

Peacebuilding in the Korean Peninsula and Its Contribution to Space Governance: How Can the United States and the Two Koreas Promote Peace, Prosperity, and Humanity During Denuclearization?

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Abstract

The great powers' policy failures on North Korean denuclearization are mainly due to their ignorance of its domestic politics. My project reflects North Korean perceptions to identify cross-cultural variables in systems analysis. Democratic peace solutions considering domestic politics can enhance the feasibility of North Korean denuclearization beyond power-centric approaches, such as balance-of-power and power-transition theories. Peaceful democratization in North Korea will be accompanied by North Korea's regime maintenance, national security, economic development, and economic liberalization. North Korea's economic liberalization will transform its policy from nuclear development to peaceful coexistence. Pareto-optimal outcomes are likely to enable North Korea to develop its economy like China and Vietnam in the short term, or like Singapore in the long term. If ruling elites in North Korea gain political legitimacy, popularity, and support from their citizens, they will provide citizens with more freedom and a higher standard of human rights in the development path from economic development to economic liberalization, and eventually to political liberalization. If North Korea successfully evolves from a military state to a normal state with economic prosperity, it will voluntarily accept denuclearization. Democratic peace will promote global governance on interstate peace and humanity for the long-term goals of human space development.

Keywords: North Korea, Foreign Policy, Denuclearization, Democratic Peace Theory, Global Governance, Humanity.

Introduction: Denuclearization Through Economic Development and Political Liberalization

The United States and East Asian countries face conundrums on how to proceed with North Korea's denuclearization and, by extension, peacebuilding in the Korean Peninsula and East Asia. Regarding systems analysis, Robert M. Krone defines a *Pareto optimum* (emphasis added) as a "policy strategy conceived to produce results beneficial to all parties concerned and harmful to none."¹ Krone² and Yehezkel Dror³ advise policy makers to pay attention to cross-cultural variables to deal with extrarational ones (terrorist groups or aggressive nation states), which are largely subjective and nonquantifiable in systems analysis. In this vein, I propose that the tendency to see others (e.g., North Korea) as mirror images of oneself is a major fallacy in the policymaking of the West (e.g.,

¹ Robert M. Krone, *Systems Analysis and Policy Sciences: Theory and Practice (with an Introduction by Yehezkel Dror)* (New York: John Wiley & Sons, 1980), 26.

² Krone, *Systems Analysis*, 32.

³ Quoted in Krone, *Systems Analysis*, x.

the United States). For North Korea's denuclearization, my project proposes feasible solutions to denuclearization reflecting North Korea's perceptions. It suggests Pareto-optimal solutions, which are mutually beneficial for North Korea and relevant countries to achieve peacebuilding and economic prosperity.

Due to the bias of the cultural variables, Western policymakers have exaggerated North Korea as an anti-American or pro-Chinese nation. Neither is correct. As a result, conventional policies on North Korean denuclearization have failed not only in denuclearization, but also in peacebuilding in the Korean Peninsula and East Asia. For several decades since North Korea's nuclear experiments, beginning in the 1990s, economic sanctions and diplomatic repressions from the United States and the international community have been ineffective in changing North Korea's ambitions on nuclear development. Meanwhile, military attacks have been considered almost impossible due to neighboring countries' needs for regional stability and peace.

Pacific nations have failed to establish a common goal for peacebuilding and humanity during the negotiations on North Korean denuclearization. Peacebuilding will promote a common market for economic prosperity, as exemplified by the European Union. Since North Korea's nuclear development, dialogues between the United States and North Korea, as well as between the two Koreas, have been short lived. North and South Korea have led an agreement on peacebuilding in the Korean Peninsula, as these countries held summit meetings between South Korean President Moon Jae-in (문재인) and North Korean Chairman Kim Jong-un (김정은) in spring 2018. However, in the summit meeting in Vietnam in late February 2019, the United States and North Korea failed to reach consensus on the procedure and degree of denuclearization. Relevant countries, such as South Korea, the United States, China, Russia, and Japan, need to reach a broad consensus on North Korea's denuclearization for humanitarian needs.

My project examines why North Korea's democratic peace solutions focusing on domestic politics can be the most feasible way for its denuclearization beyond power-centric approaches, such as balance-of-power (BoP) and power-transition (PT) theories. Its aim is to find roadmaps not only for denuclearization, but also for peacebuilding and economic prosperity in the Korean Peninsula. Without peacebuilding in the Korean Peninsula, it is hard to make a peace regime in East Asia. Because regime competition between the two Koreas and diplomatic repressions against North Korea have made North Korea evolve into a military state, I argue that mutual trust and economic cooperation will transform North Korea from a military state to a normal state with economic prosperity. My analysis proposes ways to denuclearize North Korea effectively for Pareto-optimal goals, which can be shared by all relevant countries. Focusing on cross-cultural variables in systems analysis will promote North Korea's regime maintenance, national security, economic development, and economic liberalization.

To enhance the feasibility of North Korean denuclearization, in Section I, I review conventional theories of international relations, commonly called power-centric approaches. By extension, this section provides my approaches of democratic peace theory in the context of systems analysis. Section II describes the previous failures of

relevant countries' denuclearization policies, and it further examines the diplomatic turn between North Korea and the United States, as well as that between North and South Korea. Section III explains North Korea's desire for economic development and its ongoing process of marketization, despite long-lasting economic sanctions. Section IV proposes North Korean economic development and liberalization as feasible steps for democratic peace. Section V considers global governance to promote peace and humanity during the era of space development. The Conclusion prospects East Asia's new international relations after summit meetings between the United States and the two Koreas, and it then summarizes the entire analysis.

I. Theoretical Reviews of Systems Analysis for Peacebuilding

Democratic Peace Solutions as Alternatives to Power-Centric Approaches

North Korea as a *rational* state-actor has maximized its profits through seemingly *irrational* behavior in foreign policies. In this regard, it is useful to analyze North Korea's diplomatic patterns by employing Dror's concept of crazy states. Dror classifies the dimensions of craziness into (a) goal contents, (b) goal commitments, (c) risk propensity, (d) means-goals relations, and (e) style, regarding the degrees of craziness, such as (1) reasonable (low), (2) unreasonable (medium), and (3) counterreasonable (high).⁴ For Dror, crazy states are identified by crazy behaviors in security and international perspectives.⁵ Dror's concept can further provide Western policymakers with policy prescriptions on North Korean denuclearization. Western policymakers failed to predict North Korea's diplomatic patterns, or to control North Korea's ambitions on nuclear development. Of course, North Korea's view is that it is simply maximizing its national interests and trying to maintain its national security. Thus, it is necessary to share goals in national development between North Korea and relevant countries to reduce risks in regional stability and peacebuilding in East Asia.

In conventional theories of international relations, two meta theories—BoP theory and PT theory—focus mainly on states' power maximization in the international structure regardless of their assumptions: anarchy (to BoP theory) or hierarchy (to PT theory). BoP theory postulates that equal power distribution among great powers or members of major alliances—for example, the balance of power between the United States and the Soviet Union during the Cold War era—will promote peace. However, asymmetries in the distribution of power resources increase the probability of war.⁶

Meanwhile, PT theory postulates that an even distribution of political, economic, and military capabilities between contending states, such as the United States and China, is likely to increase the probability of war. The small number of nuclear-armed countries is stable. Peace is preserved best if great powers maintain an imbalance of national

⁴ Yehezkel Dror, *Crazy States: A Counterconventional Strategic Problem* (Lexington, MA: Heath Lexington Books, 1971), 27.

⁵ Dror, *Crazy States*, xiii.

