KINNAIRD COLLEGE FOR WOMEN

ANALYZING THE TRENDS OF NUCLEARIZATION IN EAST ASIA UNDER POSTURE OPTIMIZATION THEORY: CASE STUDY OF JAPAN'S PURSUIT OF NUCLEAR DETERRENCE (2012-2022)

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RESEARCH COMPLETION CERTIFICATE

It is certified that Ms. Rubab Ali and Ms. Zainab Haseeb of BA/BSc (session 2019 – 2023), Department of International Relations have carried out research work entitled Analyzing The Trends Of Nuclearization In East Asia Under Posture Optimization Theory: Case Study Of Japan's Pursuit Of Nuclear Deterrence (2012-2022)

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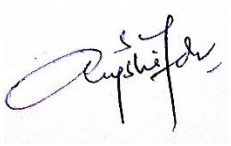

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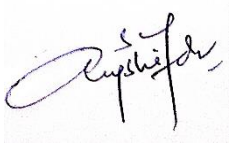

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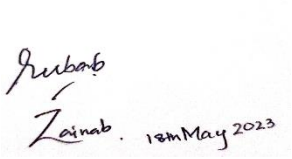
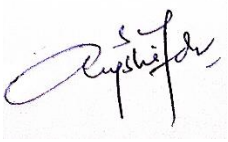
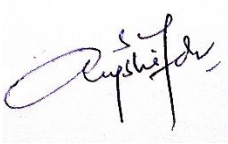
Signature: 

Signature of Supervisor: 

Signature of HOD: 

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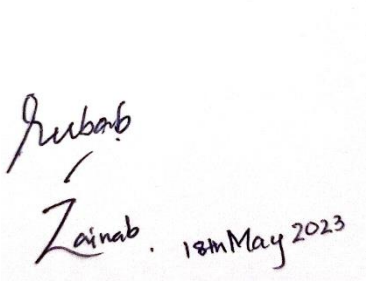

ABSTRACT

The emerging global landscapes of nuclear policies are an important phenomenon of the 21st century that had sparked different strategic questions. A much similar question was posed by Vipin Narang who in his Theory of Posture Optimization attempted to fill some of the gaps that explain why states acquire particular nuclear postures. With the discussion about strategies of nuclear proliferation and postulates of posture optimization, this research paper discusses the trends of nuclearization in the East Asian Region and the typology of nuclear postures of the regional states. The threat of continuous introduction of modernized militaristic and nuclear technologies in the region has created strategic instability, resulting in the pursuit of more secure second-strike capability by the countries, and forming the heart of conventional warfighting and deterrence strategies. This paper mainly focuses on the implications this regional nuclearization is leaving on the Japanese efforts of optimizing its nuclear posture, with the country left struggling with a parallel pursuit of disarmament and nuclear deterrence. In this struggle, the extra-regional alliances namely, with the United States and its fluctuating extended deterrence policy of nuclear umbrella are turning the tide of Japan's security optimism. In this enigmatic approach there might be certain possible regional implications that Japan has to face, further confining its policy choices.

LIST OF ABBREVIATIONS

DPRK	Democratic Republic of Korea
ROK	Republic of Korea
TPNW	Treaty on the Prohibition of Nuclear Weapons
NPT	Non-Proliferation Treaty
CTBT	Comprehensive Nuclear Test Ban Treaty
CPS	Conventional Prompt Strike
SDF	Self Defense Forces

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CHAPTER 1

1. INTRODUCTION

The emerging global landscapes of nuclear policies are an important phenomenon of the 21st century that had sparked different strategic questions. A much similar question was posed by Vipin Narang who in his Theory of Posture Optimization attempted to fill some of the gaps that explain why states acquire the nuclear postures that they do. The theory of optimization describes the conditions that prompt the states for adopting the three nuclear postures that Vipin talks about. In order to adopt these postures, the states use four strategies including hedging, sprinting, hiding, and sheltered pursuit. The three postures that the states adopt include catalytic interventions of superpowers in which the weaker state uses the umbrella of a superpower possessing nuclear weapons and uses it to shield itself from regional threats. In order to acquire this posture, states adopt two policies. They either create nuclear-free zones or eliminate the idea entirely. Or they use the strategy of hedging in which they use the nuclear immunity provided by the superpower to them. The second nuclear posture remains that of Assured Retaliation in which a state that possesses nuclear weapons makes use of it as an act of defense. Hence, the state only makes use of the weapon when it's attacked. The third type of nuclear posture is that of Asymmetric Escalation according to which a state retaliates with a nuclear attack as a response to a conventional attack. Now a state adopts this posture under two conditions. First is when it fails to secure any nuclear umbrella from the superpower. And second is when it has a conventionally superior neighbor that poses a threat to it. That is what the theory predicts will happen if a state faces these two conditions.

The growing nuclearization of East Asia is worsening its security environment. Various indications of the discovery of new Chinese nuclear missile silos fields, a seemingly escalating nuclear-conventional arms competition between the Democratic People's Republic of Korea (DPRK) and the Republic of Korea (ROK), moreover, the announcement that Australia, in concert with the United States and the United Kingdom, is pursuing nuclear-powered attack submarines are representing how fast the regional security is deteriorating. The threat of continuous introduction of modernized military technologies in the region is creating strategic instability, resulting in the pursuit of more secure second-strike capability by the countries of the region, and forming the heart of conventional warfighting and deterrence strategies. Amid this situation, Japan; a stand-by

nuclear state and part of the US defense alliance of 'Quad' has a stance for nuclear disarmament in the region. However, in the wake of Japan's weaponizing neighbors, it is facing its toughest security environment. Moreover, since the Treaty on the Prohibition of nuclear weapons (TPNW), was passed in July 2017, nuclear disarmament movements have started to grow remarkably and are pressuring the Japanese government to join the treaty. Japan's status as a nuclear umbrella state highlights once again the country's postwar security dilemma between maintaining nuclear deterrence and parallelly seeking nuclear disarmament.

As the theory of nuclear posture optimization explains the typology of nuclear postures, in the case of the East Asian region, there are diverse examples of these nuclear postures. Considering the militaristic civil-military arrangement of the Democratic Republic of Korea, it follows the asymmetric nuclear posture. Its aggressive attitude toward the United States and its allies in the region poses a great threat to the environmental stability of East Asia. While China is a rising superpower, and according to Vipin superpowers trying to emerge as responsible powerful states have to compromise some strategic moves that compromise their deterrence to some extent. China hence follows the Assured retaliation posture. Whereas Japan and South Korea are a part of an extensive defense alliance with the USA. Japan, however, is considered a quasi-nuclear state. By 2011, 54 nuclear reactors were in operation in Japan, supplying approximately 30% of the country's electric power. However, after the Great East Earthquake, currently, only 21 of these reactors are in operation. Nuclear power energy for electricity production has been a national strategy priority of Japan. Today, Japan's nuclear energy infrastructure makes it capable of constructing nuclear weapons at will. The de-militarization of Japan and the protection of the United States' nuclear umbrella have led to a strong policy of non-weaponization of nuclear technology, but in the face of nuclear weapons, testing by North Korea, some politicians, and former military officials in Japan are calling for a reversal of this policy. Since 2012, the Abe government has pushed a series of institutional, diplomatic, and military reforms that reshaped Japan's nuclear security posture in the region. Responding to the situational changes in regional security Japan started to distance itself from its Pacifist optimism. Moreover, Japan signed Nuclear Non-Proliferation Treaty (NPT) in 1970 and the Comprehensive Nuclear Test Ban Treaty (CTBT) in 1976, however it has not signed or ratified the Treaty on the Prohibition of nuclear weapons (TPNW). This treaty is the first legally binding international agreement to comprehensively prohibit the possession of nuclear weapons with the ultimate goal of their total elimination.

Although the United States shares its security umbrella with Japan under the US-Japan Security Treaty signed in 1951 along with the regional defense treaty of QUAD, former US president Donald Trump suggested that Japan should develop its own nuclear weapons, claiming that it was becoming too expensive for the US to continue to protect Japan from countries such as China, North Korea, and Russia that already have their own nuclear weapons. Since, the Ukraine invasion, Japan has been trying to become a part of the USA's nuclear umbrella by acquiring the membership of NATO, and this thought has been largely opposed by China. This presents a similar scenario of Russian skepticism against NATO enlargement and hence these small moves are fanning the flames of new threats to the region.

1.1 SIGNIFICANCE OF THE STUDY

This Research aims to elucidate the factors contributing to the growing nuclearization and instability of the security environment of East Asia with particular attention paid to Japan's nuclear posture. This research by shedding light on the nuclear postures of regional and extra-regional players will make it easier for academicians and other researchers to understand the grey zones of the complex security environment of the region. Through the theoretical description presented in this research project, the readers will be able to understand why states particularly choose a specific nuclear posture and explain the deterrence strategies of Japan, in the wake of its parallel pursuit of deterrence and disarmament. The study will also provide an overview of the implications this regional nuclearization is leaving on the Japanese efforts of optimizing its nuclear posture. This research project will further contribute to the existing literature on East Asia's nuclear pursuit by innovatively describing how extra-regional alliances and the nuclear umbrella are turning the tide of Japan's security optimism.

1.2. PURPOSE AND DESIGN OF THE STUDY

1.2.1 AIMS AND OBJECTIVE

This research aims to comprehend the heightened nuclearization trend in East Asia by exploring the entangled relations of regional and extra-regional players and how it creates a dilemma of nuclear threat for Japan compelling it to reconsider its demilitarization policy.

1. To understand the deterrence policies of nuclear and non-nuclear states through the prism of Posture Optimization Theory.

2. To explore the nuclear postures of the states in the East Asian Region and the role of extra-regional players namely the United States.
3. To assess the nuclear posture of Japan and a parallel pursuit for deterrence and disarmament during 2012-2022.
4. To identify the effects of the growing nuclearization of East Asia on the changing posture of Japan.
5. To observe what implications will Japan's deterrence measures will have on the region.

1.2.2 RESEARCH QUESTIONS

1. How does Posture Optimization Theory explain the typology of nuclear postures and the causes behind the nuclear and non-nuclear states pursuing a particular deterrence strategy?
2. What is the nuclear status of the East Asian region and the involvement of extra-regional actors in the security environment of the region?
3. What nuclear posture explains the deterrence strategies of Japan, in the wake of Japan's parallel pursuit of deterrence and disarmament?
4. How is the changing security environment of the East Asian region contributing to the Japanese efforts of posture optimization?
5. What can be possible regional implications to Japan's pursuit of nuclear deterrence?

1.3 NATURE OF THE STUDY

The nature of this research calls for critical analysis of the available information through a mixed research design consisting of both qualitative and descriptive methods of the available primary and secondary sources of data. Here it is important to acknowledge that the authenticity and credibility of the sources of literature would validate the findings of research and is listed in the reference section in accordance with the formatting standards instructed. The available literature consisting of journal articles and books is used as the sources of data for carrying out the research. The data that has been collected for research consists of a descriptive backgrounds and currently prevailing trends about the nuclear struggles of East Asian states. Here, it is important to note that extra regional players, who have become nuclear states, are also viewed to comprehend their role in the nuclearization of the region. The main aim of the research remains addressing the significance of the nuclear postures in the East Asian region which has a geostrategic significance in the 21st century Indian Ocean politics. The research focuses on the making use of the parallel pursuit of deterrence and disarmament by Japanese policy makers. Furthermore, it measures the effects of

Japanese nuclearization on the region including but not limited to the spillover effect it might generate for the regional players.

1.4 LITERATURE REVIEW

Numerous developments in national security postures of states have indicated East Asia's worsening security environment. Ian Bowers has used geostrategic, operational, and technical factors to assess the nuclear war in East Asia. He mentioned that the most dangerous threat to the strategic stability of the region is the counterforce dilemma. Growing nuclearization and extended Nuclear Umbrella may lead to advertent or inadvertent entanglement. The set-up of a region with conventional capabilities shapes the web of conventional warfighting and deterrence strategies, considering various flashpoints of the region. Bower states that the security environment of East Asia provides powerful and understandable strategic and operational logic for maintaining these increasingly potential conventional capabilities. He has further highlighted that due to the conflicting or competitive relationships of the region, any initiative for arms control either for nuclear or conventional capabilities will unlikely to succeed. However, Bowers fails to identify all major potential flashpoints of the region as he states that the only contesting ground in East Asia is Korean Peninsula. Moreover, he is optimistic about the preservation of regional security as he believes that the maritime nature of the East Asian region reduces the chances of the likelihood of a nuclear confrontation. However, he is rightly guided when he considers the deployment of conventional counterforce capabilities in Japan, Taiwan, and South Korea (Bowers, 2022).

In his chapter of the book Alliances, Nuclear Weapons, and Escalation, Massahi mentioned that East Asian allies of the US, under its extended deterrence, have developed a denial-based deterrence posture. This posture limits the extent of damage by adopting nuclear and conventional counterforce capabilities. He mentions that the current security environment and growing technological development of the region are forcing the US and its regional allies to develop an offensive posture rather than a defensive posture. Moreover, he highlighted that the extended deterrence of the United States shapes it to be a cross-regional deterrence between partners that do not necessarily share a common geographical theatre. Examples are Japan-US, Japan-Australia, Japan-Europe, US-Australia, etc. He further mentioned that East Asia has developed an increased operational tempo, with the growing number of long-range and prompt strike weapons in the region. China and North Korea have already deployed short and medium-range missiles and

mobile launchers as counter-power projection capabilities. However, he mentioned some technical loopholes in US extended deterrence mechanism, that need to be addressed in order to deter the regional aggressors. For instant, he discussed that a cruise missile will take an hour to target North Korea if launched from Japan, whereas it should take only minutes. Considering that, he recommended that the Japanese Self-Defense Force must actively participate and tried to advise undercover that Japan must develop self-sufficient counterforce capabilities to reduce the political risk of deploying Conventional Prompt Strike (CPS) systems to Japan (Murano, 2021).

While, Tomohiko Satake, in his chapter, explained that Japan's reliance on US extended deterrence was initially of asymmetric nature. The alliance formulated by the US-Japan Security Treaty included that the United States will protect the Japanese homeland, while Japan will provide its land, air, and naval forces facilities and areas to the US military for its agenda of peace and security in the 'Far East'. He mentioned that although Japan's Self Defense Forces (SDF) and US military have increased interoperability, but the continuing limits to Japan's contribution in the operational underpinning of deterrence and the deteriorating security environment of the region put constitutional constraints on its active military role in North-East Asia. Satake highlighted that Japan revised its military doctrine in Abe's era in 2012, which enhanced SDF's joint operational; capabilities. This allowed SDF to exercise the right of collective self-defense. Some believed that this has allowed Japan to progress its capabilities while continuously relying on US extended deterrence shaping its nature from asymmetric to symmetric. However, Satake mentioned that as Japan's pessimism against China and North Korea rose, the policymakers kept pushing for new security legislation. However, they had to face great resistance from the Public. This domestic counter movement and anti-militarism limited Japanese and US strategic interests. Satake has stated that other than domestic resistance, there are legal constraints to SDF operational capabilities even after the introduction of new security legislation. SDF is only allowed to use force once Japan faces a planned and organized attack. Moreover, SDF's role is very limited and needs approval from National Diet and its use of force should be at the minimum necessary level. This will give great leverage to China and North Korea who have already been upgrading their law enforcement activities to further thrust into Japan's territorial sovereignty. In his conclusive remark, Satake has put a question mark on the nature of the US's extended deterrence for Japan, stating that its asymmetric nature will likely be the same for the foreseeable future (Satake, 2021).

In the article 'Japan's New Realism', Michael Auslin has extensively discussed Shinzo Abe's strategy to enhance Japan's national security policy in the wake of the deteriorating security environment in East Asia. His efforts included allowing Japan to expand its arms export and increase its defense budget. Auslin has commended Abe's diplomacy that helped Japan to expand its defense cooperation with Australia and India. During his tenure, he also signed strategic partnership agreements with Indonesia, Vietnam, Philippines, and Malaysia and expanded defense ties with France and UK. Auslin stated that with these realist efforts Japan was trying to keep Asia's balance of power from tilting too far towards China ensuring no one power dominates Asia (Auslin, 2016).

Sayuri Romei has mentioned that although Japan's national policy on the nuclear program mentions it as an exclusively peaceful one, however, the political rhetoric and policymakers' studies on the nuclear option have always attracted doubts about Japan's commitment to its deterrence policy. Sayuri has stated that the Japanese government has created a conceptual division between deterrence and disarmament, as they consider them as two different and coexisting things of Japan's nuclear policy rather than conflicting. Considering the security environment of the region, Japan has shifted its emphasis on security needs. The Japanese government has always promoted a step-by-step approach to disarmament rather than a bold and quick move for it. According to Sayuri, this has invited a lot of criticism of Japan's disarmament stance, calling it hypocrisy. One of the most prominent moves was Japan's opposition to the Treaty on Prohibition of Nuclear Weapons (TPNW) along with the US, UK, France, and Russia. Japan wants to achieve two goals simultaneously, i.e. achieving a strong pacifist identity and a capability of deterrence through the United States. Sayuri mentioned that despite public opposition, Japan has started taking concrete and realistic steps after the heightened regional threat perception and the deepening gap between the nuclear and non-nuclear states. Sayuri has mentioned that Japanese policymakers are also not very confident about the US-Japan alliance and she has posed questions that Japanese policymakers must need to consider in order to organize and engage in domestic and multilateral efforts for deterrence or disarmament (Romei, 2019).

In the book review: "Posture Matters but Stability Matters More", the author Douglas B. Shaw address the importance of the step taken by Vipin's Optimization theory for contemplating upon the emerging nuclear landscape of the 21st century world. Douglas continues with explanatory style of

research and lays emphasis on the fact that the possession of nuclear weapons remains not just limited to the idea of deterrence. Further, he asserts that the ability of deterring nuclear attacks vary with the choices of the state. An important shortcoming that Douglas highlights in his findings is how the exploration of the U.S. nuclear posture could prove to be helpful is assessing parallel to the East Asian state, Japan. He findings add to the relevance of the research by asserting that the mere existence of nuclear weapons provide deterrence is important as it validates the needs for looking into Japan's deterrence efforts and its effect on the region. Lastly, the author concludes by saying that the idea of nuclear optimization can help policy makers in deciphering defense posture postures of states that are carrying out a nonproliferation policy and remain the ally of US pointing out to the state of Japan once again (Shaw, 2014).

In the Article, "Asia's Complex Strategic Environment: Nuclear Multipolarity and Other Dangers", Christopher P. Twomey discusses the nuclear environment of the Asian region through a mixed research design. And for that he builds off with the main argument asserting that the change in the traditional nuclear environment is having implications for the international security of the Asian region. Through a focused approach, he contributes to the literature by jotting down the policy implications that the nuclear multipolarity of the world is having on Asian region. And for those Twomey Asian states are likely to observe a tough nuclear competition amongst each other by employing increased offensive nuclear weapons. The wholistic approach that Twomey adopts reflects in the figure that he has constructed demonstrating the perceptions of states on utility of nuclear weapons. And in that list, there are regional players such as China, Japan, and North Korea as well as extra regional players such as USA, Russia, and India. Here the arsenal needs and expected roles of states are addressed depicting how different the nuclear postures of the states are according to the needs of their region. Lastly, the author mentions Japan to be a lesser potential opponent of China. Though the research addresses the complex Asian strategic environment, it doesn't however predict that Japan has the potential to construct nuclear weapons and has acquired the raw material if not the weapon itself (Twomey, 2011).

In the research paper, "East Asia's Nuclear Future: A Long-Term View of Threat Reduction" Brad Roberts takes about the as an important player in the nuclearization process of the East Asian region. According to Roberts, though Japan stands as a non-nuclear state, the risk of it acquiring nuclear weapons has already been generated. Falling under the deterrence umbrella of USA, the leaders of the Japanese regime seem to be in a blur while describing the future of the nuclear

posture of the state. Here Robert addresses the fact that is often overlooked which is that Japan possesses the resources to put together a nuclear weapon. The stockpile of Plutonium which is under strict safeguards is one component of it. An important addition that the research makes in the nuclear literature is that the deceasing credibility of the American deterrence can become one of the centrifugal forces in pushing Japan towards nuclearization. And lastly, Roberts also predicts that the nuclearization of Japan would lead towards shift in the threat perceptions of the region, especially for China who would consider itself to be the main target of this effort (Brad, 2001).

In the article, "The Utility of Nuclear and Conventional Forces in the Second Nuclear Age: A Japanese Military Perspective", the author Noboru Yamaguchi makes use of a Japanese military perspective in order to showcase how the Japanese observe the utility of nuclear weapons giving the reader an inside view. Noboru starts off by discussing the fact that Japan's National Security Strategy and National Defense Program Guidelines focus on nuclear proliferation due to its evolving threat perception triggered by the increased nuclear proliferation by North Korea. Hence, the key factor is included but not limited to the generation of security dilemmas due to the North Korean nuclear posture for the regime. An important finding of Noboru's research that acts as his contribution to literature is how he calls the assured deterrence of USA to prove to be problematic for Japan. He mentions that if Japan faces a Balance of Threat situation, the infrastructure and industry will become highly vulnerable. And in this case the mutual deterrence may not be a viable option (Yamaguchi, 2015).

In the article "A Nuclear Free Zone for Northeast Asia", Andrew Mack discusses how the presence of different nuclear elements is an indication of nuclear proliferation by the states. He uses the case study of Japan and conducts qualitative analysis by making use of the facts and figures representing the number of nuclear products that Japan possesses. The author puts forward his assertion that Japan's commitment to becoming a plutonium economy is a cause of concern in the region. Despite the opinion of supporters of plutonium economy, it is said that the sheer amount of plutonium that Japan receives can in fact be used to manufacture nuclear weapons. To be specific. Andrew makes use of the term "reactor grade" plutonium which is more hazardous than "weapons grade" plutonium. And can be used to make bombs. The author addresses the impact of this initiative and mentions that North Korea uses the argument that the amount of Plutonium Japan uses doesn't significantly support the economy which means that Japan is following a hidden nuclear agenda. That way, Andrew addresses an important threat perception of a state that suspects that the Japanese actions reflect an attempt to nuclear the East Asian

region. Lastly, the author adds an important point to the research asserting that it might be possible for Japan to adopt nuclear deterrence without actually producing nuclear weapons (MACK, 1995).

In the article, "China, the U.S.-Japan Alliance, and the Security Dilemma in East Asia" the author Thomas J. Christensen opens up by discussing a general perception that has been prevailing in the world on international analysts about how the East Asia region is more susceptible to have instability in the region in comparison to western Europe, the war theatre of 20th century. And Thomas puts forwards this as a belief of not just realists but liberalists as well. To emphasize upon the immediate causes, he discusses factors such as security institutionalization and balance of power shifts in the East Asian region. Thomas also uses the security dilemma theory in order to observe the East Asian region as one with states using precautionary and defensively motivated measures which seem threat to the other states in the region. The continuing presence of US military in Japan and the constant expansion of China is South China Sea remain the highlights of the present situation. Here, the writer attempts to lay more emphasis on the role of USA in region and how it expects Japan to comply with it. Thomas emphasizes upon this by iterating that USA aims for Japan to adopt non offensive roles and remain less threatening to its neighbors. And the key to defending itself from the Chinese threats remains that of burden sharing of defense responsibilities with USA. The limitations of the research are highlighted in the fact that Thomas does make use of any actors other than that of USA, Japan and China while discussing the East Asian region. And while the topic specifies that, it would certainly be more appropriate to adopt inclusive approach and discuss the North Korea as a significant player too (Christensen, 1999).

