. Therefore, the actual use of force to divert attention by the strong state with difficulties is not observable. However, this kind of strategic avoidance does not happen without a history of diversionary use of force cases. In other word, this kind of strategic avoidance cannot happen without fear of being a target. Sometimes revealing non-existence is a way to prove the presence of real intentions. The strategic avoidance concept is applicable to diversionary war theory as well as other factors that we may not observe but that is hidden or disguised intentionally.

The second implication concerns the practical role of U.S. troops stationed on the Korean Peninsula. Although there have been debates and incidents that invite anti-American sentiment domestically, the extended deterrence that U.S. forces have provided against the North Korean military threat has been essential to regional stability. The very fact that North Korea's behavior can be explained by the concept of strategic avoidance demonstrates the utility of U.S. troops stationed on the Korean Peninsula. The true intentions of an adversary towards encouraging fewer numbers of US soldiers can create disguised peace. This is the true role of forward-stationed U.S. troops. Therefore, the reduction and withdrawal of U.S. forward-deployed forces sometimes produces temporary peace; however, we should pay attention to the real cause of the peace in order not to be deceived.

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An Analysis of the State of North Korea's Human Security and the Possibility of Inter-Korean Exchange and Cooperation

Ilsoo Bae, Jiwon Yun

Abstract

This article aims to examine the elements of the crises and challenges of South-North Korean cooperation after the sixth nuclear test in North Korea in 2017 and to consider the possibility of South-North Korean cooperation concerning human security and the actual state of human security in North Korea in the sectors of welfare and food. Most importantly, the welfare and food sectors have become the most important issue of human security in North Korea due to the COVID-19 pandemic. These are directly connected to its survival accompanied by urgency and sensitivity. Welfare and food support are considered a matter in the field that can achieve cooperation without any strong objection from North Korea in addition to international cooperation for humanitarian purposes. If these forms of South-North Korean cooperation become possible, they could become the trigger that opens the gate of communication in the South-North Korean relationship that is fixed with chronic welfare and food problems in North Korea and the relief of the economic sanctions in North Korea as prescribed by the UN and the US. The possibility of South-North Korean exchange through enhanced human security may be expanded to the relief of North Korean sanctions for the assurance of humanitarian activity, international cooperation, and governance construction. At the same time, if South-North Korean cooperation is approached from a human security point of view, it may create momentum that results in the settlement of peace on the Korean Peninsula by acting as a catalyst that could relieve the problem of welfare and food faced by North Korea and transform the hardened South-North Korean relationship into a more conversational paradigm.

Keywords: *Human Security, South-North Korean Cooperation, Economic Sanctions on North Korea, Humanitarian Support, Governance*

I. Introduction

With the recent virus outbreak and spread throughout the world, it is made apparent that the world is a globalized single entity and a community of life. The common recognition that protecting precious lives is one of the most important tasks of the state, society, and individuals has expanded the concept of security and drawn more attention to the importance of community. In the same vein, the issues associated with the stagnant inter-Korean exchange and cooperation due to COVID-19 need to be discussed in the post-COVID-19 era. Inter-Korean exchange and cooperation is a controversial topic to discuss as it is affected by North Korea's nuclear weapons and missile programs; some argue that although they recognize the importance of improving inter-Korean relations, it is yet too premature to discuss inter-Korean exchange and cooperation without a tangible solution to the issue of North Korea's nuclear weapons. Nevertheless, there is no doubt that inter-Korean exchange and cooperation is one of the core tasks that the Korean community - both North and South - must solve.

Neither the will of the conservative nor progressive governments of South Korea alone cannot solve the issue of Inter-Korean exchange and cooperation. Moreover, North Korea's nuclear weapons and missiles have a profound impact on inter-Korean exchange and cooperation. The Park Geun-hye administration has provided 39.1 billion won to UN agencies in North Korea during its 4 years in office, while the Moon Jae-in administration has no record of support. The Moon Jae-in government held an Inter-Korean Exchange and Cooperation Promotion Council on September 21, 2017, to review the requests for the support it received from the United Nations International Children's Emergency Fund (UNICEF) and the World Food Program (WFP). The requests asked for US \$3.5 million to UNICEF for vaccines, essential medicines, and nutritional aids for North Korean children and pregnant women and US\$4.5 million to WFP for malnourished children and pregnant women. However, the Moon government postponed the support plan to 2018 in comprehensive consideration of North Korea's nuclear tests and launch of the ballistic missile, Hwasong, in 2017. The plan has not yet been implanted until now. Because North Korea violated the 'moratorium of nuclear and intercontinental ballistic missile tests' imposed in 2018 and continued missile tests as late as early 2022, some argue that although they recognize the importance of improving inter-Korean relations, it is yet too premature to discuss inter-Korean exchange and cooperation without a tangible solution to the issue of North Korea's nuclear weapons. Nevertheless, there is no doubt that inter-Korean exchange and cooperation is one of the core tasks that the Korean community - both North and South - must solve. This study examines inter-Korean exchange and cooperation from the perspective of human security, which lies at the heart of non-traditional security, and suggests possibilities.

Though there are not many studies conducted on supports provided to North Korea through inter-Korean exchange and cooperation for human security-related matters, such as food, health, and disaster, most of these studies were carried out in three directions. Firstly, previous studies conducted by Kim, Daein (2020),¹⁾ Han, Kiho (2020),²⁾ and Kim, Taewon (2021)³⁾ investigated supports for North Korean and inter-Korean exchange for each area of inter-Korean exchange and cooperation. They demonstrated the necessity of humanitarian aid, review and support of related laws, and vitalization of the support for exchange and cooperation, suggesting that inter-Korean exchange and cooperation should be reflected in related policies. Secondly, Park Youngmin (2021), Lee Shinwha (2009),⁴⁾ and Kim Youngjin (2021)⁵⁾ analyzed the state of North Korea's human security, such as food security, health security, environment security, and human rights, highlighting the need for providing assistance to North Korea and engaging in inter-Korean exchange and cooperation from the perspective of human security. They examined the necessity of securing human security in North Korea by analyzing how poor the human security was in North Korea with the sanctions the US and international community imposed on the country against its nuclear weapons and missile programs amid the COVID-19 pandemic. Thirdly, the studies of Park, Sungyul (2021),⁶⁾ Kang, Dongwan, and Jeong, Eunmee (2010)⁷⁾ investigated measures to promote international and inter-Korean cooperation, establish cooperative partnerships, and provide humanitarian aid by analyzing changes and influence factors of inter-Korean exchange and cooperation. They expected that North Korea's 4th (2016) and 5th (2016) nuclear tests and missile launches (2016) would have an impact on inter-Korean exchange and cooperation as the UN Security Council's sanctions were intensified and the US sanctions against North Korea were tightened to another level, proposing active utilization of the exemption clauses of the UN sanctions and a

1) Kim, Daein, "Revitalization of Rule of Law Assistance Projects in North Korea through International Institutions: Focusing on UNDP (United Nations Development Programme)," *Journal of Law of Northeast Asia Law*, Vol. 14, 2020.

2) Han, Kiho, "Institutional Research for Sustainable North Korean Development Cooperation," *Journal of Legislation Research*, Vol. 58, 2020.

3) Kim, Taewon, "Legal review of Inter-Korean Health Cooperation: Focus on Infectious Disease," *Sungkyunkwan Law Review*, 2021.

4) Korea University, "Non-traditional Security and Inter-Korean Cooperation Measures," *Ministry of Unification's Final Report on Policy Service Project*, 2009.

5) Kim, Youngjin, "Human Rights Issues in North Korea from a Human Security Perspective," *Border Area Unification*, Vol. 3, 2019.

6) Park, Sungyul, "Trend and Influence Factors of Inter Korean Exchange and Cooperation: Focusing on Sanctions Against North Korea and COVID-19," *National Strategy*, Vol. 27, No. 1, 2021.

7) Kang, Dongwan & Jeong, Eunmee, "The Structure and Dynamics of Inter-Korean Exchanges and Cooperation Governance: Focusing on Evaluation of Network Transformation in the Kim Dae-jung and Roh Moo-hyun Administration," *Journal of Social Science*, Vol. 34, No. 2, 2010.

consensus view on humanitarian aid to North Korea.

As such, previous studies, in general, emphasized the importance of human security in North Korea coincided with increased non-traditional security threats and studied human security by grafting humanitarian aid to North Korea and inter-Korean exchange and cooperation. However, it fell short of suggesting practical alternatives that could be politically instituted. In this regard, this study examines human security in North Korea, which suffers from the triple hits of COVID-19, the United Nations and bilateral sanctions, and economic hardship, and seeks a breakthrough for inter-Korean exchange and cooperation for health and food.

Due to its nature, this study was conducted by surveying relevant literature and reviewing the Internet data centered on official documents of the Ministry of National Defense and other government agencies, academic papers, and dissertations. In this paper, Chapter II shows the state of human security in North Korea, Chapter III examines the progress of inter-Korean exchange and cooperation and impediments thereof, and Chapter IV suggests the possibilities of inter-Korean exchange and cooperation in terms of human security. This study suggests the possibilities of human security in terms of health and food for vitalizing stagnated inter-Korean exchange and cooperation, which is difficult to address with the traditional concept of security.

II. The State of Human Security in North Korea

As the times change, the concept of “security” also changes. During the Cold War, the concept of security centered on national defense and diplomacy in contrast to the era of globalization in which the concept has been expanded and diversified to include not only military security but also environment, economy, disease, and human rights. With the changes in the concept of security, the concept of “human security” has become more important in security cooperation. In 1994, the United Nations Development Programme (UNDP) advocated human security in the Human Development Report, pivoting around its two main axes of “freedom from fear” and “freedom from want.” Of the seven areas of human security, the areas of health security and food security, as the key elements of the freedom from want, are directly related to human rights and life.⁸⁾

Human security, from the standpoint of inter-Korean exchange and cooperation, can help North Korea alleviate its problems related to health care and food by putting an end to the triple hardship and achieving economic development through financial

8) For further discussion, see Barry Buzan, *People, States and Fear: An Agenda for International Security Studies in the Post-Cold War Era*. Boulder, Colorado: Lynne Rienner Publishers, 1991; United Nations Development Programme(UNDP), *Human Development Report 1994* (New York: UNDP, 1994), pp. 22~23.

support from the international community and South Korea. Health care and food are recognized as the most existential threats among the seven categories of human security and are recognized and supported not only by the United Nations, such as FAO (The Food and Agriculture Organization) and WHO (World Health Organization) as serious threats but also by global governance. Non-traditional security issues, such as infectious diseases, hunger, climate change, disasters, and terrorism, require more cooperation and joint response, rather than conflict and hostility, compared to traditional security issues. Cooperation can play a catalytic role in solving non-traditional security issues which cannot be easily resolved through a traditional security approach. In this respect, the urgent and sensitive issues of North Korea's health and food, as part of human security, can facilitate the resumption of inter-Korean exchange and cooperation. Accordingly, this study limits its scope to the health care and food sectors.

UN agencies and various NGOs in Korea and abroad aim to improve food security by assisting technology development for vegetable cultivation and agricultural production, provide infant nutrition and welfare for the elderly, and support essential health care services such as vaccinations. According to the "Korea NGO Council for Cooperation with North Korea" (KNCCNK), which represents about 60 organizations providing humanitarian aid to North Korea, 33 organizations, in 2004 alone, provided 111.7 billion won in aid to North Korea. After the May 24 measures, the number of support groups gradually varied from 42 in 2010 to 35 in 2011, 16 in 2012, 15 in 2013, 17 in 2014, and 21 in 2015, showing a gradual decrease without a sharp drop. This is because South Korea applied humanitarian cooperation as an exception to the May 24 measures and provided various assistance to the North with international organizations to circumvent the measures. However, the cessation of the Kaesong Industrial Complex in 2016 and the tightening of the UN-US sanctions against North Korea had a significant impact on the private organizations' support for North Korea. The number of North Korea supporting organizations plummeted from 21 in 2015 to 2 in 2016 and 1 in 2017, while the amount of support also decreased from 11 billion won in 2015 to 2.8 billion won in 2016 and 1.1 billion won in 2017. After the inauguration of the Moon Jae-in government in 2018, inter-Korean relations seemed to improve, showing an increase in the number of the organizations and the amount of support (13 organizations, 6.5 billion won in 2018) and (15 organizations, 17 billion won in 2019). However, the number went down back to 5 organizations and 1.1 billion won in 2020. Sanctions against North Korea, quarantine and self-lockdown in North Korea to prevent the inflow of COVID-19, and North Korea's refusal to accept external support after the Hanoi summit are presumed to have an impact on the decrease in inter-Korean humanitarian exchange and cooperation in 2020.⁹⁾

9) Park, Sungyul (2021), p. 78.

Therefore, securing stable inter-Korean humanitarian exchange and cooperation has been difficult due to inter-Korean tensions, domestic political environment, and security and foreign policies of the US and others. The food and health sectors have been identified as the greatest weakness of the North Korean system and the most urgent and sensitive areas of human security. Although South Korea, international organizations, and private organizations have promoted various programs, cooperation and institutionalization have not yet reached a mature, stable stage.¹⁰⁾

A. The State of Health Security in North Korea

Infectious diseases and medicine shortages in North Korea do not only affect the survival of North Koreans, but they can also affect the health of South Koreans with infectious diseases spreading through the border areas, even placing the sense of community of the Korean people at risk of collapse.¹¹⁾ Advocating a socialist healthcare system, North Korea's healthcare system is said to consist of a free treatment system, a preventive medicine system, and a regional doctor system; however, the economic crisis in the 1990s left the system in name only, placing many residents in the blind spot of the system.¹²⁾

The basis of socialist medicine is preventive medicine. In North Korea, prevention of diseases and protection and promotion of people's health and life by prioritizing prevention over treatment are set to be its basic missions. Nevertheless, since most of the assets of North Korea's unified healthcare system are financed by the national budget, the healthcare system as a whole will inevitably suffer if the national budget is not secured.¹³⁾ In the 2019 Global Health Estimates, WHO identified stroke, cardiovascular disease, chronic obstructive disease, tuberculosis, lung cancer, lower respiratory tract infection, traffic accident, hypertensive heart disease, liver cancer, and liver cirrhosis as the top 10 causes of death among North Koreans. In North Korea, tuberculosis, a traditional infectious disease, is reported to be a serious issue. According to the statistical data of the WHO, the number of new or recurrent cases of tuberculosis per 100,000 people in a year has remained almost the same since 2000. 1 in 200 people in North Korea has tuberculosis. In contrast, only 59 per 100,000 people in South Korea had tuberculosis in 2019, and the number is on the decline.¹⁴⁾ < Global Tuberculosis Report 2020 > ranked North Korea as the 6th county with the highest mortality rate of tuberculosis.¹⁵⁾ These numbers clearly

10) Park, Youngmin, "A Study on the Possibility of Inter-Korean Exchange and Cooperation from the Perspective of Human Security Theory," *Global Studies Education*, Vol. 13 (2021), p.45.