⁶ Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* (5th ed., revised) (New York: Alfred A. Knopf, 1978); Kenneth N. Waltz, *Theory of International Politics* (Reading, MA: Addison-Wesley, 1979).

capabilities between disadvantaged and advantaged nations, or if challengers—generally disadvantaged nations—are satisfied with the status quo.⁷

Neither the vision of a balance of power between the United States and China nor that of a power transition by the United States (or by China) can lead to North Korean satisfaction with East Asia's international order, because neither meets its top priority of national security and regime guarantee. Relevant countries must think of ways to induce North Korea's agreement to fulfill its denuclearization for humanitarian reasons and for global governance.

Democratic peace theory is applicable to North Korea's denuclearization to promote humanity for global governance and space governance. My democratic peace approach provides an alternative for feasible denuclearization to deterrence and disarmament solutions as extensions of power-centric approaches. Michael W. Doyle argues that democracies do not fight each other because of democratic norms and public opinions.⁸ International relations theorists need to devise ways to peaceful denuclearization with North Korean elites' agreement. A paradigmatic shift in North Korea's denuclearization process must come from the analysis of North Korea's domestic politics. In conventional international relations theories, a normative argument is whether the concentration of nuclear power or its dispersion leads to world peace. The dichotomous visions of BoP and PT theories will not lead effectively to North Korea's agreement on denuclearization.

Beyond power distribution, North Korea's satisfaction with East Asia's international order will lead to its voluntary denuclearization. According to PT theory, the satisfaction of challengers and the peaceful power transition from the previous dominator to the new superpower (the previous challenger) leads to peace.⁹ Its satisfaction will be accompanied not only by a regime guarantee by relevant countries, but also by its economic development. The regime guarantee and economic development will be accompanied by regime stability in North Korea's domestic politics and by economic assistance from relevant countries in global governance. Meanwhile, PT theory postulates that the challenger's dissatisfaction will be a potential cause of conflict and war. Thus, it will also be effective to incorporate North Korea's satisfaction into a power transition perspective for peacebuilding in the Korean Peninsula.

An Approach of Systems Analysis: The Promotion of Peace, Prosperity, and Humanity

a) A Systems Analysis for North Korea's Denuclearization: Concepts and Evaluation
North Korean policy makers' priorities are, in order of significance, regime guarantee, state sovereignty (with national security), and economic development. Although

⁷ Jacek Kugler and A. F. K. Organski, "The Power Transition: A Retrospective and Prospective Evaluation," in *Handbook of War Studies*, ed. Manus I. Midlarsky (Boston, MA: Unwin Hyman, 1989), 171-94.

⁸ Michael W. Doyle, "Kant: Liberalism and World Politics," *American Political Science Review* 80, no. 4 (1986): 1151-69.

⁹ A. F. K. Organski and Jacek Kugler, *The War Ledger* (Chicago: University of Chicago Press, 1980); Ronald Tammen et al., *Power Transitions: Strategies for the 21st Century* (New York: CQ Press, 2000).

Chairman Kim Jong-un emphasizes economic development for a national strategy, North Korea's top priorities are political conditions rather than economic considerations. Krone points out that, in systems analysis, policy makers should consider the three feasibilities—economic, technological, and political.¹⁰ Economic feasibility is defined as the probability that resources are available. Technological feasibility is the probability that the technological and scientific goals for the system will be met. Last, political feasibility is the probability that the policy alternative will be acceptable to the decision-makers. In Krone's prism, policy makers need to meet political feasibility for North Korea's denuclearization by understanding North Korean power elites' processes of decision making. By extension, economic feasibility is promising, because North Korea has immense potential for economic development from its human resources and from South Korea's robust and consistent economic aid and the expected technological support during denuclearization. A Pareto optimum in economic cooperation between Pacific nations—in the context of economic feasibility—will reduce the risks from North Korea's regime durability and from the difficulty in its denuclearization process—in the context of political and technological feasibilities. North Korean power elites are sensitive to regime breakdown. However, economic development will enhance their political legitimacy during denuclearization.

To enhance policy feasibilities, I propose that unbiased dialogue and communications between North Korea and the international community—including the United States—can overcome the conventional fallacy in Western policymaking. Communications with mutual trust can lead to peacebuilding with economic prosperity. Concomitantly, these processes provide freedom to North Koreans. These communications and exchanges under political elites' leadership can promote national integration between the two Koreas. Dror points out that the widespread weakness of Western thinking is Western bias, which has proposed inadequate prescriptions to developing countries.¹¹ From Dror's perspective, my project elucidates that Western policymakers have mistakenly applied Western theories and concepts to very different realities, such as North Korea's diplomacy. In particular, the United States' policy failures have brought about an unexpected consequence: North Korea has exerted strong diplomatic autonomy despite its weak national power. Machiavellianly, this country has repressed its citizens through its elaborate mobilization system, and it has mobilized its resources for nuclear development; meanwhile, relevant countries have no substantial measures to control this country regarding nuclear development. How does one resolve this quasi-impossibility of North Korea's denuclearization?

The feasibility of North Korea's denuclearization can be enhanced through promoting mutual trust and by understanding North Korea's domestic politics. To incorporate North Koreans' perspective into systems analysis, my project discusses global governance for peacebuilding. Dror argues that the development of public governance practices, scientific and human knowledge, and technology needs a paradigmatic shift in philosophy from "raison d'état" to "raison d'humanité."¹² Dror's vision is to improve the capacity of

¹⁰ Krone, *Systems Analysis*, 42.

¹¹ Yehezkel Dror, *Policymaking under Adversity* (New York: Routledge, 1986).

¹² Yehezkel Dror, *Capacity to Govern: A Report to the Club of Rome* (London: Frank Cass, 2002), 25.

states, supra-state structures, and global governance institutions. Dror emphasizes global governance to resolve growing disparities in material quality of life between countries in terms of human development,¹³ and, by extension, he highlights humanity in “global commons.”¹⁴ Dror further claims that if the perspective is broadened from “statecraft” to “humancraft,”¹⁵ directed at advancing *raison d’humanité*¹⁶ instead of *raison d’état*, statecraft becomes an even more important domain for study, such as global governance and peacebuilding. Regarding values analysis for moral leadership, Downing, Krone, and Maguad highlight that the overwhelming majority of humanity aims to proceed in constructive ways to improve the quality of life for human civilization in global governance.¹⁷ Leaders in North Korea and relevant countries need to exert moral leadership to establish the peace regime for economic prosperity and global equity, which promote humanity in global governance, by switching the previous mistrust to mutual trust.

During peacebuilding, economic cooperation between South and North Korea and relevant countries will create a political community and a common market in East Asia for mutual trust, peace, and economic prosperity. According to Karl W. Deutsch, the political community has been created through the evolution from confederalism to federalism, as a federal state has evolved through amalgamation and integration between individual states.¹⁸ His example is the United States and, by extension, another successful case at present is the European Union. Deutsch’s model of the political community, like Dror’s global governance, can be realized effectively through democratic peace solutions through systems analysis.

b) The Application to North Korea’s Domestic Politics Through Game Theory

East Asian and relevant countries must help North Korea to transform from a military to a normal state not only for peacebuilding, but also for economic prosperity. Krone points out that deterrence relies on subjective factors, like uncertainty, threats, ideas, intentions, and intuition.¹⁹ All these factors are non-quantifiable and difficult to build into war gaming scenarios. To reduce uncertainty in North Korea’s nuclear crisis and to avoid mutual threats between North Korea and relevant countries, it is necessary to share mutual trusts between these countries. Downing, Krone, and Maguad elucidate that theories consist of three categories: (1) *descriptive* theory to explain “what exists”; (2) *values* theory to defend “what is preferred”; and (3) *normative* theory to identify “what should be” (italics

¹³ Dror, *Capacity to Govern*, 12.

¹⁴ Dror, *Capacity to Govern*, 25-26.

¹⁵ Yehezkel Dror, *Israeli Statecraft: National Security Challenges and Responses* (London: Routledge, 2011), 201.

¹⁶ Dror, *Capacity to Govern*, 83-93.