In the book "Governing Atom" the authors: "Jong-dall Kim, John Byrne" address the nuclear power structures that exist in the East Asian region. The writers take a microscopic look at how these structures are progressing in the region shaping the nuclear postures. Here, Kim and John discuss how East Asia, at rapid rates, is becoming one of the world's largest producers of the nuclear electric reserves. The nuclear energy for sustainable purposes is growing each day to meet the energy demands of the region. The authors also state that Japan developed its nuclear strengths primarily for combating the resource shortage. And the interesting long-term cause of it is the inspiration that the region takes from USA and European allies who throughout the cold war period were engaged in much more volatile nuclear efforts. Here, the authors through their research ensure that the East Asian states are

running out for spaces for their nuclear reactors. However, one thing that the writers do not categorically address is the potential that Japan holds to gather nuclear weapons. Here, addressing these potentials of Japan would act as an important factor to assess the atom growth in the region (Jong-dall Kim, 1996).

CHAPTER 2

EXPLORING THE TENANTS OF POSTURE OPTIMIZATION THEORY

2.1 THEORETICAL FRAMEWORK

The 21st century is an era of increasingly complex relations between states. With the phenomenon of globalization, the interconnectivity of actions of the states has increased. The world has become a cobweb where the action of one state has direct implications for the interests of another. With this large cobweb of affairs, there are sub systems which we refer to as regions. In the present era, the significance of region has increased. After the world saw the rise and success of the European Union, the rest of the regions came upon this realization that the prosperity of any single state is increasingly connected to its relations with other regions. Each sub-system has its unique features, a set of cultures, traditions that are etched to that era specifically. Most importantly, the geographical contiguity that exists between the states within the region is important to acknowledge. For instance, if a state conducts nuclear tests in the region, the rest of the states which stand as a neighbor to it are directly impacted. Now each state would have to decide whether this is a threat to their security interests, whether the state is going to submit to the domination of the state, whether it has to acquire nuclear power itself to restore the imbalance in the region, or whether it should press other states to jointly pursue the act of denuclearization of the region. These are some of the actions that the states can undertake. Another thing that the regional players have to take into account is what are the intentions of nuclear power? Is it to acquire domination in the region? Is it to threaten its fellow states? Is it a manifestation of its international aims? Or is it competing for international domination? Once these questions are figured out, the state can either choose to settle with this change in the region. Or it can acquire nuclear capabilities for itself by a couple of methods. In order to dwell further on this, there are many theorists and scholars in international relations who aim to figure out how states respond to nuclearization in their region. A renowned American Political Scientist who explored the nuclear arena of states, their nuclear choices, and their reactions to nuclearization by fellow states goes by the name of Vipin Narang. Vipin is a professor of Political Science who is known for his work on the art of nuclearizing, proliferation and conflicts in international relations. He, in his work, has aimed to establish a theoretical model that specifically aims to explore the nuclear choices and their impacts on states

within the context of regional nuclear powers (Narang V. , Vipin Narang Profile, 2006). Vipin's area of interest is that of South Asia, however he has taken case studies from other regions as well. He has majorly explored states including India, Pakistan, America, China, North Korea and even Japan that stands to present a clear case of states who have a neighboring nuclear power to which they react through several choices explained by Vipin. All and all, his work remains published in international security journals and aims to direct the readers towards the nuclear insight of state's action, position and enlightens the reader of what kind of reactions to expect from a state who have nuclear proliferation happening in their region.

2.2 THE THEORY OF NUCLEAR OPTIMIZATION

The theory that Vipin gave out was that of Nuclear Optimization Theory. The term is commonly used among the nuclear development authorities of the state and has a scientific nature to itself. Vipin, being a major in chemical engineering launched this scientific term but with a political intention. The reason is that in the case studies too, Vipin calls for a close exploration of the activities of the state that are involved in nuclear ventures. By estimating the kind of nuclear activities, a state is conducting, Vipin with the eyes of a Chemist tried to gauge the stage of nuclear acquisition of each state. All in all, the term was introduced by him in order to comprehend the nuclear outlook of a state kept under the microscope. That is because nuclear power development is a complex issue of the 21st century. The nuclear matters span over cyber, physical and even social realms of the international system (Xinxin Yang, 2022).

2.2.1 DECIPHERING THE THEORY

According to Narang, the theory of nuclear optimization or the posture optimization theory describes the conditions that derive states to select the nuclear postures described by Narang. The theory also offers four sequenced variables for gauging the state's posture. Narang's theory also enlightens the observer to comprehend what type of escalation is the state going to invest itself into (Shaw D. B., 2014). The internal power dynamics of the state, the external power dynamics and the threat factors. In doing so, the theory also dwells into the domestic factors that come in hand while acquiring nuclear weapons. Hence, it can describe whether the internal political fabric of the state supports such an act of acquisition or if it doesn't. In his own words, Vipin offers the theory to explain the cause behind the existing regional powers' adoption of nuclear postures. Moreover, it explores the strategies that they have and attempts to generate testable predictions

about the type of nuclear posture that the future regional nuclear power may adopt based upon the available and observable variables (Narang, 2014).

2.2.2 POSTULATES OF NUCLEAR OPTIMIZATION THEORY

Hence, Nuclear power is becoming an important energy resource in many countries. In 2019, the capacity of nuclear power production reached 400 GW in 30 states of the world belonging to different regions. Nuclear resources have become the second largest low carbon electricity producers after hydropower. With acquiring such kind of capabilities, states are either increasingly close to becoming sustainable energy producers or dangerously close to obtaining the opportunity to acquiring nuclear weapons (Association, 2019). To determine whether these capacities mount to the extent of producing nuclear weapons, Vipin has introduced to his readers this theory so that they can identify his methods for closely analyzing the state behaviors and comprehending whether they stand close to the title of a nuclear power or not.

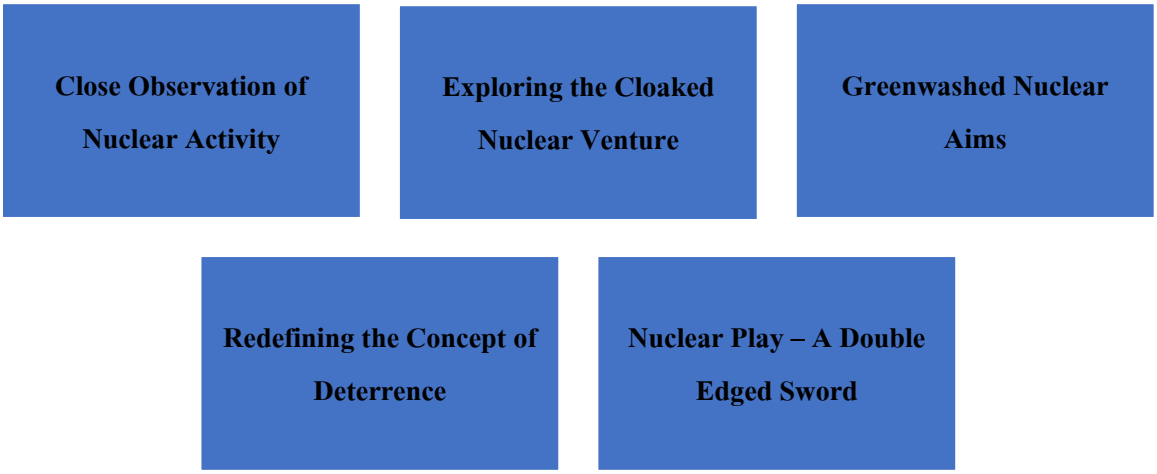


Figure 1: **Postulates Of Nuclear Optimization Theory - Author's Own**

2.3 CLOSE OBSERVATION OF NUCLEAR ACTIVITY

Hence, this is a close observation of the state's nuclear activity. What kind of nuclear reserves does it have at the moment? The kind of enrichment plants it has. What is the scale of enrichment that is taking place at the moment? Is the state hoarding some nuclear energy reserves? Does it have a blueprint for nuclear weapons? Though this information is not readily available, it is not always possible for a state to hide each and everything from the international system. If a state is purchasing uranium reserves from another state, it would have constituted a deal which the rest of

the world would be aware of. If it is building a nuclear reactor, there are chances that sooner or later it might be revealed. In this era of increased surveillance and google maps/images, everything leaves a signal or a trace which shows up in monitory devices. Moreover, the amount of espionage and covert operations that enemy states carry out on each other's land is an attempt to unveil the secret plans of the state. The crux of the argument is that in this increasingly realist setting of the world, where states are constantly trying to acquire their interests, a constant need to reveal each other's motive is a common practice. If a state is suspicious of its neighbors actions, it can bring the attention of the international community towards it. The hegemon then, which is USA in the current world order, is then most likely to pay attention to that state.

2.4 EXPLORING THE CLOAKED NUCLEAR VENTURE

Under the international non-proliferation treaties, states are bound to comply with the rules of nuclear resource acquisition and proliferation. At that point, the hegemon would use its position to speculate and even interrogate the state to reveal its capabilities. Hence, in this entire process, a few observations would become evident if not all of them. As the states are capable of hiding their nuclear facilities, the states would show just a smidge of their actual tangible labor which they are doing to purse clean nuclear energy needs. However, by observing the quantities of reserves and the capacities of reactors, the observers could decipher whether the state has the capability to create nuclear weapons or not. If it does, how long would it take to assemble it and questions like that. Narang states that because of the shortage of states that have acquired nuclear weapons and openly declared it, it can be tricky to perform this exercise with complete precision. However, this remains a plausible framework that predicts the future choices of nuclear power through the choices undertaken by existing regional powers.

2.5 GREENWASHED NUCLEAR AIMS

Right now, we live in a world where there is an ever-increasing threat of climate. Now, traditional security issues are not the only matter of debate. Hence, to counter these issues of energy security and the challenges posed by climate, states have begun to increase induce more and more nuclear programs. That way, they can rely on clean, safe and non-volatile nuclear atomic energy production to suit the demands of their people. These fossil energy resources are to increase the momentum of zero-carbon initiatives and lead to low carbon energy consumption (NEA, 2019). Hence, under the banner of sustainable energy transition, states are now diving into nuclear

reserves for providing low carbon and efficient energy resources for gaining a vital option that can meet the power demand and ensure energy security. However, at times it is just possible that a state can save some of these reserves in order to guarantee the security of its land and not just energy resources. That the states can use this initiative to coddle the international system into accepting a non-nuclear profile of the state. However, in reality it can have the blueprints of acquiring weapons of mass destruction due to the fear of attack from a neighbor in its region. That is what Vipin attempts to explore under his theory of Nuclear Optimization. The fact that nuclear optimization is not just the key to protecting carbon reserves but the sovereignty of the state for countering traditional security threat as well (Nian & Chou, 2014). The *example* of such state is Iran that is known for engineering a food security crisis due to lack of economic resources. The cover of economic resources was used by Iran to seek permission from the international community for exploring nuclear venues that could fulfill its fuel needs. That way the budget dedicated to fueling resources could be used to provide basic necessities concerning sustenance to people. The carbon fuels were to be replaced by clean nuclear energy.

2.6 REDEFINING THE CONCEPT OF DETERRENCE

One of the attempts of the theory remains that of dismissing or demolishing this common misconception that is etched with the acquisition of nuclear weapons. That assumption is that of deterrence (Shaw D. B., 2014). The mere acquisition of nuclear weapons isn't the only source of deterrence. The ability to maneuver that acquisition is too. Moreover, states can not only deter the world by actually acquiring nuclear weapons too but by hiding them from the world as well. That is because if one state is suspicious that its neighboring state has nuclear weapons, it might remain deterred. The state cannot embark on a mission to acquire its own weapons just on the basis of simple assumption. Moreover, it cannot risk the revelation of it by inviting an attack from the neighbor. Hence, the posture of the neighbor is such that the state remains deterred without the need for revelation. However, it can work in the opposite sense as well. At times, states due to a change in the regime interest or demarcation of new interests due to changing nature of international relations prioritize their security interest at the expense of every other. In that case, states even at the suspicion of nuclear weapon possession by a neighbor can embark on a nuclear journey of their own. That way the power competition of the region intensifies. That is how the posture of one state comes into play in determining the course of another.

2.7 NUCLEAR PLAY – A DOUBLE EDGED SWORD

Vipin's findings have revealed how nuclear play is a double-edged sword that depends upon the threat perceptions of the state. If it can create deterrence, it can lead to further proliferation and tightening competitions too making the states more and more aggressive. All factors considered, there is a need to explore further by taking into account the causes due to which states pursue nuclear proliferation. By closely considering these, one can identify the states which have the potential to become nuclear power. The states which are currently surrounded by similar factors, grounded in similar situations and present in an atmosphere of hostility which can prompt them to take such actions for fulfilling national security interests. These causes hence act as one of the measures that the theory aims to offer to its spectator for gauging the actions of the state and for determining the possible next move. In total there remains four causes that act as key forces behind serving as a motivation for the state to purse this expensive yet formidable venture.

2.8 CAUSES BEHIND NUCLEAR PROLIFERATION

The causes include the increased level of Duress, the point of weaponization, reliance on ambiguous capabilities and the factor of civil military relations. Each cause carries its own set of cohesive logical assertions which aid the reader in understanding the factors which act as a catalyst for states to make their nuclear choices.

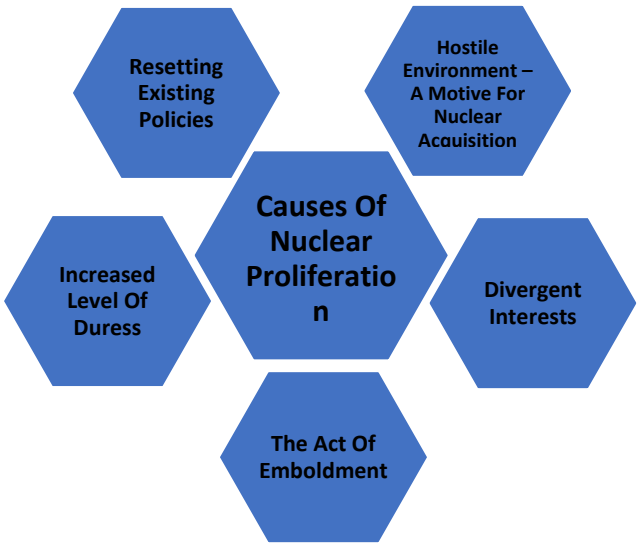


Figure 2: **Causes Behind Nuclear Proliferation - Author's Own**

2.8.1 INCREASED LEVEL OF DURESS

The first cause is stated as the increased level of Duress or the Proliferation under Duress. This principle revolves particularly around the idea of threats, violence or coercion in which the state, due to an external factor feels the pressure to pursue a policy of proliferation. Once under threat the state takes into account the possibility that the only way out to minimize the volatility of this threat is by the pursuit of nuclear proliferation or acquisition of nuclear weapons. For such states, the term of nuclear proliferators shall be utilized. As nuclear proliferation moves towards the point of weaponization, they eventually begin to face more pressure from the international community. The pressure is exerted in the form of threats of sanctions, military attacks and different measures that can ensure the accountability of the proliferator.

These pressures are something that the nuclear proliferator would not have faced before the pursuit of its weaponization goal. That leads to the ***phenomenon of reverse causality*** (Narang, 2016). That means that international pressure or criticism can at times agitate the proliferation and leading to a provoking effect which makes the state want to purse the act of proliferation even more. That happens because the state initially is under the enchantment that it has acceptability in the international system and is a crucial part of it. However, if it so much as hints a nuclear plan for the pursuit of its own security interests, for adding to its own deterrence capabilities, the regional and extra regional players come to negate it. That also includes the states which are one of the few who possess nuclear weapons and have created a monopoly in the international system which they aim to maintain by preventing any further proliferation. These hegemon states or those competing for hegemony have their own aims too. However, the not yet nuclear power sees it as an act of shunning by the international system which creates an environment of duress.

The actor chooses to respond with proliferation and embarks on acquiring his own weapon. Often times, the status quo powers utilize the ***approach of pre-emptive employment of conventional capabilities*** for the purpose of physically disabling or eliminating the nascent nuclear plans of the proliferator state. The motivations behind a nuclear proliferator to acquire weapons can be the pre-existing conflicts that it is facing. While the proliferator attempts to solve this conflict that it has in its region, its continues to face failures at the hands of adversary in a dialogue or even in limited scale confrontations. As it moves further from the option of conflict resolution, it moves closer to the option of nuclear solutions. However, as they begin to devise these plans of proliferation, the status quo powers intervene to curb these plans for achieving a long-term purpose. That long term

purpose is to not only prevent nuclear proliferation but also to settle the disputes that brought the states to the ledge of proliferation. Hence, the revelation of the intention of pursuit acts as a wake-up call for the existing powers. However, the state doesn't always give in, and the powers don't always intervene if the state handles the proliferation with extreme caution keeping its plan from detection. In that case, the proliferation goes in the order of no program, exploration, pursuit and acquisition (Sobek et al., 2012). That is what the first cause revolves around.

2.8.2 HOSTILE ENVIRONMENT – A MOTIVE FOR NUCLEAR ACQUISITION

The second cause is cohesive with the factor of Duress. That is why it is important for the reader to keep the factor of hostile environment in consideration while viewing the rest of the causes. The second cause in line is described as a state moving towards the point of weaponization. That is a stage which the proliferator reaches under a hostile environment to achieve its security interest. As it approaches the point of weaponization, the other states attempt to intervene and destroy its capabilities of nuclear proliferation. The status quo powers take into consideration the idea of attacking the nuclear infrastructure of non-nuclear states. That is because the attacking states are threatened by the nuclear potential of the to-be-attacked state. This threat of proliferation generates because of some key reasons. First, the state which is to be attacked in prior military conflicts puts forward the possibility that it might involve itself in another one and in some moment of agility, the state decides to use the acquired nuclear capabilities. Secondly, the presence of a highly autocratic proliferator which means that the attacking power fears that the already autocratic state might use its newly acquired power to disturb the current status quo of the international system for the fulfillment of its interest.

2.8.3 DIVEREGENT INTERESTS

The third factor is that of divergent foreign policy interests. This remains a simple one that revolves around the fact that the current power fears that a state that has contrasting foreign policy goals to its own might use it to challenge the powers interest in its own or even other regions and the international theater. In order to safeguard the international system from such clash of interests, the status quo power attempts to initiate an attack for preventing the other state from pursuing such nuclear goals. In this entire process, the status which plan to attack the proliferator may not fear the risk of retaliation. The attack is planned in the following order. No plan, consideration of attack and then an actual attack (Fuhrmann & Kreps, 2010). This is not always the case that the states decided to attack the proliferator. However, when they do reach upon this decision, the attack is

defined by different strategies. Either the state can plan to attack and diminish the materials, the facilities, commodities and infrastructure or anything that can delay the proliferation process of the state. In doing so, an environment of hostility is created. A threat is constituted for the proliferating state, and it is now exposed to an environment where its security and sovereignty is in danger. That instigates the state to pursue the acquisition and that is how the duress, or the threat prompts it to materialize its nuclear plans. The hostility and the threat hence prompt it to solidify its proliferation goals and develop its capability to defend itself against any attack.

2.8.4 THE ACT OF EMBOLDMENT

The next cause which is a result of the duress is that of reliance on ambiguous capabilities. This cause revolves around the reaction of the proliferator to the rising hostilities in the international environment against it. The reaction is the act of emboldment. The proliferator that anticipates acquiring nuclear weapons or has acquired it would become emboldened to retaliate to any opposition to its nuclear assets whilst relying upon its ambiguous capabilities. That remains one of the effect of acquiring nuclear weapons upon the foreign policy as it introduces changes to it and reinvigorates it for capturing a goal (Betts, 1987). Employment is observed in different forms of actions that are taken by the states to further their position in the international system. It refers to the conventional aggression that is displayed when weak or revisionist states acquire their nuclear power (Kapur, 2007). Though aggression is not the only manifestation or the cause behind nuclear proliferation, it is one of the leading factors. Moreover, another underlying cause in this particular case is that through proliferation, states acquire what they had previously lacked. They acquire a capability which provides them with a source of acknowledgment or helps them gain attention in the international system as an important player in it. By acquisition of nuclear weapons under a stressful environment, states aim to obtain what they previously couldn't, perhaps security from the hostile environment. Often times, states also undergo such measures to guarantee the foreign policy goals which they could not have previously. If a strong states does proliferate against the existing status quo power, it has the threat of retaliation. But what it also has is the aim of stationing those nuclear capabilities in other states to strengthen its position. That is how nuclear proliferation helps the state rely on its ambiguous capabilities through the feat of emboldment.

2.8.5 RESETING EXISTING POLICIES

Another motivation for the state under this particular cause is to reset some of the already existing theaters of conflict which carry its interest. For instance, a state is expecting retaliation from

another state if it acquires nuclear weapons which would further instigate hostilities between the two. To catalyze or facilitate that aggression states deliberately go for acquiring nuclear power and hence invite that very threat. That is based upon the goal to revise their current existing position. The purpose to invite aggression is to shift the odds in one's own favor and ensure the upper hand through the adoption of any such measures. That conflict could be that of a disputed territory which needs to be regained. The aftermath of aggressive engagement is something the proliferator states have already predicted and are what they plan to achieve.

The ***risk seeking behavior*** is often seen by some as an irrational move but if it entails a positive outcome, it could be a realistic goal with well calculated and times strategy that added to the interests of the state (Fair, 2014). In this case nuclear weapons do not reduce the cost of retaliation in comparison with conventional retaliation. The entire acquisition process, though materialized, is just a tactic that the proliferator is tailoring for its foreign policy goals against the enemy. Even if the nuclear weapon is used in place of conventional weapons, the cost of the war would not reduce at all (Bell, Nuclear Reactions: How Nuclear-Armed States Behave, 2021). In that case the range of aggressive behaviors is diversified, and new strategies are incorporated such as issuing new threats in ongoing dispute, or dedicating larger conventional forces, or belligerent rhetoric, or new military doctrine overall. Hence, the cause of proliferation remains that of altering the course of one's conflict (Bell, Beyond Emboldenment: How Acquiring Nuclear Weapons Can Change Foreign Policy, 2015). These were some of the cause behind a state's pursuit of nuclear proliferation.

2.9 STRATEGIES OF NUCLEAR PROLIFERATION

To comprehend the theory further, it is important to understand how states achieve their nuclear aims. For that Vipin has categorized the proliferation strategies into four types. These four strategies can help an individual observe the activities of the state and aid him to gauge the stage of proliferation at which the state is resting. The first strategy is that of hedging which is further divided into three types. The second one is that of sprinting followed by hiding and finally the strategy of sheltered pursuit. By observing this typology, the observer can understand how in this competitive international environment where states are constantly enforcing the principle of non-proliferation, proliferators achieve their aims.