11) Seo, Bohyuk, *Human Security and Inter-Korean Cooperation*, Seoul: Acanet, 2013, p. 96.

12) Choi, Eunjoo, "North Korea's Health Care System and Inter-Korean Exchange and Cooperation," *Sejong Policy Brief*, 2020-07 (2020), p. 1.

13) Choi, Eunjoo (2020), pp. 4~7.

14) Lee, Hyewon, et al., "Status and Trends of Tuberculosis Deaths in Korea, 2001-2020," *Weekly Health and Disease*, Vol. 14, No. 48 (2021), p. 2.

represent the state of human security in North Korea where poor health and medical welfare directly affect the survival of the people.

B. The State of Food Security in North Korea

In the meantime, North Korea has kept secret the number of confirmed cases of COVID-19 but officially recognized it for the first time on May 13, 2022. The number of COVID-19 cases has reached 400,000. Although the number of patients is gradually decreasing, international organizations such as the WHO question the reliability of the COVID 19 information provided by North Korea and point out that it is difficult to trust.¹⁶⁾ From the perspective of a community of life, supplying food to North Korea as a humanitarian aid can be considered an inter-Korean cooperation project. The chronic shortage of food North Korea has suffered from is well-documented, and it is not expected to improve in a short time.

On March 23, 2021, North Korea reported to The Food and Agriculture Organization of the United Nations (UNFAO) that it produced 5,523,119 tons of food in 2020. The number is similar to 5,542,000 tons, the average annual production of food between 2012 and 2018, although it was 17% less than the record high production of 6.654,000 tons in 2019.¹⁷⁾ According to the UNFAO, the food shortage in North Korea had gradually decreased for the first three years since Kim Jong-un's succession to power in 2012, increased after 2015, and reached a peak in 2018. It is expected to escalate into a crisis for 10.1 million North Korean, about 40% of the North Korean Population in 2020, due to COVID-19 and other reasons.

Graphs showing fortified foods delivered to children, pregnant women, and nursing mothers are often found among the data on the monthly food (nutritional) aid provided by the World Food Programme (WFP) to North Korea. It is worth noting that aid has significantly decreased since the collapse of the 2019 US-North Korea summit in Hanoi. North Korea's trade with China, which slowed down after its peak in 2013 and plummeted in late 2017 due to sanctions against North Korea, is on a rapid decrease, both for import and export, due to COVID-19. Agricultural, forestry, and livestock products accounted for 0% of exports and 35.8% of imports; 71.9% of imports are farm products that are directly related to livelihoods. Thus, food aid to North Korea takes priority in terms of human security as it is directly related to the survival of North Koreans. North Korea's food aid is directly related to the survival of the North Korean people, and it can be said that it takes priority over anything else. Through food, humanitarian measures in connection with international governance can become a point of contact for inter-Korean exchanges and cooperation.

15) Park, Youngmin (2021), p. 52.

16) <https://www.edaily.co.kr/news/read?newsId=01105366632363360&mediaCodeNo=257&OutLnkChk=Y> (Search date: 2022.6.19).

17) Kim, Younghoon, "KREI Agricultural Trends in North Korea," Vol. 23, No. 1 (2021), p. 11.

III. Progress of Inter-Korean Exchange and Cooperation and Impediments

Inter-Korean exchange and cooperation have been continued within the framework of inter-Korean relations which officially began in 1948 with the establishment of the Democratic People's Republic of Korea (DPRK) and the Republic of Korea on the north and south sides of the Korean Peninsula, respectively. Inter-Korean relations have been fluctuating between conflict and cooperation for the past 73 years, showing contradicting complexions of war and precarious peace. In short, inter-Korean relations have been built between conflict and peace. Exchanges and cooperation are necessary to improve inter-Korean relations; improvement in inter-Korean relations is often led by exchange and cooperation. In fact, inter-Korean exchange and cooperation are a channel that serves as a network to secure mutual homogeneity between the two parts of Korea while connecting North Korea with South Korea and other parts of the world. This is the biggest reason why we should cherish and manage inter-Korean exchange and cooperation. However, inter-Korean exchanges and cooperation, which were expanded and further developed with the Mt. Geumgang tour (1998), Kaesong Industrial Complex (2003), and two inter-Korean summits (2000, 2007), have withered due to the May 24 measures taken by the South Korean government in response to North Korea's provocations, such as the Cheonan sinking (2010), suspension of the Kaesong Industrial Complex (2016), and tightened international sanctions against North Korea. Moreover, North Korea virtually cut off inter-Korean exchange and cooperation by locking itself down due to COVID-19 and successively refusing to have inter-Korean exchange and cooperation.¹⁸⁾

With structural factors such as international sanctions against the 11 missile tests and North Korea's harsh remarks toward South Korea during the first three months of 2022, North Korea's refusal to exchange or cooperate makes it even more difficult to achieve a breakthrough in inter-Korean exchange and cooperation. The factors hindering inter-Korean exchange and cooperation can be understood from three different aspects: the international community's sanctions against North Korea, North Korea's national interest and policy, and South Korea's policy and institutionalization concerning North Korea. UN Security Council can impose sanctions to maintain and restore international peace and security in accordance with Chapter 7 and Article 41 of the UN Charter that may comprehensively limit the target country in terms of economy and trade with measures such as arms embargoes, travel bans, and financial or commodity restrictions and without involving the use of armed force. The UN Security Council has imposed collective sanctions on North Korea in response to the country's violation of the non-proliferation treaty in order to maintain international peace and security by blocking the transfer of financial

18) Park, Sungyul (2021), p. 70.

resources necessary for the development of weapons of mass destruction (WMD) such as nuclear weapons. Similarly, the United States has been playing a vital role in leading the UN sanctions on North Korea and urging each country to implement sanctions resolutions on North Korea. It also prepared and implemented the framework of strict sanctions against North Korea through legislation and executive orders in the US. In the end, the sanctions on North Korea imposed by UN Security Council and the US are interconnected in terms of securing normative power and enhancing executive power driven by the North Korea-US relations and the position of the US.¹⁹⁾

North Korea's national interests, including political independence and territorial preservation, seek to establish ideology and system identity, reinforce military security, and promote strategies concerning South Korea in connection with which North Korea is highly likely to strategically respond or give up. The national policies that North Korea has implemented since Kim Jong-un's acceded to power, from the stance of nuclear and missile development in relation to national interests, include the Economy-Nuclear Parallel Policy (2013); Completion of Nuclear Force (2016-2017); Improvement of Relations with South Korea and Nuclear Negotiations with the US (2018); Deadlocks in Nuclear Negotiations and Severance of Relations with South Korea (2019); and Self-Reliance and Head-On Breakthrough (2020). When its nuclear development was not concerned, North Korea showed a cooperative attitude toward inter-Korean exchange and cooperation; on the matters related to its nuclear development or the dignity of its supreme leader, North Korea went as far as suspending inter-Korean exchange and cooperation.

Inter-Korean exchange and cooperation have been influenced by the South Korean government's ideological tendencies and the basis of North Korean policy. The progressive government has prioritized dialogue, exchange, and cooperation with North Korea, while the conservative government has focused on a give-and-take type of exchange and cooperation under the principle of reciprocity. The May 24 measures (2010) taken by the Lee Myungbak government in response to the sinking of the Cheonan and the closure of the Kaesong Industrial Complex by the Park Geunhye administration in consideration of North Korea's development of nuclear weapons are good examples of inter-Korean exchange blocked by the conservative government. On the contrary, the Moon Jaein government presented a vision of peaceful coexistence and shared prosperity and suggested developing inter-Korean relations based on the principle of mutual respect. This vision resulted in a temporary resumption of the inter-Korean summit and exchange in various fields in 2018 despite the international sanctions imposed on North Korea.

It is essential to explore the possibility of inter-Korean continental cooperation as a humanitarian measure such as human peace, human life, and fundamental rights. In

19) Park, Sungyul (2021), p. 83.

particular, health care and food are two of the key areas among the seven categories of human security. There are very few problems that the two Koreas can solve for the issues mentioned in Chapter III. It must be supported by the international community from a humanitarian perspective in terms of institutionalization of inter-Korean continental cooperation and human security.

IV. Possibilities of Inter-Korean Exchange and Cooperation in Terms of Human Security

A. Institutionalization of inter-Korean Exchange and Cooperation and Strategic Targeting of Escape Clauses in Related Policies.

The possibilities of inter-Korean exchange and cooperation can be found in the support of the people who share a community of life on the Korean Peninsula, mutual national interests of North and South Korea, and policy diversification. Institutionalization can be regarded as the process by which all organizations and procedures related to inter-Korean exchange acquire value and stability. National interests and policies initially have contradictory ideologies. While national interests cannot be constricted, national policy toward unification has a lot of room for change.

The South Korean government enacted the Inter-Korean Exchange and Cooperation Act and the Inter-Korean Cooperation Fund Act in August 1990 to institutionalize exchange and cooperation with North Korea. Since then, the Development of Inter-Korean Relations Act (2005), Act on Inter-Korean Confirmation of the Life or Death of Separated Families and Promotion Of Exchange (2009), and Kaesong Industrial District Support Act (2015) were also enacted. The enactment of the Inter-Korean Exchange and Cooperation Act and the Inter-Korean Cooperation Fund Act has facilitated exchange and cooperation activities by various entities, including private organizations, and laid a legal and institutional basis for securing necessary finances.²⁰⁾ The legal system should be reorganized to avoid conflicts, and inter-Korean exchange and cooperation for unification should be expanded by acknowledging each other in mutual respect.

The poor healthcare system and food shortage, which are directly related to the survival of the people, can threaten human security from a humanitarian point of view. Although assisting North Korea through tourism or economic aid is difficult as it is restricted by the sanctions imposed by the UN and the US on North Korea, the escape clauses in related policies should be revisited for the humanitarian aid for health care and food that can directly benefit North Koreans.²¹⁾ It is time to develop

20) Park, Sungyul (2021), p. 90.

systems and policies that can be supported by various governing entities and individuals. As a policy for humanitarian measures for human security that breaks away from the framework of ideological or military confrontation, it requires mutual sympathy and effort throughout the Korean peninsula.

B. Establishment and Utilization of Inter-Korean Governance

In terms of governance, inter-Korean exchange and cooperation are a multi-layered system that involves various entities, including not only the domestic central government, local governments, private organizations, and corporations but also overseas international organizations, associations, and North Korean authorities-organizations.²²⁾ The international governance system that supports North Korea's exchange with others has been operated in association with UN organizations, European countries, and international NGOs. First, WHO, WFP, UNDP, FAO, UNICEF, and UNFPA have sought to provide humanitarian aid to North Korea in cooperation with major countries such as South Korea, Switzerland, Russia, Sweden, Canada, Norway, and Germany. In 2020, the UN announced the need for humanitarian aid to North Korea in the amount of \$107 million for "the Necessities and Priorities of North Korea" and \$39.7 million for "North Korea's response to COVID-19." Simultaneously, European humanitarian NGOs have continued promoting food security improvement projects for the vulnerable in North Korea. The United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) announced that, in 2020, the French and British governments respectively provided \$220,000 and \$100,000 through international NGOs to improve nutrition for the vulnerable in North Korea. The governance for inter-Korean exchange and cooperation, which is composed of several entities with different goals from South and North Korea and the international community, plays an important role in securing democracy during the course of implementation and efficiently achieving goals. Governance in the private sector embraces flexibility, autonomy, and pluralism.²³⁾ Government-controlled inter-Korean exchange and cooperation governance that can exert an integrated synergy effect based on the governance in the private sector should be made available.²⁴⁾

C. Inter-Korean Exchange and Cooperation Through Relieving Sanctions Against North Korea

The possibility of exchange and cooperation with North Korea can be found in

21) Park, Youngmin(2021), pp. 49~54.

22) Bae, Ilsoo, "A Study on the Importance of Human Security and the Effect of National Security in COVID-19 Pandemic," Sangmyung University Ph.D. thesis, (2022), pp. 156~157.

23) Kang, Dongwan & Jeong, Eunmee (2010), p. 31.

24) Park, Sungyul (2021), p. 96.

the exemption clauses of sanctions imposed by the UN and the US. First, after the 6th North Korean nuclear test, UN Security Council Resolution 2397 (December 2017) Paragraph 25 states that “the Committee may, on a case-by-case basis, exempt any activity from the measures imposed by these resolutions if the committee determines that such an exemption is necessary to facilitate the work of international and non-governmental organizations for any other purpose consistent with the objectives of these resolutions.”²⁵⁾ Accordingly, the Committee may, on a case-by-case basis, exempt activities with humanitarian purposes, as long as the activities do not interfere with the achievement of the objectives of the resolutions and obtain prior approval. However, even if the South Korean government promotes humanitarian aid to North Korea through international organizations and NGOs, companies and financial institutions conscious of the US secondary boycott are cautious, and, thus, it is difficult to find transportation to North Korea. As such, support for exchanges and cooperation with North Korea seems to be extremely limited under the current sanctions imposed on North Korea.

Paragraph 15 of the Security Council Resolution 1718 affirms that it shall keep DPRK’s actions under continuous review and that it shall be prepared to review the appropriateness of the strengthening, modification, suspension, or lifting of the measures, as may be needed at that time in light of the DPRK’s compliance with the provisions of the resolution. It can be interpreted that a new Security Council Resolution is needed to ease or lift sanctions on North Korea. However, most support organizations for North Korea had to strain lots of time and manpower through trial and error to accumulate enough precedents for exemptions and to share among the organizations due to difficult exemption procedures and complicated conditions.²⁶⁾

As mentioned earlier, since the US is at the core of sanctions against North Korea, a solution for easing sanctions against North Korea should be looked for through the ROK-US alliance. A day after the virtual summit between the US-China on November 16, 2021, at the Brookings Institute, the National Security Adviser Sullivan proposed four conditions for maintaining a free, open, and fair international system. The first of the four conditions is to promote cooperation for global agendas such as climate change and health security. As health and food are matters of cooperation between the United States and China, the two top leaders of the world, as well as threats to North Korea’s human security, inter-Korean exchange and cooperation in the field of health and food have a possibility in connection with the ROK-US alliance. To do so, a working group with the US can be formed to ease sanctions against North Korea, expand permitted items, and simplify procedures. In other words, South Korea must seek ways for inter-Korean exchange and

25) Kim, Nokyoung, “A Review on the Compatibility between the UN Sanctions against North Korea and the Inter-Korean Economic Cooperation,” *Unification and Law* (2021), pp. 93~94.