¹⁷ Lawrence G. Downing, Robert M. Krone, and Ben A. Maguad, *Values Analysis for Moral Leadership* (1st ed.) (London: Bookboon, 2016), bookboon.com/en/values-analysis-for-moral-leadership-ebook.

¹⁸ Karl W. Deutsch, *Political Community and the North Atlantic Area* (Princeton, NJ: Princeton University Press, 1957).

¹⁹ Robert M. Krone, “A Pacific Nuclear Information Group: Prospects and Guidelines,” *Journal of East Asian Affairs* 3, no. 2 (1983): 440.

added by author).²⁰ To contribute to values theory, my game-theoretic analysis identifies North Korea's preference for reaching a consensus between itself and relevant countries, as illustrated in Figure 1.

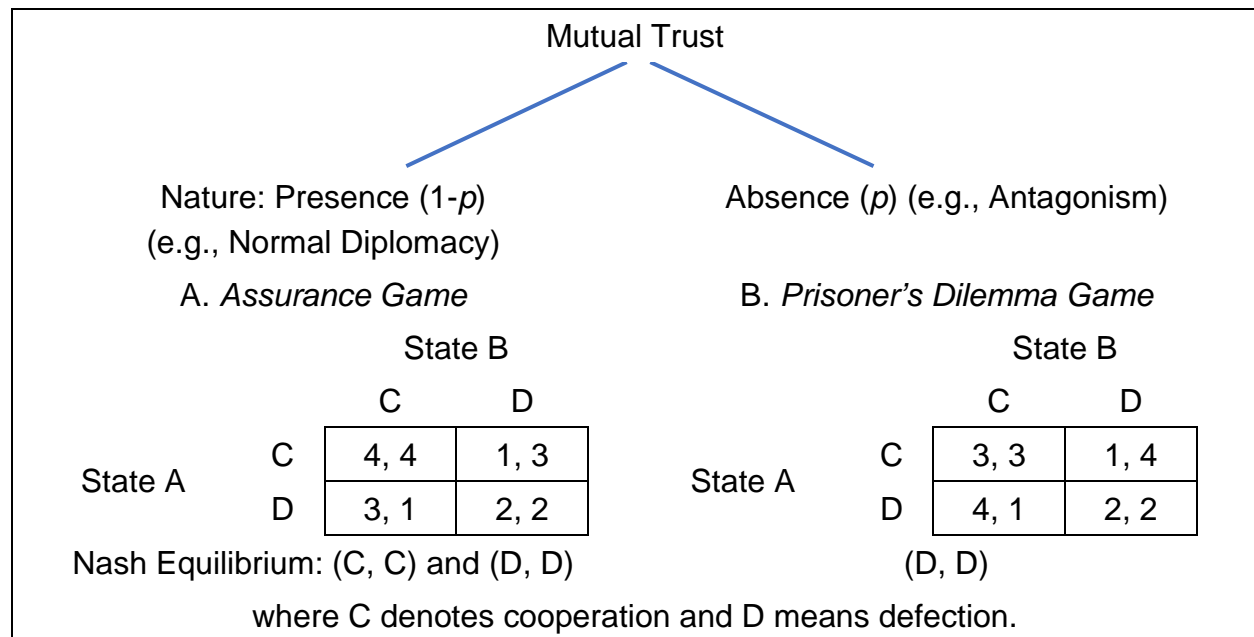


Figure 1. National Security Game during North Korea's Denuclearization.

My game-theoretic models discuss how to enhance mutual trust, because mutual trust is a preliminary step to applying democratic peace solutions to North Korea's denuclearization. As illustrated in the assurance game in Figure 1A, mutual trust is a precondition for peacebuilding: in normal diplomacy, the United States regards North Korea as a *normal* state, excluding the previous perception as a *rogue state* (불량 국가) or an *axis of evil* (악의 축). In the logic of assurance game, North Korea's top priority is state sovereignty and a regime guarantee, with economic prosperity as Payoff 4. The second preferred scenario is to receive economic compensation despite North Korea's armed provocation as Payoff 3. The third scenario is antagonistic coexistence as Payoff 2. The worst scenario is to face external threats despite its voluntary commitment to denuclearization and peacebuilding as Payoff 1. Meanwhile, in the prisoner's dilemma (PD) game in Figure 1B, antagonistic coexistence between North Korea and the United States is accompanied by mistrust. The best scenario is that North Korea gains the maximum of economic aid or compensation from relevant countries despite the failure of its promise of denuclearization as Payoff 4. In the assurance game, this situation is Payoff 3. Under antagonism, mutual cooperation has not led to mutual gains for either North Korea or the United States, and it is identified as Payoff 3. In the PD game, the situations of Payoffs 1 and 2 are as same as those in assurance game. By understanding North

²⁰ Downing, Krone, and Maguad, *Values Analysis for Moral Leadership*, 13.

Korea's perception and payoff structures, relevant countries need to persuade North Korea that mutual cooperation under mutual trust can be beneficial to it.

In a game-theoretic logic, North Korea's denuclearization needs to promote a Pareto optimum in resource allocation for national security and economic prosperity. In this equilibrium, North Korea and relevant countries can gain mutual national interests in national security, economic prosperity, and peacebuilding in global governance. In Figure 1A, the assurance game, mutual cooperation is preferred to unilateral defection, and thus this makes the preference ordering as $CC > DC > DD > CD$. As expected in the assurance game, political leaders in both South and North Korea have nourished mutual trust to make peace through summit meetings since spring 2018. By extension, mutual trust between North Korea and relevant countries will switch the vision of East Asia's international relations from the PD to the assurance game. To simplify, let State A be North Korea and State B be the other relevant countries, in particular the United States. Since spring 2018, South Korea has played the constructive role of "arbiter (중재자)" in peacebuilding between the United States and North Korea.

Figure 1 proposes nation states' causation from peacebuilding to economic prosperity through mutual trust. In the payoff structure, Payoffs 4, 3, 2, and 1 are ranked according to the preference order for each party. Payoff 4 is the first priority that each party hopes to choose, while Payoff 1 is the worst option for each party. In this figure, in the *assurance game*, the preference order is $CC > DC > DD > CD$. In the assurance game, where utilities are beneficial to all parties, this symbiotic relationship will lead to peacebuilding through normal diplomacy between North Korea and relevant countries. In the *PD game*, the preference order is $DC > CC > DD > CD$.

During North Korea's denuclearization, North Korea and the relevant countries face paradigmatic changes for peacebuilding, economic prosperity, and humanity in global governance. Peter F. Drucker argues that few policies remain valid for as long as 20 to 30 years, while most of our assumptions about business, technology, and organization are at least 50 years old.²¹ Drucker further points out that paradigms in social science have more significant roles for humans and society than those in natural science. Paradigmatic changes in social science directly exert influences on humans' behaviors as well as on the organization of institutions, such as local communities, nation states, and international organizations. However, paradigmatic changes in natural science do not change the essence of the objects in natural phenomena. Paradigmatic changes for peacebuilding between North Korea and relevant countries can transform the path of humanity from antagonistic coexistence to peacebuilding, economic prosperity, and global equity.

²¹ Peter F. Drucker, "Management's New Paradigms," *Forbes*, October 5, 1998, www.forbes.com/forbes/1998/1005/6207152a.html (April 25, 2019).

II. A Long Process of Denuclearization, but a Promising Way for Peace and Humanity

Policy Prescriptions of Systems Analysis: From Mutual Trust to Peacebuilding

If I apply Dror's concept of *global equity* to North Korea's denuclearization, relevant countries need to promote North Korea's economic development.²² North Korea's denuclearization will be accompanied by economic prosperity in a common market in East Asia encompassing the Korean Peninsula. North Korea's economic development will guarantee its regime in the long term with robust support from its citizens and relevant countries. Thus, North Korea's national strategy not only for national security, but also for its state competitiveness, can be realized by switching from its nuclear development to economic development.