HEDGING (In order of Precedence)	SPRINTING	HIDING	SHELTERED PURSUIT
❖ ***Technical*** Gathering technical equipment for creating a bomb ❖ ***Insurance*** Technical equipment + blueprint for putting together the bomb. ❖ ***Hard*** The edge of acquisition	❖ Active Pursuit of acquiring nuclear weapons ❖ Cloaking facilities ❖ Less intimidated by the external actors	❖ Slow Pursuit ❖ Secrecy over Speed Approach ❖ Intimidated by external actors.	❖ Pursuit of Nuclear capability ❖ Using cover of Patron to which the state is a client
Example: ❖ Japan	**Example**: ❖ USA ❖ Russia	**Example**: ❖ Iran	**Example**: ❖ Israel ❖ Pakistan

Table 1: **Strategies Of Nuclear Proliferation**

2.10 THE STRATEGY OF HEDGING

In this particular strategy the hedger is distinguished from other proliferators on the basis of its intention to develop a bomb rather than actually enacting the decision of acquiring weapons. The proliferator actually refrains from continuing to implement the plans but does not explicitly eliminate the option completely. That means a hedge can have all the pieces of the nuclear puzzle in case it needs to move towards weaponization in future. In order to do so, the hedgers devise a scheme in which the international community is obviously aware that the state has some capabilities, however the intention of these are for producing clean nuclear energy for fulfilling the needs of the state. Still, the hedge preserves a breakout option. The hedge remains standby in its aim to pursue any proliferation plans. There are chances that the state might never feel the need to exercise it. That does not mean it can't. The hedging states often include the ones which have civilian energy nuclear programs and remain in the position to uplift the proliferation capacities to

a scale where they will be equipped with weapons of mass destruction. These states possess uranium enrichment facilities which are reserved for later use as a source of defense (Potter & Mukhatzhanova, 2010). More importantly, it is crucial to understand that the art of hedging is not limited to states that have uranium capabilities only. The condition that pertains to design is not the possession of technology, but the act of choosing a strategy through which the state can hedge on a nuclear program (Fuhrmann & Tkach, 2015). The strategy is hence a choice not a privilege to remain prepared in an unpredictable and volatile international system. Moreover, it is political in nature rather than technological and is not to be confused with the idea of latency. The states wants to reserve the political choice of reserving its ability to protect its interest. For clarifying this strategy further, it is important to address the three methods of hedging the state can carry out. The reason why Vipin considered addressing this particular strategy in detail is to broaden the lens of observer. The purpose of imparting this knowledge is to clarify that there is no one way for a state to pursue hedging.

2.10.1 TECHNICAL HEDGING

The first type of hedging is that of technical hedging which is marked as being technological in its nature. The states which choose to be technical hedgers call for materialistically approaching their strategy. These states put the piece of tech in one place which enables them to establish a repository of not yet assembled bomb. They design their military program whose application is to be absorbed later in future when the need arises. Through this time, the states hedges its development under the title of civilian energy program and infrastructure. To get in further detail, the technical heading is identified by the spotting the existence of fissile material production which obviously aren't weapons grade. No work takes places in terms of weaponizing the available resources or conducting the research on explosives or nuclear delivery systems or plans to manage the routines of the nuclear program. If this type of hedging is to be summed up in one phrase, it could be that of a state's choice to explicitly not go for acquiring nuclear weapons right now, but implicitly it doesn't mean that the state will never acquire it. The reason why this approach is adopted is because states give themselves the margin of temptation. That means that once the state acquire nuclear tech, it can be allowed to explore the possibility of a nuclear weapon. This is often known or termed as the dual use dilemma in which the states call for using the nuclear reactor that they use for producing not just electricity but weapons too (Fuhrmann, 2012). Often times, states which are under duress and have such nuclear energy programs running on the side see this as an

attractive option. Though the probability of such an instance remains weak and often controlled by the infringing influences within a state such as that of political commitments, military priorities or energy needs, it is never non-existent. Technical hedging remains a concept close to pure latency in which there is not an absolute absence of intent to nuclearize and put together a weapon. Latency is defined as the condition when a state possesses some or all ingredients of a nuclear weapons however it does not have full operational weaponization. In technological hedging there is also the presence of technological capabilities, however the difference is gauged when the matter of political intent comes under consideration. In latency, the question of political intention or even the room for forming one is not present, but it is in hedging (Reiss, 1995).

2.10.2 INSURANCE HEDGING

The second type of hedging is referred to as insurance hedging. The idea of insurance hedging revolves around moving a mile extra than technological hedging. Here the key is to put together more pieces of the nuclear puzzle in order to move closer to the purpose. That way the state can reduce the time its required to build a bomb in case the need for mobilization arises in times of threat. Hence, the state has moved one step a notch in its preparedness. For instance, the state knows that there is a security threat that surrounds it, so it pursue insurance hedging. As that threat intensifies the hedger might be abandoned by its ally with no source of deterring the enemy. In that case, the insurance hedging is put to work by explicitly threatening a breakout under some highlighted conditions. Hence, the state has insurance against an attack. The indicators of insurance hedging the accumulation of theoretical work or research upon nuclear weapons and explosions. Or the movement of the state towards the control of the fuel cycle of the energy program or exploring the avenues of weapons grade fissile materials and dual use delivery vehicles. Though there is no physical work on weaponization, the backdrop for such activity is set and ready to be activated.

Hence, it is the state policy of not pursuing nuclear proliferation explicitly right now but doing so if the red line is crossed. The insurance hedging hence lay the foundation for nuclear proliferation and speedily development in case the security deteriorates. Moreover, it can be used to bargain and leverage an ally to commit to protecting its sovereignty in case it is under attack. That means that the powers of the status quo are given an ultimatum that the threatened state shall proliferate if the requested ally doesn't come to its help. Keeping in view of the status quo, the international powers are prone to offering assistance as it opposes the possession of nuclear weapons by any

state other than itself. The currently existing power in the status quo, the United States has gone to considerable lengths in order to prevent the spread of a weapon that it created itself (Lowenhaupt, 1969). There have been attempts to halt, slow down and even reverse the nuclear age by the expulsion of treaties such as Non-Proliferation Treaty which obviously haven't been all successful. That is because states pursued insurance hedging and the United States failed to come to its help as ally due to lack of interest in interference or alliances with the threatened state's enemy. The consequences were the pursuit of nuclear programs and successful nuclear tests by these states. Hence this inhibition strategy of great powers is something the insurance hedgers use to benefit itself (Gavin, 2015).

The ***example*** of Insurance is taken by considering the case of Japan which enjoys extended deterrence from United States and claims to possess no nuclear weapons of its own. The USA holds Japan as one of its close allies whose security interests is a subject of importance to the great power giving it influence in East Asian region.

2.10.3 HARD HEDGING

The third form of hedging which is more volatile than the ones preceding it is hard hedging. This third category is defined as the one in which a state initiates the attempt to become a threshold nuclear state. The state usually has many pieces of the nuclear puzzle in place for putting together a functional nuclear weapons program. That could be due to the threat that the state is experiencing around it. One can say that the security dilemmas of the hard hedge have escalated to a level where the state deems it necessary for its protection to have its nuclear ingredients ready to go and is one step away from putting them together. The hard hedgers hence have what can be known as turnkey nuclear weapons standing on the edge of acquisition but resisting moving over the brink. The level of acquisition can be defined by the number of materials that the state has acquired which can include a blueprint or a theoretical work on the explosive devices, the ability to produce weapons-grade material with fissile potency, designs of the weapon, a complete delivery system, and even the necessary bureaucratic backing required in order to manage the launch of such capability. Hence the position of a hedger state is to follow the strategy that calls it to explicitly not follow carry out proliferation in the present.

However, it also ensures firmly holds ***the position*** explicitly that never acquiring a nuclear weapon won't be the case. The strategy of hard hedging hence brings the question of nuclear weapons into

the list of goals of the state that probably has a condition etched to it such as the red line of the state. For instance, it marks the neighbor penetration of a certain border as its red line. The moment the neighbor state crosses that red line, the state goes on to assemble its nuclear arsenal. That means the state constructs a mainstream political debate that is dedicated to discussing its nuclear priorities. The executive heads of the state, the chief of army staff, the intelligence bureau head, the cabinet and even the bureaucratic circles are too involved in this debate. That is because the focus of the hard hedger lies in his preparedness. As a state on a brink, it ensures keen and thorough examination of all the logistics, the discussion of all the hurdles that might come in while implementing the plan to acquire weapons and then the solutions to tackle them too. The hard hedge ensures that the only opposition standing to it is the enemy and his behavior itself. As long as peace persists, the hedger keeps its nuclear ingredients in the closet. However, as soon as the insecurity breaches a certain level, the hedger officiates the status. There are other characteristics to hard hedging as well that can appear to be noticeable to an observer such as emphasis on military power, sovereignty and autonomy.

Hence, it's the constant ***exertion of the fragility*** of its sovereignty that remains under threat due to the actions of another state (Holslag, 2016). This stage of political exploration of the idea of heading remains extremely significant. That is a stage where the state can come to the decision to not pursue nuclear weapons proliferation at all. The hard hedging phase is hence a double-edged sword where things could go either in the favor of the hard pursuit of nuclear weapons or complete disarmament. An example to quote in this case is that of Sweden where the decision makers came to the conclusion that nuclear weapons are not in their interest. (Jonter, 2016)

The ***example*** of hedging can be taken from the state of Japan that has nuclear resources which it is claiming to use for peaceful purposes of producing energy to fulfill the needs of the state and its populace. However, a careful evaluation of Japan's nuclear practices might reveal its goal of pursuing nuclear weaponization which is to be observed in this study.

These three types of hedging are what the state can carry out before actually acquiring a nuclear weapon and admitting to their actions for gaining recognition as a nuclear state in a world where the nuclear powers are constantly pressing to prevent any further proliferation. Though there is a fine line between all three types, it is an important way to identify which phase of proliferation a state can be for an observer.

2.11 SPRINTING

The next strategy for proliferation revolves around the concept of sprinting that remains the first active strategy of acquiring weapons by a state. When a state attempts to adopt the strategy of sprinting, the main aim is to seek out the plan to acquire nuclear weapons as quickly as possible. Here, the state is not too concerned with external powers. That is because the state has decided that one of the goals regarding its securitization that it needs to pursue is that of nuclear proliferation. Moreover, it is clear in its intention of acquisition which is why it is somewhat aware of what the response of external actors is going to be. Secondly, the state has the necessary capabilities to put together such as weapons granting it a sense of self-reliance. At this point, the state attempts to mask its facilities, the location of proliferative activities, the blueprints, the labs, the production units etc. However, the constant reinforcement of its military might, and capabilities is not hidden from the world. Usually, the state remains assertive in this strategy of proliferation. The state remains free to conduct the processes of nuclear enrichment or the reprocessing of its plutonium reserves. Moreover, it expressly states proliferation as one that is motivated by military purposes. There is the building of the transportation plans for delivering the nuclear materials, the organizational routines for the labs, the necessary security arrangements for camouflaging the sites and for the management of the weapons that are in the developmental stage. At times, the state timelines of acquiring a nuclear bomb are different than what was initially expected (Hymans J. E., 2012).

That could lead to ***miscalculation*** on the part of external actor that is observing the nuclear advances of the state. Though, sprinting as a strategy that is likely to lead towards the stage of nuclear weapon acquisition it is important thing to iterate here is that the process for implementing this strategy is not the same for every state when it comes to the period of nuclear progress. Usually, the first sign here is the act of nuclear tests in some chunk of land with little to no population (Hymans J. E., 2010). The failure or success of the test is not the debate. The test itself is enough to identify the fact that the state aims to differentiate itself from non-nuclear states to a nuclear state. in the post 1970 era, most of the states pursuing the goal of developing nuclear weapons have dedicated years to working on their nuclear reactors before heading for the actual acquisition of their bombs (IAEA, 2009-2022). To conclude, the state devotes itself to the cause handling the threat of any prevention action by the external force and each state has its own journey comprising of different phases of nuclear development.

Example – The United States of America is one that qualifies for the act of sprinting. The American Nuclear pursuit can be traced to the inter war period where the Jewish scientists who had discovered the chemical engineering that goes into creating a nuclear weapon. Rather than giving it to Germany, the scientists decided to share it with the US, a power that came to aid the European Nations in WW1 and one that had little fear of outside threats due to its geographical seclusion from the rest of the world. Despite the lack of fear, the US managed to maintain the secrecy of its nuclear aims not because it feared attack. It did so because it feared that the valuable nuclear assets might get into the hands of Germans which would eventually prevent it from becoming a formidable rising power.

2.12 HIDING

Another strategy of proliferation is that of hiding. To define, the state that becomes a hider aims to acquire nuclear weapons. The hider pursues the secrecy over speed approach in which it carefully carries out a very slow yet steady process of putting togethers its weapons. The main reason behind that is that the hider fears an adverse reaction from the states propelling a narrative against nuclear proliferation (Richelson, 2006). Any kind of prevention or coercion from the opposing parties is feared by the hider. One of the ideal solutions to introducing one's weapon is via fait accompli (Vipin, 2013). That is when the weapons have been acquired and the state puts the international system in such a place where it can no longer prevent its creation as has already taken place. The maximum reaction that could be predicted might be an act of condemnation but no shutting down of operations during the nuclear journey of state. Once fait accompli is applied the international community shouldn't be left with any choice but to accept the weapons which prevents the act of rejecting the idea all together. Any revelation can lead to a diplomatic or military reaction, which has been the case for the most part. The strategy of hiding is not deemed to be a successful one as hiders have often got caught. All thanks to the modern intelligence apparatus designed to detect nuclear activity, states can no longer hide a nuclear activity all together from the radar of such tech.

The ***United States of America*** in particular is known to be active in its ***aim to monitor all its foes*** and its friends who have any nuclear goals. The International Atomic Energy Agency was designed specially by the USA for this purpose. Moreover, the USA even convinced states such as Russia, China, and India to use this channel and pressurize Iran to stop its nuclear weapons program. One

could saw that Iran, as a hider state was caught due to the technological apparatus possessed by the Great Power. That is how a hiding proliferation strategy takes places and its failure leads to diplomatic, if not military, pressure from the hegemon of the system who views any such nuclear development as a challenge (Fayazmanesh, 2008).

The ***example*** of hiding is taken from the state of Iran which tried to pursue nuclear aims in an international order that already remained suspicious of its aim. Because of its reputation as a country that was prone to have revolutions that led to dictatorial regimes, the hegemon USA always had its eyes on Iran. Despite attempting to maintain secrecy at all costs, Iran's nuclear plans were revealed leading to Joint Comprehensive Plan of Action, an action taken by the powers of the world to keep check on any and every nuclear activity that Iran carries out.

2.13 SHELTERED PURSUIT

The last category that Vipin cared to mention in the theory was that of Sheltered Pursuit. This strategy of proliferation is one that revolves around the idea of taking advantage of a major power's favoring attitude towards country. And using that attitude in order to pursue the development of nuclear weapons. Sheltered pursued is hence an opportunistic approach of a state to use a major power for the fulfillment of one's own nuclear goals and capability enhancement. According to Vipin, this strategy is not something that is pursued in a formal alliance inter-state relationship. Rather the possibility of this strategy's enforcement is more probable in a client-patron relationship. That is because the superpower then becomes complicit or tolerant of the process of acquisition by the client state as it can be used later to deter the states challenging the superpower. Another important (Gavin, 2015).

The thing to establish here is that the sheltered pursuit can be carried out by ***taking advantage of major powers*** as well. Though the patron never directly permits the pursuit of such nuclear aims. For instance, the United States of America would never allow any client state to pursue nuclear program. However, the client state pursues the aim in a secret manner while the umbrella of protection from external threat is still on its head. Hence, the state must acquire the weapons before the patron disposes of the client-patron relationship abandoning it. The strategy can prove too successful as it has been pursued by the state of Israel and Pakistan both of whom had the common patron of United States. Both of these states fulfilled their goals and protected their sites saying it was an economic operation that included non-military operations such as textile industries or farms

etc. (Cohen & Burr, 2015). The benefit of the approach is that the pursuer can call upon the patron for protection like Israel has to USA. A much more prominent example of it was that of Pakistan that used the timeframe of Russo-Afghan War in 1970's and 1980's to use the umbrella of US protection and carry out its nuclear aims (Shultz, 2007). Due to that sort of protection, the state achieves an insulation from neighboring threat which was India in case of Pakistan and the Arab states in case of Israel. However, if the patron finds the client no longer useful, it can call for eliminating its program too. Lastly, the sheltered pursuit can be carried out by a hider who became designs became exposed. However, unlike this approach, the hider has to begin to look for major power willing to protect its nuclear capabilities.

The ***example*** of Sheltered Pursuit is that of Israel and Pakistan who acted as a client to their patron USA in Middle East and South Asia respectively. These states used the cold war period to carry out their nuclear arms and use the umbrella of a superpower to shield themselves from external threats and opposition. Moreover, the reason why their patron remained if not supportive then blind to these aims was because of the role that the respective states played in the Arab-Israel Crisis and the Afghan War aiding USA in defeating USSR at these proxy fronts.

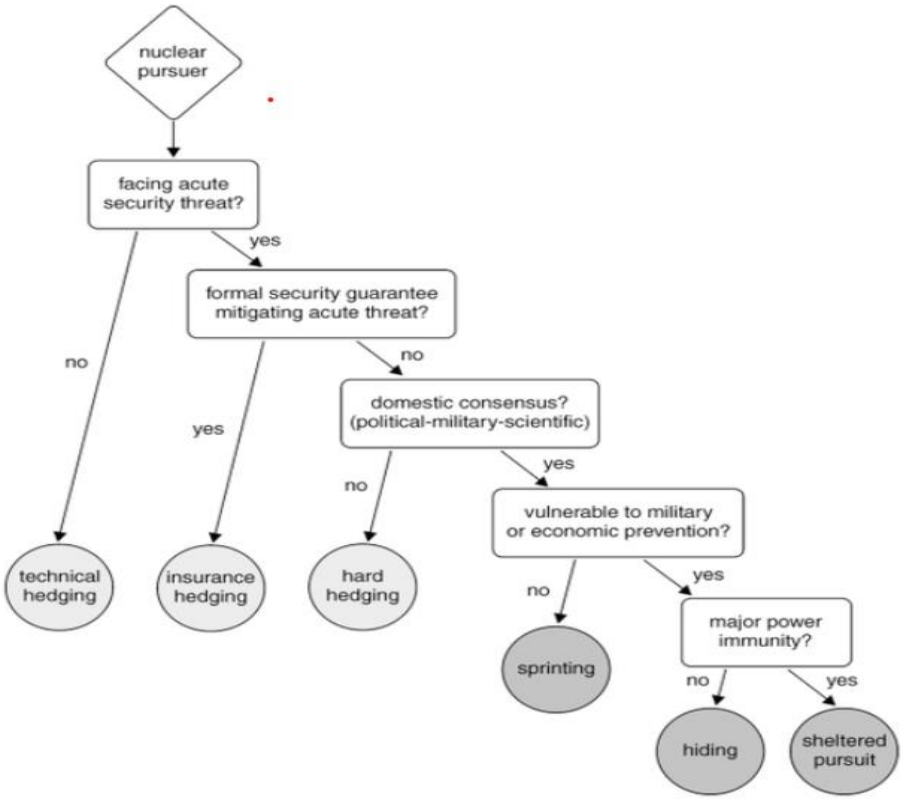


Figure 3: **Typology of Nuclear States – Extracted from Vipin Narang's Nuclear Strategy In The Modern Era: Regional Powers And International**

2.14 LIMITS OF GENERALIZATIONS

Though Vipin in his theory has attempted to explain a plethora of reasons of how one can observe the nuclear future of state from its existing posture, there are still some gaps that are present in the theory which include:

2.14.1 THE ROLE OF LEADER

The first gap is that of the perceptions of the state and the existing policy makers. Throughout the theory, Narang's approach seems to have an observatory nature to it. There are fine lines between the different types of posture that he explains. If one posture is that of the state acquiring the necessary materials for putting together a weapon, the next stage is about having all the nuclear elements in one place which can be put together in a calculated amount of time. Hence, he divides the posture into different stages of nuclear acquisition in which the state has one or two or all the ingredients of its nuclear designs.

However, in all of these stages he does not mention how the ***policy maker*** is having an impact on the process of nuclear acquisition. For instance, if a state is facing a current threat for which it has devised the policy of adopting a hedging strategy, he does not discuss how the policy maker contributes to making that choice. The researcher can take into account the role of the leader here and how his operational codes contribute to it. As we know, every leader has a different approach for resolving international issues. Every leader reacts differently to each situation, even within a country. If a state is under a military ruler, the leader is expected to make different decisions than the one who was elected as a democratic leader by the people. The military leader might call for pursuing an active nuclear proliferation strategy such as that of sprinting. However, a democratic leader might call for a sheltered pursuit or a type of hedging. Hence, the choices become different depending upon the way the leader perceives a certain situation. There are political constraints that every leader faces. For instance, while the military leader makes decisions with full autonym over the policy makers, the democratic leader might face pressures from the Parliament or his cabinet. That is why it is important to take into consideration the political hindrances that prevented a state from adopting an active posture and even the political ease that led a state to purse active nuclear posture.

2.14.2 NEED FOR SUBJECTIVE INSIGHT

Another gap observed here is the lack of subjective insight in the theory. The nature of the theory is one based upon calculated observations. However, in doing so it misses the subjective nature of

rationality. Overall, the theory has an objective outline to it which is why it tends to ignore the role of leader in choosing a nuclear posture. However, there is a need to acknowledge that nuclear strategies are rational choices of leader or group of individuals making the policies of state. Moreover, rationality remains a subjective idea that cannot be fitted in one box. The theory must take into account an explanation of the subjective realities of the state as well. These realities can include public opinion, the position of parliament, the leader and other subjective realities. Moreover, it could also dwell into the pressures that external actors put on the state under study. Though Narang repeatedly talks about external pressures and opposition, he does not explore further what kind of pressure, opposition, and resentment the neighboring states will have after the nuclear reality surfaces. He does go into depth about what is the take of neighboring state on the matter and how the state with the nuclear aim is perceiving it. That is there is a need for subjective insight which can add to the theory's qualitative strength.

2.15 CASE STUDY OF JAPAN

In consideration of these contexts, the state of Japan remains an interesting study as it has been a victim of a nuclear power that is the United States of America. For a state like Japan, where the public has a strict opinion against the acquisition of nuclear weapons, the state might never become a nuclear power. However, with the rise of nuclear powers in its neighborhood and actors that Japan perceives as volatile such as China and its client North Korea, could the state be pursuing insurance hedging. Hence, it is important to take into account both the objective and the subjective realities of the state and study it further to explore its nuclear posture.

CHAPTER 3

GEO-STRATEGIC LANDSCAPE OF EAST ASIA

With North Korea and China's nuclear arsenals steadily growing and improving over the last decade, the nuclear dilemma for East Asian countries is more pressing than ever, especially given the United States' loss of credibility in extended deterrence over the same time period. The acquisition of an independent nuclear deterrent has long been a source of contention, with supporters and opponents on parallel sides of the debate. However, there is a grey zone between 0 and 1 in terms of the latency of nuclear deterrence.

There are various signals that the security situation in East Asia is deteriorating, with regional states flexing their defensive and offensive might. In 2022, North Korea launched more than 90 ballistic and other missiles, than in any other year, while they began the year 2023 with a new launch. China has continued its military expansion over the past years, creating new nuclear missile silo fields and increasing its nuclear capabilities to project power at sea.

While the United States and its allies are upgrading their postures in response. Australia, along with the United States and the United Kingdom, is pursuing nuclear-powered attack submarines and other advanced military capabilities to challenge China's expanding military dominance. It is not difficult to find parallels between North Korea and China and other nations that possess nuclear weapons. However, the East Asian nuclear issue is more complex than the activities of a single nation. In reality, the majority of unfinished business is with democratic states, most notably South Korea and Japan, who continue to face pressure from regional adversaries.