26) Ji, Hyeron, “Economic Sanctions on North Korea and Its Effects of the Human Rights Activities,” *Culture and Politics*, Vol.8, No. 1 (2021), p. 81.

cooperation in the fields of health care and food with or without the governance of the international community from a humanitarian and human security point of view. For South Korea, conducting an objective evaluation of the effectiveness of the UN and US sanctions against North Korea in advance while participating in the sanctions imposed on North Korea in response its nuclear and missile threats from the standpoint of ROK-US alliance and continuing dialogue and consultation with North Korea to provide support for the health care and food supply, which are directly related to the survival of North Koreans, from the perspective human security is of great importance.²⁷⁾

V. Conclusion

The number of COVID-19 infection cases hardly decreases with the continuous emergence of mutated variants and incomplete quarantine measures. Similarly, inter-Korean exchange and cooperation are still under suspension due to the issues associated with North Korea's nuclear weapons and missiles and the COVID-19 pandemic. The best measures to bring solutions to COVID-19 issues in North Korea and inter-Korean exchange and cooperation are humanitarian aid such as the provision of food and medicine from the standpoint of human security. North Korea's problems with health care and food, though they are directly related to the survival of its people, cannot be resolved without the support of the international community and South Korea.

It has not been long since individual health issues have been discussed in terms of security, and the state has a responsibility to protect health security. In particular, the emergence of unexpected infectious diseases such as SARS, swine influenza, MERS, and COVID-19 terrorized the international community and made the necessity of health security more apparent. Cooperation between countries is an essential condition for realizing health security. Infectious disease control is a common concern between North and South Korea, and inter-Korean exchange and cooperation for this purpose can play a catalytic role in improving inter-Korean exchange and cooperation.

Despite the need to provide humanitarian aid to North Korea in consideration of its poor health care system and food shortage, doing so has been difficult due to North Korea's nuclear test and missile launches. Rather than addressing it with the traditional approach using diplomacy and security between states and governments, it should be addressed from the perspective of human security along with various governance. This study examined several possibilities of promoting inter-Korean

27) Kim, Joosam, "Efficacy of UN's Sanctions on North Korea's Nuclear and North Korea's Regime Survival Strategy," *Korea and Global Affairs*, Vol.2, No. 1 (2018), p. 89.

exchange and cooperation in terms of human security while enhancing human security in North Korea and contributing to the reunification of the Korean Peninsula. Firstly, the South Korean government must institutionalize inter-Korean exchange and cooperation and strategically target escape clauses in related policies. Secondly, a governance control tower should be built for inter-Korean exchange and cooperation, and governance should achieve convergence and synergy through solidarity and cooperation. Thirdly, North Korea's sanctions should be lifted to facilitate inter-Korean exchange and cooperation. The ROK-US alliance, which has been expanded into a comprehensive alliance, should help provide aid to North Korea by lifting sanctions on the health care and food sectors from the standpoint of human security.

Inter-Korean exchange and cooperation in the domain of human security can become a blue ocean for world peace and prosperity beyond peace on the Korean Peninsula. Human security will secure not only national support but also the justification of global support for the identity of the Korean Peninsula community and life community while contributing to the establishment of peace and unification of the Korean Peninsula.

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- <https://www.edaily.co.kr/news/read?newsId=01105366632363360&mediaCodeNo=257&OutLnkChk=Y> (Search date: 2022.6.19.).

A study on North Korea's Hypersonic Missile Development: Threat Analysis and Suggestions for the South Korean Military

Geunho Song

Abstract

This paper attempts to assess the threats from North Korea's first Hwasung-8 hypersonic missile test in 2021 and another hypersonic missile test undertaken in January 2022. Through examination of the current status, purpose, and capability of North Korea's hypersonic missile development, we evaluate the current status and threat of North Korea's hypersonic missile development and review the countermeasures of the South Korean military.

Hypersonic missiles constitute a new weapon system currently being developed in some technologically advanced countries, including the United States, Russia, and China. They are dubbed a game-changer of war because it is impossible to defend them with a general ballistic missile defense system. Thus, North Korea's hypersonic missile test was a big shock to South Korea. North Korea's development of hypersonic missiles should be established through objective evaluation of South Korea's missile defense system. Since hypersonic missiles are different from ordinary ballistic missiles in terms of their capabilities, such as speed and maneuver, it is difficult to establish a counter-defense weapon system. North Korea's development of hypersonic missiles poses a threat to South Korea's peace and security; thus, a response is needed. First, South Korea should analyze North Korea's intentions behind developing hypersonic missiles and its threats. Second, South Korea should strengthen its missile capabilities to cope with military threats from North Korea's development of hypersonic missile technology. Lastly, South Korea should surpass North Korea in the hypersonic missile development.

This study is meaningful in that it analyzed the North's hypersonic missile development and test process and its threats to South Korea and neighboring countries. It also studied countermeasures of the South Korean military. Access to information such as North Korea's hypersonic missile flight data was restricted; hence, analysis of North Korea's hypersonic missile capability was limited. Nonetheless, this study will provide substantial grounds to encourage in-depth research on North Korea's supersonic missile development in the future.

Keywords: Hypersonic missile, Hwasung-8, HGV, HCM, Missile provocation

I. Introduction

On September 28, 2021, North Korea's hypersonic missile test-launch shocked South Korea. North Korea reported that it had succeeded in the development of hypersonic weapons systems with the most strategic significance among the five key tasks proposed in the Five-Year Plan for Defense Science and Technology and Weapon System Development at the 8th Party Conference in January 2021.¹⁾ North Korea announced that it would develop North Korea's advanced defense science and technology, improve defense capabilities, and strengthen national self-power while conducting a hypersonic missile development project. In addition, in January 2022, two hypersonic missile tests and five missile provocations heightened the crisis on the Korean Peninsula. Beijing Winter Olympics and South Korea's presidential election were scheduled to be held; yet, North Korea had no interest in negotiating with the United States and continued with missile provocations to draw attention from the international community, including the United States. North Korea's missile provocations are expected to increase further as major national events such as Kim Il-sung's birthday are planned in 2022.

It is critical that we study why North Korea decided to develop hypersonic missiles. The technology required to develop hypersonic missiles is difficult to acquire, and North Korea was under international economic sanctions after its previous missile tests. The U.S., China, and Russia are currently securing technology and continue to develop hypersonic missile technology. Since 2017, North Korea has been threatening the Korean Peninsula and neighboring countries as its missile performance has improved so much that it can complete the advancement of nuclear power and project missiles into North Korea's attack targets. North Korea's missiles were known for their poor accuracy in the past. However, North Korea's advanced missile system is considered a grave military threat to South Korea. Hypersonic missiles are dubbed a game-changer because they are difficult to intercept with the existing missile defense system. North Korea's development of hypersonic missiles is expected to escalate military threats to South Korea.

Many studies have been undertaken on North Korea's nuclear and missile threats. Yet, studies on hypersonic missiles recently developed by North Korea are still rare. Most works on North Korea's development of hypersonic missiles are conducted by the Korea Institute for Defense Analysis. The recent report on North Korea's launch of a new ballistic missile compared the warhead of North Korea's hypersonic missile with that of other countries' missiles in order to assess North Korea's hypersonic missile capability.²⁾ There was a study that evaluated South Korea's response system

1) Rodong Newspaper, January 11, 2022.

2) Shin Seunggi, "Evaluation and implications of North Korea's new ballistic missile test launch." *Northeast Asia Security Situation Analysis*, Feb 9, 2022.

and military countermeasures by analyzing North Korea's intention behind developing the hypersonic missile system and its threats to the neighboring countries including South Korea.³⁾ The study suggested that South Korea should analyze the development of North Korea's strategic weapons, dubbed a game-changer, and establish countermeasures.⁴⁾

To analyze the process of North Korea's hypersonic missile development and assess the gravity of its military threats, this study will discuss the nature of hypersonic missiles and examine the activities and performance of North Korea's hypersonic missile development.

II. The concept and analysis method of hypersonic missiles

1. Hypersonic missile concept and preliminary research review

The Hypersonic Missile is a threatening weapon system called a game-changer in the modern war as it flies at a high speed of more than 6,120 km/h (Mach 5 or higher). Hypersonic missiles are mounted on a hypersonic glide vehicle (HGV) on the booster propulsion system of the ballistic missile. Once they are fired, they leave the atmosphere, reach their peak altitude, and then enter the atmosphere as they are separated from the booster rocket. Hypersonic missiles operate in the atmosphere differently from existing ballistic missiles flying at an altitude; they are not easy to detect and intercept due to anomalous maneuvers. Due to the high flight speed, they can target and reach any object on Earth within two hours, and it is difficult to defend oneself from them with the existing missile defense system.⁵⁾ The United States, Russia, and China have previously acquired hypersonic missile technology. Yet, the news that North Korea had tested hypersonic missiles was a big shock to South Korea. The fact that North Korea tested hypersonic missiles poses a grave threat to South Korea's national security.

Hypersonic missiles can be largely divided into two categories: Hypersonic Glide Vehicle (HGV) and Hypersonic Cruise Missile (HCM).⁶⁾ Launched by rocket, HGVs are separated from the booster rocket at an altitude of 50 to 100 km. They fly at high speed to the target above the atmosphere with anomalous maneuvers such as ascending and descending maneuvers and skipping. In general, a HGV is

3) Lee Sunhee, "Intent and implications for the development of a hypersonic glide in North Korea." *Defense Foundation*, no. 1884, Feb 10, 2022.

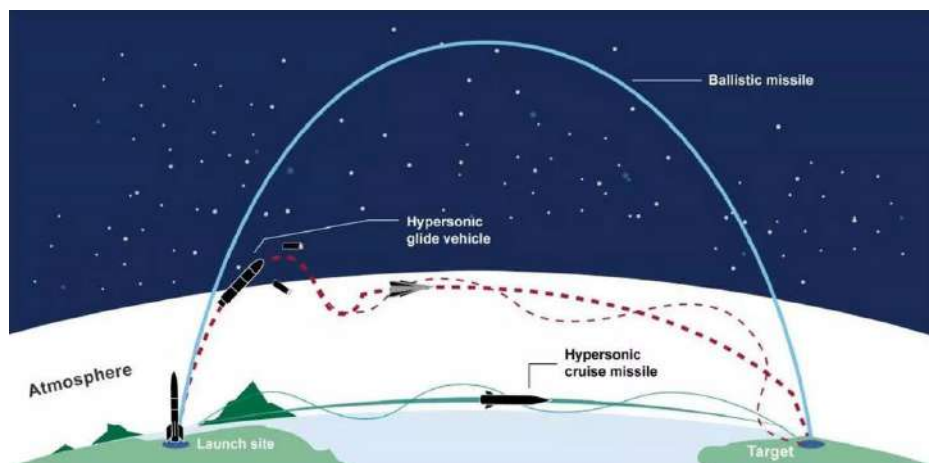
4) Kim Kangnyeong, "North Korea's development of game changer strategic weapons and South Korea's response." *South Korea and the world*, Volume 3, No. 1, 2021.

5) Richard H. Speier, George Nacouzi, Carrie A. Lee, Richard M. Moore, 2017. *Hypersonic Missile Nonproliferation*, Santa Monica: Rand corporation, p. 12.

6) NASA, "Welcome to the NASA's Guide to Hypersonics."
<https://www.grc.nasa.gov/www/BGH/index.html> (accessed : Feb 8, 2022)

wedge-shaped.⁷⁾ HGVs can set various attack directions and flight paths depending on the target, making it difficult to ascertain expected targets because they do not follow a typical flight trajectory of ballistic missiles.⁸⁾ Due to the nature of these hypersonic missiles, the prediction of the intended targets is nearly impossible, and, thus, hypersonic missiles pose a greater threat than do those with hypersonic but low maneuvering capability ballistic missiles. As shown in Figure 1, a HGV does not have a ballistic trajectory like a ballistic missile. Its anomalous trajectory limits air defense units' ability to intercept the missile and can improve the viability of hypersonic glide vehicles in case of target changes during the flight.

<Figure 1> Comparing the flight trajectories of hypersonic glide vehicle (HGV) and ballistic missile reentry vehicle



Source: The Economist, "Gliding missiles that fly faster than Mach 5 are coming," April 6th, 2019, <https://www.economist.com/science-and-technology/2019/04/06/gliding-missiles-that-fly-faster-than-mach-5-are-coming>(assessed: April 20, 2022).

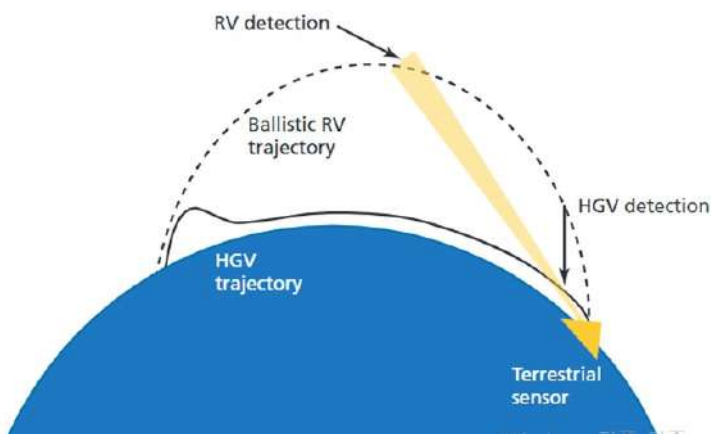
The hypersonic cruise missile (HCM) is the fastest existing cruise missile, equipped with a high-speed jet engine such as a rocket or a scramjet, flying to the target. Typical cruise missiles boast a subsonic speed of less than Mach 1 and excellent maneuvering capability but have the disadvantage of being intercepted due to their relatively low speed.⁹⁾ The high speed of HCMs can neutralize the opponent's missile defense system

7) Richard H. Speier, George Nacouzi, Carrie A. Lee, Richard M. Moore, 2017. *Hypersonic Missile Nonproliferation*, Santa Monica: Rand corporation, p. 1.

8) Richard H. Speier, George Nacouzi, Carrie A. Lee, Richard M. Moore, 2017. *Hypersonic Missile Nonproliferation*, Santa Monica: Rand corporation, p. 2.

while overcoming typical cruise missiles' vulnerability to the air defense system due to their low speed.¹⁰⁾

<Figure 2> The characteristics of radar detection of hypersonic missiles (HGVs) and ballistic missiles



Source: Richard H. Speier, 2017. *Hypersonic Missile Nonproliferation*, Santa Monica: Rand Corporation, p.11.