By extension, Krone, Krone, and Gregory-Krone aim to increase policymaking capacity to influence the future for humanity's benefit in the era of space development.²³ The Kepler Space Institute (KSI) that Krone leads highlights the *Law of Space Abundance*, which states, "space has abundant resources to meet human needs," because all the resources that humans will ever need are waiting in space.²⁴ According to this law, all nation states may utilize space resources as public goods for humans' economic prosperity and welfare. Dror proposes to redesign governance to upgrade human future-shaping capacities.²⁵ Krone, Krone, and Gregory-Krone extend the concept of global governance to prepare for space governance, and thus to enhance humanity through humans' economic prosperity and wellbeing from resources in space.²⁶

North Korea's official justification for its development of nuclear power and missiles is that it aims to launch satellites to develop space in a peaceful way. For North Korea, the peaceful use of space is a nation state's just right. North Korea's National Aerospace Development Administration mentioned that the launch of the ICBMs is "an epochal event in developing the country's science, technology, economy, and defense capability by legitimately exercising the right to use space for independent and peaceful purposes."²⁷ The ideas of Krone and KSI may provide a roadmap on how the United States, North Korea, and other relevant countries may reach a consensus for the goal of humanity in the era of space development.

North Korea has developed advanced military technologies, such as nuclear weapons and missiles, although it has a weak domestic economy as a low-income country. In this regard, North Korea is not the same type of failed state as those that are commonly found in the Middle East and sub-Saharan Africa. Conventional failed states have exhibited poor performance in economic growth and redistribution, and thus they have been prone to

²² Dror, *Capacity to Govern*, 27.

²³ Robert M. Krone, Kat Krone, and Salena Gregory-Krone, *Space Abundance for Humankind's Needs* (London: Bookboon, 2019), bookboon.com/en/space-abundance-for-human-kinds-needs-ebook.

²⁴ Krone, Krone, and Gregory-Krone, *Space Abundance*, 21.

²⁵ Dror, *Capacity to Govern*, 213.

²⁶ Krone, Krone, and Gregory-Krone, *Space Abundance*.

²⁷ Reuters, "North Korean Rocket Puts Object into Space, Angers Neighbors, U.S.," February 7, 2016, www.reuters.com/article/us-northkorea-satellite-idUSKCN0VG00H.

civil war without domestic hierarchy (political order). Although North Korea is a low-income country, and though North Koreans are impoverished and suffer from long-lasting famine and malnutrition, North Korea has an advanced mobilization system, specifically a totalitarian regime, that has evolved over more than 70 years. Because of its closed system and economic sanctions, its economy has degenerated into one of the world's lowest-income countries. However, it has developed its science, engineering, and IT industries, as well as its military and nuclear technologies, through bold, state-led investments. North Korea also has a high level of human capital compared to other low-income countries.

Krone, Krone, and Gregory-Krone point out that, during the long human history, past leadership has come from either the survival of the fittest or from political organizations with short-term thinking; whereas, in the era of space development, leaders may design global governance using long-term thinking.²⁸ The most important idea for humans is to stop destroying each other and to take positive steps for the advancement and survival of humankind. Space development will be one of those very important positive steps.²⁹ Under global governance for humanity, North Korea may switch its investment in science and technologies from the military sector to economic development and social welfare.

Krone highlights that when uncertainty and risk are involved in strategic games, probabilistic quantitative models of decision-making are employed.³⁰ In systems analysis, a probabilistic model as an alternative to a deterministic model can analyze the interactions of several states. It is necessary to remember that North Korea's armed provocation of South Korea, as well as its tests of nuclear weapons and ICBMs against the United States, have led to deep-rooted mistrust between North Korea and other relevant countries. Reducing uncertainty through mutual trust can be a preliminary step for denuclearization in global governance, as illustrated in Figure 1.

Upon North Korea's denuclearization and relevant countries' guarantees of the North Korean regime, all countries may find Pareto-optimal outcomes for North Korea's economic development and all countries' economic prosperity and peacebuilding. Crazy states could obtain nuclear weapons for blackmail or use.³¹ Krone recommends that Pacific nations, such as the United States and East Asian states, should establish a Pacific Nuclear Information Group to control the usage of nuclear weapons and to build peace, as the North Atlantic Treaty Organization (NATO) formed the Nuclear Planning Group to manage nuclear weapons for defense purposes.³² North Korea has attempted to blackmail several countries since its nuclear development in the mid-1990s. To transform North Korea from a military to a normal state, and to prevent it from degenerating into a crazy state, relevant countries need to share mutual trust, because mutual trust will lead to peacebuilding in the context of the assurance game.

²⁸ Krone, Krone, and Gregory-Krone, *Space Abundance*, 24.

²⁹ Krone, Krone, and Gregory-Krone, *Space Abundance*, 65.

³⁰ Krone, *Systems Analysis*, 68-69.

³¹ Krone, "Pacific Nuclear Information Group," 437; Dror, *Crazy States*.

³² Krone, "Pacific Nuclear Information Group."

Through national solidarity, South Korea can help North Korea to transform from a military to a normal state. Relevant countries may manage uncertainty and risk, which have led to North Korea's nuclear development. Dror pays attention to Confucianism, which theorizes governance for harmony and communitarianism.³³ By extension, my research points out that, in domestic politics, Confucianism promotes social capital, such as mutual trust and solidarity in community-oriented life.

Can communitarianism and national solidarity in domestic politics be extended to peacebuilding and international solidarity in the Korean Peninsula and in East Asia? My answer is positive. South Korea regards North Korea as the same ethnic community, not an independent nation state. It may exert national solidarity for North Korea's economic development, which will be accompanied by denuclearization.

In this regard, it is necessary to highlight the KSI hypothesis: that "the emerging Space Age can be designed and implemented to create societies with reverence for life within ethical civilization; and that those models can be adopted for Earth's implementation."³⁴ My project on peacebuilding and economic solidarity explores national solidarity between the two Koreas and international solidarity between all relevant Pacific nations.

Previous Policy Failures in Denuclearization, but Diplomatic Turns for Mutual Trust

From a North Korean perspective, both the United States and China have very limited measures of either military or economic dimensions to make North Korea give up its nuclear weapons and to discourage it from developing ICBMs. Military attacks will induce North Korean military retaliation, which no neighboring countries or great powers can peacefully control. In North Korean President Kim Jong-un's view, it is not easy for him to discard his grandfather and father's accomplishments and legacies of nuclear development, which have proceeded for 25 years since 1994. In North Korea's diplomacy, his declaration of denuclearization in 2018 must be a critical juncture, which will significantly change not only North Korea's national security and defense, but also South and North Korea's process for peacebuilding. Conventional policy prescriptions include nuclear proliferation, disarmament, the US-led nuclear umbrella, the neutralization of the Korean Peninsula, and the nuclearization of South Korea and Japan. However, these are not effective in peacebuilding, because they cannot lead to North Korean satisfaction. My democratic peace solution links domestic governance with global governance for humanity: For feasible denuclearization, policy makers need to consider the path from North Korea's economic development to liberalization.

For mutual trust between North Korea and relevant countries, the international community needs to consider a Pareto optimum in policymaking for both North Korea and relevant countries to agree for mutually beneficial national interests. This equilibrium can be accompanied not only by North Korean regime legitimacy, but also by relevant countries' expectations that economic liberalization will lead to political liberalization as well as denuclearization. Since the summit meetings between the United States and the two

³³ Dror, *Capacity to Govern*, 13.

³⁴ Krone, Krone, and Gregory-Krone, *Space Abundance*, 52.

Koreas, the international community is seeing favorable conditions to promote peacebuilding and humanity in global governance.

The United States and North Korea are leading a paradigmatic shift from hostile to close relations in their bilateral diplomacy. For humanitarian purposes, the relevant countries aim to help North Korea to transform from a military, isolated, and poor state to a normal, open, and economically affluent one. My project on humanity indicates how the international community can help North Korea to overcome long-lasting economic difficulty, while removing economic sanctions and diplomatic isolation.