There are a number of factors at play here, but one, in particular, stands out. Simply put, nuclear weapons beget nuclear weapons. While China's nuclear arsenal poses a serious danger to regional security, its overwhelming conventional might moderates the impact of its nuclear arsenal. On the other hand, North Korea's nuclear arsenal is a major psychological and geopolitical concern for its East Asian neighbors. When asked whether they support nuclear development, a plurality or majority of South Koreans have regularly answered in the affirmative in polls (Rapaport, 2021). With this support, a political party will eventually utilize the nuclear issue to gain power and actually do what it says it would do. The rising frequency with which North Korean missiles fly over Japan may inspire a similar call for a nuclear deterrent there.

Strategic instability is most at risk from the counterforce dilemma, in which conventional weapons from the United States, China, and East Asian regional powers become entangled with or used against the nuclear forces of another state, either on purpose or by mistake. As a result, efforts have been made to strengthen the region's capacity for a second strike (Schreer, 2015). Throughout the region's many flashpoints, these conventional assets form the backbone of conventional warfare and deterrent operations. As a result, obtaining and sustaining these increasingly effective conventional capabilities is warranted for both tactical and strategic reasons. Moreover, the extensive cross-regional military development and deployment of an increasing number of long-range, hyper-accurate precision capabilities coupled with more accurate and resilient intelligence, surveillance, and reconnaissance systems in order to deny or control the operational area at sea threaten to offset some of the stabilizing effects imposed by the maritime environment.

Figure 4: **Map of East Asia – By saylordotorg.github**

There are a number of distinct security flashpoints in the region's maritime dynamic that could lead to direct conflict between regional powers. The two most prominent are the Korean Peninsula and Taiwan. China and the United States have developed operational concepts that would have a

significant impact on the ability to use the sea but could also include deep strikes into Chinese territory by the United States and strikes on US military facilities in the region, primarily in its allied states, by China (Beckley, 2015).

3.1 NUCLEAR ENERGY POLICIES

To ensure they have enough energy, Japan and South Korea have both devoted close attention to the development of nuclear power since the 1970s. These two nations used 25% and 36% of nuclear energy, respectively, prior to the Fukushima nuclear tragedy. Since the 1990s, China has given increasing attention to nuclear energy, which is a well-developed, carbon-free source of energy. Alongside other emerging energy sources, it is viewed as a complement to fossil fuels.

Even if there have been some short-term benefits, it is unlikely that East Asian countries would change their nuclear power usage in a big way. This is because nuclear energy has significant 'sunk costs' and is already included in their country's energy plans. Numerous protests, votes, and petition campaigns against nuclear power have taken place after the 2011 catastrophe at the Japanese nuclear facility Fukushima. The enormous demographic, resource, and environmental concerns facing the world, however, have not been resolved by the nuclear disaster. Politics have caused China, South Korea, and Japan to all accept new nuclear safety laws, but they haven't been able to overthrow the nuclear lobby and change how their individual countries use nuclear energy. Only Taiwan has succeeded in remaining nuclear-free.

The Chinese State Council made four policy decisions in response to the nuclear accident in Fukushima: immediate safety reviews of all nuclear facilities; strengthening the safety management of operational facilities; thorough reviews of nuclear facilities under construction; and delaying approval of new projects until new nuclear safety plans are published. They decided to restart the nuclear power program in 2012 using a safe and efficient way (Zhongmao, 2018).

The South Korean nuclear energy program does not appear to have been significantly affected by the Fukushima nuclear disaster. The long-term nuclear energy development strategy that South Korea adopted in December 2008 is still being followed. Japan had to make major adjustments as a result of the nuclear disaster, which caused tremendous damage. The Japanese government decided to promote energy conservation and renewable energy to the maximum degree possible in order to reduce its reliance on nuclear power. The Basic Electricity Plan, which the Japanese

government enacted in 2014, recognized nuclear energy as a significant source of base-load electricity.

Japan is the only nuclear-free nation in the world to whom the US has given permission to start a reprocessing program. On the other hand, South Korea is required to develop a dry reprocessing technology because it has been denied permission to purchase the aqueous reprocessing system. Despite the fact that Japan's recovered plutonium stockpile does not pose a serious risk to the spread of nuclear weapons, it continues to be a focal point for criticism of Japan's standing as a leading proponent of nonproliferation on a global scale. Furthermore, Japan's persistent quest for a closed fuel cycle may set a bad example for those non-nuclear-armed governments who want to engage in reprocessing. For example, South Korea persistently lobbies the US to change their nuclear cooperation agreement so that South Korea can use pyro processing to separate plutonium. Important decisions on their nuclear fuel cycles will soon need to be made by Japan and South Korea. These choices might have a significant impact on regional, global, and international nuclear security (Radzinsky, 2018).

3.2 NUCLEAR POSTURES OF REGIONAL STATES

COUNTRY	NUCLEAR POSTURE	GOAL	MANAGEMENT	LEVEL OF TRANSPARENCY	CAPABILITY
China	Assured Retaliation	Deter Nuclear use and coercion	Assertive Civilian control	Unambiguous capability and ambiguous deployment	Survivable Second Strike capability
North Korea	Asymmetric Escalation	Deter Conventional Conflict and Nuclear use	Delegative (Assets and authority integrated into military forces and doctrine)	Unambiguous capability and deployment	Pre-emptive First Use capability
South Korea	Catalytic	Third-Party Compellence	Recessed and opaque	Ambiguous capability and deployment	Ability to assemble a handful of nuclear weapons
Taiwan	Catalytic	Third-Party Compellence	Recessed and opaque	Ambiguous capability and deployment	Ability to assemble a handful of conventional weapons

Table 2: Characteristics of East Asian States' Nuclear Postures

3.2.1 CHINA

During the Cold War, nuclear diplomacy was employed as a threat, which China had to cope with. During the Korean War (early and late), as well as subsequent crises involving the Taiwan Strait islands, the United States and the Soviet Union threatened China with nuclear war in the 1950s. China's ability to compete with the then-superpowers is restricted. China's nuclear arsenal has always been designed to thwart such threats in the future. Because of this, the ‘no first use’ policy has historically been at the heart of China's nuclear diplomacy. However, China now finds it increasingly challenging to sustain its nuclear second-strike capabilities due to changes in global technology and security.

Despite American efforts to attain strategic preeminence, China feels that maintaining assured retaliation is both possible and desired. China has continued to modernize and progressively build up its nuclear arsenal while maintaining its no first use policy. Despite American efforts to attain

strategic preeminence, China feels that maintaining assured retaliation is both possible and desired. China has continued to modernize and progressively build up its nuclear arsenal while maintaining its no first use policy. Instead, China will increase the number of missiles and warheads that can reach the mainland United States, maintain its assured retaliation doctrine. As in case of any American offense retaliation will be more likely as a result. China's no first use policy raises questions about its effectiveness, especially if the United States uses conventional weapons to attack Chinese nuclear weapons or the infrastructure that supports them (Fravel, 2015).

3.2.1.1 MAINTAINING THE ASSUREDNESS

Since its first nuclear test in 1964, China has adhered to a no first use policy and a self-defensive nuclear strategy that stipulates it will only use nuclear weapons in counterattack in self-defense. Analysts in the West have properly noted that a first-time pledge not to deploy nuclear weapons may not be trustworthy. Even if the promise is sincere, the situation may deteriorate swiftly during a crisis. Under addition, a limited number of Chinese specialists have stated that what China deems a counterattack may not be evident in particular, constrained conditions, such as when conventional strikes are used to prevent the operation of China's nuclear weapons (Brown, 2021).

Despite Western skepticism, Chinese strategists still believe the promise to be valid. China's nuclear strategy is founded on a no-first-use stance, which continues to be the government's official position. In authoritative publications on Chinese military philosophy, three primary objectives for China's nuclear forces are identified.

- During times of peace, they attempt to *deter* adversaries from initiating a nuclear war with China.
- They *restrict the scope* of war during hostilities, preventing a conventional fight from expanding into a nuclear exchange.
- If a conflict escalates to nuclear warfare, they will be used to execute nuclear *counterattacks*.

The only anticipated use of nuclear weapons described in the documents is the nuclear retaliation operation in reaction to a nuclear assault (Brown, 2021).

In addition, China's interest in a strategic early warning system has lately intensified. China wants its nuclear missiles to be ready to strike as soon as it senses an attack so that its nuclear retaliation

is effective. China is concerned that other nations may conduct an unexpected nuclear first strike. This defensive position is also known as **Launch under Attack (LUA)** or **Launch on Warning (LOW)**. In a 2015 defense white paper, China committed for the first time to "improve strategic early warning" for its nuclear weapons. This pledge was reaffirmed in its 2019 defense white paper.

However, even if the No First Use (NFU) policy were to stay unchanged, China's nuclear operations would alter drastically if it adopted a LOW posture rather than a posture of delayed retaliation. Even if China only prepares its nuclear missiles for LOW during a crisis, the window of opportunity for Chinese officials to decide on nuclear retaliation would be extremely constrained and hence plagued with severe risks. The LOW posture compromises the decision-making capacity to determine the proper course of action for retaliation based on the unique security environment and battlefield conditions. Instead, it puts nuclear retaliation one step closer to being an almost immediate process. Therefore, the probability of an unintended or accidental nuclear escalation increases (Zhao, 2020).

China is more concerned in making sure that it has a dependable capability for retaliation in the event of U.S. attacks than it is in trying to match or surpass the U.S. nuclear arsenal. A more mobile and redundant force that can withstand American counterforce capabilities, such as conventional systems like the Conventional Prompt Global Strike system, and whose missiles can penetrate American missile defense systems is what China's nuclear expansion and modernization are aimed at creating, according to research. Although there is some justifiable suspicion against the notion that China will multiply its nuclear arsenal, it does not seem to be impossible. With the recent deployment of the DF-5C and DF-41 as well as the 2015 deployment of the DF-5B, China is fielding an increasing number of multiple independently targetable reentry vehicle weapons that improve the ability of its intercontinental ballistic missile (ICBM) arsenal to breach the American missile defense system.

It's important to note that not all of China's nuclear arsenal consists of intercontinental missiles that may attack locations within the United States' continental territory. China has made purchases of nuclear weapons that especially endanger the neighborhood. Along with freshly deployed midrange and intermediate-range ballistic missiles like the DF-21E and the DF-26, it now has new air capabilities that put regional enemies and American overseas facilities at danger. The DF-17,

a new hypersonic glide vehicle that China just deployed and may be nuclear capabilities. Importantly, Beijing is free to direct its developing nuclear capabilities toward a more aggressive posture in the future even while Beijing's nuclear buildup may be focused on a policy of guaranteed retribution. China's operational philosophy may change as its capabilities evolve (Brown, 2021).

3.2.2 NORTH KOREA

Although North Korea has consistently maintained a robust military posture, its force composition and relative strengths and weaknesses have evolved over time. The development of North Korea's nuclear and missile capabilities has garnered the greatest attention since Kim Jong Un assumed power in December 2011.

North Korea pursues nuclear weapons in order to increase regime security in the homeland. Large benefits that nuclear weapons provide to Pyongyang's leadership include the increase in the military's support by justifying high military spending, the strengthening of the regime's internal cohesion against international pressures (such as economic sanctions), the heightening of the regime's legitimacy by boosting the pride and prestige of North Korean citizens, the increase in Pyongyang's bargaining power for nuclear extortions, and the consolidation of a belligerent leader (Min-hyung, 2020).

In Pyongyang's national security strategy, the North Korean nuclear program may generally serve four functions. It serves as a diplomatic bargaining chip, a catalyst, a means to assure retaliation, or a weapon of war. First, North Korea may use its nuclear program as a diplomatic bargaining chip. If this were the case, Pyongyang would pursue nuclear weapons not out of a desire to use them, but in order to obtain concessions from an ally or an adversary. Second, North Korea may assume that possessing nuclear weapons will intensify a conflict and garner support from a foreign power. To increase China's diplomatic and military backing for Pyongyang during periods of peace, Pyongyang may seek very crude nuclear weapons. Alternately, should a future crisis erupt, China or potentially Russia may act on behalf of Pyongyang—either politically or militarily—to avert a nuclear exchange. Thirdly, North Korea might create a nuclear posture tailored to guarantee retaliation, thereby discouraging other states from coercing it with nuclear weapons or seeking regime change. Pyongyang might pursue a relatively modest nuclear force capable of surviving a first strike and delivering a major counterattack against enemy population centers to satisfy the objectives of minimum deterrence (Warden, 2017).

Lastly, North Korea may potentially work toward developing nuclear weapons that can hit specific military targets in conflict. The use of nuclear weapons in armed conflict may support a range of potential nuclear employment tactics. Warfighting nuclear capabilities may, for example, take the place of conventional troops in a tactical battlefield role, sending a message to adversaries that North Korea is prepared to deploy nuclear weapons frequently and early to defeat conventional forces from the United States and South Korea (Narang, 2015).

3.2.2.1 THE POSTURE

We keep tabs on how North Korea's nuclear posture changes as its nuclear capabilities advance. As in 2014, Vipin Narang described North Korea's pursuit of nuclear weapons under the Catalytic Posture, which permitted a sheltered pursuit to construct the plutonium pathway for nuclear weapons, originally supplied by the Soviet Union and afterwards by China. Vipin also predicted that the catalytic approach would be more resilient if China is ready to take part in any crisis involving North Korea in order to protect the strategic stability of the region. However, if this patron-client relationship breaks down, North Korea will take an overt and open asymmetric escalation attitude that involves very risky nuclear rollbacks and barriers to North Korea obtaining nuclear weapons (Vipin, 2015).

Whereas the Alexandre Debs and Nuno Monteiro stated that states like North Korea that does not have a reliable ally are more likely to acquire an aggressive posture to deter its enemy by an increased pursuit of nuclear weapon with a doubtful nuclear strategy and thus creating a fog of war (N. Vipin & N. Miller, 2018), which Vipin described as an Asymmetric Escalation.

To further understand this shift in perspective, we may look to the most current Law on the State Policy on the Nuclear Affirmation that Pyongyang passed in 2022. The legislation clarifies the missions, command and control setup, and conditions for nuclear weapon use, updating the regime's 2013 policy on Consolidating Position of Nuclear Weapons State. The paper codifies North Korea's long-standing nuclear doctrine, despite some terrifying changes. The 2013 law did not include a statement of intent to use pre-emptive nuclear weapons, despite its inclusion in several leadership announcements over the last decade. In contrast, the legislation of 2022 describes in greater detail the circumstances that may lead to pre-emptive North Korean attacks. In accordance with the new law, nuclear weapons would be employed in reaction to or in

anticipation of a nuclear or non-nuclear strike against the nuclear command structure, regime leadership, or other major strategic targets.

In addition, the nuclear law for 2022 ominously stipulates that if hostile forces threaten the command and control of nuclear weapons, a nuclear attack must be launched automatically and immediately to destroy the hostile forces, including the provocation's origin point and the command, in accordance with a predetermined operation plan. Pyongyang has established a preemptive military reaction system describing that the front-line commanders would assume that the United States had disabled North Korea's communications infrastructure and launch conventional assault orders against South Korea if they were unable to speak with Pyongyang if they were unable to connect with Pyongyang (Klingner, 2022).

Pyongyang may misinterpret activities taken by coalition members, such as routine military training or a response to a North Korean provocation, as a prelude to a real assault because of the limited information and surveillance capabilities that it possesses. If they feared the worst, there is a good probability that they would hurry to preempt the seeming preemption, which would increase the likelihood of an accidental nuclear conflict. This aggressive strategy taken by North Korea has lowered the bar for the use of nuclear weapons in some scenarios, making the possibility of a nuclear conflict breaking out on the Korean Peninsula significantly higher as a result.

3.3.3 SOUTH KOREA

South Korea is a signatory to the Nuclear Nonproliferation Treaty, which prevents countries from producing nuclear weapons. In addition, in 1991, both Koreas signed a declaration pledging not to "test, manufacture, produce, receive, possess, deploy, or use nuclear weapons." As North Korea has pledged to increase its nuclear arsenal and threatened to use it against the South, analysts and members of the conservative People's Power Party in South Korea have increased their calls for Seoul to reconsider the nuclear option.

By promising to use a range of military resources, including nuclear weapons, to defend South Korea against threats, particularly from North Korea, the United States protects the country through its extended deterrence strategy. Beginning in 1955, the **nuclear umbrella** was part of the United States' extended deterrence commitment to South Korea, which also included the stationing of tactical nuclear weapons alongside US forces in South Korea. The ROK military required significant US support given South Korea's faltering economy, and some US officials

believed that modernization, including the potential for nuclear weapons from the US, would justify for a reduction in that force's intensity.

The presence of tactical nuclear weapons in South Korea served multiple functions for the United States military. The U.S. Army planned to employ nuclear weapons as part of a warfighting strategy early on in a confrontation to halt a North Korean invasion should deterrence fail. Periodically, and occasionally in response to specific North Korean actions, the United States sought to strengthen deterrence by signaling its willingness to use nuclear weapons. The Air-Land Battle strategy, which simulated the use of nuclear bombs to protect the South against an invasion by North Korea, was first implemented by the United States in 1982 during the annual spring drill. (Roehrig, 2017-18).

Depending on the year, estimates of the number of nuclear weapons deployed to South Korea at any given time ranged from 250 to more than 600. However, there were also attempts made to deter South Korea from obtaining its own nuclear weapons. As the Cold War came to an end in the late 1980s, South Korea's support for keeping any nuclear weapons had started to wane. President Roh Tae-woo of South Korea declared, "As of this moment, there are no nuclear weapons whatsoever, anywhere in the Republic of Korea," after the removal process had been finished in December 1991.

3.3.3.1 FROM NUCLEAR UMBRELLA TO EXTENDED DETERRENCE

The annual Security Consultative Meeting (SCM), which includes the ROK minister of defense and the U.S. secretary of defense, is one of the forums for the United States to provide affirmation of its the nuclear umbrella. Following this meeting, the two sides released a joint communique outlining the areas of agreement and restating their commitment to the alliance's founding ideals. There has been a statement to the effect that *"Korea is and will continue to remain under the U.S. nuclear umbrella"* in the communique ever since 1978. Over the next 30 years, the wording barely changed, while its placement within the communication evolved in response to changing circumstances. The nuclear umbrella clause was revised in the SCM Joint Communique in October 2009.

In a communique released in May 2009 in response to North Korea's second nuclear test, the United States *"reaffirmed its commitment to provide extended deterrence for the ROK, using the full range of its military capabilities, including its nuclear umbrella, conventional strike, and missile defense capabilities."* The declaration reaffirmed American commitment but emphasized

that extended deterrence does not have to depend entirely on nuclear weapons; missile defense and conventional military operations can also be used to deter North Korea.

Despite the fact that the Obama administration's 2010 Nuclear Posture Review stated that a small number of [tactical] nuclear weapons stored in the United States are ready for international deployment in support of extended deterrence to allies and partners, a White House spokesperson told the Financial Times that "tactical nuclear weapons are unnecessary for the defense of South Korea and we have no plan or intention to return them" (Dombey, 2011).

3.3.3.2 THE DILEMMA OF DETERRENCE

Despite many US measures of extended deterrence and diplomatic visits to South Korea, North Korea has not been dissuaded from pursuing its ambitious nuclear weapons program. Pyongyang's stated objective is the development of intercontinental ballistic missiles (ICBMs) capable of reaching US territory. Given the speed of advanced nuclear tests and capabilities during the past decade, it is improbable that North Korea will slow down its nuclear construction and much less likely that it will abandon its nuclear ambitions.

South Korea has developed the Kill-Chain and Korean Air and Missile Defense KAMD systems in an effort to combine deterrence by denial with deterrence by punishment, namely extended deterrence. However, there is a decoupling problem, and South Korea is quite worried that the United States may be unwilling to take nuclear risks with North Korea. Although the United States' vital interests are not directly threatened, Washington and Seoul have repeatedly tried to convince Pyongyang and the South Koreans that the United States is willing to shoulder substantial financial costs in defense of an ally (Chaesung, 2017).

The KAMD strategy, which refers for South Korea's technique of deterrence by denial, is built on air-strike, surveillance, and reconnaissance systems, but it is not intended to intercept all of the North Korean missiles before they are launched. In response to North Korea's nuclear and missile threats in 2017, South Korea deployed a missile battery using the U.S. Terminal High-Altitude Area Defense system (THAAD). China, who claimed that the anti-missile system could be modified to look into its territory, was incensed by the decision. Beijing responded by halting Chinese group tourism to South Korea and dismantling South Korean supermarket giant Lotte's China operations after the country gave the land for the missile installation.

Moon Jae-in, the former president of South Korea, was a liberal who actively pushed cooperation with North Korea. He made a "Three Nos" commitment stating that Seoul would not deploy any additional THAAD systems, would not participate in American-led missile defense networks, and would not form a trilateral military alliance with Washington and Tokyo. However, the current Yoon administration has claimed that THAAD is a defensive mechanism for protecting South Korean lives and property, and that Seoul's refusal to negotiate with Beijing in this regard is because it is an issue of national security, saying that the "Three Nos" were never a formal agreement or commitment (Tong Hyung, 2022). US Forces Korea began modernizing the THAAD system in 2022, after the present South Korean government has repeatedly expressed a desire to purchase additional THAAD batteries. In addition to providing American forces in South Korea with a more comprehensive and three-dimensional missile defense capability, upgrading the THAAD system there could serve as a technical, political, and diplomatic benchmark for future upgrades or even additional such deployments on the Korean Peninsula or elsewhere (Kai, 2022).

This would do little to deter North Korea from continuing to improve its missile capabilities, especially in light of the ongoing tension on the Korean Peninsula, especially between Pyongyang and Washington, and North Korea's recent multiple countermeasures, such as adopting a preemptive nuclear strike policy and launching a short-range ballistic missile towards the sea between South Korea and Japan.

3.3.4 TAIWAN

China's recent military modernization has dramatically impacted the Republic of China (ROC) or Taiwan's security options. New Chinese submarines, sophisticated surface-to-air missiles, and particularly short-range ballistic and land-attack cruise missiles have dramatically eroded Taiwan's geographic advantage. Taipei's Patriot interceptors, diesel submarines, surface warships, F-16 fighters, and P-3 maritime patrol aircraft are no longer capable of balancing China's military might. On the other hand, it has strong ties to the United States and, along with Japan, South Korea, and the Philippines, which can be viewed as a crucial component of a line of military allies in the Western Pacific and is vital to US security interests. Taiwan is stuck between China and the United States in a geopolitical triangle of competing interests.

The People's Republic of China ratified the Non-Proliferation Treaty in 1968 when it was still considered China's legitimate representative. In 1964, in response to China's first nuclear weapon

test, the ROC initiated its own covert research efforts. Later, it was asserted that because there was only one Chinese state and China possessed a nuclear weapon prior to the signing of the NPT, the ROC also possessed one. After losing recognition, the ROC signed a trilateral safeguards agreement with the United States and the IAEA to ensure that its nuclear program would only be used for peaceful reasons. The Republic of China's repeated attempts to develop nuclear weapons between 1964 and 1988, when US rapprochement with China was viewed as an abandonment risk, demonstrate that the legal basis for nonproliferation is contingent on US-ROC relations. Under American pressure, all initiatives failed (David Albright, 1998).