Since hypersonic missiles do not fly at an altitude similar to that of ordinary ballistic missiles; missile warning times may be reduced, limiting missile defense operations. Countries like South Korea that do not have missile warning satellites in space mainly operate ground-based air defense networks. Ballistic missiles can be detected in advance and warn of threats, but hypersonic missiles fly less than 50 km as shown in Figure 2 above, making it difficult to detect by radar early; thus, they are bound to be vulnerable to air defense operations. According to a study by the RAND Corporation, re-entry of the 3,000km range can be detected by the ground radar 12 minutes prior to the target collision, but hypersonic missiles powered at low altitude reduced the radar's detection ability to 6 minutes prior to the target collision.¹¹⁾ It can be a major obstacle to the operation of air defense assets because the radar detection

9) Richard H. Speier, George Nacouzi, Carrie A. Lee, Richard M. Moore, 2017. *Hypersonic Missile Nonproliferation*, Santa Monica: Rand corporation, p. 7.

10) Lee Sunhee, "Intent and implications for the development of a hypersonic glide in North Korea." *KIDA Defense Issues and Analyses*, no. 1884, Feb 10, 2022, p. 3.

11) Richard H. Speier, George Nacouzi, Carrie A. Lee, Richard M. Moore, 2017. *Hypersonic Missile Nonproliferation*, Santa Monica: Rand corporation, p. 11.

system installed on the ground is limited, not being able to issue a warning of hypersonic missile attacks in advance.

Studies on North Korea's development of hypersonic missiles are rare. In September 2021, North Korea conducted the first hypersonic missile test. Due to the limited collection of detailed flight data, there were not many studies and analyses on missile test activities. Shin Seung-gi postulates that, based on its activities in 2021, North Korea's hypersonic missile development is in the early stage and that it will take a long time for the North to be able to electrify the Korean Peninsula.¹²⁾ Based on his analysis and comparison of the hypersonic missile launch in January 2022 with the September 2021 launch, Shin concludes that the North Korean hypersonic missile was an improved MaRV with improved performance that could neutralize the ROK-US joint missile defense system.¹³⁾ Lee Sun-hee determines North Korea's hypersonic missile development as a challenge to the South Korea-U.S. missile defense system, which limits the allocation of missile batteries due to their high speed and maneuvering capability. Thus, she argues that they should perform hypersonic missile defense missions.¹⁴⁾ While existing studies reviewed above reveal the current state of North Korea's hypersonic missile development and the gravity of its threats, in-depth studies that assess North Korea's ability to develop hypersonic missiles, analyze its threats systematically, and propose countermeasures against military threats are needed.

2. Hypersonic missile development and international control regime

Russia and China have succeeded in developing weapons systems with hypersonic missile technology. Russia has Avangard glide-type hypersonic missiles deployed in 2019 and Chiron vessels and submarine-launched hypersonic cruise missiles deployed in November 2020. Before Russia's recent invasion of Ukraine, it threatened to fire hypersonic missiles as a show of force. Recently, Russia fired a Kinzhal hypersonic missile to strike a Ukraine weapons depot. China's typical hypersonic missile is DF(Dong Feng)-17, which was operatively deployed in 2020 and can speed up to Mach 10. The United States is developing hypersonic weapons in the Army, Navy, and Air Force and plans to deploy them in 2023. However, due to the recent test failure of the U.S. hypersonic missile, there are strong concerns about the United States trailing far behind China and Russia that possess advanced hypersonic missile technology.¹⁵⁾

North Korea's recent claim that it tested hypersonic missiles necessitates an effective mechanism to control over the transfer of hypersonic missile technology.

12) Shin Seung Gi, "It is related to the evaluation of North Korea's Mars-8 type and new anti-aircraft missile test launch." *Northeast Asia Strategic Analysis*, Oct. 26(2021).

13) Shin Seunggi, "Evaluation and implications of North Korea's new ballistic missile test launch." *Northeast Asia Strategic Analysis*, Feb 9(2022).

14) Lee Sunhee, "Intent and implications for the development of a hypersonic glide in North Korea." *KIDA Defense Issues and Analyses*, no. 1884, Feb 10(2022).

15) Yoo Yong-won, *Chosun Ilbo*, "Hypersonic missile." (2022.1.7).

Although Japan is also developing hypersonic missiles, North Korea's actual test activities have made waves. Concerns that North Korea may have secured hypersonic technology increased because it is difficult for North Korea to import strategic materials and transfer technology due to COVID-19 and U.N. Security Council economic sanctions. It is not easy for North Korea to produce its own hypersonic missile development technology, and there is a high possibility of technical support from China or Russia. Some media outlets have reported that North Korea secured hypersonic missile technology through hacking.¹⁶⁾ Rogue states and terrorist groups can pose a grave threat to international security if they acquire hypersonic missile technology.

The hypersonic missile technology is controlled by the MTCR. However, since hypersonic missiles are a new weapon system that surpasses the existing concept of war, it is necessary to discuss the transfer of hypersonic missiles for peace. Among the developed countries, the United States, China, and Russia possess hypersonic missile technology. Australia, Japan, India, France, and Germany are currently developing hypersonic missile technology, while Iran, Israel, and South Korea are known to conduct basic research. North Korea's hypersonic missile development was announced as a paramount development project of a weapon system at the 8th Party Congress in January 2021. However, it is considered a grave threat to the security of the Korean Peninsula as North Korea undertook three hypersonic missile tests in September 2021 and January 2022. It is unclear whether or not North Korea has developed its own hypersonic missile technology. Nonetheless, North Korea's threat should not be underestimated because it has acquired and tested the world's best weapon technology.

3. Research Scope and Subject

When North Korea test-launched a hypersonic missile, the most asked question was whether or not it was a hypersonic missile. At the time of the 2021 test launch, the maximum missile speed was measured as Mach 3. Thus, assuming North Korea's hypersonic missile test failed, South Korea surmised that it could intercept North Korea's hypersonic missile with South Korea's missile defense system. However, at the time of the 2022 test launch, the missile flew at a high speed of Mach 10 and broke through hypersonic speeds, raising concerns over whether South Korea could defend itself from North Korea's hypersonic missiles. Therefore, it is imperative that the South Korean government should evaluate North Korea's hypersonic missile development activities and devise countermeasures for its national security.

To assess North Korea's threats systemically, this study selects three evaluation factors: the purpose of North Korea's hypersonic missile development; the capability of North Korea's hypersonic missiles; and the military threat of hypersonic missiles. First,

16) Nils Weisensee. 『NKNEWS』 .“Hackers likely helped North Korea build hypersonic missile: UN report”, February 8, 2022, <https://www.nknews.org/2022/02/hackers-likely-helped-north-korea-build-hypersonic-missile-un-report/> (accessed : Feb 28, 2022).

given that North Korea launched hypersonic missiles after North Korea's declaration of nuclear advancement, the purpose of hypersonic missile development could be to provide a reliable weapon system that can carry North Korea's nuclear weapons. North Korea began developing missiles in the 1980s and has operated a number of Scud and No Dong missiles. Over three decades, North Korea has noticed many shortcomings of conventional missiles as a delivery vehicle of nuclear weapons. In addition, North Korea was aware that the ROK-US joint missile defense system could intercept its missiles. Thus, it can be assumed that these reasons motivated North Korea to develop hypersonic missile technology that could change flight routes to address the shortcomings of such missile operations.

Second, it seems that North Korea developed hypersonic missiles, which boast excellent maneuvering capability and shorten the detection time by the ROK-US radar system, in order to carry out successful attacks on the South Korean, Japanese, and U.S. military bases. Although the speed of the first test launch in 2021 fell short of the hypersonic speed, it showed hypersonic maneuver during the test launch activity in 2022. While the lack of detailed flight data and analysis of North Korea's hypersonic missiles limits the evaluation of hypersonic missiles, based on data collected during the tests of North Korea's hypersonic missiles so far, this study will evaluate the characteristics and capability of the missiles.

Lastly, it is critical that the South Korean government should gauge how North Korea's hypersonic missiles could be used for military purposes in the future. By studying the nature and threat of North Korea's hypersonic missile operation, the South Korea government must update its missile defense operation system so that it could utilize it efficiently against North Korea's hypersonic missiles. Assuming that North Korea builds hypersonic missiles to strengthen its nuclear missile capabilities, this study intends to propose countermeasures for the South Korean military by examining the process of North Korea's hypersonic missile development and analyzing missile

<Table 1> North Korea's hypersonic missile threats research range and subject

Category	Judging threat analysis	Examples
Judgment on the threat of the development of hypersonic missiles	The purpose of developing hypersonic missiles	Enhance national status and strengthen national defense capabilities through advanced nuclear missile capabilities, domestic control, and development of advanced technologies.
	Hypersonic missile capability	Status and capability of hypersonic missile design/test launch
	Military operation of hypersonic missiles	Hypersonic Missiles Military Threats and Military Management Measures

capabilities and military threats. The threat of North Korea's development of hypersonic missiles is analyzed in the following manner. Table 1 shows the ranges and subjects of the research on North Korea's hypersonic missile threats.

III. Threat Analysis of North Korea's Hypersonic Missile Development

1. North Korea's hypersonic missiles development

With the success of the sixth nuclear test, North Korea conducted a test launch of a Hwasung-12 Intermediate-range ballistic missile (IRBM) with a range of 4,500 to 5,500 km in May and November 2017, and exhibited North Korea's missile capability in November 2017. In January 2021, the 8th Worker's Party Congress set forth major tasks pertaining to the development of the defense industry and announced that it would develop hypersonic missiles, tactical nuclear weapons, nuclear submarines, and military reconnaissance satellites.¹⁷⁾ At the time, it was questionable whether or not North Korea could develop hypersonic missiles. Nonetheless, South Korea was shocked to learn of North Korea's test launch of a hypersonic missile in September 2021. We will analyze North Korea's three hypersonic missile tests.

(1) The first hypersonic missile test (September 28, 2021)

On September 28, 2021, North Korea launched a Hwasung -8 hypersonic missile from Yonglim-gun, Jagang-do. North Korea claimed that the hypersonic missile test launch was carried out to fulfill one of the top five tasks, the development of hypersonic missiles, in the Defense Science Development and Weapon System Development Plan announced at the 8th Party Conference in January 2021. Kim Jong-un mentioned North Korea's preparation for the production of hypersonic missile tests in the 8th Worker's Party Congress project report.

Korea Central News Agency reported that the National Defense Research Institute conducted a test launch of the newly developed hypersonic missile Hwasung-8. Defense scientists corroborated the flight control and stability of the missile in the active section and confirmed technical indicators, including the induction maneuvering capability and glide flight characteristics of the separated hypersonic active flight combat unit. They confirmed the stability of the ampoule missile fuel system and actuator introduced for the first time, and all technical indicators aimed at the test were satisfied with the design needs.¹⁸⁾

17) Jeon Seong-hoon, "Northern ultrasonic missile, the decisive version of the 10-year nuclear advancement of Kim Jong-un," *Kookmin Ilbo*, October 11, 2021, <https://www.donga.com/news/article/all/20211011/109641872/1> (accessed: February 26, 2022).

18) Korea Central News Agency, September 28, 2021.

North Korea's first hypersonic missile test fell short of the speed of Mach 5, and, thus, South Korea evaluated that North Korea's missile test could not be considered a hypersonic missile test. Based on its analysis, the South Korean government determined that it was not a threat because North Korea's hypersonic missile technology was still in the early stage of development.¹⁹⁾ Detailed flight data and analysis data on the first hypersonic test launch were not released; thus, North Korea's initial test launch of hypersonic missiles received little attention. It seems that North Korea inspected the basic hypersonic missile flight performance and lowered the difficulty of the test evaluation when it first tested and fired hypersonic missiles.²⁰⁾ The first test is evaluated as an initial test launch to develop hypersonic missiles while additional functions such as precise guidance of hypersonic missiles, stable flight, and extended ranges are expected to be tested in the future.²¹⁾ North Korea continues to develop weapon systems to improve the efficiency and viability of ballistic missile operations using ampoule-type fuels to prevent a prolonged liquid-fuel injection and shorten the operation time of missile launches.

(2) The second Hypersonic Missile Test Launch (January 5, 2022)

North Korea claimed to have conducted the second hypersonic missile test on January 5, 2022. The shape of the warhead of the hypersonic missile claimed by North Korea is different from that of the Hwasong-8 launched in September 2021. Yet, the propulsion system was the same and was determined to be the MaRV with improved performance.²²⁾ MaRV has relatively fewer technical demands than hypersonic missiles. The Ministry of National Defense announced that North Korea's second hypersonic test hit a target with a maximum speed of Mach 6 or less and an altitude of 50 kilometers apart, but there was no technological advance compared to the first test. It added that it was a ballistic missile with a MaRV.²³⁾ It is speculated that the liquid fuel ampoule was used, and weapon system development activities were carried out to improve viability by being fired from a mobile launch vehicle.

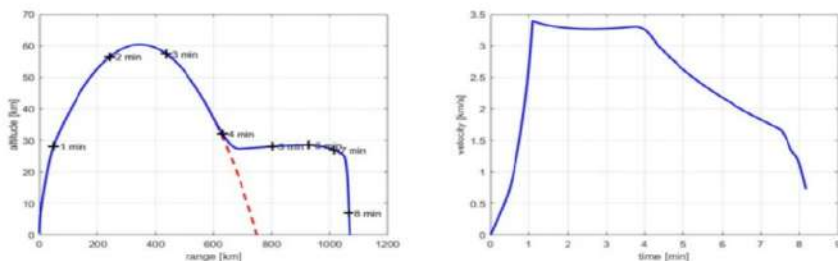
-
- 19) Kim Yong-rae, Yonhap News Agency, "It falls short of North Korea's hypersonic missile, Mach 5..." "Technology beginner stage", 2021.11.24., <https://www.yna.co.kr/view/AKR20211124085100504?input=1195m> (accessed: February 26, 2022).
- 20) Shin Seung Gi, "It is related to the evaluation of North Korea's Mars-8 type and new anti-aircraft missile test launch." *Northeast Asia Strategic Analysis*, Oct. 26, 2021, p.9.
- 21) Lee Sang-heon, Yonhap News, Game Changer's competition to develop hypersonic missiles is heating up...North Korea also joins, on October 19, 2021, <https://www.yna.co.kr/view/AKR20211019035800071?input=1195m> (accessed: February 26, 2022).
- 22) Shin Seung Gi, "It is related to the evaluation of North Korea's Mars-8 type and new anti-aircraft missile test launch." *Northeast Asia Strategic Analysis*, Oct. 26, 2021, p.3
- 23) Ministry of National Defense press briefing, January 7, 2022.