The international community highlights that, with mutual trust, North Korea can evolve into another South Korea regarding economic prosperity. In May 2018, US President Donald Trump announced that, upon North Korea's complete denuclearization, the United States has no intention of overturning the North Korean regime. Trump emphasized that, upon denuclearization, North Korea's road map will be the South Korean model: South Korea has achieved economic prosperity, as the United States has provided generous foreign aid and favorable markets in trade to South Korea.

However, the United States and North Korea revealed differences in their perception of denuclearization in the second summit meeting in late February 2019. The two countries aimed to materialize North Korea's denuclearization and the United States' declaration of the end of war (종전선언). North Korea wanted a partial dissolution of economic sanctions according to its partial denuclearization, while the United States demanded substantial denuclearization, which would be accompanied by comprehensive economic support. The United States perceived that partial dissolution would make economic sanctions ineffective, and hence it chose "no deal" rather than a "big deal." In North Koreans' view, as the United States' guarantee of, and economic rewards to, the North Korean regime, is uncertain, North Korea's partial denuclearization must be a bold decision, against broad opposition from the Party, diplomats, and the military.³⁵

In this vein, regime guarantee accompanied by liberalization and economic development by the North Korean regime and people can be a feasible solution for denuclearization. My research defines this solution as a democratic peace solution, which is beneficial for both the North Korean regime and its people. This solution may promote the *global equity* that Dror highlights for humanity in global governance.³⁶

Regarding the diplomacy of the two Koreas, since summit meetings beginning in spring 2018, North and South Korea have evolved from rivals to brotherly states. Under national solidarity and humanity, each Korea regards the other Korea as a brotherly state, as one single ethnic community. During South Korean President Moon's visit to Pyongyang, the capital of North Korea, President Moon noted that the two presidents agreed on the denuclearization of the Korean Peninsula (한반도 비핵화), and that the two Koreas should

³⁵ NEWSIS, "CHOI Sun-hee 'Kim Jong-un, Singapore Ihu Guknae Manheun Banae-dojeon Maat-seo'" [최선희 "김정은, 싱가포르 이후 국내 많은 반대·도전 맞서"], March 26, 2019, www.newsis.com/view/?id=NISX20190325_0000598650.

³⁶ Dror, *Capacity to Govern*, 27.

seek for peacebuilding (평화구축) free of war. This event implies that the two Koreas can have mutual trust, that North Korean top elites and citizens are ready to accept denuclearization and peacebuilding in the Korean Peninsula, and that they have aspirations of economic prosperity.³⁷ Mutual trust between South and North Korean presidents can be regarded a de facto declaration of the end of war.

Regarding the domestic politics of the two Koreas, South Korea may play a constructive role in North Korea's regime guarantee and economic prosperity, because South Korea considers North Korea the same ethnic community, which should be unified. Because the relevant countries of the Korean War are the two Koreas and the United States, South Korea can be an arbiter (중재자) to reduce the gap between the United States and North Korea in solutions to North Korea's denuclearization. South Korea has been the sole partner to embrace North Koreans for peacebuilding and humanity, because it may provide assistance without any conflict in national interests, because of the national solidarity between North and South Koreans.

III. North Korea's Marketization and the Two Koreas' Prosperity During Denuclearization

North Korea's Marketization and Capitalist Development Despite Economic Sanctions

The promotion of denuclearization and peacebuilding will be accompanied by the economic prosperity that the North Korean regime and citizens desire. Economic sanctions and diplomatic repression as conventional policy prescriptions have not discouraged North Korea's ambition of nuclear development. Instead, these policies have simply brought about a long-lasting North Korean famine. Although North Korean Chairman Kim Jong-un has encouraged the improvement of the domestic economy and an increase in agricultural products, 40 percent of North Koreans suffer from malnutrition.³⁸ It is necessary for the international community to transform North Korea from a military state with a shortage economy to a normal state with capitalist development and economic prosperity. This humanitarian aim will enhance peace, economic prosperity, and humanity as humans seek for global governance and, by extension, space governance.³⁹

To understand North Korea's motivation for denuclearization, it is necessary to explain North Korea's views on economic development and the substantial changes in its society and economy. North Korea has experienced marketization despite economic sanctions

³⁷ *JoongAng Sunday* [중앙선데이], "Meekook, Hankook Apseoganda Bulpyeong Malgo Buk-haeng-yeolcha Soakdo Nopyeora" [미국, 한국 앞서간다 불평 말고 북행열차 속도 높여라], October 6, 2018, news.fois.com/article/23024324.

³⁸ MBC, "Book Sickryangnan Simgak ... Ingoo Jeolban Gakkai 'Youngyangsiljo'" [北 식량난 심각...인구 절반 가까이 '영양실조'], April 17, 2019. imnews.imbc.com/replay/2019/nwdesk/article/5253135_24634.html; *Hankyoreh Newspaper*, "'Ssalyi Geumboda Gwihada' Bookhan Sickryangnan 10nyeonsae Choekank Seoulsi Daebok Sickryangjiwon Naseonda" ["쌀이 금보다 귀하다" 북한 식량난 10년새 최악 서울시 대북 식량지원 나선다], May 2, 2019, www.hani.co.kr/arti/politics/defense/892350.html.

³⁹ Krone, Krone, and Gregory-Krone, *Space Abundance*.

from the United States. This section evaluates North Korea's hidden potential for economic development, because these potentials have not been evaluated by scholars on international relations and political economics. North Korea's rapid marketization and capitalist development imply that North Korea's main national strategies are focusing on the goals of rapid industrialization and economic prosperity. These goals are matched with those of its neighboring countries, and they are far from its official diplomatic metaphor of anti-Americanism and Marxism. Yeon-chul Kim argues that it has been difficult for North Korea to adhere to a socialist planned economy since its economic reforms of the 2000s.⁴⁰ Since then, autonomous marketization has steadily broadened its reach, irrespective of North Korean leaders' intentions. Outsiders have not recognized North Korea's rapid change to marketization and capitalist development since the 1990s.⁴¹

Under an extreme famine, North Koreans have recognized that their state and government do not have the capacity to provide economic security. They have also seen that China does not intend to provide economic security as well as national security. North Korean society has rapidly developed its market system and informal economy, helping people to survive the shortages in the North Korean regime's provisions. Due to its market system and informal economy, North Koreans have survived despite their poor domestic economy and the economic sanctions from the international community. As North Korean society becomes liberalized and as the North Korean economy evolves into a market economy, North Korean citizens' loyalty to the Supreme Leader and the Party weakens. Liberal ideas are more common among young generations, who do not show strong loyalty, unlike their grandfathers' generations.⁴²

North Korean society has evolved its informal economy as the North Korean regime has failed to take responsibility for the masses' basic needs for physical survival. Since the socialist states' regime breakdowns in the early 1990s, North Korea has lost international solidarity and external aid systems. North Korea's socialist economy has been weakened because of the lack of external markets and aid providers. During the long-lasting famine of the 1990s, North Koreans recognized that they should not rely on their government, but that they needed to develop a self-help system, such as an informal economy. Since then, North Korean society has developed its informal economy, divided from the formal economy controlled by the government. North Korea's informal economy has been expanded with voluntary aid from South Korean or Chinese markets and relief

⁴⁰ Kim, Yeon-chul, "Potential for Economic Reform in North Korea," in *Understanding North Korea: Indigenous Perspectives*, eds. Jongwoo Han and Jung Tae-hern (Lanham, MD: Lexington Books, 2014), 91-110.

⁴¹ *JoongAng Ilbo*, "Bookhanpan Gangnam-eun Pyongyang-yeonk Ap ... 60Pyeong 2eok, Royal-cheung 1~10cheung" [북한판 강남은 평양역 앞 ... 60 평 2 억, 로열층 1~10 층], September 17, 2018, news.join.com/article/22975701; *JoongAng Ilbo*, "Book Sonjeonhwa 580maandae, Gaipbi 17eok Dollar ... Modu Dollarmaan Badatda" [북 손전화 580 만대, 가입비 17 억 달러...모두 달러만 받았다], September 17, 2018, news.join.com/article/22975716.