In accordance with its policy of "extended deterrence" for Taiwan, the US administration aims to make indirect investments in Taiwan's defensive weaponry and raise the legitimacy of its threats through diplomatic channels. However, rather than using military force as a deterrent, the US has chosen to rely more on its present strategy of "strategic ambiguity," which aims to keep everyone in the dark about whether America would use force to defend its much smaller state if attacked by China. Depending on how a crisis starts and progress, Washington's precise response would vary. This has led to skepticism that it is because America has simultaneously sought to suppress pro-independence movements in Taiwan, maintain good relations with China, and deter China from attacking. Currently, some advocate abandoning this complex balancing act in favor of a firm commitment to Taiwan's security (O'Hanlon & Chaos, 2021).

3.3.4.1 DEFENSE POLICY

An example of asymmetric warfare is presented in the form of the porcupine doctrine, which serves as the foundation for Taipei's defense policy. The doctrine can be summed up as the utilization of three separate lines of defense. Intelligence gathering and reconnaissance are the primary responsibilities of the outermost layer, which helps to ensure that the defensive forces are adequately equipped. Guerrilla naval warfare utilizing high-tech air support supplied by the United States is the primary motivating factor behind this. The topography and population of the island both play a role in determining the bottom level. The end goal of this concept is to survive and adapt to an aerial offensive well enough to set up a wall of fire, which will prevent a successful invasion by the Chinese People's Liberation Army (PLA) (James Timbie, 2021).

In order to put this concept into practice and gain some breathing room in the event if China decides to invade, over the years, Taiwan has constructed and continues to maintain an advanced early-

warning system. As part of its ongoing attempt to become militarily self-sufficient, the country has also been looking into the possibility of constructing a long-range strike capability that is built entirely on Taiwanese soil. Nevertheless, over the course of the past twenty years, the government has gradually improved its defensive arsenal, most recently reaching an agreement with the United States to purchase the most cutting-edge Patriot missiles available.

The most significant challenge, on the other hand, is that China possesses over a thousand precision-strike missiles that can be fired from a variety of locations on the southeastern mainland of China. These missiles can be used to launch attacks on Taiwanese airfields, ports, and other facilities, in addition to ships that are out at sea.

Taiwan is secured by a nuclear guarantee from the United States, but the credibility of a nuclear threat is contingent on the likelihood that it would be carried out. When a rival with revisionist objectives acquires nuclear weapons, a nuclear umbrella may become ineffective. Fear of a nuclear strike on the United States' homeland may impede public support for a nuclear escalation threat designed to deter a conventional attack on an ally. The Russian invasion of Ukraine in February 2022 is a notable example of how, in addition to economic interdependence, the nuclear threat of the aggressor effectively dissuaded nuclear-armed Europe from intervening militarily, despite the attack posing a significant threat to European security interests (Guthe, 2011).

3.3.5 CREDIBILITY OF US EXTENDED DETERENCE IN THE REGION

The nuclear posture of the United States differs significantly from that of other nations possessing nuclear weapons, as the primary objective of US nuclear weapons is not exclusively or predominantly focused on deterring attacks on the homeland or other critical interests. The nuclear posture of the United States takes into account the manner in which its nuclear weapons can serve as a deterrent against attacks on its allies and partners. The United States maintains a physical presence of conventional forces within the territories it safeguards. It engages in this action not solely to safeguard its allies from conventional attacks and render nuclear weapons redundant, but also to emphasize its credibility and establish "sunk costs" as evidence of tangible interests at risk. As a result, the United States has established many complex extended deterrence agreements throughout various regions of the world, including Europe, Asia, and the Middle East, to support its allies (Houft, 2020).

The viability and reliability of US nuclear assurances are crucial for the security of a number of governments. Without the security—or reassurance—that this nuclear umbrella offers, these states might move forward with their own nuclear weapons development plans. For allies like Japan, South Korea, and Taiwan, as well as some NATO nations, the stability of the US deterrent and extended deterrence guarantees are crucial aspects of these countries' own strategic calculations. Understanding that extended deterrence's effectiveness is dependent on how both allies and enemies view the legitimacy of US commitments puts a strain on the discussion surrounding it. What matters more is how other countries see the US nuclear threat, not how the United States thinks they should be seen. Some allies view the American nuclear weapons being stationed on their soil as a sign of American resolve, which adds to the value of extended deterrence. If this is the case, additional cuts to US strategic offensive armaments may not have a significant impact on how credible the US is seen by its allies. Others see the value of extended deterrence more in the United States' ability and willingness to keep the effectiveness of its strategic nuclear. As a result, further cutbacks in strategic weaponry could reduce the credibility of American security commitments (Trachtenberg, 2012).

It is noteworthy that the East Asian security environment and the characteristics of US Extended Deterrence vary from those in Europe in two fundamental aspects. First, the nuclear deterrence of the United States in Europe is integrated within the American pledge to the North Atlantic Treaty Organization (NATO), specifically in relation to Article V of the Washington Treaty. In contrast, the United States lacks a comparable multilateral alliance framework in the East Asian region. The extension of the U.S. deterrent in that region is dependent upon bilateral relationships and agreements, thus any conversation regarding nuclear subjects will be primarily interpreted through a bilateral perspective. Second, the U.S. nuclear commitment to Europe is supported in part by the presence of U.S. nuclear weapons on the territory of NATO allies when some of these allies have dual-capable aircraft that are equipped to transport U.S. nuclear weapons. In order to provide them with nuclear weapons in the worst-case scenario, the United States never maintained such partnerships with its Asian allies. Moreover, during the George H. W. Bush Administration, the US removed all tactical nuclear weapons from South Korea. Around the same time, the U.S. Navy decommissioned all nuclear weapons from its surface vessels and submarines with the exception of those on Trident missiles deployed on ballistic missile submarines. This included the removal of sea-launched cruise missiles (SLCMs) carrying nuclear warheads, which some had

viewed as offering an in-theater nuclear presence. Thus, since the early 1990s, U.S. strategic nuclear assets, either stationed in the United States or aboard Trident ballistic missile submarines, have provided the U.S. extended nuclear deterrent for its East Asian allies (Bush, 2011).

In the past US allies in East Asia significantly, Japan, and South Korea have expressed strong views regarding US extended deterrence. According to documents recently declassified by Japanese officials, for instance, in the middle of the 1960s, Prime Minister Sato Eisaku reportedly pressed Secretary of Defense Robert McNamara for assurances that the United States would be ready to use its nuclear weapons against China out of concern over a potential Sino-US conflict.

Following China's nuclear test, Secretary McNamara expressed fear that, if Japan wasn't assured of the US's commitment to its security, Tokyo would consider developing its own nuclear arsenal. Following North Korea's nuclear test in 2006, Foreign Minister Aso Taro made remarks in which he requested similar American nuclear assurances. After that nuclear test, South Korea similarly sought nuclear assurances from the United States. According to reports, former South Korean defense ministers contacted the United States to request the redeployment of nuclear weapons that had previously been removed from South Korea. President Obama and President Lee Myung-bak of South Korea reiterated in June 2009 that the US and the Republic of Korea had a security alliance that included a continuing commitment to extended deterrence, including the US nuclear umbrella (Trachtenberg, 2012)

Long-term U.S. commitment to the security of Europe and Asia may be more uncertain for reasons that go beyond the nuclear policy options. If the United States has enough interest in other places, that question has been answered by the actual presence of American soldiers there. As the United States faces rising conventional challenges, particularly in Asia, and adopts a one-war planning criterion, it is unclear whether this assurance still holds.

Theoretically, there is a "point X" below which the American presence cannot go without losing credibility from both its allies and enemies. Point X would depend on how the U.S. is seen to have interests at stake in the region. This includes the physical presence of U.S. troops as well as verbal promises, the costs of U.S. commitments if it tries to defend against aggression, and the costs of losing in that region. Still, opponents might not try to find out where that cutoff is because the costs of making a wrong guess are usually higher than the benefits of being aggressive. One would contend that all it takes to dissuade threats against U.S. allies is to simply raise doubt in the minds

of potential enemies over the nature of the possible response, recalling Thomas Schelling's idea of a threat "that leaves something to chance." However, if that is not the case and the U.S. is no longer required to support its alliance obligations with a physical presence and nuclear retaliation on their behalf, U.S. allies will be in a vulnerable position (Houft, 2020).

CHAPTER 4

EXPLORING THE NUCLEAR POSTURE OF JAPAN

The foundation of Japan's nuclear strategy is a policy of non-nuclear weapon possession that is laid out in its constitution. Since the end of World War II, Japan has maintained a consistent stance on nuclear weapons: it upholds the "three non-nuclear principles" of not acquiring, not creating, and not permitting the importation of nuclear weapons. Nonetheless, there is some discussion within Japan over whether it should change its stance in light of the deteriorating regional security environment, particularly North Korea's nuclear and missile development.

To preserve deterrence, Japan nevertheless sticks to its strategy of relying on the US nuclear umbrella. However growing opposition to nuclear energy in Japan as a result of the Fukushima nuclear disaster in 2011 has affected the country's nuclear policy. In addition, Japan's neighbors, especially China and South Korea, would be concerned by the country's acquisition of nuclear weapons, which could spark an unstable arms race in the area.

The strategic costs and dangers associated with acquiring nuclear weapons have been weighed against the benefits, which is why Japan has chosen not to do so. To this end, Japan has pursued a number of other security-related policies, including deepening its alliance with the United States, increasing its defense budget, and building up its own military assets, such as anti-ballistic missile defenses. While supporting non-proliferation and disarmament efforts has helped Japan advance its disarmament goals, it also pursues deterrence as part of a parallel strategy owing to its partnership with the United States. This involves the conduct of cooperative military drills, the exchange of intelligence, and the stationing of American nuclear weapons in the region.

Japan has recently participated in diplomatic initiatives to resolve the nuclear potential threat from North Korea through multilateral negotiations and sanctions. Moreover, it has stated that it supports both the Comprehensive Nuclear Test-Ban Treaty (CTBT) and the Treaty on the Non-Proliferation of nuclear weapons (NPT). Essentially, Japan's nuclear strategy, which is influenced by its distinct security environment and historical experiences, is defined by a careful balance between its pursuit of disarmament and deterrence.

4.1 JAPAN'S THREAT PERCEPTIONS AND DISARMAMENT DILEMMA

Japan's dedication to nuclear disarmament and non-proliferation is evidenced by the country's long-standing support for efforts to ban nuclear weapons worldwide. Although many different groups in Japan hold different views on nuclear disarmament, they all reflect Japan's unique history and security concerns. This is because Japan is the only country to have suffered the horror of a nuclear assault. As a result of which, Japan has been one of the most vocal advocates for nuclear disarmament and non-proliferation. At the same time Japan relies on the U.S. nuclear umbrella not only for its own defense but also as a deterrent against prospective security challenges in the region, such as China's gunboat diplomacy and North Korea's nuclear development. Nonetheless, Japan's position on nuclear disarmament has been complicated by this stance, as it has prompted some to question the country's dedication to the cause.

Japan is confronted with numerous regional nuclear concerns that represent substantial security threats. This includes North Korea's nuclear program, China's nuclear modernization, the possibility of South Korea's nuclearization, and Japan's nuclear policy. Among these issues, North Korea's nuclear program is the most urgent. North Korea is actively pursuing the construction of intercontinental ballistic missiles (ICBMs) that could potentially reach Japan and the United States and has amassed a sizable nuclear arsenal (Cheng, 2020). Japan has relied on the American nuclear umbrella for deterrence due to the regime's unpredictable behavior which has generated fears about the prospect of a nuclear attack (Schwartz, 2017).

Japan has pursued actions to improve its own defense capabilities at the same time, such as creating missile defense systems. These initiatives have included the deployment of Patriot missile batteries and the creation of the Aegis missile defense system, which is equipped with the ability to intercept ballistic missiles mid-flight (Gartzke & Jo, 2021). These precautions are not flawless, though, and Japan's security continues to be seriously jeopardized by the threat presented by North Korea's nuclear development.

China's nuclear modernization poses another major threat to Japanese security. The creation of novel nuclear warheads and the use of multiple independently targetable reentry vehicles (MIRVs) on its ballistic missiles are two examples of how China has been updating its nuclear forces (Ren, 2017). These events have caused Japan to worry about China's objectives for the region and the possibility of a nuclear arms race. Japan has called for increased conversation and collaboration

on nuclear disarmament and non-proliferation and expressed concern about China's lack of transparency regarding its nuclear capabilities (Inoguchi, 2018). Yet, historical tensions and territorial disputes between China and Japan have complicated their relationship, making it challenging to conduct fruitful discussions about these topics.

Another regional nuclear challenge that could have a significant impact on Japan's security is the possibility of South Korea going nuclear. The Japanese government has long opposed any effort by South Korea to build nuclear weapons in response to the nuclear program in North Korea. Discussions concerning the potential for South Korea to build nuclear weapons have taken place, but Japan has opposed any such action and has instead urged for ongoing communication and collaboration on denuclearization (Katsumata, 2020).

4.2 JAPAN'S CONCEPT OF DETERRENCE

In 1976, the Japanese National Defense Program Guidelines used the word "deterrence" for the first time. The word and meaning of deterrence have not changed, but the Prime Minister publishes an executive order every four years that updates these principles to serve as a comprehensive defense policy. According to Keitaro Ushirogata of the Japan Maritime Self-Defense Force, as Japan's security environment has changed recently, the phrase has been used more frequently in academic publications, government policy, and policy discourse.

It is important to consider the specific geopolitical environment in which Japan builds its deterrence posture. The term "deterrence" has historically been employed within the context of the US-Japan security alliance, in which the United States has always been seen as the senior ally and Japan as the subordinate partner. The National Defense Strategy of Japan never included deterrence. This is due to Japan's defense posture after the war departing from the concept's ideal-typical form of deterrence. So, rather than deterrent by punishment, the Japanese approach national security more along the lines of deterrence by denial, making the phrase "defense by denial" more appropriate. This is because there are long-standing prohibitions on the use of force, which make using force to dissuade violence itself illegal. This is due to the fact that Japan's deterrence-by-denial strategy is based on conventional deterrence rather than nuclear weapons. This puts Japanese strategists in a tough position since they will need to employ the threat of force to achieve deterrence by denial in the absence of punishment (Ushirogata, 2015).

In the years following World War II, Japan has adhered steadfastly to a deterrence-by-denial approach. Denial of hostility is crucial to its ability to repel foreign aggression. Japan's defense posture is based on a US-centered multilateral hedging strategy and an internal balancing plan. Tokyo's defense posture has influenced its choices in terms of military activities, weapon purchases, and combined drills. The denial approach has undergone gradual but evident shifts, primarily at the tactical and operational levels. In short, defense policy's conventional political and strategic underpinnings are still in place, while modifications and enhancements are constantly made at the operational and tactical levels to increase deterrence.

Yet, Japan's deterrence-by-denial policy has encountered at least two significant obstacles. One difficulty is its inherent inability to deter foreign invasions. This posture is more geared toward defense-by-denial than actual deterrence. While Japan's national security apparatus is well-suited to denying hostility for the purpose of defending the home front, it is not well-suited to discouraging foreign attackers, as the country forbids its armed forces from engaging in offensive military actions, which is a prerequisite for deterrence via the imposition of threats. With the adoption of the peace constitution in 1947, Japan has surrendered the authority to punish opponents and declared it unlawful to employ force as a means of settling international conflicts, underscoring its policy of deterrence-by-denial through the logic of elimination. These prohibitions on the use and threat of force derive from constitutional and normative constraints enacted after World War-II have been shown to be outdated, considering the souring security environment of the region.

Another issue is that Japan's deterrence hasn't improved much despite recent efforts to upgrade its weaponry, supply chain management, and military readiness. These modifications are so concentrated on equipment and technology that the fundamental lack of deterrent persists (Katagiri, 2020).

4.3 DETERMINANTS OF JAPANESE POSTURE

Nori Katagiri in his chapter explained two main determinants that describes about Japan’s deterrence posture. These determinants ensure that post-war national security policies will remain consistent. The sustainability of the limits, which makes deterrence by denial possible, is their most important feature. But this approach has a price. As a result, Japan has found it challenging to conduct itself as a "normal state," that is, a state that is able to use or threaten to use force for the purpose of national security (Katagiri, 2020). This claim is consistent with the literature on

Japanese security policy. The recent growth of Japan's defensive capabilities has been observed by researchers, but not its deterrence. Many analysts have noted that despite Japan's improved defensive capabilities, the country has not grown more military or nationalistic. While Japan is making advances in technology and logistics, the country's national security policy is based on a profoundly pacific social and political foundation.

4.3.1 LEGAL CONSTRAINTS

The "peace" constitution of 1947 and related legislation governing the Self-Defense Force (SDF), Japan Coast Guard (JCG), and national police are the foremost determinant of deterrence-by-denial. Because of Article 9's prohibition on possessing offensive capabilities, the constitutionality and legitimacy of the SDF are called into doubt, and as a result, Japan's ability to use force to discourage other countries from challenging Japanese sovereignty is diminished. The SDF can use force to defend the country in the event of an assault, but they are prohibited from attacking enemy forces by the constitution. The use of force is also prohibited by the Constitution unless three criteria are met: (1) an unlawful and immediate threat to the nation, (2) no reasonable alternative reaction, and (3) the use of the smallest amount of force necessary to counter the threat. Yet, the Constitution isn't the exclusive source of law. The SDF and JCG are subject to strict legal procedures on the tactical, operational, and strategic levels due to the laws that govern them.

Their inability to perform offensive missions is crucial in at least two respects. The United States, Japan's top defense treaty ally, is compelled to organize and, if necessary, carry out all of Japan's offensive missions in the war. As a result, if the People's Liberation Army (PLA) attacked Japan, the US Forces in Japan (USFJ) would be forced to join the fight against China because the SDF is unable to employ force offensively. As a result, USFJ is left in charge, which will intensify the dispute between China and the United States. Second, since Japan doesn't have any offensive missions, China, North Korea, and Russia can spend more money on purchasing offensive weapons while saving money on defensive equipment and training. This further erodes Japan's deterrent power.

4.3.2 NORMATIVE CONSTRAINTS

A group of four social norms and behavioral guiding principles make up the second element. The doctrine of 'defensive defense' is the first to forbid the use of force offensively, even during times of war. It implies that the use of defensive force is restricted to the bare minimum required for self-

defense and is only permitted in the event of a foreign invasion. It has influenced Japan's weapons operations and deterrence-by-denial strategy since the 1970s. The doctrine suffers from two issues. The first benefit is that it prevents the government from acquiring weapons that might be used in attack missions. Yet even if they are required to deter foreign assault, the SDF lacks systems like aircraft carriers, attack helicopters, strategic bombers, and surface-to-surface missiles. Up until recently, mid-air refueling was prohibited because such "expeditionary" activities may be used to invade other nations and were therefore viewed as aggressive. Japan acquired that capacity as a result of the need for mid-air refueling by Air-borne Warning and Control System (AWACS) to maintain the flight of F15 air-to-air combat aircraft, which are not intended for ground attack. The doctrine also states that once at war, Japan won't be able to change the location of the fighting elsewhere. The conflict would have to be purely defensive, resulting in numerous domestic civilian casualties.

The second principle is that the SDF's primary focus should be on humanitarian assistance and disaster relief HA/DR operations within the country. That corresponds with the widespread approval of the SDF only in its civilian capacity. While the third standard is based on the historical practice of placing significant national defense reliance on the United States. The standard is best expressed in the work *What is Strategic Thought?* by the late diplomat Hisahiko Akazaki, who contends that Japan's primary "strategy" is to rely on the United States. This tactic, which is compatible with the Cold War's long-term deterrence, has helped USFJ gain a lot of public support. This supports the idea that the Japanese people view the United States as their only reliable security partner (Oriki, 2012).

The last norm is the widespread belief in Japan that the country can go without nuclear weapons so long as the United States provides one via its extended deterrence. In 1967, a set of rules known as the "three non-nuclear principles" were established that made it illegal to own, produce, or introduce nuclear weapons. Japanese officials have denied reports that their country has the potential to produce nuclear weapons. Japan's anti-nuclear "allergy" is deeply ingrained in the country's culture. After the triple disaster of earthquake, tsunami, and nuclear meltdown in Fukushima in 2011, when all civilian-use nuclear reactors across the Japanese archipelago were shut down for some time, the non-nuclear norm appears to have reinforced. This means that Japan's

deterrence-by-denial posture relies mostly on conventional and cyber assets rather than nuclear weapons.

4.4 JAPAN AS A PART OF USA'S EXTENDED DETERRENCE

The deterrence by denial posture of Japan is a policy that is rooted in the extremely dependent relationship that Japan shares with the United States of America. The concept is explored under the title of Extended Deterrence which the state of Japan has opted for in order to address its deepening security concerns. Over the years, this policy has been reflected in both formal and informal deliberations conducted on the part of Japan in different meetings, statements and responses to certain reports.

4.4.1 THE 2010 US NUCLEAR POSTURE REVIEW REPORT

An example of one of these reports is that of the 2010 US Nuclear Posture Review Report. The report reflects a revision of the so called non-nuclear goals of Japan which are paradoxical in nature. Before diving into that, it remains necessary to decipher what the report actually offers the Japanese security planners. When the report was launched, a stir of tension was observed amongst the security planners because the report talked about the reduction of American nuclear arsenal or the possibility to explore it. Again, this shall stand as something concurrent with the Japanese Nuclear Objectives of limiting nuclear efforts and de-nuclearizing states. But this was not the case. That is because ending US nuclear capabilities is a sign of insecurity for Japan. If the United States of America is to disarm itself and reduce its nuclear weapons, the ever-growing powers in East Asian region particularly China and North Korea are going to become a major threat to the sovereignty of Japan.

4.4.2 NON-PROLIFERATION TOOL – A PARADOX

The idea of extended deterrence is one that was developed to reassure allies regarding their safety in their respective regions. It was a reassurance that the allied states wouldn't have to pursue nuclear programs in order to deter themselves against ambitious neighbors. Therefore, the nuclear umbrella was created and extended to those in need of it. This was seen as a non-proliferation tool preventing states from taking up any nuclear projects. The report aimed to establish one narrative which was to propel this belief that the US doesn't actually need nuclear weapons to deter enemies as its conventional capabilities combined with that of allies have the credibility to defend it against aggressors. However, this idea seems to be farfetched and unrealistic. Though it is strictly in line

with the Japanese goals, it reflects idealism which has little space in the insecure international environment. Moreover, this idealism is balanced off by the last point of the report which iterates the sole purpose of US nuclear weapons to be deterrence against threats.

4.5 THE SIGNIFICANCE OF US NUCLEAR DOCTRINE

The nuclear doctrine hence remains a matter of great importance and one that is central to the US-Japan alliance. The 2010 report brought some of the rampant narratives in Japan to light. These included the factor that the Japanese Public remains highlight opposed to the idea of any nuclear goals in Japan. The nuclear allergy is said to be an inherent value of post war 2 Japan that prohibits it from any participation in the nuclear policy making too. However, this is not the case. It has been said that many of the governmental and non-governmental experts anticipated the 2010 nuclear report and wanted Japan to offer its input in the process. This stands in contradiction to the three non-nuclear goals in Japan. It does not deem it realistic that the US part with any of its capabilities in order to ensure on thing. That one thing is the commitment of United States to its Allies. The regime of the decade believed that the Japanese security interests must not be forgotten in any case by USA. The state must not be left vulnerable to its nuclear neighbors. In order to register them, the Japanese officials went to the extent of making direct efforts in order to make sure that they were heard. Strategic dialogues were held between Japanese policy makers and their counterparts in USA for the sake of assurances and reiteration of goals. The acceptance of these reactions to the report was praised by Japan. The Japanese Ministry of Defense issued its statement later of which highlighted how the state was satisfied after registering their concerns that the US must take into account to improve the report. This reflection the dissolution of mistrust and gaps between the US-Japanese relations in 2010.