(3) The third hypersonic missile test launch (January 11, 2022).

On January 11, 2022, North Korea conducted its third hypersonic missile test launch under the observation of Kim Jong-un. In the third missile test launch, the missile flight distance was more than 700 km, the flight altitude was up to 60 km, and the maximum flight speed surpassed Mach 10. In the face of South Korea which concluded that the missile North Korea test-launched for the second time was not hypersonic, North Korea showed off its achievements in developing hypersonic missiles that surpassed Mach 10 in its third launch. The two hypersonic missile test launches conducted in January 2022 are Maneuverable Reentry Vehicles (MaRV).

Some argue that it can attack by bypassing the southern region of the Korean Peninsula and Japan from the interview with the Deputy Director of Missile Defense Project, the Center for Strategic and International Studies.²⁴⁾ In addition, as a result of the simulation of the hypersonic missile test launch on January 15, unlike ordinary ballistic missiles, the flight trajectory was horizontally descending at an altitude of 60 km or less. Its speed exceeded 3 km per second, flying at hypersonic speed. North Korea's third test launch is presumed to be of a hypersonic missile. Given the missile range, attacks on U.S. military bases in Japan are possible.²⁵⁾

<Figure 3> Hypersonic missile flight altitude-distance, speed-time analysis results



Simulation results: altitude versus range (left) and velocity as a function of time (right). (Savelsberg/Kawaguchi)

Source: Ralph Savelsberg and Tomohiko Kawaguchi, "North Korea's hypersonic missile claims are credible, exclusive analysis shows," February 16, 2022, <https://breakingdefense.com/2022/02/north-koreas-hypersonic-missile-claims-are-credible-exclusive-analysis-shows/> (accessed: 2022.2.27.)

24) Brad Lendon and Yoonjung Seo, "North Korea claims to be testing the world's most advanced weapon. Experts are doubtful", CNN, January 6, 2022, <https://edition.cnn.com/2022/01/06/asia/north-korea-missile-test-explained-intl-hnk-ml/index.html> (accessed: Feb. 27, 2021).

25) Ralph Savelsberg and Tomohiko Kawaguchi, "North Korea's hypersonic missile claims are credible, exclusive analysis shows" February 16, 2022, <https://breakingdefense.com/2022/02/north-koreas-hypersonic-missile-claims-are-credible-exclusive-analysis-shows/> (accessed: Feb. 27, 2022).

It is not easy to intercept hypersonic missiles like the one that North Korea test-fired over Mach 5 due to high-speed flights and anomalous maneuvers. In South Korea's missile defense system, Patriot and THAAD are usually responsible for intercepting ballistic missiles. More than likely, North Korea will analyze the operational range of Patriot and THAAD and their weakness and operate hypersonic missiles at altitudes and areas where Patriots and THAAD cannot intercept them.

2. Analysis and evaluation of North Korea's threat to develop hypersonic missiles

(1) The military purpose of developing hypersonic missiles

North Korea is strengthening its nuclear and missile power to defend itself against the invasion of hostile countries and unify the Korean Peninsula by strengthening its defense power. It also demands that South Korea and the United States lift economic sanctions on North Korea while strengthening internal control and solidarity within its territory. North Korea is recognized as a nuclear powerhouse and continues to develop the latest missiles, including the development of hypersonic missiles, the North Korean version of Iskander (KN-23), the North Korean version of ATACMS (KN-24), and the new long-range cruise missiles. North Korea also launched 11 missiles in January 2022, escalating the security crisis on the Korean Peninsula according to its strategy regardless of the Beijing Winter Olympics and South Korea's presidential election. North Korea claims that missile development is part of its efforts to strengthen its peaceful defense system against U.S. aggression. North Korea also strongly opposes the U.S.-South Korea joint exercises and steps up criticism for practicing invasion of North Korea even in small-scale military exercises.

North Korea's missile launches in the name of strengthening its nuclear and missile defense capabilities are drawing criticism from the international community. Yet, North Korea continues to develop missiles despite the UN Security Council's resolution to impose sanctions on North Korea. North Korea continues to strive to complete new missile systems, including hypersonic missiles, to defend itself from the U.S. attack and maintain internal control over North Koreans. It also highlights the Kim Jong-un regime's performance in strengthening its defense capabilities. In addition, after the success of the sixth nuclear test, North Korea has completed various nuclear weapons delivery systems. Following the successful development of mid- to long-range ballistic missiles and intercontinental ballistic missiles, North Korea is advancing missile technology that will neutralize the South Korea-U.S. missile defense system.

In his 2017 New Year's address, Kim Jong-un expressed confidence in the development of ICBM, claiming that the plan to prepare for the intercontinental ballistic missile (ICBM) test was in its final stage. Then, he declared the

completion of the national nuclear force with the success of the Hwasung-15 ICBM launch in November 2017. Kim Jong-un aims to improve nuclear missile technology by strengthening missile power in order to block U.S. intervention in the event of a war on the Korean Peninsula.²⁶⁾ Taking into account North Korea's threat to develop hypersonic missiles and violations of U.N. Security Council resolutions, South Korean and U.S. authorities should toughen economic sanctions and pay attention to the dangers of North Korea's hypersonic missiles.

North Korea emphasized cooperation and peaceful exchanges for denuclearization at six-party talks, the Pyeongchang Winter Olympics, three inter-Korean summits, and Kim Jong-un and Trump's historic summit. However, it should recognize historical lessons to simply avoid risks of pressure on North Korea and U.S. military response.²⁷⁾ On multiple occasions, North Korea has promised to comply with the international community norms, while participating in dialogues through diplomatic channels, only to break the promise once the situation improved. Thus, North Korea's hypersonic missile development strategy should be clearly recognized and countered by similar military strategies.

North Korea's large-scale national budget investment in missile development in the midst of economic difficulties and international sanctions shows how desperately North Korea seeks to strengthen its nuclear missile power and enhance its external bargaining power with the U.S. and South Korea. Provided that there are only three countries in the world with hypersonic missile technology, the United States, China, and Russia, North Korea's success in testing hypersonic missiles could boost North Koreans' pride in and loyalty to the North Korean regime and, ultimately, contribute to strengthening Kim Jong-un's power.²⁸⁾

(2) Hypersonic missile capability.

North Korea has conducted three hypersonic test launches since September 2021. North Korea's launch of hypersonic missiles is a big shock to South Korea, which is still undergoing basic research on hypersonic missiles. North Korea's hypersonic missile is operated as a mobile launcher and can be deployed at any launch point and fired at any time, avoiding the ROK-US joint surveillance network in advance. In addition, by using an ampoule type of liquid fuel equipped with a sealed liquid-fuel tank, North Korea seems to have found a solution to the existing long-term fuel injection time and information monitoring system and

26) Jeong Sung-jang, "North Korea's ICBM test launch and prospects for U.S.-North Korea relations." *Sejong review*, no. 333, 2017, p. 2.

27) Park Siyoung, "The reversal of North Korea's perception and preference of threats before and after the declaration of completion of nuclear force." *Defense Research*, Volume 62, No. 1, 2019, p. 26.

28) Jeong Sung-jang, "The background of North Korea's consecutive missile launches and the outlook for the situation on the Korean Peninsula." *The situation and policy*, 2022-Feb No.10.

enabled rapid missile launch. The capabilities of North Korea's hypersonic missiles require precise analysis and research on test activities. Overseas research institutes report various analyses of North Korea's claims of hypersonic missiles. Based on the test launch data so far, it is difficult to intercept hypersonic missiles with missile defense assets because it has a range of more than 700 km with a peak altitude of 50 to 60 km, a maximum speed of Mach 10, and high-speed flight and maneuver at an altitude of 50 km.

The International Institute for Strategic Studies (IISS), a British think tank, recently identified North Korea's hypersonic missile as a mobile re-entry (MaRV) ballistic missile and compared it to the Hwasung -8, which was launched in September 2021, the booster of the Hwasung-12 medium-long-range ballistic missile.²⁹⁾ North Korea's hypersonic missiles have yet to be technically completed. However, North Korea ordered priority investment in strengthening its defense capabilities and developing weapons systems at the 8th Party Conference in January 2021. Since the party and Kim Jong-un focus the national power on developing a defense weapon system, the South Korean government should proactively implement its military missile defense operation and response weapon system.

(3) Hypersonic missiles for military operations.

North Korea's hypersonic missiles are expected to have a range of more than 700 kilometers and are estimated to fly within 60 kilometers of their peak altitude. They boast high-speed flight performance, flying below the peak altitude of Mach 5, and maneuvering capability that allows changes of flight routes, making it difficult to intercept if they fly below the lowest effective altitude of 40 km of the THAAD interception system. The interception altitude of the High Altitude Missile Defense System (THAAD) ranges from 40 to 150 km, the range is 200 km, the new Patriot Missile (PAC-3 MSE) is 40 km, the range is 100 km, and the medium-range surface-to-air guided weapon (M-SAM) is 15 to 20 km, and the range is 40 km.

North Korea can establish and operate flight routes and find operational restrictions based on its previous research on non-imperceptible areas of South Korea's missile defense system. Rather than presuming that North Korea's hypersonic missile technology level is primitive and cannot pose a threat to South Korea's security, the South Korean government should establish countermeasures in advance to respond to the advancement of North Korea's hypersonic missile technology.

29) Tom Karako, Masao Dahlgren, CSIS Missile Defense Project, *Complex Air Defense: Countering the Hypersonic Missile Threat*, February 7, 2022, <https://www.csis.org/analysis/complex-air-defense-countering-hypersonic-missile-threat> (accessed: Feb.26, 2022).

IV. The South Korean military's countermeasures

North Korea continues to develop various ballistic missiles to strengthen its nuclear missile capabilities and step up its R&D activities to neutralize the South Korea-U.S. missile defense system. North Korea's recent development of hypersonic missiles poses a grave security threat to the Korean Peninsula because only a few countries around the world possess such technology. North Korea's launch of hypersonic missiles and ballistic missiles is a violation of the UN resolution. The South Korean government should strengthen its military readiness by utilizing the ROK-US joint missile defense system while demanding tougher sanctions from the international community. In response to the increase in North Korea's threat of hypersonic development, we propose that the South Korean military adopt the following measures.

First, the South Korean military must analyze North Korea's intentions of developing hypersonic missiles and its threats. The hypersonic missile test-launched by North Korea for the first time failed to exceed Mach 5, which indicates that it was not a hypersonic missile. However, the missiles in the subsequent launches in 2022 performed various anomalous maneuvers and surpassed Mach 10, heightening the threat of North Korea's hypersonic missiles. The fact that North Korea's new weapons system development plan announced at the 8th Party Congress in 2021 was tested and evaluated in the second half of 2021 should be recognized that unlike South Korea's weapons system development, it is developing weapons systems with all the nation's capabilities. It is dangerous to judge early that the threat will be small because the North's hypersonic weapons system is low in technology and can be defended with existing missile defense systems. North Korea will also recognize that it will become a game-changer in the war by using hypersonic missiles to attack major targets and military command posts in South Korea's metropolitan area. An objective threat analysis should be conducted on North Korea's hypersonic development activities.

Second, South Korea must devise countermeasures against North Korea's hypersonic missile military threat and develop combined countermeasures technologies and equipment. To maintain South Korea's security, it is imperative that South Korea builds an effective military response system to North Korea's hypersonic missile development. North Korea's hypersonic missiles are in the early stages of development; it is not certain whether or not such missiles would be complete. However, unlike South Korea's weapons system, North Korea's hypersonic missiles may be developed quickly and deployed early. South Korea needs to reinforce its military plans for hypersonic missile defense. South Korea and the U.S. missile military experts, who have established a South Korea-U.S. joint operation plan, should study together how to respond to North Korea's hypersonic missiles. In January 2022, the U.S. and Japan agreed to joint research

on the threat of hypersonic missiles by North Korea and China after a meeting of foreign and defense ministers. South Korea should also participate in the Japan-U.S. cooperation system to jointly respond to North Korea's hypersonic threats and establish measures to strengthen South Korea's missile defense capabilities by working with the US military.

Third, South Korea should surpass North Korea in the hypersonic missile development and strengthen the development of South Korean missile capabilities to counteract the hypersonic missile development. The Ministry of National Defense has decided the requirement for hypersonic guided missiles in 2020. The Agency for Defense Development (ADD) has key technologies and plans to develop hypersonic cruise missiles. The development of hypersonic cruise missiles will strengthen the ability to accurately strike North Korean key targets by surprise attack in the air.

South Korea is vulnerable to North Korea's hypersonic missiles with the South Korea-U.S. current missile defense weapons system. It may be reasonable to develop a weapon system that can defend against North Korea's hypersonic missiles. However, it takes a long time to initiate and conduct basic research, produce prototypes, and evaluate weapons tests. According to a close analysis of Korea's current missile defense system, countermeasures should be established through objective threat evaluation. North Korea's hypersonic missiles are also in the development stage. However, if development activities are terminated early, it is also necessary to purchase and deploy a new weapon system that can respond to them. Raytheon's new Glide Phase Interceptor (GPI) and SM-6 missile defense systems are adopted by the U.S. Missile Defense Agency. It needs to consider introducing and operating interceptors through cooperation between South Korea and the U.S. For South Korea to gain a military advantage in response to various North Korean missile-attack weapons systems, it is imperative that South Korea introduces a counter-weapon system and builds the technology required for a counter-weapon system.

V. Conclusion

This paper analyzed North Korea's hypersonic missiles in political and military aspects. North Korea is continuing to develop the latest weapons systems, including hypersonic missiles, to defend against external aggression and strengthen its defense capabilities. However, North Korea's hypersonic missiles are not developed for defense purposes but for military attacks against neighboring countries. Despite COVID-19 and economic sanctions against North Korea, it continues to build new missile weapons systems with large budgets. North Korea is strengthening its nuclear and missile capabilities by developing hypersonic

missiles and new weapons systems to maintain internal control of its people and promote the achievements of the Kim Jong Un regime. Also, as a nuclear power, North Korea is trying to tilt the scale on the situation on the Korean Peninsula in its favor, strengthening its foreign negotiating power on the Korean Peninsula issues. Since hypersonic missiles have emerged as a new weapon system on the Korean Peninsula, existing studies are rare. Most of the analyses are of the United States, China, and Russia, which have secured hypersonic missile technology and are developing weapon systems. Through this study, academia's interest in North Korea's hypersonic missile development and understanding of the development of state-of-the-art weapons systems were enhanced by deriving South Korean military countermeasures through research on North Korea's hypersonic missile development process.