⁴² *Yonhapnews*, "'JSA Gwisoon' Bookbyeongsa 'Bookhan, Kim Jong-un Moorihage Sinkyeokwahago Itseo'" ['JSA 귀순' 北병사 '북한, 김정은 무리하게 신격화하고 있어'], November 17, 2018, www.yna.co.kr/view/AKR20181117030200073?input=1179m.

organizations. The informal economy has been operated regardless of economic sanctions, mainly from the United States and the United Nations. In the globalized world, economic sanctions cannot control all the dimensions of the informal economy in North Korea. Dror argues that humanity can be promoted not only by science, technology, mass media, and the internet, but also by globalization.⁴³ For a humanitarian aim, the international community needs to help North Korea to organize its market and economy successfully under the system of capitalism and world trade for North Koreans' economic prosperity and wellbeing.

Many specialists have evaluated that if North Korea succeeds in its economic reform and opening, it will have an immense potential for economic development. For example, an investment guru, Mark Mobius, evaluated that North Korea can jump to a modern economy with the help of its cheap labor and advanced human capital as well as with additional help from South Korea's generous investment, capital infusion, and technology transfer.⁴⁴ Furthermore, North Korea can evolve from a low-income to a middle-income economy with the help of its favorable background and its factor endowments for advanced capitalism: specifically, (1) a synergy of economic cooperation between the two Koreas, (2) its geo-economic network that connects South Korea, China, and Russia, and (3) its estimated natural resources, such as rare earths and uranium.

The Two Koreas' Economic Prosperity during Denuclearization

During the process of North Korea's denuclearization, economic cooperation between South and North Korea will lead to economic prosperity in both Koreas. In South Korea, President Moon Jae-in's administration (in office May 2017-May 2022) holds a belief that economic prosperity in South and North Korea will be accompanied by peacebuilding in the Korean Peninsula. In his speech on Korea's National Liberation Day (Independence Day: 광복절), President Moon expressed confidence in the two Koreas' immense potential for economic prosperity by utilizing North Korea's human resources and natural resources, as displayed in his key words "평화가 경제 (peace is economy)."⁴⁵ In

⁴³ Yehezkel Dror, "Crafting the Past on the Future: Realistic Visions and Futuristic Nightmares?," in *The Thinking State?* eds. Kees Schuyt, Bruno Latour, Jan Peter Balkenende, Wim van de Donk, Anton Hemerijck, Lisa Anderson, Yehezkel Dror, Jérôme Vignon, and Peter Weingart, WRR-Lecture 2007 (The Hague: Scientific Council for Government Policy, 2007), 83-96.

⁴⁴ CNBC, "Investment Guru Mark Mobius Says North Korea Presents a 'Tremendous Opportunity,'" June 12, 2018. www.cnbc.com/2018/06/12/investment-guru-mark-mobius-says-north-korea-presents-a-tremendous-opportunity.html.

⁴⁵ *Kukmin Ilbo* [국민일보], "Moon Daetongryeong 'Naedal Pyongyang Bangmoon, Cheoldo Doro Yeonkyeol Olhae Ane Chakgongsink Mokpyo'" [광복절 경축사 전문] 문 대통령 "내달 평양 방문, 철도 도로 연결 올해 안에 착공식 목표", August 15, 2018, news.kmib.co.kr/article/view.asp?arcid=0012603754&code=61111111&cp=du; *Segye Ilbo* [세계일보], "'Pyeonghwaga Kyeongje' ... Hyanghu 30nyeon Nambook Kyeongjehyeopryeok Hyokwa 'Choeso 170jo'" [[문대통령 광복절 경축사] "평화가 경제" ... 향후 30년 남북 경제협력 효과 '최소 170조'], August 15, 2018, www.segye.com/newsView/20180815003085.

November 2018, President Moon emphasized in his address to the Korean congress that peace is a new engine for South Korea's higher economic growth.⁴⁶

East Asian developmental states, such as Japan, South Korea, and Taiwan, have succeeded in *economic growth with equity*.⁴⁷ South Korea may propose an appropriate "developmental state model" for North Korea's rapid industrialization with egalitarianism.⁴⁸ Eventually, economic cooperation between the two Koreas will lead to the process of national unification for economic prosperity. Relevant countries have not recognized North Korea's desire for economic development, and instead they have focused on its nuclear development. All countries should find Pareto-optimal outcomes for denuclearization and economic prosperity.

IV. The Feasibility of Democratic Peace Solutions from Systems Analysis ***Proposals to Enhance the Feasibility of North Korea's Liberalization***

From the framework of systems analysis, policymakers can enhance the feasibility of democratic peace solutions through mutual trust. North Korea's liberalization will promote North Koreans' humanity and, by extension, South Korea will enhance the feasibility of national integration or unification between the two Koreas. Economic exchange between North Korea and relevant countries as well as the infusion of information into North Korea will nurture North Korean civil society.⁴⁹ Economic liberalization can transform North Korea from its hard, authoritarian regime to a soft, authoritarian regime, such as Singapore. This path is most feasible for denuclearization and peacebuilding over conventional policy prescriptions, such as nuclear proliferation and disarmament.

However, North Korea's democratization should be decided by North Koreans, not by the international community. Arbitrary democratization by external military forces—accompanied by ignorance of North Korea's state sovereignty—will not receive agreement from North Korean citizens. North Korean elites do not want to degenerate into *secondary* citizens after the national unification of the two Koreas. North Korean denuclearization may lead to national integration between the two Koreas. As a result,

⁴⁶ *OhmyNews* [오마이뉴스], "Moon Jae-in 'Kijeokgateun Kihoe ... Pyeonghwaneun Sae Kyeongjeseongjangdongryeok'" [문재인 "기적같은 기회... 평화는 새 경제성장동력"], November 1, 2018, www.ohmynews.com/NWS_Web/View/at_pg.aspx?CNTN_CD=A0002484131.

⁴⁷ World Bank, *The East Asian Miracle: Economic Growth and Public Policy* (Oxford: Oxford University Press, 1993).

⁴⁸ Seokdong Kim, "Developmental States' Weak Welfare Regimes but Long-Term Low Inequality: Why Economic Nationalism Promotes Solidarity for Egalitarianism Rather Than Conflict for Resource Monopoly," (doctoral dissertation, Claremont Graduate University, Claremont, CA, 2018), Conclusion.

⁴⁹ A previous North Korea top elite and diplomat, Thae Yong-ho (태영호), stated that North Korea's repressive, totalitarian regime has maintained itself through its terror to citizens and the exclusion of information from outside world. In his view, the United States and the international community can infuse information about the free world into North Korea, and it can weaken the regime durability. See Thae Yong-ho [태영호], "Beyond Nuclear Diplomacy: A Regime Insider's Look at North Korea," Invited Talk, Center for Strategic & International Studies (CSIS), October 31, 2017, www.csis.org/events/beyond-nuclear-diplomacy-regime-insiders-look-north-korea. For a transcript, see www.csis.org/analysis/beyond-nuclear-diplomacy-regime-insiders-look-north-korea.

humanity should be accompanied by the international community's respect of North Korea's state sovereignty. Economic and political liberalization through democratic peace will effectively change North Korea's diplomatic policy lines for peacebuilding and humanity. Diplomatic repressions and economic sanctions have been unable to change North Korea's nuclear policies, while military attacks against North Korea have been considered almost impossible.