4.5.1 US JAPAN NUCLEAR DIALOGUE

the second instance of Japanese interest in the US Nuclear policy can be seen in the Pacific Forum CSIS 2010 US-Japan Strategic Dialogue where the Japanese interlocutors called upon US for the establishment of a dialogue on the issues of nuclear security. The purpose of the dialogue was stated as discussion over the details such as the objective as well as the outcome of any exchange between the United States and China. Hence, this can be seen as an attempt of Japan to bridge the gap and enjoy the umbrella of US in order to decipher the nuclear aims of its neighbors. The umbrella doesn’t only extend to guar tee a nuclear front to Japan, but also to keep an eye on one

of its closest threats. The concept hence becomes extremely broad and one that has a lot of potential for Japan and a lot of responsibility for USA.

4.5.2 JAPANESE CONCERNS REGARDING THE REPORT

The Japanese response to the report attempts to uphold the US to a level of scrutiny which it deems necessary for its survival. These four deliberations include threat priority, first use policy, no sole purpose for nuclear weapons and of course, the Sino-US relationship. These deliberations mark the differences that exist between the US and Japan when it comes to nuclear approaches. And contradiction leads to separation of interests. However, before making any claims to whether the US-Japan interests have changed, we must dwell into the concerns.

4.5.3 THE THREAT PRIORITY CONCERN

The threat priority concern is that the report labels terrorism and technology nexus as a major threat to international security. However, the Japanese believe nuclear terrorism as the core of insecurity in the international system. The Japanese do acknowledge the element of terrorism as one to be of major concern, but it also believes that the United States must upgrade its definition to that of nuclear terrorism. The motivation behind this security concern is that of Pyongyang, the North Korean capital which is brewing nuclear plants and boasting tis every increasing nuclear arsenal with an alarming rate. Being right next to it, the security dilemma is generated for Japan which is further intensified by the aims of its second neighbor that is China. Japan holds this belief that the North Korean and Chinese aims are one that should be seen as a joint effort against USA. The modernization of strategic arsenal and People's Liberation Army in China is the manifestation of the very threat that Japan is highlighting. The Japanese white paper has identified Chinese military modernization as a challenge to the regional security environment and most importantly the Japanese security itself. This is the cause behind the first concern.

4.5.4 THE NO FIRST USE POLICY

The second concern is that of No First Use. The nuclear report calls for the elimination of nuclear threats. One of the methods for that would be the elimination of the weapon itself. However, this is not a practical approach and a more pragmatic way of dealing with it is launching the No First Use. The no first uses policy places a constraint on nuclear power from initiating mass destruction. Hence, it is something that would be expected to be a Japanese non-nuclear aim. However, it was not the case, even for the nuclear policy of another state. That is because the Japanese defense

officials believe that it shall weaken the role of US as a deterrent. Though they have secured their position by maintaining this narrative that nuclear option should only be a means of response to the Japanese threats. Still, the idea of no first use is something that the defense strategists were glad to not see in the report. That highlights another contradiction between Japan's declared non-nuclear arms and its intention. It reflects how Japan's security interest stand as a priority that is cloaked in idealism. Underneath that idealism is the constantly assured extended deterrence of USA which is a variable quantity predicting the nuclear future of Japan.

4.5.5 SOLE PURPOSE OF NUCLEAR WEAPON

Another concern which was addressed in one of the follow up recommendations made in the International Commission on Nuclear Non- proliferation and Disarmament report. This was declaring the sole purpose for nuclear weapons. It was to declare that the only intention behind keeping the nuclear weapons is an act of defense against any threats to US or its allies. However, a division of thought can be seen as Japan's strategic elite does not seem to be very appreciative of this thought. The Obama administration revealed how the security environment was not ripe to execute such policy which the Japanese elite resonated too. The growing animosities, competitions and threats in East Asia could not afford the US to declare such an ambition that could weaken its deterrence in front of the competing states. Doing so would grant space to the idea that the US may not be as actively concerned about its allies which is against the image that it has propagated of itself in front of the rest of the world. The image of a protector of human rights and the defender of sovereign nations.

4.5.6 SINO-US RELATIONS

Another major concern for Japan is the Sino-US relations. The concern is grounded in the dual thinking that US has towards China. The fact that China is both a threat and opportunity for US leaves Japan predicting whether the US would choose its economic inserts over its security commitments with Japan. China provides a much bigger market to USA than Japan leaving more room for their partnership devaluing Japan's position. In order to address these concerns, Japan cautioned the US repeatedly not to cut down its arsenal supplies beyond a certain extent in the wake of its close economic dealings with China. Since China remains a big market that has great opportunities for the US, Japan fears that the priorities of the Great Power might change from that of security to economy which remains unacceptable to the victim of a nuclear attack. These

concerns reveal how Japan is not ready to profess a complete reliance over the capabilities of United States of America due to the many fears that it carries regarding USA's other national interests that can or cannot over arch its security goals.

4.6 DETERRENCE BY DENIAL POSTURE

Apart from the US posture, there are some initiatives taken by the state of Japan as well which are identified as deterrence by denial posture. Since the post war era, the Japanese deterrence is based upon the idea of denying any act of hostility rather than punishing or avenging itself from the perpetrators or violators of sovereignty. Throughout these years, we have observed how Japanese posture is seemingly consistent as Japan uses extended deterrence to deal with rising problems of China, North Korea, Russia through conventional forced. Japan has disagreement with Russia over Northern territories. The North Korean Ballistic Missile acquisitions also add to the threats of Japan. Despite that, the main object of this posture remains that of China. China is one of the greatest threats to Japan that has conventional, nuclear and cyber forces that has both economic and human resources to support its execution. It remains a crucial part of its foreign policy, its security and national interests. A major highlight of the posture remains resisting aggressive military missions and use of force for defensive purposes only. Not only that, but the Japanese government also uses an assertive tone to demand de-nuclearization from North Korea and the return of its abductees for purpose of reproachment all in all following a negotiation approach and that of diplomatic pressure.

4.6.1 MULTILATERAL HEDGING

The second layer of the deterrence posture is built on the multilateral hedging with the US Alliance which has been discussed above as well. The Japanese, despite the problematic nature of the alliance stick to it for the sake of pursuing its non-nuclear goals. To keep this alliance in the bag, the foreign policy was built on close cooperation with Trump by making concessions on imports to the American vehicles, to their farm products and opportunities for American workers in Japan. Moreover, it has attempted to expand military purchasing such as the 100 F-35 Jets for the Aegis Ashore Missile System. And the idea of multilateral hedging expands into execution by allying with other neighbors in the region such as India and Australia. Through diplomatic tools the posture is boosted to include non-US nations.

4.6.2 THE TRILATERAL DYNAMIC

The maritime partners create a triangle in the Indo-Pacific Ocean laying ground for stronger and connected American deterrence as well. India for instance remains a staunch enemy to the Chinese interests in the region making it perfect for multilateral hedging. Both states have reinforced the interest in the favor of democracy, freedom, human rights and more importantly a joint fear and security dilemma of the expanding Chinese military aims. Both Japan and India maintain this belief of balancing Chinese power in the region through collective effort. The third ally to this quest of balance in the region is that of Australia. Under the Democratic Security Diamond (DSD) Japan, India and Australia have allied themselves under the umbrella of United States. In 2002 another joint effort by the name of Trilateral Strategic Dialogue was put forward for countering nuclear threats of North Korea and China. In order to deter the cyber-attacks, Japan is using cross domain method by combining military, cyber diplomatic and economic means for ensuring stronger defense system.

4.6.3 NATIONAL DEFENSE PROGRAM GUIDELINES 2018

Proof of this is the 2018 National Defense Program Guidelines (NDPG). Here the Japanese administration revealed how the state will make use of conventional, spatial and cyber means for retaliating against an armed attack. Hence, it is moving to the subject of retaliation as the security concerns continue to deepen. However, there are still some weaknesses in the plan in terms of its clarity. Firstly, it doesn't explore the idea of cyber-attacks that it wants to deter. Secondly, it doesn't consider the possibility of how Japan would remain impaired after the first military blow of the enemy from any retaliation. A state that uses the denial strategy for its deterrence and has been doing so consistently has little capacity to execute such retaliatory measures. This means that a state like Japan requires more assertive behavior, more aggression in order to make this objective a reality. The cyber dimension is one that remains unexplored even for the 21st century. And for a state that has been avoiding any contact with the enemy and pursuing non-nuclear nuclear aims, it lacks the necessary strength which could deter its enemy. The lack of self-reliance and increased dependency on USA's extended deterrence showcases Japan not so much as a front foot player. That does not mean that the NDPG initiative is a failure. It is definitely a step forwards towards securitization of Japanese interests, but it requires more conventional and non-conventional equipment in order to improve its makeup for meeting the challenges of the current security environment of the international system.

CHAPTER 5

JAPAN'S EFFORTS FOR POSTURE OPTIMIZATION

5.1 JAPAN'S STRATEGIC RESPONSE TO ITS STRATEGIC CHALLENGES

The National Security Strategy (NSS), the National Defense Strategy (NDS), and the Defense Buildup Program were three security-related strategy papers that the Japanese government approved in December 2022. The three documents include the decision to fundamentally reinforce defense capabilities within five years, budget measures to increase defense-related expenditures to two percent of GDP, and the introduction of a long-range counterstrike capability, all of which were discussed in a speech given by Prime Minister Fumio Kishida in January at Johns Hopkins University. These are, at the very least, unprecedented decisions in the postwar Japanese history (Pavey, 2023). The premise of the strategy documents is that the international community is facing its "greatest postwar trial" and that the security environment encircling Japan is "the most severe and complex" since the end of World War II. According to the documents, Japan faces a growingly complicated defense challenge on three fronts: from China, which was labelled as the "greatest strategic challenge," from North Korea, which was labelled as a "grave and imminent threat," and from Russia, which was labelled as a "strong security concern."

However, even on an unprecedented scale, defense buildups alone will not be sufficient to meet deterrence capability requirements. First, ***Japan's military strength*** is insufficient to compete with that of China. Japan could only support a fifth of China's defense spending even if it increased its spending on defense to two percent of GDP in 2027. It is impossible to achieve deterrence by boosting the Japanese Self-Defense Force's (SDF) capacity and size to that of the Chinese People's Liberation Army (PLA). Second, the U.S. military is having trouble keeping up with the rising costs of fighting an in-theater war with the Chinese PLA. Various war simulations on the Taiwan Strait crisis conducted by U.S. think tanks assumed that the U.S. military would not only fail to achieve a decisive victory over China but would also sustain enormous military casualties. The question of whether or not the United States would be able to intervene in a confrontation with China is further complicated by the fact that China is likely to considerably strengthen its nuclear capacity during the coming decade. Lastly, it is challenging to implement a uniform policy against Japan's three military challenges on three fronts—North Korea's ongoing development of nuclear weapons and missiles and the Russian military in the Far East. Each of these challenges has a

separate escalation dynamics. The capacity composition of Japan's Self-Defense Forces and the defense capabilities necessary would be a significant burden if Japan adopted the strategy of developing individual defense capabilities against China, North Korea, and Russia. Furthermore, pressure on the operational planning of the SDF would grow if China, China-North Korea, and China-Russia military collaboration intensifies (Pavey, 2023).

5.2 AN OUTLOOK OF SECURITY STRATEGY

The updated December 2022 strategies and conclusions from the January 2023 meetings in Washington, DC, reflect a reassessment by the leaders of Japan of what Tokyo must do to more effectively enhance deterrence in response to a rapidly deteriorating security environment, a shifting balance of power in East Asia, and a "new era of strategic competition." They are the most recent and striking example of an opinion held by other administrations before this one: Tokyo needs to be more proactive in "deter[ring] contingencies and attempts to unilaterally change the status quo in Japan and its vicinity." The 2022 NSS's stated objectives include, among others, safeguarding Japan's "sovereignty and independence," creating "an international environment in which its own economy can grow," and establishing a reliable, predictable, free, and open global order based on the rule of law. The three main goals of the NDS are to: "shape a security environment not accepting unilateral changes to the status quo by force"; "cooperate with the US and like-minded countries to deter and, if necessary, rapidly respond to" any unilateral changes to the status quo in order to "prevent further escalation into an invasion of Japan"; and, if an invasion does take place, assume primary responsibility to "disrupt and defeat" it (Liff, 2023).

According to their ***Deterrence by Denial strategy***, Japanese security experts have underlined the importance of enhancing its battle resilience in order to deny Beijing a decisive victory in a conflict on the country's southwest front, including a Taiwan contingency. The underlying rationale is to capitalize on Japan's distinctive geographical characteristics as an archipelago state in order to implement a strategy of deterrence that emphasizes both denial and resilience in order to keep the territorial status quo. This strategy is very similar to the strategy that is articulated in the United States National Defense Strategy for 2022. These new strategic evaluations are predicated on the idea that Japan and the United States no longer possess a military advantage over China. It's important to keep in mind that the supposed unipolar moment is eroding, but not necessarily because US material power is declining. Instead, it has to do with how severely military operations

are constrained by the waning of America's military hegemony in the post-Cold War world when Chinese missiles influentially threaten forward-based US military assets with the possibility of neutralizing them in the early stages of a conflict as China's military modernization expressly targets utilizing changes in the conduct of warfare (Matsuda, 2023).

The new approach accurately pinpoints ***Tokyo's present missile arsenal***, and concerns over the legality of so-called "left-of-launch" strikes (targeting an enemy's missile before it can launch itself) have left gaps in Japanese deterrence. The most recent documents close those gaps by outlining the legal justification for counterstrike capabilities, specifying the circumstances in which Japan would be legally permitted to employ such capabilities, and modernizing existing missile stocks to enable such strikes. Key enhancements include plans for an indigenously produced missile and the recent decision to acquire U.S.-made Tomahawk Land Attack Missiles (TLAM) for use on ships of the Japanese Maritime Self-Defense Force. With these possibilities, Japan will have the technical capacity to attack military targets far inside of continental Asia, including in China, North Korea, and Russia. Notably, these documents also emphasize the significance of a new term, "Comprehensive National Power (CNP)", which, according to Richard Samuels, a professor at the Massachusetts Institute of Technology, refers to the integration of diplomacy, military power, economic power, technology, and intelligence (Ashley, 2023).

5.3 DECIPHERING THE STRATEGY

Japan’s National Security Strategy can be deciphered into three divisions as explained below.

5.3.1 TRACK ONE: BOLSETERING JAPAN’S DEFENSIVE CAPABILITIES

Based in part on an assessment that Ukraine's insufficient defense capability was what failed to discourage and deter Russia's assault, both Japan's new defense policy after its introduction in December and officials' statements coming afterwards contain stunningly hard evaluations of the JSDF's capability gaps and an acknowledgment that significant new resources would be required to rectify them. The stated goals and timeline of Japan's new defense strategy also reflect this acknowledgment: by 2027, the country should be able to take the lead in dealing with invasions against its nation and disrupt and defeat such threats while reaping the support of its ally and others; by roughly 2032, to better attain this defense objective and acquire capabilities that will enable it to disrupt and defeat invasions against its nation much earlier and a lot more effectively (Liff, 2023).

The core military budget is set to increase by about two-thirds by 2027, which is a significant difference from both Japan's 2013 strategy and the most recent (2018) National military Program Guidelines. This new development is really important. Accordingly, concerns have been raised on several occasions over the JSDF's preparedness, resilience, and sustainability in a war due to factors such as inadequate manpower, munitions, and stockpiles; passive base defenses; and cyber, space, unmanned, and artificial intelligence (AI) capabilities. Efficacious expenditure has already increased by more than 1 percent of GDP thanks to supplemental budgets in the previous couple of years, but the recently announced plan to surge investments through 2027 will take this to a whole new level. Additional "national security-related" spending (such as funding for the Japan Coast Guard, civilian R&D, and public infrastructure) will be added to the stated defense budget.

The three documents and government justifications present a convincing argument: because of the revolutionary "qualitative and quantitative" advances in regional nuclear and missile capabilities, counterfeit "saturation attacks" could easily overwhelm Japan's current missile defense systems; as a result, effective deterrence now requires the ability to stop the launches at their source. The possibility of striking even military targets on another country's territory is still debatable, but after a year of seeing PRC missiles land in Japan's Exclusive Economic Zone (EEZ) east of Taiwan and over 70 North Korean missile tests, one of which flew over Japan, a slim majority of the Japanese public supported counterstrike capabilities, provided they were used only for "self-defense."

5.3.2 TRACK TWO: STRENGTHENING US-JAPAN ALLIANCE

Japan's new military plan gives major focus to improving relations with its sole treaty partner as well. In the January 2023 policy address, Kishida listed Japan's aforementioned goals from "track one" and added, "With respect to all that I just mentioned, the Japan-US Alliance is the anchor" which is a sign of the alliance's sustained significance. Washington provided resolute support for Tokyo's new goals, anticipated increases in the defense budget, and procurement plans at the US-Japan talks in January 2023. A new era of strategic competition and China's actions as the largest strategic threat in the Indo-Pacific region and beyond were also collectively expressed by the allies. The Biden Administration's explicit extension of the US's Article V treaty commitment to "attacks to, from, or within space" was one of the notable achievements, albeit with a vague qualification with "in certain circumstances". Additionally, it gave full support to Japan's pursuit of counterstrike capabilities and promised to strengthen bilateral collaboration in order to make

efficient use of them. Counterstrikes in particular may require unprecedented cooperation and adjustments to the alliance's decades-old "shield/spear" division of labor in a possibility, in which the JSDF traditionally focuses on defending Japanese territory from attacks while the US military conducts offensive operations. In addition, they reflect the decades-long trend of the US-Japan's growing alliance as the security environment deteriorates.

5.3.3 TRACK THREE: EXTENDING DEFENSE COOPERATION WITH THIRD PARTIES

The continuous efforts of Tokyo to strengthen defense connections with significant US treaty allies and partners constitute the third key track of Tokyo's national security policy since 2013, which is also reiterated in the new military plan. Kishida has continued the work of his predecessors, making significant announcements with important US allies even before the revelation of the three papers in December. Tokyo and Canberra, for instance, signed a reciprocal access agreement in January 2022, which will make it much easier for the two militaries to visit each other and conduct exercises. In October, they also issued a significant new joint security declaration, and in November they joined Washington for the first-ever coordinated trilateral asset protection mission.

Although Japan has long sought to strengthen military relations with US partners in Europe, the invasion of Ukraine by Russia has increased the need for action. In 2017, Kishida made history by being the first Japanese prime minister to attend a NATO summit. In December, he also decided to collaborate with the UK and Italy on the development of a next-generation fighter jet, which will be Japan's most significant military project with non-US allies to date. A fresh military pact with Italy and yet another historic reciprocal access pact with the UK were concrete results (Liff, 2023).

This trend of strengthening Japanese defense connections with European friends and partners as well as US Indo-Pacific allies and partners—including South Korea, with whom Japan historically has a contentious relationship—is also accelerating. For instance, the past year has seen Japan's first-ever aerial combat exercise with important "Quad" partner India, as well as a trilateral missile defense exercise with Washington and Seoul, another new '2 + 2 dialogue' between Tokyo and a US ally (Manila), the first deployment of Japan Air Self Defense Force (JASDF) fighters to the Philippines, and several other events.

5.4 JAPAN'S NUCLEAR HEDGING

Though the readily available Japanese narration stands in contestation to any nuclear aims, the Japanese advancements in the field of nuclear energy and resources says otherwise. In recent years the overly expanded security commitments of America has made it, if not completely then to some extent, somewhat incapacitated to guarantee enhanced security to its allies. The fault of which rests not in the fact that US has reduced its nuclear crafts but on the fact that the other actors of East Asia are growing by each day. China has seen a heightened rate of economic expansion and is dominating the capitalist market. The economic edge that it is getting over the so-called super-power is pertinent to its security aims for the region which can be seen to be in full swing especially in the South China Sea theatre. On the other hand, North Korea remains ever so volatile and aggressive to all those around emitting concerns for its neighbor. In such times, it is no longer enough for Japanese to rely on this extended deterrence that USA aims to provide. Rather it has warmed up to the idea of taking initiatives such as that of nuclear hedging.

5.4.1 NEED TO EXPLORE NUCLEAR JOURNEY

For a state like Japan, it remain quite complicated to establish that Japan is currently in the pursuit of insurance to hard hedging. In order to understand that there is the necessity to generate some proof that can showcase the capabilities that the state has created to prove such as assertion right. Hence, by exploring the nuclear journey of Japan, one can comprehend how Japan has carried out insurance or hard hedging. According to the theory of Vipin, physical nuclear developments can be used to determine the nuclear posture of the state. Based upon that very understanding, we must explore how the Japanese have always explore the venues of nuclear energy even though the world has seen it as a believer of non-nuclear state.

5.4.2 NUCLEAR HISTORY OF JAPAN

Dating back to pre-WWII period, the Japanese scientists initiated a nuclear weapons program that had its failures throughout the process. The work had started parallel to the German nuclear program but it with the tragedy of Hiroshima and Nagasaki in 1945. The program was headed by Yoshio Nishina who's parallel was parallel to the contemporary of his time that was Albert Einstein. The Klein Nishina Formula was put together by the scientists and led to a successful finding of the nuclear equation (Nishina, 2013). Nishina had a Nuclear Research Laboratory which could help the nuclear scientists carry on the venture of progress. Japan was already quite keen to

catch up to the technological development of the West and was speedily acquiring the pieces of the puzzle. After war, Nishina wanted to continue with his projects and even tried seeking permission from the American authorities to use the cyclotrons for research and medical purpose (Weiner, 1979).

Some of the early investigations even revealed that ***Japan might have already gained the nuclear weapon and tested it at Hungnam***. However, the report was dismissed. In 1965-64, upon the revelation of Chinese nuclear weapon Japan pledged the Americans for permission to carry on with its nuclear designs but failed. Few years later, a letter circulated among the Japanese leadership to press for acquiring tactical nuclear weapons which also require nuclear capabilities for a state and does not demand larger strategic weapons, this however did not become a reality. However, it did reveal that the Japanese constitution permitted such efforts of nuclear possession which are for defensive capabilities. Article 9 of the constitution is seen to prohibit this venture and it is often quoted while addressing the debate. However, from a legal perspective, even the Article 9 does not discuss the plausibility or the permissibility of gaining limited nuclear capabilities for the solitary purpose of defense (Staff, 2007). Hence, nowhere is it mentioned clearly that if Japan could expand such capabilities to further the self-defense strategy without any first attack aims. That is where the legal loophole is identified revealing the space for a venture.

5.4.3 UNCOVERING THE MYTH OF NO RETALIATION

The misconception that Japanese has never exerted itself it not entirely true. The two events in 1998 showcased how Japan is very much concerned about its immediate neighbors and the regions around it. In May, the back-to-back nuclear tests of India and Pakistan brought Japanese attention upon the laxness that the international community showed on condemning such acts. The second time, which was comparatively more assertive in nature was when North Korea launched the Taepo Dong over Japan. The demonstration of ballistic capabilities led to an outcry in Japan. So much so, the Japanese Chief of Defense Agency gave away the statement, “his government would be justified in mounting pre-emptive military strikes against North Korean Missile bases.” Moreover, the Japanese conservative Sankei newspaper gave out a statement in its editorial implying cold and merciless actions on behalf of regime (Kurt M. Campbell, 2004).