It is very important to analyze North Korea's hypersonic missile development and assess threats through an objective analysis of North Korea's media reports on North Korea's hypersonic missile test launch. Analysis by experts in South Korea and the United States could help evaluate the intention and threat of North Korea's hypersonic missile development.

If North Korea's hypersonic missile capabilities are advanced in the future, it is necessary to establish countermeasures against North Korea's use of hypersonic missiles as an asymmetric strategy through research in advance on how they will operate in missile operations. In the future, comparisons of hypersonic missile development between the two Koreas, detailed analysis of North Korea's hypersonic missile power, and scientific analysis and in-depth research on the military impact of North Korea's hypersonic missile on security on the Korean Peninsula should continue.

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- Tom Karako, Masao Dahlgren, CSIS Missile Defense Project, Complex Air Defense: Countering the Hypersonic Missile Threat, February 7, 2022, <https://www.csis.org/analysis/complex-air-defense-countering-hypersonic-missile-threat> (accessed: Feb.26, 2022).
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Ukraine-Russia War and a Nuclear Crisis: How Dangerous It Could Be?

Tae-Hyung Kim

Abstract

One of the most worrisome aspects of the current war on Ukraine is its possibility of escalating to a nuclear level. How likely is Moscow to employ nuclear weapons in the conflict? Is this crisis more or less likely to get worse than other nuclear crises? I try to find out some answers by looking at specific characteristics of the ongoing nuclear crisis. The paper begins with a basic framework of the nuclear crisis developed by Bell and Macdonald. Then I delve into the development and evolution of Russia's nuclear strategy. By applying Bell and Macdonald's theoretical framework to the ongoing nuclear crisis, I cautiously conclude that the current crisis is closer to the staircase model, where a nuclear first use incentive is moderate to relatively high, and crisis controllability is high. Therefore, the possibility of the current crisis escalating to a nuclear level may not be so high. There is certainly a risk of analyzing an ongoing crisis, and future research needs to address theoretical and practical shortcomings.

Keywords: *Ukraine-Russia War, Nuclear Crisis, Four Models of Nuclear Crises, First Use Incentive and Crisis Controllability, Russian Nuclear Strategy*

Introduction

Russia's unprovoked invasion of Ukraine on February 24, 2022, shocked the world and violently shook the existing international order. Despite repeated warnings from the Russian President Putin and the mobilization of large-scale forces near the border with Ukraine, not many had thought that Putin would actually order his army to cross the international boundary and brazenly attack the neighboring sovereign state in 2022 in Europe. In contrast to Moscow's expectation of early and easy victory, the war has been dragging on for more than two months as of May due to overconfidence and poor logistics of the Russian side as well as the tenacious resistance of Ukraine. Besides the horrendous human toll, one of the most worrisome aspects of the current war in Ukraine is its possibility of escalating to a nuclear level. In his speech justifying the war, Putin ominously stated that potential interveners would confront consequences that they had never seen in history, which is widely interpreted as a nuclear warning. A few days after the outbreak of war, Putin put Russia's nuclear forces on a higher state of alert. In mid-March, as the war continued and became messier, the UN General Secretary Guterres warned of the possibility of nuclear conflict. As many experts are concerned about the rising possibility of nuclear weapon use by Russia, Dmitry Medvedev, the former Russian president and the current deputy chairman of the country's security council, warned that Russia has the right to use nuclear weapons when its very existence is in jeopardy even by just conventional forces in late March.¹⁾ In mid-April, CIA Director William Burns made a statement that although there has been no actual deployment yet, the possibility of Russian military using tactical or low-yield nuclear weapons out of frustration and desperation should not be taken lightly.²⁾

Therefore, the ongoing war on Ukraine certainly contains nuclear risk and the crisis could get worse for various reasons. How likely is Moscow to employ nuclear

1) Daniel Boffey, "Russia reasserts right to use nuclear weapons in Ukraine," *The Guardian*, March 26, 2022.

2) William Burns, "The Role of Intelligence at a Transformational Moment" Speech delivered at Georgia Tech, April 14, 2022.

weapons in the conflict? Is this crisis more or less likely to get worse than other nuclear crises? What can the West possibly do to prevent it? What would be the consequences if Russia uses the bomb regardless of the size of yields? The paper tries to find out some answers to these questions. Since the conflict is still going on, it would be extremely hard to come up with satisfactory answers. I will try to find out as convincing answers as possible by looking at specific characteristics of the ongoing nuclear crisis. To get there, one needs to understand Russia's nuclear posture and strategy. Thus, the paper begins with a basic framework of nuclear crises to situate the current crisis in the proper context. Then I delve into the development and evolution of Russia's nuclear strategy. A cautious prospect of nuclear weapon use will follow. I conclude the paper by wrapping up the findings and providing some policy implications.

Analyzing Nuclear Crisis

Ever since the detonation of the first (and last so far) atomic bombs in 1945, the world has been spared a nuclear catastrophe. Yet there have been numerous near misses due to technical malfunctions, human errors, misperceptions, and/or crises between nuclear powers. Among the reasons that could have triggered nuclear use in the past, nuclear crises are particularly worrisome because involved parties are already locked in rivalry and animosity that could flare up at any time. Nuclear states have acquired nuclear weapons for mainly security reasons. They believe nuclear capability would significantly bolster their security by providing top-level deterrence from external threats. Since the precarious external security environment pressures nuclear-powered states to get the atomic weapons in the first place, it is not surprising that these states get involved in rivalry, tension, and confrontation with adversarial states even after they become nuclear powers. Any type of security crisis between nuclear states carries a risk of escalating to a nuclear exchange level. We might have been lucky to avoid a nuclear cataclysm between nuclear powers: a nuclear crisis has not escalated to the next level yet. However, as the current Ukraine War demonstrates, the possibility of nuclear escalation and breaching of nuclear threshold is always present in a crisis between nuclear powers. Are certain types of nuclear crises more prone to escalation? How do we know if a nuclear crisis gets out of control? What is required to prevent the danger from happening? To answer these questions, defining what a nuclear crisis is and figuring out nuclear crisis dynamics are in order.

Any type of military confrontation between nuclear powers, a typical appearance of a nuclear crisis, has the potential to move up to the next level. Bell and Macdonald define a nuclear crisis as "an interaction between two nuclear armed states in which there is a change in type and/or an increase in intensity of disruptive or hostile

behaviors with a heightened probability of military hostilities that destabilizes their relationship and begins with a disruptive act or event.”³⁾ By reflecting and simplifying this sophisticated definition, in this study, I define a nuclear crisis as a hostile interaction between nuclear armed states in which there is a heightened chance of escalating to a more disruptive level of nuclear use. Scholars also analyze the causes, processes, and consequences of a nuclear crises. Some of the narrow escapes like the Cuban Missile Crisis in 1962, the Able Archer in 1983, and the Kargil War in 1999 have attracted particular attention.⁴⁾ Other lesser-known nuclear crises also have been studied to find out a specific mechanism of the nuclear crisis and to learn the right lessons not to repeat the nuclear scare.⁵⁾ Despite efforts by many scholars, it is hard to find what role nuclear weapons played in each crisis and if they assuaged or worsened the crisis. Since states that were engaged in nuclear crises had strategic objectives in mind, researchers also have studied under what conditions a state would have the upper hand in the aftermath of a nuclear crisis but with no clear consensus. Whereas some argue that superior nuclear capability vis-à-vis its opponent gives a strong advantage to the state,⁶⁾ some argue that the balance of nuclear capability has little discernable effect on nuclear coercion.⁷⁾ Some argue that besides the balance of nuclear power, the balance of resolve between confronting states also matters in a nuclear crisis.⁸⁾ Therefore, various, sometimes

3) Mark Bell and Julia Macdonald, “How to Think about Nuclear Crises,” *Texas National Security Review*, Vol. 2, No. 2 (February 2019), p. 42.

4) Marc Trachtenberg, “The Influence of Nuclear Weapons in the Cuban Missile Crisis,” *International Security*, Vol. 10, No. 1 (Summer 1985); Dmitry Adamsky, “The 1983 Nuclear Crisis – Lessons for Deterrence Theory and Practice,” *Journal of Strategic Studies*, Vol. 36, No. 1 (2013); T. Negeen Pegahi, “From Kargil to Pulwama: How Nuclear Crises Have Changed over 20 Years,” *The Washington Quarterly*, Vol. 42, No. 2 (June 2019); Mark Bell and Julia Macdonald, “How Dangerous Was Kargil War?: Nuclear Crises in Comparative Perspective,” *The Washington Quarterly*, Vol. 42, No. 2 (June, 2019); Sameer P. Lalwani, et al., “From Kargil to Balakot: Southern Asian Crisis Dynamics and Future Trajectories,” Stimson Center Asia Policy Paper, Feb 2020.

5) Michael Gerson, “The Sino-Soviet Border Conflict: Deterrence, Escalation, and the Threat of Nuclear War in 1969,” Center for Naval Analyses (CNA), November 2010; Barry Blechman and Douglas Hart, “15. Nuclear Weapons and the 1973 Middle East Crisis,” in Robert Art and Kenneth Waltz, eds., *The Use of Force: Military Power and International Politics* (Rowman & Littlefield, 1999, 5th edition); Polly Nayak and Michael Krepon, “US Crisis Management in South Asia’s Twin Peaks Crisis,” Stimson Report 57 (September 2014, 2nd edition); Polly Nayak and Michael Krepon. “The Unfinished Crisis: The Crisis Management after the 2008 Mumbai Attacks,” Stimson, February 2012.

6) Matthew Kroenig, *The Logic of American Nuclear Strategy: Why Strategic Superiority Matters* (Oxford University Press, 2018).

7) Todd Sechser and Matthew Fuhrmann, *Nuclear Weapons and Coercive Diplomacy* (Cambridge University Press, 2017).

8) Robert Powell, “Nuclear Brinkmanship, Limited War, and Military Power,” *International Organization*, Vol. 69 (Summer 2015).

opposite, interpretations and arguments have been put forward by academics in the nuclear field. Recently, Bell and Macdonald have attempted to synthesize existing arguments and concepts regarding the nuclear crisis and to provide a comprehensive and generalizable dynamic of nuclear crises. According to them, the intensity and direction of a nuclear crisis are based on the dynamic interactions of two key variables. The first variable is the extent to which either side has incentives to use nuclear weapons first in a crisis, a.k.a. crisis (in)stability, and the second variable is whether a crisis can escalate to the nuclear threshold in a controlled manner. The interaction of these two variables, the nuclear first use incentive and the controllability of crisis, yields four ideal-type models. The table below shows four models of nuclear crises.⁹⁾

<Table 1> Nuclear Crisis Model

Crisis Controllability			
		Low	High
Incentives for deliberate first use	High	“Firestorm” crisis	“Staircase” crisis
	Low	“Brinkmanship” crisis	“Stability-Instability” crisis

Among these four ideal models, a ‘stability-instability crisis, where an incentive for nuclear first use is low and crisis controllability is high, is the least dangerous model; a good example would be the Doklam Crisis, the months-long standoff between India and China along the disputed border areas near Bhutan in 2017. The ‘firestorm crisis model,’ where high incentives for nuclear first use coincide with low levels of controllability, is the most dangerous type and a potential nuclear crisis between North Korea and the US fits this model. According to Bell and Macdonald, the well-known Cuban Missile Crisis is a typical example of the ‘brinkmanship crisis’ because, during the Crisis, both sides had little incentive to go first while it was very difficult to control the possible escalation of the situation. The fourth model, the ‘staircase crisis’ occurs when one or both sides have a high incentive for nuclear first use, but the escalation controllability is relatively easy like what happened during the Kargil War between India and Pakistan in 1999.¹⁰⁾

Then, which nuclear crisis model best explains the current crisis over Ukraine? In

9) Bell and Macdonald, “How to Think about Nuclear Crises,” p. 46.

10) Ibid., pp. 47-62.

order to find an answer to this question, one needs to figure out how to measure these two intermingling variables of incentives for nuclear first use and crisis controllability. Bell and Macdonald lay out an elaborate measurement mechanism for two interacting variables. For incentives to use nuclear first use variable, they suggest three areas to look at: a significant nuclear asymmetry between the parties involved; an asymmetric escalation posture on either side; and perceptions by leaders of political advantages associated with the first use. According to them, the nuclear asymmetry is more likely to lead to the nuclear first use incentive because the weaker side is under the “use it or lose it” pressure when confronted by a superior enemy and the stronger side gets a “splendid first strike” temptation. A country with an asymmetric escalation posture, the concept developed by Vipin Narang,¹¹⁾ threatens the early use of nuclear weapons to deter a conventionally greater adversary. Leaders’ perception regarding their assessment of nuclear first use advantage is also important for first use incentive variable but hard to measure, as the authors admit.¹²⁾

For crisis controllability variable, Bell and Macdonald propose four areas to consider: robust command and control (C & C) institutions; clear and mutually understood red lines; the likelihood of interaction of nuclear and conventional forces; and avenues for crisis communication.¹³⁾ Although robust C & C, mutually clear red lines, and avenues for crisis communication like hotlines certainly make sense for crisis controllability, an interaction of nuclear and conventional forces might be tricky, because many nuclear states think this approach is a better way of deterrence despite increasing criticism to it.¹⁴⁾

These two interacting variables and seven areas to measure the two variables, three and four respectively, proposed by Bell and Macdonald, undoubtedly help understand nuclear crisis dynamics. However, there are clear limitations to this approach. As the authors admit, there could be more variables than the two, and we always have shortcomings in understanding leaders’ perceptions and misperceptions on the matters.¹⁵⁾ Furthermore, some argue that escalation controllability is just a myth, and nuclear calamity avoidance so far has been only thanks to sheer luck.¹⁶⁾ In

11) Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (Princeton University Press, 2014), pp. 19-21.

12) Bell and Macdonald, “How to Think about Nuclear Crises,” pp. 43-45.

13) *Ibid.*, p. 45.

14) James Acton, “Escalation through Entanglement: How the Vulnerability of Command-and-Control Systems Raise the Risks of an Inadvertent Nuclear War,” *International Security*, Vol. 43, No. 1 (Summer 2018); James Acton, ed., “Russian and Chinese Perspectives in Non-Nuclear Weapons and Nuclear Risks,” Carnegie Endowment for International Peace, 2017.

15) Bell and Macdonald, “How to Think about Nuclear Crises,” pp. 46-47.

16) Benoit Pelopidas, “The Unbearable Lightness of Luck: Three Sources of Overconfidence in the Manageability of Nuclear Crises,” *European Journal of International Security*, Vol. 2, No. 2 (2017).

spite of limitations and shortcomings, the interaction of two variables and the four ideal nuclear crisis models provide valuable insight and a useful analytical framework. Therefore, I apply this analytical framework to the current nuclear crisis in Ukraine to see how dangerous the crisis could be. Before I get to the recent nuclear thinking of Russian leaders, I provide a brief historical background of the evolution of Russian nuclear strategy to grasp better how it has reached the current stage of its nuclear mindset.