To realize Pareto-optimal outcomes during denuclearization, relevant countries need to help North Korea to develop its economy like China and Vietnam in the short term, or like Singapore in the long term. This development path will transform North Korea from a military to a normal state with economic prosperity. North Korea will be more motivated to denuclearize than if it maintains its poor economic status. A developed North Korea will keep its national defense with the help of its advanced economy, and additionally with relevant countries' guarantee of its regime. Its ruling elites will gain legitimacy and popularity from the masses. In this case, they are more likely to liberalize its society. Modernization theory or political development theory elucidates that developing countries under authoritarian regimes are liberalized in the short term, and they are democratized in the long term if they succeed in economic development. Relevant countries need to consider democratic peace solutions for North Korea's gradual path from economic development to liberalization, and eventually to denuclearization. For peacebuilding and humanity in global governance, North Korea's liberalization is likely to lead to national and political integration between South and North Korea for national unification.

North Korea's National Security: Focusing on Cross-Cultural Variables

a) The United States' Guarantee of North Korea's Regime as a Military Sponsor

Relevant countries need to respect North Korea's state sovereignty, and consistently to provide North Korea with military protection (national defense like an alliance between the United States and North Korea) against neighboring countries or great powers, and with economic aid. To prevent nuclear proliferation from North Korea's nuclear weapon exports to enemy states and terrorist groups, the most feasible way is to democratize North Korea or to unify the two Koreas peacefully and with humanity.

Power transition theory postulates that the satisfaction of the challenger (North Korea) in East Asia's international relations will lead to peace. Democratic peace theory implies that democratization will reduce the policy uncertainties and/or irrational behaviors of the North Korean ruling elites. Under mutual trust with relevant countries, a democratized North Korea can agree to the denuclearization of the Korean Peninsula, and it will not export its nuclear weapons or ICBMs to anti-American nations or terrorist groups.

The United States can guarantee North Korea's state sovereignty if North Korea intends to become a peace-seeking country. Thus, the United States should change the purpose of US forces in Korea, so that they function as a military sponsor for North Korea. The original main purpose was deterrence for North Korea and China. But because the US forces in Korea have been a significant threat to North Korea, North Korea has maintained a strong motivation to develop nuclear weapons. Neighboring countries' regime guarantees to North Korea would imply that there is no remaining hostility to North Korea,

and, thus, it will not need nuclear weapons. Therefore, after North Korea's denuclearization, the US forces in Korea should provide national defense not only to South Korea, but also to North Korea.

In particular, when the United States plays a constructive role in making regional community in East Asia, it can expect a peaceful relationship with China. Even during the probable power transition, its allies, such as Japan and South Korea, will remain friendly countries. The East Asian regional community can be established like the European Union has been institutionalized through its deepening and enlargement. Eventually, it may persuade North Korea to abandon nuclear weapons, when the community guarantees North Korea's national security.

b) Economic Assistance and North Korea's Liberalization

If North Korea remains a peace-seeking country, it is necessary for all neighboring countries to provide economic aid, such that the recipient, North Korea, may realize its rapid industrialization. Since Kim Jong-un's rule began, North Korea has prioritized economic development over nuclear development. According to the standards of international human rights, it must be morally inappropriate for neighboring countries to be patient with North Korea's repressive regime. But global governance that promotes North Korea's economic development will eventually soften the North Korean regime's harsh rule. For global equity, economic assistance to North Korea will promote not only long-term democratization in North Korea, but also peacebuilding in East Asia.

North Korea and the United States mutually agree that relevant countries' support for North Korea's economic development is one way to help North Korea's regime guarantee. US Secretary of State, Michael Richard Pompeo, witnessed that North Korean President Kim Jong-un wants the United States' economic support, regime guarantee, and peace treaty.⁵⁰ President Trump has repeated that North Korea's denuclearization will be accompanied by economic prosperity, which is similar to that of South Korea. Upon a guarantee of national defense and economic assistance, North Korea's voluntary denuclearization must be a path for global equity and humanity.

Regarding the feasibility of North Korea's liberalization, my democratic peace solution seems too optimistic, because it is not certain if and when North Korea will be a normal state with democratization. The international community needs patience to wait for North Korea's liberalization in the short term and its democratization in the long term. However, if North Korea's regime guarantee and national security are provided, then North Korea's political reform and the opening of its domestic market will promote prosperity and humanity. North Korea's economic development will lead to liberalization. Economic liberalization has led to peaceful democratization in South Korea (in the late 1980s) and in many previously authoritarian states. This path can enhance humanity in global governance from the North Korean context.

⁵⁰ *Yonhapnews*, "Pompeo 'Kim Jong-un, Mee-Gyeongjejiwon-Chejebojang. Pyeonghwahyeopjeong Wonhaetda'" [폼페이오 "김정은, 美경제지원·체제보장·평화협정 원했다"], May 24, 2018. www.yna.co.kr/view/AKR20180524002000071.

Peaceful democratization will be the most feasible way to prevent irrational wars or leakages of nuclear weapons. Even if the regime collapses due to internal protests or external shocks, neighboring countries will need to empower North Koreans to make a peaceful transition from autocracy to democracy. For a democratic transition, a peaceful solution is preferable to a violent solution to prevent unexpected nuclear leakages to foreign countries. Conventionally, peaceful transitions of democratization include the ruling elites' voluntary measures of liberalization and democratization—democratization from above in Samuel P. Huntington's term⁵¹—as well as democratization through negotiations between the ruling elites and citizens. Huntington categorizes patterns of democratization into democratization from above (transformation), democratization from below (replacement), and democratization through negotiation (transplacement). Of course, a voluntary concession of power from North Korea is not likely in the near future. However, North Korea's liberalization will promote the preconditions for peaceful democratization.

My application of democratic peace theory to systems analysis postulates that the North Korean regime should be peacefully democratized to denuclearize the Korean Peninsula. Global governance focusing on North Korea's domestic politics will promote the peaceful, gradual political reform or democratization of the North Korean regime by inner ruling elites or the masses. But for humanity, state sovereignty, and national self-determination, North Korea's democratization should be decided by North Korean citizens, not by external forces or foreign countries. For national solidarity, South Koreans should also respect North Korea's state sovereignty and its political regime until the two Koreas have been integrated politically, economically, and socially.

Considering cross-cultural variables, my project assumes that many North Koreans would not want their Korea absorbed into South Korea and their political regimes and values negated by South Koreans. North Korea's regimes and values should be respected until the substantial national integration of the two Koreas: This integration process will lead to complete unification between the two Koreas.

V. Global Governance: Peace, Prosperity, and Humanity During Space Development

East Asia faces a paradigmatic shift in the perspective of nationalism from aggressive nationalism to international solidarity; hence, this section discusses how global governance may promote the humanity that Dror and Krone, Krone, and Gregory-Krone highlight.⁵² One open question for peacebuilding in East Asia is how Pacific nations, such as the two Koreas, the two Chinas, Japan, and the United States, can promote economic prosperity and egalitarianism despite their differences in political regimes, economic systems, and national interests. Consecutive summit meetings between South and North Korea, and also between the United States and North Korea since spring 2018, have dismantled the long-lasting Cold War in East Asia and, by extension, they will promote

⁵¹ Samuel P. Huntington, "How Countries Democratize," *Political Science Quarterly* 106, no. 4 (1991): 579-616.

⁵² Dror, *Capacity to Govern*; Krone, Krone, and Gregory-Krone, *Space Abundance*.

peacebuilding and economic cooperation. During North Korea's denuclearization, all East Asian countries may use a *revised developmental state model*, by applying the assets of South Korea's economic development to North Korea. For example, because North Korea has a foundation of socialism, relevant countries utilize public land-ownership for investment into North Korea. By creating common markets for peace and humanity, relevant countries may create a peace regime for economic prosperity.

In 2018, South and North Korea sought for peace and humanity through summit meetings, declaring the end of the war. Since then, South and North Koreans' national solidarity has brought about the process of national integration between the two Koreas, and it has led to a broad consensus for economic prosperity. By extension, the United States and the two Koreas have dismantled East Asia's long-lasting Cold War through summit meetings.