5.4.4 BEHIND THE CURTAIN APPROACH

Hence, there has been sentiment to act with bold and assertive actions in order to protect the security interest of the region. And even today this class continues to exist even if it is not highlighted in international platforms. The myth that all strata of the population is on the same page is simply not true. One way or another, the leaders have been trying to enhance the Japanese capabilities behind the curtain. And the US, being an ally, has provided it with the necessary cushion by remaining oblivious to some of the facts. The superpower which manages to control the flow of information and narrative building is hence successful in making people capture the soft Japanese image.

5.4.5 A DEBATE AMONG STATE INSTITUTES

The debate among the political bodies and the security strategist regarding the need for weapons remains very much alive. In the early 2000's the Prime Minister Junichiro Koizumi gave out a statement which revealed how the Japanese leadership remains aware of the loophole as well. He said, "It is significant that although we could have, we don't". This highlights how the leadership remains well aware of its technological capabilities as well as the space that the legal realm grants it for the acquisition. Apart from that, the Japanese Prime Minister whose regime saw the advent of South China Sea Crisis during his service in 2012 gave out the statement of how Japanese constitution does necessary ban the acquisition of nuclear weapons as long as they are kept at a minimum number for tactical purpose. A similar view was shared by Yasuo Fukuda, the Chief Secretary of Cabinet on the matter (Furukawa, 2022).

5.4.6 DE-NUCLEARIZATION – A HOLLOW PEACE

The current Prime Minister of Japan Fumio Kishida recently gave a speech in which he iterated this new narrative of absolute denuclearization in order to move the world towards becoming more peaceful. However, the Prime Minister is seen to not share this view with his very own policy advisors, the rightwing political club and more importantly its defense ally the United States of America. The political opposition that the Prime Minister received reflects that the statement remains impractical in light of the current security environment of the region. And it is something that even the Japanese decision makers would reject. Japan alone cannot enable the world to denuclearize itself as it would push the world back a century where there were no nuclear weapons leading to direct violence and confrontation of conventional forces. Secondly, the argument would

prompt states such as USA to bid farewell to its nuclear possessions with which it promises Japan the extended deterrence. The unrealistic deliberations of the Prime Minister are contradictory to the nuclear nonproliferation paradox that Japan has been practicing. Moreover, it would oblige the state to reveal itself of its own nuclear capabilities which it utilizes for civilian purposes only. That would directly hamper Japan from meeting its energy demands for supporting its industry. That is how the unrealistic statement of the Prime Minister fails to address the alternate sources of deterrence and that of energy resources (Donaldson, 2022).

5.5 REVIEWING JAPANESE NUCLEAR CAPACITY

In order to qualify Japan for a hard hedger, we must revisit some of the assertions that Vipin made. According to him, in order to gauge the nuclear posture of the state, there are some conditions that the state must fulfill, and these conditions are based upon objectives undeniable facts which provide potent proof. This proof helps the observer in gauging how far the state has moved along the spectrum of acquiring nuclear weapons. To start off, we must establish whether Japan has all the pieces of the nuclear puzzle or not.

5.5.1 THE NUCLEAR RESOURCES

The first thing to recognize is that the hedger must carefully shadow its abilities as not directed for the purpose of acquiring nuclear weapons. Japan is a state that has the need to import 90% of its energy requirements. The first nuclear commercial reactor that the state acquired became functional in 1966. At the moment Japan has 33 nuclear reactors classified as operable (Profile, 2023). The Nuclear Regulation Authority has permitted the limit of 10 to work for now. However, the applications for the rest of the reactors are under review. In the light of current situation, the Prime Minister has announced that 9 more reactors shall be put to restart and 7 more by 2023. The state remains strongly committed to producing nuclear power, nuclear fuel cycle and generating 40% of its electricity by it (Large, 2016).

5.5.2 THREATS IN THE REGION

The reason why these nuclear reactors are being restarted is because of the current threat that the Japanese are facing. A total of three threats can be considered which are instigating the start of these reactors. The first is the threat posed by Russian-Ukraine war. This is a live example of how Japan is increasingly concerned about the volatile security environment that has been created in the world hence it would be an option used to uphold security (Oliveira, 2019). Although this is

an initiative taken to meet the energy demands that Russia could no longer fulfill because of the condemnation that Japan offers it. The second reason of why these nuclear reactors are being increased is because of the increased missile testing of North Korea from 2021 till 2023 making the environment increasingly insecure for Japan. (Jazeera, 2022). Thirdly, China has recently tested a long-range hypersonic missile which could reach all the way to US and the reason why this is a direct threat for Japan is because US remains the ally which is guaranteeing extended deterrence to it (Rogin, 2023).

5.5.3 A TURN-KEY NUCLEAR WEAPON

Apart from the threats, the third thing a hard hedgers needs to have been a turnkey nuclear weapon which means we must consider the resources it has and understand whether they can be assembled into a nuclear weapon. To observe that there is a need for the position of nuclear resources. Currently, Japan possesses 46.1 metric tons of plutonium at home. This amount has increased by 0.6 tons from the year 2020. The Japan Atomic Energy Commission has discussed about reducing these reserves. The plutonium that is extracted from the spent nuclear fuel generated at nuclear plants. All these reserves are kept under the label of Japan's civilian power program (Shimbun, 2021)

5.5.4 SEPARATED PLUTONIUM RESERVOIRS

The controversial feature is that of the separated plutonium reservoirs which are kept in storage. Moreover, another detail is that of the advanced fuel cycle facilities that Japan possesses. Once the reactor grade plutonium is separated from the fuel, it becomes usable for nuclear weapons. The consider the division, 6.7 MT of the stocks are that of civilians whereas 38 MT of plutonium stocks are stored outside the country (Report, September, 2008). These stockpiles have enough potential to make around 1000 nuclear weapons. Hence, the state has the resources, the reactors, and the formula to put together all these ingredients. Currently the largest plant possesses is that of Rokkasho Nuclear Fuel Reprocessing Facility which has the ability to accommodate and handle powerful nuclear weapons. The criticism that came on this plant revolved around the fact that Japan is building bomb factories under the banner of producing energy for fulfilling its fuel needs (Johnston, 2020).

5.5.5 THE BLUEPRINT FOR THE NUCLEAR WEAPON

Hence the state has acquired the materials. The blueprint of the weapon was established long before the nuclear incident and was called the Klein Nishina Formula. Hence the state qualifies for nuclear latency and is a threshold state (Panofsky, 2007) . It qualifies as a state which is in the condition of possessing nuclear weapons which can be built quickly but have not been yet. Another phrase used to explain this state is the "being one screwdriver's turn" away from obtaining a bomb. That is how prepared Japan is being classified as in terms of the possessions.

5.6 A NUCLEAR ASSESSMENT OF NUCLEAR CONTROL INSTITUE

According to Paul Leventhal, head of Nuclear Control Institute, which is a non-profit organization that acts as a watchdog of Washington has put forward the assertion that Japan in one is producing all the ingredients necessary for nuclear weapon. It even goes on to asserting how Japan is a little more that screwdriver away and could be weeks to months if not days away from getting one. This qualifies Japan for the fifth condition of hard hedger where it is explicitly not carrying out proliferation at present. But it firmly holds the position explicitly where it doesn't say to never acquire one (Brumfiel, 2004).

5.6.1 DECLARATION OF RED LINE

Another condition that a hard hedger must qualify is that of declaration of its red line. Although a state like Japan doesn't showcase itself as assertive as it negates the image it has created in the international community. The image of peacemaker backed by its nuclear allergy. Despite that, it has a state which is concerned about its own sovereignty due to the growing militaristic designs of its neighbors. In 2021, Japan was seen to be drawing a red line around an Island chain which was claimed by China. This was a response to Beijing's aggressive military posture that it was observing in the South China Sea. The world saw it as a stage for a potential showdown between the two powers, however the confrontation has not yet manifested. But this revealed to the observers that Japan is not ready to comprise on this issue and regards it as a serious threat to its territorial interest in the region. The Japanese Minister Nobuo Kishi once gave this statement which clarified that the Senkaku Islands which were known as the Diaoyu Islands in China were Japanese territory without any question. Moreover, the minister iterated that they would defend by the Chinese threats. The severity of this threat can be realized by how it has instigated Japan to carry out a military buildup by expanding itself Defense forces, introducing the F-35 fighter jets,

building new destroyers, submarines, and missiles. Hence a chunk of its budget is being dedicated to protecting its interest at sea. This identifies how Japan has drawn a red line which is something a hard hedger is identified to possess. These islands are where Japan extracts 90% of its energy resources hence it remains crucial to the survival of its industry upon which its economy is dependent (Essig, 2021).

5.6.2 THE NATIONAL STRATEGIC DISCUSSION

Nuclear energy has always been a part of national strategic priority since 1973. Although these reactors were shut down after the Fukushima accident. But now with the rising threats the reactors are becoming functional. Japan has been moving towards taking policy initiatives which could not become a reality until a few decades ago. It has been removing bans from defense related export to allow it to closely collaborate with its allies. Moreover, the first ever National Security Strategy is being issued by the National Security Council of Japan. The Kishida government announced the update for revision of National Defense Program Guidelines as well as Mid -Term Defense Program between 2013 to 2018 (Nakanishi, 2015).

5.6.3 A CABINET BACKING

These updates are an effect of the increasing shifts in the strategic environment of the region. This is a clear sign of how the executive authorities are debating over their defense capabilities and are highly concerned about how they should proceed with their security aims. And side by side they are activating their nuclear facilities which are not only capable of fulfilling power needs but also granting them one of the most dangerous weapons to work with. In 2023, the Cabinet approved the replacement of old reactors with new ones and have also extended the period of operation of its nuclear reactors abolishing the 60 years' operating limit. Which means that even the executive bodies are keeping all the options of Japan very much alive even if it is under the cover of energy security (WNN, 2023).

5.6.4 QUALIFYING FOR HARD HEDGER

This brings us to the point where we can qualify Japan to be a state showcasing the signs of a hard hedger. The only thing that stands between this hard hedger and its nuclear weapon is the state itself which is what Vipin iterated as well. Now, Japan is at a place where it has mastered the nuclear development and all that stands in its way is a security concern that would tip it off to move towards gathering a weapon. Again, this might seem like impossible for a state that is

focused on perpetuating the non-nuclear image however the strategic environment is tightening with each day leaving Japan concerned about the extended deterrence that US promises. Moreover, if China were to attack USA first then it shall diminish the only layer of protection that Japan has against its neighbor. It shall leave the state with no immediate defense but its own capabilities which it portrays to fall short of fulfilling a nuclear weapon necessity. However, this shall not be the case as the state possesses all the ingredients for the weapon of mass destruction. The paranuclear state hence remains dependent upon the final call which shall only be sounded in case of an attack from its neighbors damaging its sovereignty.

CHAPTER 6

POSSIBLE IMPLICATIONS OF A NUCLEAR JAPAN

6.1 NUCLEAR BOMB IN THE BASEMENT

Japan has the greatest civilian stockpile of separated plutonium among all the states that do not possess nuclear weapons. This comprises a stockpile of roughly 300 kilograms of plutonium that it acquired from the United States and Great Britain in the 1960s in addition to 45 tons of separated plutonium produced by its civilian nuclear project. With this alone, Japan has the technological capacity to produce thousands of nuclear weapons. Leaders in Japan are aware that the nation has access to this information. In actuality, a declassified 1969 report reveals that the Japanese government recognized this potential and used it as leverage, declaring that Japan would maintain its nonnuclear status while still possessing the financial and scientific means to "go nuclear" at any time. According to the text, this potential ensures Japan's security (Kase, The Costs and Benefits of Japan's Nuclearization: An Insight into the 1968/70 Internal Report, 2001).

6.2 DOUBTS REGARDING CURRENT STATUS QUO

However, the aforementioned strategy continues to be implemented in contemporary times, albeit with concerns regarding the sustainability of Japan's self-restraint. Prominent Japanese government officials, including Taro Aso, the Minister of Foreign Affairs, and Shoichi Nakagawa, the leader of the Liberal Democratic Party's Policy Research Council, had expressed doubts regarding the current status quo. Some individuals have proposed that Japan should take tangible actions towards nuclearization, as recommended by former Tokyo governor Shintaro Ishihara, who stated that failure to exhibit greater military might would result in a loss of international influence. The Shinzo Abe administration in Japan had a nationalist objective, which was reflected in the cabinet's 2014 resolution to amend Article Nine of the Constitution to permit collective self-defense. These public declarations are particularly alarming. China considers Japan to be a possible nuclear danger because of its concealed nuclear weapons capabilities and some Japanese politicians' desire for nuclearization (Haynes, 2016).

6.3 A CONCERN FOR CHINA

China has expressed concerns regarding a potential modification in Japan's nuclear policy, which could be aimed at asserting its territorial rights over a contested area. China is currently in the

process of revising its nuclear policy and modifying its force structure in order to align with the expected strategic shift. The assertion made by Japan regarding its possession of the Senkaku/Diaoyu islands is considered to be the most significant concern in this context. Former Governor Ishihara has once again provided his perspective in the regard, asserting that China "wouldn't have dared lay a hand on the Senkakus" if Japan had nuclear weapons. During the US-China Strategic Dialogues, Chinese participants expressed concern regarding the Senkaku/Diaoyu islands, citing the potential for Japan to utilize nuclear coercion as a means of gaining leverage in this situation. A Chinese researcher Wang Chi Wen warned that granting Japan nuclear weapons would be like giving a tiger wings and significantly endanger East Asia's peace and stability (Haynes, 2016).

Some might argue that Japan's strategic position wouldn't improve if it were to acquire defensive nuclear weapons because such weapons wouldn't give Japan the ability to use affirmative force to get other countries to act; instead, they'd only allow Japan to take reactive measures in the event of a threat. This argument, however, leaves out a crucial component of the solution: obtaining defensive nuclear weapons may aid in Japan joining NATO as the first Asian member state. As China's power rises, tensions in the area are rising, and Japan's acquisition of nuclear weapons and eventual membership in NATO will help it become a stabilizing force (Pickar, 2016).

6.4 TRIGGERING A POTENTIAL ARMS RACE

In Northeast Asia, there may be a higher chance of an arms race and a security crisis if Japan pursues nuclear weapons (Kim, 2017). The persistent territorial conflicts and enduring animosity among Japan, China, and South Korea have already had an impact on the adversarial geopolitical climate in the region. The potential acquisition of nuclear armaments by Japan has the potential to exacerbate current conflicts and increase regional instability. This would further prompt other nations to pursue nuclear armament as a means of deterrence (Deng, 2018). In the event that Japan were to acquire nuclear weapons, North Korea would perceive this as a direct threat and respond by enhancing its own nuclear capabilities. If Japan's acquisition of nuclear weapons is perceived as a threat to China's strategic interests, it is possible that China may experience pressure to increase its nuclear arsenal.

The arms race would also be disastrous for the region's economy and society since it would divert resources from programs aimed at improving people's lives and expanding opportunities

(Cristiano, 2017). Moreover, the escalation of the arms race may exacerbate local hostilities, thereby increasing the likelihood of a potentially catastrophic confrontation. In addition, the acquisition of nuclear weapons by Japan has the potential to generate a regional security dilemma, whereby states may perceive the need to enhance their own security, thereby causing apprehension among other states (Deng, 2018). The acquisition of nuclear weapons by Japan may be perceived as a potential threat by China and South Korea, leading to an increase in their military capabilities. This could result in heightened security concerns for Japan. The dilemma pertaining to security could potentially result in a recurring pattern of suspicion and the buildup of weaponry, thereby increasing the probability of conflict in the region.

6.5 A BLOW TO THE SPIRIT OF NON-PROLIFERATION

One of the first and foremost consequence of Japan's acquisition of nuclear power would be a war that could have potential to end East Asian interest. How? As explained in the previous chapter, Japan remains a para-nuclear state that is just a few months away from gathering a fully functional nuclear bomb in light of the fissile materials and the other physical components that it possesses for gathering the nuclear weapon. When the environment of the East Asian region worsens such as an attack by North Korea on the Japanese territory, an attack of China on the territory of USA which is the guarantor of security to Japan, the state would move on to acquiring the power that ensure independent nuclear deterrence to it. Even if some other threat pushes the state towards acquiring nuclear arsenal, the US nonproliferation policy would be severely damaged as one of its allies would reject it. Hence, it would become tricky for the state of US to bring the non-nuclear states on board with the aim of no nuclear proliferation. Countries such as North Korea and China cannot be convinced to give up their nuclear programs in order to preserve the peace of the region.

6.6 A REJECTION OF US NUCLEAR UMBRELLA

That is why the sanctity NPT shall be damaged. The advocate of peaceful use of nuclear power would exit the circuit and relieve itself of any IAEA inspections. This would have a domino effect over other allies of the US. Japan being one of the closest allies by doing nuclear proliferation would be rejecting the US extended deterrence creating a doubt in the mind of other states. Soon those states would embark upon their own missions to gather nuclear bombs dismantling the nuclear umbrella of USA (Chanlett-Avery, 2009). This shall undermine the US commitments to making the world step further towards a nuclear race.

6.7 AN EAST ASIA ENDING WAR

Once Japan acquires nuclear arsenals a nuclear arms race would initiate with China, South Korea, Taiwan and even actors outside the region such as India and Pakistan. This act of acquiring nuclear deterrence by the state that has been propelling anti-nuclear narrative for so long would lead to other non-nuclear states considering the option too. The entire world would comprehend tis change as something of a need of 21st century security concerns. After the erosion of the US-Japanese alliance the security environment of East Asia would change. Four states pointing at each other with nuclear heads would emerge ready to press the button any minute in order to deter their enemy from personal gains or all-out war. An increased militarization will be observed especially in the disputed area of South China Sea.

In essence, the East Asian region would lose its ***geopolitical balance*** because of the concentration of nuclear energy in the region. USA would no longer be serving as protector of Japanese security interests in the region. That will not only mean the fall of US presence in the region if it rejects the Japanese choice but would also mean the strengthening of Chinese influence. Why? Because even if Japan increases it military budget spending, even if its acquires the nuclear weapons to defend itself, it shall never match the capacity of China and would not be a symmetric pattern. Hence the balance shall be tipped off in the favor of China. The region would crown the hegemonic position to it and the region would be destabilized. The new security dilemmas in the region would lead to increased military competitiveness that could or could not lead to a nuclear war between the Japan and the hostile neighbors. The 21st century nuclear war would have drastic effects that clearly end all prospects of peace and progress in the region leading to irrecoverable damage. That would be one implication of Japanese nuclearization.

6.8 AN ALTERNATE REALITY – RESTORING BALANCE OF POWER IN EAST ASIA

An alternate reality to Japan going nuclear can be divided into three categories. Japan going nuclear could also present a restoration of balance in the region and could lead to its strengthening.

6.8.1 INDEPENDENT JAPAN

First of all, Japan gathering nuclear weapons would grant it independency from the Western influences. It would lead to Japanese self-reliance for dealing with its own security concerns. The acquisition of nuclear weapons will grant Japan the military backing that it always lacked. Even though the USA always covered it in the nuclear umbrella, the lack of geographical contiguity is

a comprise on timely response to any kind of violation by the hostile neighbors. The Japanese Nuclear Deterrence would enhance emerge as a new challenge to Chinese and North Korean aims in the region making the environment increasingly competitive. Japan having mastered the fissile material production would present itself as a deterrent player to all those looking to profess their influence in the region. This shall have a positive impact on bolstering the confidence of the state. The drawback, however, would be a public backlash which could only be countered by the state communicating the necessity of the bomb to its civilians and engineering the rationalization of masses in favor of the weapon.

6.8.2 COUNTER FORCE FOR CHINA IN THE REGION

The second impact would a counter force to Japan. With another power in the region, China's increasingly influence will be balance to a great extent. It would have a new challenge in the face of nuclear Japan. Now the concentration of China would be divided upon its neighbor. Not only will it prove favorable for Japan but also other states in the region with no nuclear capabilities that remain at the mercy of China. With a new nuclear power, the states will begin to ally themselves with Japan and help it create a strengthened alliance against China. Hence, a group of countries coupled together would put the Chinese expansionist plan on halt. Through it is a little farfetched to claim, it might even lead to negotiation on the existing issues of region such as the dispute over sea of South China.

6.8.3 DE-ENCROACHMENT OF USA

The de-encroachment of USA can be predicted from the region of East Asia if not completely then to a certain extent as a result of Japanese acquisition of nuclear arsenal. That does not necessarily mean a breakage in the US-Japan ties (Kase, 2001). A period of condemnation is definitely expected as soon as Japan's weapon reveals. However, it will still leave Japan as the potential nuclear ally of USA in the region. That way the East Asian region shall be strengthen as it would have a state from within the region that would collaborate and coordinate on behalf of the region with USA. It shall clearly reduce the US hold providing region with its own balancing (Japan) and counter balancing (China) forces that have geographical contiguity and eligibility to dictate the future of East Asia. Japan then would become hence alleviate from its previous position of a client and help reduce any foreign and extra territorial influences. There is a possibility that the USA being relieved of its Japanese commitments would lead Japan be its watchdog in the region. That

would grant it a direct sight in the land however, this is an optimistic take on the initiative and the former realist interpretation might take precedence over it.

CHAPTER 7

CONCLUSION

The 21st century has seen the emergence of multiple nuclear policies that have been adopted by states in order to address the security threats of the modern world. These policies have led to a question and examination of the capabilities of these states regarding their assets and plans for their nuclear future. One of these questions were posted by Vipin Narang which led to his journey towards designing a model that can guide an observer towards gaining an understanding of how the nuclear capabilities of states can enable them to create deterrence.

Under the Nuclear Optimization theory, he prescribed the conditions that states need to fulfill in order to qualify for the postures of hedging, sprinting, hiding and sheltered pursuit. The region under study for this particular exploration is that of East Asia which has been under Vipin's observation as well. The region has two hostile actors including North Korea and China whose nuclearization has had increasing impacts on the security of the region. These two actors have contributed towards the creation of security dilemmas for actors in the region such as Japan.

With the help of Vipin's postulate, the study was able to decipher the effect of this regional nuclearization in Japan. With his framework the possibility of Japan being a hard hedger was exhausted. By no means does the theory use abstract explanations to justify a stance for accusing the state of possessing nuclear armaments. It goes on by performing a careful observation like the study did such as taking into account the uranium or plutonium reservoirs, the capability of the state to fuse them into a nuclear weapon, the discourse regarding the option of nuclearization, the technical needs of the process such as reactors, delivery vehicles and blueprints. Japan checks the list for all of these necessities and in order to preserve the elements of surprise it uses the American nuclear umbrella for covering its tracks adding up to the plan.

The very foundation of Japanese nuclear strategy which is built on no-nuclear weapons policy provides the state of Japan a perfect cover to carry out the strategy of hedging. Japan intelligently uses the banner of nuclear disarmament in order to pressurize its enemy in the region from continuing any further activities in the region that can jeopardize its security. It has skillfully put together this strategy in order to denuclearize the region of any nuclear capability while its protector, the Untied States of America stands to have its nuclear arsenals all ready and pointed

towards the enemy. Not only that, but efforts were also made to welcome the installation of American nuclear arsenal in the land of Japan which stands in opposition to the principles Japan preaches in the rest of the world. The paradox of the Japanese no nuclearization sentiment is clear as it stands to support USA in its extended nuclear deterrence efforts which is the very state that inflicted such a grave casualty on two of its cities.