The Evolution of Russian Nuclear Strategy

When the US dropped the first atomic bomb on Hiroshima in August 1945, Stalin instantly realized the enormous military value of the new weapon. Since allowing an American nuclear monopoly would be severely detrimental to Soviet strategic interests around the world, Stalin immediately ordered to build the bomb as soon as possible. Thus, although it was imperative to recover the country devastated by the Nazi war machine, nuclear development became the top priority of the Soviet Union.¹⁷⁾ Moscow's sprint to acquire nuclear capability bore the fruit sooner than anticipated; in 1949, Moscow was able to break the American nuclear monopoly and became the second nuclear power.¹⁸⁾ After the humiliating retreat at the Cuban Missile Crisis in 1962 partially due to nuclear inferiority vis-à-vis the US, Moscow tried to expand and strengthen its nuclear arsenal to match that of Washington. After reaching nuclear parity with the US in the mid-1970s, the Soviet Union accelerated further to take a superior position over the US in the nuclear field. Even when they achieved a higher ground than the US in terms of nuclear capability in the early 1980s, the Soviet leaders were not satisfied with their security environment and worried about the possibility of America's first strike. Therefore, they continued to upgrade their strategic capability to bolster deterrence as well as to enhance damage limitation and counterforce ability.¹⁹⁾

The sudden disintegration of the mighty Soviet Union in late 1991 dramatically weakened the Russian military posture and degraded its status in international

17) Alexander Debs and Nuno Monteiro, *Nuclear Politics: The Strategic Causes of Proliferation* (Cambridge University Press, 2017), pp. 116-125.

18) Vipin Narang, *Seeking the Bomb: Strategies of Nuclear Proliferation* (Princeton University Press, 2022), pp. 131-142.

19) Reagan's Strategic Defense Initiative (SDI) further fueled this anxiety in Kremlin. John Hines, Ellis Mishulovich, and John Shull, "Soviet Intentions 1965-1985 Volume I: An Analytical Comparison of US-Soviet Assessments During the Cold War," Office of the Secretary of Defense (December 22, 1995), pp. 12-21; William Burr and Svetlana Savranskaya, eds., "Previously Classified Interviews with Former Soviet Officials Reveal U.S. Strategic Intelligence Failure Over Decades" *The Nuclear Vault* in the National Security Archive at <https://nsarchive2.gwu.edu/nukevault/ebb285/index.htm> (accessed on April 25, 2022).

politics. Russian leaders were then appalled by the splendid display of American conventional capability in the Gulf War and the war in former Yugoslavia. Russia's unstable political situation and dreadful economic condition during the transition period in the 1990s did not allow Moscow to maintain its conventional military power not to mention developing it to the American level. Hence, Moscow had no other choice but to rely on the nuclear capability to withstand the West's vastly superior conventional capability. When Russia was engaged in the bloody and messy war in Chechnya to prevent Grozny's secession attempt, NATO fighter bombers started striking targets in Serbia to coerce Belgrade's withdrawal from Kosovo. Leaders in Kremlin were deeply concerned that NATO intervention in Kosovo could expand to Chechnya. Thus, when Moscow announced a new nuclear doctrine in 2000, it mentioned the possibility of using limited nuclear strikes in the early period of conflict to deescalate against a conventionally superior adversary.²⁰⁾ This position of possible early use of nuclear weapons continued throughout the 2000s since Russia could not catch up with NATO's conventional capability. The unilateral withdrawal of the US from the ABM Treaty in 2002 and ensuing efforts of upgrading missile defense ability provoked Russia's angry response. The disappointing performance of the Russian military in the Georgia campaign in 2008 confirmed that there was still a lot of work to do to improve Russia's conventional capability. It also meant that nuclear weapons still should play an important role to compensate and buttress not-so-impressive conventional forces. A new nuclear doctrine published in 2010 included a statement that emphasized the role of nuclear weapons in limited use for de-escalation purposes, and the Russian military's exercise in this period always incorporated a simulation of a nuclear use.²¹⁾

Since 2010, the Russian military has developed the 'strategic deterrence' concept, which comprised wider and more comprehensive contents than those of the western counterpart. Russia's strategic deterrence roughly meant a system that encompassed military and non-military (political, diplomatic, legal, economic, science-technological, etc.) means to deter an adversary's military action by threatening strategic damage. The objective of strategic deterrence included a notion that Russia could employ strategic or nonstrategic nuclear weapons to deescalate to condition favorable to Russia or terminate the conflict.²²⁾ Russian strategists thought that Russia's threat to use nuclear weapons alone, although limited, in a conventional

20) Nikolai Sokov, "Evolution in Nuclear Strategy in US and Russia and Its Implications for Arms Control," *Proliferation Papers* at Ifri, Spring 2003.

21) Nikolai Sokov, "Russian military doctrine calls a limited nuclear strike "de-escalation." Here's why," *The Bulletin of Atomic Scientists*, March 8, 2022.

22) Kristin Ven Bruusgaard, "Russian Strategic Deterrence," *Survival*, Vol. 58, No. 4 (July 2016), pp. 7-14; Michael Kofman, Anya Fink, and Jeffrey Edmonds, "Russian Strategy for Escalation Management: Evolution of Key Concepts." CNA Research Memorandum (April 2020), pp. 5-12.

conflict would not be taken credibly. Therefore, they wanted to resolve the credibility problem by reinforcing conventional capability. Despite dismal performance in the war with Georgia in 2008, Russia saw its conventional capability was improving and this change was incorporated in a new doctrine and strategy published in 2010.²³⁾

Russia's blatant annexation of Crimea and provocative support of separatist insurrection in Eastern Ukraine raised an alarm regarding Putin's belligerent behavior and threatened the stability of Eastern Europe. Washington and NATO were helplessly watching Moscow destroying the agreements of the Budapest Memorandum, which guaranteed Ukraine's sovereignty and territorial integrity.²⁴⁾ This bellicosity also generated a hot debate in the West on the role of nuclear capability behind Moscow's aggression. Western scholars and policymakers already acknowledged Russia's aggressive nuclear strategy that seemed to significantly lower the threshold of nuclear use although limited and low-yield. Trump Administration's Nuclear Posture Review (NPR) published in 2018 reflected this

23) Kristin Ven Bruusgaard, "Russian Nuclear Strategy and Conventional Inferiority," *Journal of Strategic Studies*, Vol. 44, No. 1 (October 2021), pp. 22-27.

24) When the Soviet Union disintegrated in December 1991, Ukraine, Kazakhstan, and Belarus inherited the substantial number of nuclear weapons from the former Soviet Union. In the newly independent Ukrainian territory, the number of nuclear weapons was almost 2,000, which made Ukraine No. 3 nuclear power in the world at the time. The Budapest Memorandum was signed by the three former Soviet states as well as the US, Russia, and the UK in 1994. The memorandum ensured that three states would abandon nuclear weapons on their soil and become new members of the NPT as non-nuclear states. In return, the three already established nuclear powers guaranteed sovereignty and territorial integrity of the states that just gave up nuclear weapons as well as provided economic assistance for transition and economic development. The forceful annexation of Crimea in 2014 and the invasion of Ukraine in 2022 by one of the signees of the Memorandum caused uproar and fury among Ukrainians. Many in Ukraine and the West deplore that if Ukraine had not given up the nuclear weapons on their soil, they would have deterred the Russian invasion. Although the despair and betrayal felt by Ukrainians are completely understandable, it would have been nearly impossible for them to retain their nuclear weapons in the 1990s. First, Ukraine never "possessed" the nuclear weapons, since they never had operational control of the weapons, which were firmly under Moscow's hands. Ukraine desperately needed economic assistance and diplomatic recognition as a newly independent nation with a dreadful economic condition. If they had not given up the nuclear weapons, their economy would have remained woeful and they would have fallen into an international pariah. The US, which was ardently promoting non-proliferation agenda with bipartisan support in the post-Cold War era, would have never allowed another dangerous precedent of nuclear proliferation. Furthermore, even though Ukraine somehow had obtained some nuclear weapons, it might not have been able to stop Russia's calculated aggression. Many argue that a Russian invasion could have occurred much sooner. William Martel, "7. Why Ukraine Gave Up Nuclear Weapons: Nonproliferation Incentives and Disincentives," in Barry Schneider and William Dowdy, Eds., *Pulling Back from the Nuclear Brink: Reducing and Counteracting Nuclear Threats* (Routledge, 1998); Mariana Budieryn, "Was Ukraine Wrong to Give Up Its Nukes?" *Foreign Affairs*, April 8, 2022; Michael Krepon, *Winning and Losing the Nuclear Peace: The Rise, Demise and Revival of Arms Control* (Princeton University Press, 2021), pp. 330-335.

concern. The NPR stipulates, “Russian strategy and doctrine emphasize the potential coercive and military uses of nuclear weapons. It mistakenly assesses that the threat of nuclear escalation or actual first use of nuclear weapons would serve to ‘de-escalate’ a conflict on terms favorable to Russia.....mistaken expectation that coercive nuclear threat or limited first use could paralyze the US and NATO.”²⁵⁾ Thus, by publishing an official nuclear document that contains the potential danger of Russia’s nuclear strategy, Washington made a stern warning that it would not fall for Moscow’s elaborate nuclear scheme. Furthermore, the Pentagon said it would develop and deploy new low-yield non-strategic weapons systems to enhance tailored and flexible nuclear deterrence against an adversary like Russia.

In 2020, the Kremlin published “Principles of State Policy of the Russian Federation in the Sphere of Nuclear Deterrence,” which laid out Russia’s nuclear policy and doctrine. The document clearly aimed to dispel suspicion about the allegedly aggressive Russia’s nuclear posture, known as “escalate to deescalate” in the West as repeatedly appeared in the 2018 NPR. In the document, Moscow constantly emphasized that the Russian nuclear strategy was designed for assured retaliation and its nuclear posture was of a defensive nature only. However, in the same document Russia specified four conditions under which Moscow would consider using nuclear weapons. That raised doubts in the West regarding the Russian nuclear strategy’s true nature. The first three conditions are related to nuclear weapons, including the enemy’s use of nuclear weapons and an attempt to undermine Russia’s nuclear retaliation. The fourth condition specifies, “aggression against the Russian Federation with the use of conventional weapons when the very existence of the state is in jeopardy.”²⁶⁾ Thus, Moscow states that an attack on Russia with conventional weapons could invoke a nuclear response dependent upon the scale and seriousness of the attack. In other words, Russia could justify nuclear use in response to western conventional aggression at the whim of the interpretation. The publication of the ‘Principles’ stirred fiercer debates in the West regarding Russia’s real nuclear doctrine and capability.²⁷⁾ The document’s ambiguous wordings and actual nuclear modernization efforts and deployment plans as well as high-ranking officials’ contradictory comments did not help alleviate western concerns and suspicion.²⁸⁾

25) US Department of Defense. “Nuclear Posture Review Report.” Office of the Secretary of Defense (February, 2018), pp. 8, 30.

26) Hans Kristensen and Matt Korda, “Russian Nuclear Weapons, 2022,” *Bulletin of the Atomic Scientists*, Vol. 78, No. 2 (2022), p. 101.

27) Cynthia Roberts, “Revelations about Russia’s Nuclear Deterrence Policy,” *War on the Rocks*, June 19, 2020; Petr Topychkanov, “Russia’s nuclear doctrine moves the focus from non-Western threats,” October 1, 2020 at <https://www.sipri.org/commentary/blog/2020/russias-nuclear-doctrine-moves-focus-non-western-threats> (accessed on April 5, 2022); Michael Kofman and Anya Loukianova Fink, “Escalation Management and Nuclear Employment in Russian Military Strategy,” *War on the Rocks*, June 23, 2020.

Moscow has been trying to develop an optimal way of successfully deterring conventionally superior foes in the post-Cold War period. Warning a limited use (or actual use) of nonstrategic nuclear weapons in the early stage of the conflict to deescalate seems to become a standard approach of the Russian military since around 2000. As Russia's conventional capability has improved, Moscow's heavy reliance on nuclear weapons has been reduced. Yet as the Russian term 'strategic deterrence' indicates, Moscow's strategic efforts to improve deterrence effects through skillfully calculating the level and method of warning or threat by incorporating conventional and nuclear capability have continued. Thus, Moscow has been sharpening Russian-style escalation management through fierce internal debates. Washington and NATO, however, interpret the Russian nuclear strategy as a ploy to make concessions from the West by threatening to lower the nuclear threshold and to risk a limited nuclear war. The west has been devising its response against Russia accordingly and this tit-for-tat confrontation has been raising tensions between the two sides that could be harmful to crisis stability.²⁹⁾ Under these circumstances, Russia blitzed Ukraine.

How Likely Is Moscow to Use Nuclear Weapons?

Putin has been arguing that Washington and Kyiv were trying to redeploy nuclear weapons on Ukrainian soil without providing any proof for quite some time.³⁰⁾ Right before the invasion, Putin warned against Ukraine's attempt to join NATO and NATO's eastern expansion as a grave encroachment on Russia's core security interests and used it as an excuse for possible nuclear deployment.³¹⁾ On the day of the invasion, Putin made a passionate speech that Russia's survival was in danger because of the West's diabolical effort to weaken Russia and invoked the possibility of nuclear use laid out in the 2020 nuclear document.³²⁾ A few days later Putin raised an alarming level of its nuclear forces. Thus, from the very beginning of the conflict, the Ukraine War has been conducted under a nuclear shadow.

It is hard to fathom how serious Putin is about actual nuclear use. Yet by applying

28) Kristensen and Korda, "Russian Nuclear Weapons, 2022," pp. 101-102.

29) Bruusgaard, "Russian Nuclear Strategy and Conventional Inferiority"; Kofman and Fink, "Escalation Management and Nuclear Employment in Russian Military Strategy; Sokov, "Russian Military Doctrine Calls a Limited Nuclear Strike "De-Escalation." Here's Why."

30) David Sanger, "Putin Spins a Conspiracy Theory That Ukraine Is on a Path to Nuclear Weapons," *New York Times*, February 23, 2022.

31) John Erath, "Hidden Dangers of the Ukraine Crisis," January 31, 2022 at <https://armscontrolcenter.org/hidden-dangers-of-the-ukraine-crisis> (accessed on February 2, 2022).