A constructive partnership for humanity between the United States, South and North Korea, and other relevant countries will create a political community and a common market for peace and economic prosperity. If East Asian peoples' exchanges across national borders are accompanied by peaceful communications between East Asian nation states, they will be a bond to connect nation states, and they will be a catalyst to build a regional community for humanity. For the political integration or the building of a peace regime in East Asia, international solidarity will be an asset for Pacific nations to seek economic prosperity and peace, as seen in the European Union. Peacebuilding for humanity will transform East Asian states' aggressive and exclusive nationalism to moderate and inclusive nationalism.

In the long term, international solidarity will promote humanity during space development. With mutual trust, a broad consensus on denuclearization between North Korea and relevant countries can switch interstate conflict from a *zero-sum* game to economic prosperity with common markets as a *positive-sum* game during global governance and space governance. In positive-sum game politics (known as a plus-game situation), political actors (e.g., nation states) perceive who gets more and who gets much more. Meanwhile, in a zero-sum game politics (a minus-sum situation), actors' perception is pessimistic: Some get nothing and some must give up benefits that are regarded as semisacred in many nation states at the cost of winners' dominance in competitions, as winners aim to take benefits as much as possible for the monopolization of resources.⁵³ If optimism in East Asia's international relations is shared between relevant countries, North Korea will have an immense potential for economic development. A consortium for humanity between relevant countries will transform North Korea into another South Korea, providing North Koreans with economic prosperity, peace, freedom, and democracy. Krone proposed peaceful management of nuclear weapons between Pacific nations even before North Korea's development of nuclear weapons and ICBMs.⁵⁴ North Korea's infrastructure and manpower for nuclear development will transform assets for

⁵³ Mancur Olson, Jr., and Hans H. Landsberg, eds, *The No-Growth Society* (New York: Norton, 1973); Dror, *Policymaking under Adversity*, 32.

⁵⁴ Krone, "Pacific Nuclear Information Group."

space development, and hence, they will not be dismantled unproductively, if North Korea and relevant countries seek for a *revised developmental state model* to establish North Korea's new national strategy for a strong state and a wealthy nation.

In space, there will be abundant resources, which can be utilized as public goods for humans' wellbeing and economic prosperity. Peacebuilding through denuclearization may switch Pacific nations' investment in nuclear development to investment in space development. Relevant countries have engaged in zero-sum games due to limited resources on earth, particularly engaging competitions through nuclear weapons. If Pacific nations establish leadership and moral values for *public ownership of space resources*, space development will be a *positive-sum game*, in which all relevant countries may gain Pareto-optimal outcomes for peace, economic prosperity, and humanity.

Conclusion: Prospect and Summary

Prospect after Summit Meetings between the Two Koreas and the United States

In Singapore in June 2018, the 6.12 summit meeting between the United States and North Korea was a milestone that significantly developed the relationship between the United States and North Korea, in addition to preventing nuclear proliferation all over the world. This temporary mutual trust led to the second summit meeting in Vietnam in late February 2019. Although there were no substantial agreements in Vietnam, the two countries continue to discuss solutions for denuclearization and peacebuilding in the Korean Peninsula.

What is a feasible plan for the long-term goal of North Korea's liberalization and denuclearization and for humanity in global governance? The international community must guarantee North Korea's state sovereignty, admit President Kim Jong-un's rule, and admit the North Korean ruling elites' regime's legitimacy. Then, North Korea will not develop more advanced ICBMs and nuclear weapons, such as the miniaturization of nuclear weapons, and it will not sell them elsewhere. North Korean society will be able to liberalize if peacebuilding leads to economic cooperation between North Korea on the one hand and South Korea and the United States on the other. In North Korea, liberalization will be a precondition for democratization in the long term.

In North Korea's gradual democratization, political leaders will voluntarily give up any ambitions for nuclear development, and they will dismantle nuclear facilities. This democratization is a long-term process that needs patience from neighboring countries. Thus, preliminary steps for democratization consist not only of North Korea's liberalization, but also of mutual trust between South and North Korea and between North Korea and the United States. Economic cooperation between the two Koreas and between North Korea and the United States will promote these steps.

Summary

Why have nation states' foreign policies for North Korean denuclearization failed? This is a puzzle in systems analysis. The reason for this policy failure is that the great powers have relied on power-centric approaches, and they have not taken account of North Korea's domestic politics. Policy makers have questioned why North Korea has needed to develop nuclear weapons; why any measures, such as military actions, economic

sanctions, and diplomatic repressions have been ineffective or almost impossible to apply to North Korea. My research introduces North Korean insiders' views on international relations and US policy on North Korea, because many of these views are missing, or they are not clearly spotlighted by the US mass media and academia. In switching North Korea from a military to a normal state, it is necessary to discuss why neither military attacks nor economic sanctions have been applied effectively against North Korea. My research explains why neither a balance of power between the United States and China nor a power transition by the United States (or by China) has led to North Korean satisfaction with East Asia's international order for North Korea's top priority of national security and regime guarantee. Relevant countries must consider North Korea's domestic politics for its peaceful denuclearization to induce its satisfaction with denuclearization.

My project reflects North Korea's perceptions to identify cross-cultural variables in systems analysis. In this framework, democratic peace solutions considering domestic politics can enhance the feasibility of North Korean denuclearization beyond power-centric approaches, such as BoP and PT theories. It can also be effective at incorporating North Korea's satisfaction into a power transition perspective for peacebuilding in the Korean Peninsula. In the long term, peaceful democratization in North Korea will be accompanied by North Korean regime maintenance, national security, economic development, and economic liberalization.

Conventional foreign policies—such as (1) the US-led nuclear umbrella, (2) the neutralization of the Korean Peninsula, and (3) the nuclearization of South Korea and Japan—have not led to North Korean satisfaction with the international order. These policies are mainly nuclear proliferation and disarmament, which are based on the structure of power distributions, like BoP and PT. North Korea's economic liberalization will transform its policy line from nuclear development to peaceful coexistence. Specifically, all viable solutions of democratic peace include (1) the United States' guarantee of North Korea's regime as a military sponsor, (2) economic assistance, and (3) North Korea's liberalization, focusing on cross-cultural variables.

Of course, from realists' viewpoint, it is not certain if and when North Korea will be a normal state with democratization. The international community must be patient with North Korea's democratization. However, if North Korea's regime guarantee and national security are provided, then North Korean political reform and the opening of its domestic market will promote prosperity and humanity. Pareto-optimal outcomes during denuclearization are likely to enable North Korea to develop its economy like China and Vietnam in the short term, or like Singapore in the long term. If North Korea successfully evolves from a military state to a normal state with economic prosperity, it will voluntarily accept denuclearization. If ruling elites in North Korea gain political legitimacy, popularity, and support from their citizens, they will provide citizens with more freedom and a higher standard of human rights. With peacebuilding and economic prosperity, North Korean society will also follow a development path from economic development to economic liberalization, and eventually to political liberalization. Relevant countries, such as South Korea, the United States, China, Russia, and Japan, must consider democratic peace

solutions for North Korea's gradual path from economic development and political liberalization to denuclearization.

It is necessary to establish global governance for peacebuilding to enhance humanity during the era of space development. Krone, Krone, and Gregory-Krone⁵⁵ and KSI are exploring the peaceful use of resources in space to enhance humans' economic prosperity and wellbeing, and eventually to promote humanity. By extending this vision, my democratic peace solutions will promote global governance, interstate peace, and humanity for the long-term goals of human space development.

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Editors' Notes: Dr. Seokdong Kim represents the younger generation of scholars joining Kepler Space Institute. Here he combines his original research into the long-time challenge for peace on the Korean Peninsula with his hypotheses about the role that future Space development and abundance of resources for Earth could play as a positive independent variable for consideration. We believe that Dr. Kim is the first to introduce this concept for analysis. **Bob Krone and Gordon Arthur.**

⁵⁵ Krone, Krone, and Gregory-Krone, *Space Abundance*.