32) David Holloway, "Read the fine print: Russia's nuclear weapon use policy," March 10, 2022 at <https://thebulletin.org/2022/03/read-the-fine-print-russias-nuclear-weapon-use-policy> (accessed on March 11, 2022).

seven measurements that consist of the two variables suggested by Bell and Macdonald, we could have a better understanding of the level and degree of nuclear danger of the current crisis. The variable measuring the incentives of nuclear first use assesses whether there is a significant nuclear disparity between conflicting parties. The current conflict is mainly between Ukraine and Russia; yet, the nuclear dimension of the conflict is definitely between Russia and the US (and NATO), the two nuclear-powered adversaries. According to the Federation of American Scientists, Russia possesses 5,977 in its nuclear inventory, while the US has 5,428 as of February 2022. Among these, Moscow deploys 1,588 active nuclear weapons ready to launch, while Washington's active duty weapons number 1,644 following the New START Agreement.³³⁾ Thus, both maintain a robust nuclear triad and there seems to be no nuclear disparity between them.

Regarding the second criteria of the nuclear first use incentive variable, Moscow looks to be interested in a nuclear posture that looks like an 'asymmetric escalation.' Although official statements emphasize the assured retaliation role of its weapon systems, as described in the previous section, Russia has been trying to compensate for its conventional inferiority vis-à-vis the US by developing an aggressive nuclear strategy that utilizes the threat of early use or an actual limited use to deescalate. Yet this interpretation demands more detailed scrutiny of the evolution of Russia's official nuclear strategy. As Russia's unique version of the 'strategic deterrence' concept reveals, Moscow has developed an elaborate and detailed preparation for each stage in the spectrum between peace and nuclear war. More precisely, Russia has developed specific plans of escalation management for every eventuality. Thus, Russia has advanced conflict phases from peacetime where only potential danger lurks to large-scale war (even nuclear war). According to this framework, the current war on Ukraine belongs most likely to local war, which is defined as "war, in which limited political-military goals are pursued, military actions are conducted within the borders of combating states and which touches primarily on the interests (territorial, economic, political, and others) of just these states," and is located between a military threat and a regional war, which involves several states.³⁴⁾ As the figure below shows, Russian planners have differentiated the level and intensity of conflict into several stages and incorporated specific ways of conducting military or nonmilitary, strategic or nonstrategic means deployed differently in every phase.

33) Federation of American Scientists, "Status of World Nuclear Forces," at <https://fas.org/issues/nuclear-weapons/status-world-nuclear-forces/> (accessed on May 7, 2022).

34) Kofman, Fink, and Edmonds, "Russian Strategy for Escalation Management," p. 6.

<How Russia Manages Escalation>³⁵⁾

The local war phase is beyond the demonstration stage and in the realm of adequate damage infliction on the opponents. Most notably, the Russian authority could make a threat to use nuclear weapons along with inflicting damage through precision conventional capability while avoiding the enemy's nuclear targets. In the next phase of the regional war, "single and/or grouped use of nonstrategic nuclear weapons on adversary forces" could be conducted. Thus, it is not surprising that Putin and others have been making raucous warnings of nuclear use in this local war phase without seriously considering it. Furthermore, according to Bruusgaard, "Russian strategists never argued that Russia should employ nuclear de-escalation in limited wars that were about limited objectives."³⁶⁾ Of course, however, since there is no clear demarcation line between local war and regional war phases and the distinction could be a matter of interpretation of the Kremlin leadership, the situation (or how to assess the military situation) could get worse at

35) Ibid., p. 20.

36) Bruusgaard, "Russian Nuclear Strategy and Conventional Inferiority" p. 7.

any time. Moreover, as seen in the previous section, Russia's officially documented statements on nuclear weapons do not always coincide with Moscow's actual force development and deployment. Therefore, I cautiously conclude that Russia's nuclear posture is moderately nuclear-first-use-prone.

Putin's perception of political advantages associated with nuclear first use is nearly impossible to comprehend. Although he has made comments numerous times concerning how serious he is about the nuclear option, his hands may not be completely free. Yet one should not forget that he is the one who ordered the full-scale invasion of a neighboring sovereign country despite all the odds against him. I might have to reserve judgment on this area due to the enormous difficulty of grasping the leader's perception on the matter. In sum, Russia enjoys parity with the US on nuclear weapons. Russia's nuclear posture looks like an asymmetric escalation posture but it is more complicated than how it looks; its nuclear posture may not be as dangerous as it appears. Putin's perception part remains void. Therefore, overall, on the variable of nuclear first use incentives, Russia seems to have a low-to-moderate incentive to use nuclear weapons first.

Moving onto the crisis controllability variable, first, Russia is believed to preserve robust Command and Control (C & C) system at its disposal. After all, Russia has been maintaining thousands of nuclear arsenals for decades without accidental or unauthorized detonation of any of them, which might have triggered a nuclear Armageddon, despite numerous small or big accidents and malfunctions in various facilities. The Soviet leadership kept a more centralized and strict C & C system than its American counterparts during the Cold War.³⁷⁾ Currently, the President of the Russian Federation has the sole authority over the decision to use nuclear weapons. Besides the president, the defense minister and the chairman of the Joint Chief of Staff jointly prepare the authorization to use nuclear weapons. To prepare for the absence of leadership, Moscow has devised the Perimeter system to make sure a retaliatory strike takes place.³⁸⁾ In general, the Russian nuclear C & C can be considered reliable and robust. Certainly, however, considering the extreme difficulty of weighing the sole authority's mindset as well as experiences of malfunction and various errors, the seemingly robust system cannot always guarantee the perfect performance.

Regarding the red lines, Putin has issued unambiguous warnings several times that the presence of NATO in Ukraine, especially the deployment of long-range missiles or missile defense systems, would surely cross the red line, and Moscow

37) Eric Schlosser, *Command and Control: Nuclear Weapons, the Damascus Accident, and the Illusion of Safety* (Penguin Books, 2013), pp. 467-469.

38) Jeffrey G. Lewis and Bruno Tertrais, "The Finger on the Button: The Authority to Use Nuclear Weapons in Nuclear-Armed States," CNS Occasional Paper #45, February 2019, pp. 10-12; Amy Woolf, "Russia's Nuclear Weapons: Doctrine, Forces, and Modernization," Congressional Research Service (CRS) Report, September 13, 2021, p. 19.

would respond accordingly.³⁹⁾ Even though Washington and other NATO member states have been actively supporting Ukraine by providing substantial military and economic assistance, they have been careful not to put their boots on Ukrainian soil. US President Biden has continually refused to establish a no-fly zone over the Ukrainian sky that would surely lead to direct military confrontation with Russian forces. In return, Moscow also abstains from expanding war beyond the borders of Ukraine despite repeated warnings of attacking supply routes of military equipment into Ukraine. It is because attacking convoys within Poland or any neighboring countries means attacking a NATO member state, which automatically invokes Article 5 of the collective defense mechanism.⁴⁰⁾ Thus, both sides seem to clearly understand the red lines drawn by the other side and not cross them in fear of escalation.

Russia has been investing heavily in its conventional capability since the threat of early nuclear use was not considered credible and to get out of its enduring inferior position vis-à-vis the US in the conventional forces. Recently, Russia became more confident in its conventional capability; consequently, its heightened nuclear threshold and reduced signaling of nuclear early use reflected this confidence.⁴¹⁾ Yet, the 2020 nuclear document still reaffirms the salience of the nuclear role when confronted with a grave conventional threat. The abysmal performance of Russian forces in the current war of 2022 also makes us think again about the true ability of Russian conventional forces. Regarding the potential danger of conventional military operations targeting forces related to nuclear operations, the risk is certainly present; yet, both sides seem to be making conscious efforts not to cross it.⁴²⁾ Thus, although the danger is lurking and the entanglement problem persists, the likelihood of interaction of nuclear and conventional forces that could lower crisis controllability does not look high.

Since the great scare of the Cuban Missile Crisis, the two sides have been keeping a hotline to reduce the possibility of misperception and misunderstanding. Even though it is hard to say that the crisis communication avenue has always worked smoothly between Washington and Moscow, it surely has helped to keep both sides in check. In mid-May, the US Secretary of Defense Lloyd Austin talked with his Russian counterpart on the phone for the first time since the invasion. The

39) "Russia will act if Nato countries cross Ukraine 'red lines', Putin says," *The Guardian*, November 30, 2021. Yet Putin invaded Ukraine anyway despite no deployment of NATO forces in Ukraine. Ukraine being a non-NATO member seems to influence heavily the decision-making process of the Kremlin.

40) Jeffrey Knopf, "Why the Ukraine War Does Not Mean More Countries Should Seek Nuclear Weapons" April 12, 2022 at <https://thebulletin.org/2022/04/why-the-ukraine-war-does-not-mean-more-countries-should-see-nuclear-weapons/> (accessed on April 30, 2022).

41) Bruusgaard, "Russian Nuclear Strategy and Conventional Inferiority" p. 26.

42) Kofman, Fink, and Edmonds, "Russian Strategy for Escalation Management," p. 20.

communication did not produce much, but keeping the communication line open would certainly be beneficial to the opposing parties to maintain conversation even in the worst time.⁴³⁾

Therefore, given the relatively robust level of crisis controllability and the moderate level of first strike incentive, Russia's position seems to be located somewhere between the stability-instability model and the staircase model, probably closer to the latter. It means the probability of the current crisis moving up to a dangerous level is not that high. Bell and Macdonald provide the Doklam Crisis in 2017 between India and China as an example of the stability-instability model. During the crisis, nothing much happened besides a weeks-long confrontation between the two sides.⁴⁴⁾ Thus, it may not be appropriate to compare the Doklam Crisis with the current crisis over Ukraine, where actual intense fighting caused thousands of casualties and massive material destruction. The Kargil War, as a good example of the staircase model, seems to fit better with the current nuclear crisis caused by Russia. According to the authors, the staircase model like the Kargil War emerges when vital national interests are at stake. During the Kargil War, the Pakistani side had the temptation of early nuclear use to achieve their revisionist objective of reclaiming the disputed Kashmir region; yet, they chose not to. Since the staircase crisis model develops gradually to the nuclear level after exhausting other options, the conventional balance of power is vitally important. When the Kargil War was progressing, Islamabad had an incentive for nuclear first use but conventional inferiority and strong outside intervention prevented it. India's robust C & C, Pakistan's easy-to-notice-red lines, the narrow geographic area that limited interaction between conventional and nuclear forces, and a hotline between the two states contributed to the crisis controllability during the crisis.⁴⁵⁾ Therefore, Pakistan's nuclear first use incentive never materialized. Among the four models, the staircase model seems to be the closest to the current war on Ukraine, and that outlook gives us a sigh of relief for the time being.

Conclusion

Russia's invasion of Ukraine not only has disrupted the existing international order and norms but also significantly raised the eerie prospect of a nuclear exchange. Trying to figure out how dangerous an ongoing crisis could be is extremely hard and risky since there are so many uncertainties. Yet, it is still a

43) Paul Shinkman, "U.S. Defense Secretary Speaks With Russian Counterpart as Putin Faces New Pressure," *USNews*, May 13, 2022.

44) Bell and Macdonald, "How to Think about Nuclear Crises," PP. 47-48, 60-61.

45) *Ibid.*, pp. 48-49, 50-54.

worthwhile effort to prepare for an unexpected turn of events and to learn the right lessons after the violent confrontation subsides. By adopting Bell and Macdonald's useful framework, I apply the two variables of nuclear first use incentive and crisis controllability to find out into which nuclear crisis model, among the four ideal models, the current crisis falls. It is hard to reach a satisfactory conclusion on the nuclear first use incentive variable because of the enormous difficulty of comprehending Russia's exact nuclear posture as well as Putin's perception of the issue. Nuclear parity between the US and Russia is clearly present though. Therefore, I cautiously conclude that Russia's incentive for nuclear first use is moderate. The crisis controllability seems relatively straightforward and not too difficult. Although there is always a risk of overlooking the true nature, four measurements – a robust C & C system, clear red lines, a low likelihood of interaction of nuclear and conventional forces, and existing communication avenues – all seem to buttress the crisis controllability of the current crisis. Therefore, the Ukraine crisis looks closest to the staircase model, which means the possibility of the crisis escalating to the nuclear use level is not very high.

There are many limitations to this research though, which require further investigation. First, the nuclear crisis that I try to examine is still ongoing. There is always a danger of analyzing an event that is not concluded yet due to uncertainty and unpredictability. Second, as Bell and Macdonald admit, it is hard to say that the two interacting variables and the seven measurements are exhaustive in this type of research and thus may not be enough. Third, even though the staircase model is relatively safer than some other models on the escalation scare, it certainly contains a not-so-negligible risk. For example, the Kargil War, a good example of the staircase model, was resolved in great part thanks to the US intervention. However, there is no such thing in the current crisis.⁴⁶⁾ Furthermore, witnessing the destruction of the Budapest Memorandum and the destruction of the country that signed and believed in it, North Korea might have learned a lesson that, for regime survival, nuclear weapons must be never given up under any circumstances. It would make denuclearization efforts much more difficult. Future research needs to address these shortcomings.

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46) Besides, another crisis that occurred in 2019 in South Asia, the Pulwama Crisis, was even more dangerous in terms of the risk of escalation. It indicates that the leaders of India and Pakistan may not have learned the right lessons from the 1999 War. Mark Bell and Julia Macdonald, "How Dangerous Was Kargil War? Nuclear Crises in Comparative Perspective," *The Washington Quarterly*, Vol. 42, No. 2 (2019).pp. 144-146.

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Manuscripts should:

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INSS
INSTITUTE FOR NATIONAL SECURITY STRATEGY
국가안보전략연구원

Instopia Bldg., 120, Eonju-ro, Gangnam-gu,
Seoul 06295, Republic of Korea
Tel: +82-2-6191-1043 Fax: +82-2-6191-1111
E-mail: joeaa@inss.re.kr
Website: www.inss.re.kr

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1) Books

Partha Bose, *Alexander the Great's Art of Strategy* (New York : Gotham Books, 2003), p. 98.

2) Dissertations

Joseph S. Nye, "Redefining the National Interest," *Foreign Affairs*, Vol. 8, No. 4 (Winter 1999), p. 21.

3) Magazine or Newspaper articles

Oona A. Hathaway, "Why do Countries Commit to Human Rights Treaties?," *The Journal of Conflict Resolution*, August 2007, p. 588.

Lucy Hornby, "China moves further into Africa," *International Herald Tribune*, Jan. 9, 2012. p. A9.

4) Use of *ibid.* and *op. cit.*

Ibid. can be used only when indicating the source immediately before the concerned footnote.

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5) Internet

Example: available at <http://www.dic.mil/jcs/core/nms.html> (accessed on Dec. 1, 2007).



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