Apart from that, the Japan has mastered the process of nuclearization as it uses plutonium reserves and process it to meet its energy needs. Moreover, it has kept is reserves in other states in Europe which clearly highlights the abundance of volatile material that it possesses. The 2011 Fukushima nuclear disaster was a revelation of how Japan is not oblivious to the power that nuclear material can grant it. With the greatest civilian stockpile, it continues to hold the technological capacity to produce thousands of nuclear weapons. This nuclear bomb in the basement, as some would say, could lead to a clash of Japanese and American interests in the region which might be the thing keeping the state from revealing its designs. However, doing so would lead Japan to become a powerful actor with its independent capabilities in the region. It would grant the East Asian region a balancer to counter the weight of China and North Korea. Once the other states of the region observe it, they might come to ally with Japan against the aggressors. In the second scenarios, a revelation like this could led to mass destruction in the region as it might instigate a nuclear war between the three players leading the East Asian region towards a tragic end.

REFERENCES

Auslin, M. (2016). Japan's New Realism: Abe Gets Tough. *Foreign Affairs*, 125-134.

Bowers, I. (2022). Counterforce Dilemmas and the Risk of Nuclear War in East Asia. *Journal for Peace and Nuclear Disarmament*, 6-23.

Murano, M. (2021). The Impact of New Capabilities on the Regional Deterrence Architecture in North-East Asia. In A. O. Stephan. F, *Alliances, Nuclear Weapons and Escalation* (pp. 141-150). Canberra: ANU Press.

Romei, S. (2019). Japan and the Nuclear Challenge in a New Era of Rising Tensions. *JOURNAL OF INDO-PACIFIC AFFAIRS* , 66-84.

Satake, T. (2021). Japan: The Political Cost of Deterence . In A. O. Stephan F., *Alliances, Nuclear Weapons and Escalation: Managing Deterrence in the 21st* (pp. 89-100). Canberra : ANU Publisher.

Brad, R. (2001). East Asia's Nuclear Future: A Long-Term View of Threat Reduction. *Institute for Defense Analyses*.

Christensen, T. J. (1999). China, the U.S.-Japan Alliance, and the Security Dilemma in East Asia. *International Security, 23(4),*, 49–80.

Jong-dall Kim, J. B. (1996). *The Asian Atom: Hard-Path Nuclearization in East Asia.* New York: Routledge.

MACK, A. (1995). A NUCLEAR FREE ZONE FOR NORTHEAST ASIA . *The Journal of East Asian Affairs, 9(2), ,* 288–322.

Twomey, C. P. (2011). Asia's Complex Strategic Environment: Nuclear Multipolarity and Other Dangers. *Asia Policy, 11,* 51–78.

Yamaguchi, N. (2015). The Utility of Nuclear and Conventional Forces in the Second Nuclear Age: . *A Japanese Military Perspective. Asia Policy, 19, ,* 21–27.

Association, W. N. (2019, December). *World nuclear power reactors & uranium requirements, December 2019*. Retrieved from World Nuclear Association : https://world-

nuclear.org/information-library/facts-and-figures/world-nuclear-power-reactors-archive/reactor-archive-december-2019.aspx

Bell, M. S. (2015). Beyond Emboldenment: How Acquiring Nuclear Weapons Can Change Foreign Policy. *International Security Vol. 40, No. 1*, 87-119.

Bell, M. S. (2021). *Nuclear Reactions: How Nuclear-Armed States Behave.* New York: Cornell University Press.

Betts, R. K. (1987). *Nuclear blackmail and nuclear balance.* Washington: Brookings Institution.

Burr, A. C. (2015, April 15). *The U.S. Discovery of Israel's Secret Nuclear Project*. Retrieved from The National Secuirty Archive: https://nsarchive2.gwu.edu/nukevault/ebb510/

Chou, V. N. (2014). "The state of nuclear power two years after Fukushima – the ASEAN perspective". *Applied Energy, vol. 136*, 838-848.

David Sobek, D. M. (2012). “Conventional Wisdom? The Effect of Nuclear Proliferation on Armed Conflict, 1945-2001.” . *International Studies Quarterly 56, no. 1* , 149–62.

Fair, C. C. (2014). *Fighting to the End: The Pakistan Army's Way of War.* Oxford: Oxford University Press.

Fayazmanesh, S. (2008). *The United States and Iran: sanctions, wars and the policy of dual containment.* Routledge.

Fuhrmann, M. (2012). *Atomic Assistance: How “Atoms for Peace” Programs Cause Nuclear Insecurity 1st ed.* New York: Cornell University Press.

Gavin, F. J. (2015). Strategies of Inhibition: U.S. Grand Strategy, the Nuclear Revolution, and Nonproliferation. . *International Security 2015; 40 (1)*, 9–46.

Holslag, J. (2016). Hedging the hard way: Russia’s response to world disorder. *Global Affairs, 2:2*, 165-176.

Hymans, J. E. (2010). When Does A State Become A “Nuclear Weapon State”? *The Nonproliferation Review, 17:1*, 161-180.

Hymans, J. E. (2012). *Achieving Nuclear Ambitions: Scientists, Politicians, and Proliferation.* Cambridge : Cambridge University Press.

IAEA. (2009-2022). *Research Reactor Database*. Retrieved from IAEA.org: https://nucleus.iaea.org/rrdb/#/home

Jonter, T. (2016). *The Key to Nuclear Restraint: The Swedish Plans to Acquire Nuclear Weapons During the Cold War.* London: Palgrave Macmillan London.

Kapur, S. P. (2007). *Dangerous Deterrent: Nuclear Weapons Proliferation and Conflict in South Asia.* Redwood City: Stanford University Press.

Kreps, M. F. (2010). Targeting Nuclear Programs in War and Peace: A Quantitative Empirical Analysis, 1941–2000. . *The Journal of Conflict Resolution, 54(6),* 831–859.

Lowenhaupt, H. S. (1969). *On the Soviet Nuclear Scent (The USSR's Early Atomic Program).* Digital Public Library of America.

Mukhatzhanova, W. C. (2010). *Forecasting Nuclear Proliferation in the 21st Century, Volume 2 A Comparative Perspective.* Redwood: Stanford University Press.

Narang, V. (2006, October 10th). *Vipin Narang Profile*. Retrieved from Paul and Daisy Soros Fellowship for New Americans: https://www.pdsoros.org/meet-the-fellows/vipin-narang

Narang, V. (2013). What Does It Take to Deter? Regional Power Nuclear Postures and International Conflict. *The Journal of Conflict Resolution 57, no. 3,* 478–508.

Narang, V. (2014). *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict.* New Jersey : Princeton University Press.

Narang, V. (2016). “Strategies of Nuclear Proliferation: How States Pursue the Bomb.”. *International Security 41, no. 3* , 110–50.

NEA. (2019). *The Costs of Decarbonisation: System Costs with High Shares of Nuclear and Renewables.* Paris: OECD Publishing.

Reiss, M. (1995). *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities.* Washington: Woodrow Wilson Center Press.

Richelson, J. T. (2006). *Spying on the Bomb: American Nuclear Intelligence from Nazi Germany to Iran and North Korea.* New York: W. W. Norton & Company.

Shaw, D. B. (2014). Book Review: Posture Matters, but Stability Matters More. In V. Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (p. 360). New Jeresy : Princeton University Press.

Shultz, G. P. (2007). *How Do we Make use of the Zia Visit to Protect our strategic Interests In the Face of Pakistan's Nuclear weapons Activities.* Washington: CIA.

Tkach, M. F. (2015). Almost nuclear: Introducing the Nuclear Latency dataset. *Conflict Management and Peace Science, 32(4),* 443–461.

Vipin. (2013). What Does It Take to Deter? Regional Power Nuclear Postures and International Conflict. *The Journal of Conflict Resolution 57, no. 3,* 478–508.

Xinxin Yang, B. C. (2022). "Review on Optimization of Nuclear Power Development: A Cyber-Physical-Social System in Energy Perspective,". *Journal of Modern Power Systems and Clean Energy, vol. 10, no. 3,* 547-561.

Brown, G. C. (2021). Understanding the Risks and Realities of China's Nuclear Forces. *Arms Control Association*.

Chaesung, C. (2017). The North Korean Nuclear Threat and South Korea's Deterrence Strategy. In M. D. Kim Sung Chull, *North Korea and Nuclear Weapons-Entering the New Era of Deterrence* (pp. 113-128). Georgetown University Press.

David Albright, C. G. (1998). Taiwan: Nuclear nightmare averted. *Bulletin of the Atomic Scientists,* 54-60.

Fravel, F. S. (2015). Assuring Assured Retaliation-China's Nuclear Posture and US-China Strategic Stability. *International Security,* 7-50.

Guthe, K. (2011). Nuclear Weapons Acquisition and Deterrence. *Comparative Strategy,* 486-492.

James Timbie, A. J. (2021). A large number of small things: A porcupine strategy for Taiwan. *The Strategists,* 84-93.

Klingner, B. (2022). *The Troubling New Changes to North Korea's Nuclear Doctrine.* Washington: The Heritage Foundation.

Min-hyung, K. (2020). Why Nuclear? Explaining North Korea's Strategic Choice of Going Nuclear and its Implications for East Asian Region. *Journal of Asian and African Studies*, 1-15.

Narang, V. (2015). Nuclear Strategies of Emerging Nuclear Powers: North Korea and Iran. *The Washington Quarterly*, 73-91.

Roehrig, T. (2017-18). The U.S. Nuclear Umbrella over South Korea: Nuclear Weapons and Extended Deterrence. *Political Science Quarterly*, 651-684.

Vipin, N. (2015). Nuclear Strategies of Emerging Nuclear Powers: North Korea and Iran. *THe Washington Quarterly*, 73-91.

Warden, J. K. (2017). *North Korea's Nuclear Posture-An Evolving Challenge for US Deterrence.* France: Ifri.

Zhongmao, G. (2018). Nuclear Development in East Asia: A Chinese Perspective. In H. Sokolski, *Alternative East Asian Nuclear Futures, Volume II: Energy Scenarios* (pp. 181-215). Arlington: Nonproliferation Policy Education Center.

Schreer, B. (2015). China's Development of a More Secure Nuclear Second-Strike Capability: Implications for Chinese Behavior and U.S. Extended Deterrence. *Asia Policy 19*, 14-20.

Beckley, M. (2015). "The Myth of Entangling Alliances: Reassessing the Security Risks of U.S. Defense Pacts." International Security 39 (4): 7–48.

Radzinsky, B. (2018). Nuclear Risks in Northeast Asia: Opportunities and Challenges for Extended Deterrence and Assurance. JOURNAL FOR PEACE AND NUCLEAR DISARMAMENT, 1(2), 363–382.

John K. Warden, "North Korea's Nuclear Posture: An Evolving Challenge for U.S. Deterrence", Proliferation Papers, Ifri, March 2017.

N. Vipin & N. Miller . (2018). North Korea Defied the Theoretical Odds: What Can We Learn From Its Successful Nuclearization? Carnegie Endowment for International Peace, 1–18.

Abe, S. (2017). *Solidarity against the North Korean threat.* New York : The New York Times.

CSIS, P. F. (2010). Anchors for an Alliance Adrift: The Third US-Japan Strategic Dialogue. *Issues and Insights, Vol. 10-No. 18* , 1-32.

Defense, D. o. (2010). *Quadrennial Defense Review Report.* Washington : Department of Defense.

Defense, J. M. (2009). *The Defense of Japan* . Tokyo: Japan Ministry of Defense.

DOD. (2010). *Nuclear Posture Review Report.* Washington: U.S. Department of Defense.

Gady, F.-S. (2018, December 19). *Japan Set to Become World's Second Largest Operator of F-35 Stealth Fighters*. Retrieved from https://thediplomat.com/: https://thediplomat.com/2018/12/japan-set-to-become-worlds-second-largest-operator-of-f-35-stealth-fighters/

Glosserman, B. (2006). Straight Talk About Japan's Nuclear Option. *Pacific Forum CSIS Honolulu, Hawaii (No. 50A).*

Iwata, S. (2015). *Japan's Defence Policy and Deterrence.* Yokosuka: National Defense Academy, Japan Ministry of Defens.

Katagiri, N. (2020). Japanese Concepts of Deterrence. In F. O. Sweijs, *Deterrence in 21st Century-Insights from Theory and Practice* (pp. 201-214). Hague: Springer.

Kawaguchi, G. E. (2009). *Eliminating Nuclear Threats.* Tokyo: International commission on nuclear non-proliferation and disarmament.

Kiglics, B. (2021). Japan's Asia–Pacific Diplomacy in the Twenty-First Century: Empty Rhetoric or a New Paradigm? *From Asia-Pacific to Indo-Pacific: Diplomacy in a contested region*, 115-142.

Osinga, F. (2020). Japanese Concepts of Deterrence. *NL ARMS Netherlands Annual Review of Military Studies* , 201–214.

RIPS. (2018, August 13). *President Nishihara answered the interview of Korean Arirang TV.* Retrieved from Research Institute for Peace and Security: https://www.rips.or.jp/en/archives/1523/

Satoh, Y. (2009). *Agenda for Japan–US Strategic Consultations* . Tokyo: International Symposium on Security Affairs.

SUGIO, T. (2017). *Redefining Strategic Stability: A Japanese View.* Washington D.C.: Carnegie Endowment for International Peace.

Tow, W. T. (2015). The trilateral strategic dialogue, minilateralism, and Asia-Pacific order building. . *US-Japan-Australia Security Cooperation*, 23-35.

Ueki, C. K. (2020). Japan's China strategy. . *Security Challenges, 16(3)*, 58-63.

Ashley, R. (2023). Japan's New National Security Strategy is Making Waves. *Foreign Policy Research Institute*.

Liff, A. p. (2023). Kishida the Accelerator: Japan's Defense Evolution After Abe. *The Washington Quarterly*, 68-73.

Matsuda, T. (2023). Japan's Emerging SecurityStrategy. *The Washington Quarterly*, 94-96.

Pavey, A. (2023). Deterrence by Denial: Japan's New Strategic Outlook • Stimson Center. Stimson Center.

Policy Speech by Prime Minister KISHIDA Fumio at the Johns Hopkins University School of Advanced International Studies (SAIS) | Prime Minister's Office of Japan. (2023, January 13). Prime Minister's Office of Japan. https://japan.kantei.go.jp/101_kishida/statement/202301/_00005.html

Brumfiel, G. (2004). We have the technology. *Nature volume 432*, 432–437.

Donaldson, M. (2022, AUG 17). *Kishida, 'PM from Hiroshima', is Shifting Japan's Long-Standing Pro-Nuclear Weapons Posture*. Retrieved from The Wire: https://thewire.in/world/fumio-kishida-japan-nuclear-weapons-stance

Essig, B. L. (2021, September 16). *Japan's defense minister draws red line in island dispute with China*. Retrieved from CNN World: https://edition.cnn.com/2021/09/15/asia/japan-defense-minister-kishi-china-interview-intl-hnk-ml/index.html

Furukawa, H. I. (2022, June 2). *Not Going Nuclear: Japan's Response to North Korea's Nuclear Test*. Retrieved from Arms Control Association: https://www.armscontrol.org/act/2007-06/features/not-going-nuclear-jaan%E2%80%99s-response-north-korea%E2%80%99s-nuclear-test

Holslag, J. (2016). Hedging the hard way: Russia's response to world disorder. *Global Affairs, 2:2*, 165-176.

Jazeera, A. (2022, Oct 1). *North Korea fires ballistic missiles in latest tests amid tension*. Retrieved from Al Jazeera: https://www.aljazeera.com/news/2022/10/1/north-korea-fires-suspected-ballistic-missiles-in-latest-tests

Johnston, E. (2020, May 31). *Aomori's Rokkasho nuclear plant gets green light but hurdles remain*. Retrieved from Japan Times: https://www.japantimes.co.jp/news/2020/05/31/national/social-issues/aomoris-rokkasho-nuclear-plant-gets-green-light-hurdles-remain/

Jonter, T. (2016). *The Key to Nuclear Restraint: The Swedish Plans to Acquire Nuclear Weapons During the Cold War.* London: Palgrave Macmillan London.

Kurt M. Campbell, R. J. (2004). *The Nuclear Tipping Point: Why States Reconsider Their Nuclear Choices.* Massachusetts : Brookings Institution Press.

Large, J. H. (2016). *The Actual and Potential Development of Nuclear Weapons Technology in the Area of North East Asia (Korean Peninsular and Japan).* Chicago: LARGE & ASSOCIATES.

Nakanishi, H. (2015). Reorienting Japan? Security Transformation Under the Second Abe Cabinet. *Vol. 39, No. 3, Special Issue: The Abe Effect in Regional International Order: Japan and Asia*, 405-421. Retrieved from https://www.mod.go.jp/: https://edition.cnn.com/2021/09/15/asia/japan-defense-minister-kishi-china-interview-intl-hnk-ml/index.html

Nishina, O. K. (2013). On the scattering of radiation by free electrons according to Dirac's new relativistic quantum dynamics. *Z. Physik, 52* , 853–868.

Oliveira, H. A. (2019). Japan: A Nuclear State? *Bras. Polít. Int. 62 (1)*, 1-12.

Panofsky, W. K. (2007, June 14). *Capability versus intent: The latent threat of nuclear proliferation.* Retrieved from Bulletin of the Atomic Scientists: https://thebulletin.org/2007/06/capability-versus-intent-the-latent-threat-of-nuclear-proliferation-2/

Profile, C. (2023, February). *Nuclear Power in Japan*. Retrieved from https://world-nuclear.org/:/information-library/country-profiles/countries-g-n/japan-nuclear-power.aspx

Report, I. (September, 2008). *Global Fissile Material Report 2008: Scope and Verification of a Fissile Material (Cutoff) Treaty.* Princeton: The International Panel on Fissile Materials (IPFM).

Rogin, J. (2023 , April 13). *The most shocking intel leak reveals new Chinese military advances*. Retrieved from The Washington Post: https://www.washingtonpost.com/opinions/2023/04/13/china-hypersonic-missile-intelligence-leak/

Shimbun, M. (2021 , July 10). *Japan's plutonium stockpile climbs to 46.1 tons in 2020, first rise in 3 years*. Retrieved from The Mainichi : https://mainichi.jp/english/articles/20210710/p2a/00m/0na/018000c

Staff, R. (2007, JANUARY 20). *Japan can hold nuclear arms for self-defense: govt*. Retrieved from Reuters: https://www.reuters.com/article/us-japan-nuclear-idUST4792620061114

Weiner, C. (1979). *Bulletin of the Atomic Scientists.* New York: Taylor and Francis.

WNN. (2023, February 10). *Cabinet approves change in Japanese nuclear policy*. Retrieved from World Nuclear News: https://www.world-nuclear-news.org/Articles/Cabinet-approves-change-in-Japanese-nuclear-policy#:~:text=Japan's%20Cabinet%20has%20approved%20a,from%2040%20to%2060%20years

Haynes, S. T. (2016). China’s Nuclear Threat Perceptions. *Strategic Studies Quarterly* , 39-42.

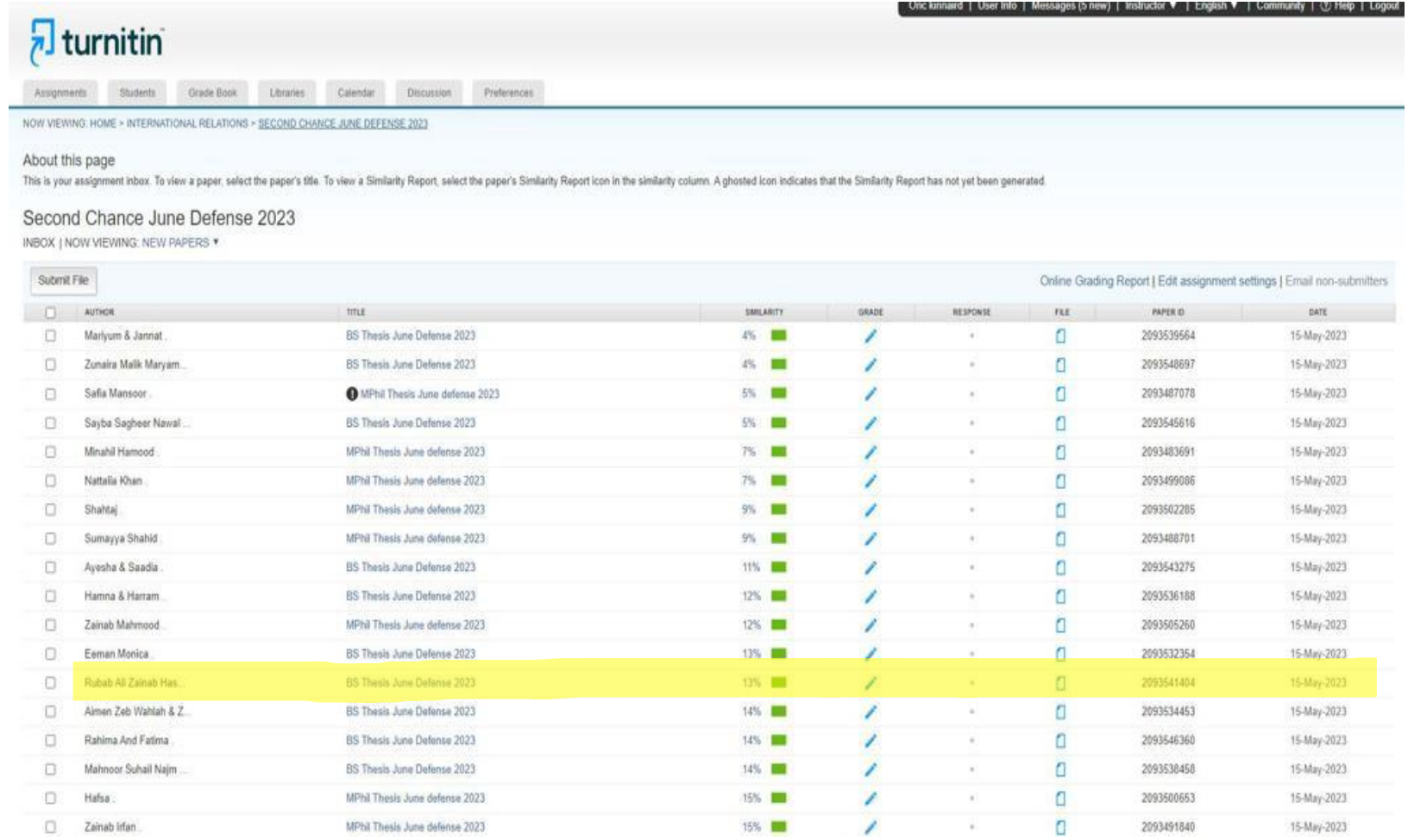
Kase, Y. (2001). The Costs and Benefits of Japan's Nuclearization: An Insight into the 1968/70 Internal Report. *The Nonproliferation Review,* 55-68.

Pickar, J. (2016). Japan's Defensive Constitution : Nuclear Weapons as a Better Alternative Than Expanding Collective Self-Defense. *Law School International Immersion Program Papers*.

Cristiano, F. (2017). Japan's Nuclear Weapons: Abe's Strategy to Overcome Japan's "Nuclear allergy." *Asia Europe Journal,* 15(1), 93-107.

Deng, Y. (2018). Regional security dilemmas and nuclearization in northeast Asia. *Journal of Contemporary China*, 27(112), 1-16.

Kim, J. (2017). Japan's quest for nuclear weapons: historical context, current challenges, and future prospects. *Journal of East Asian Studies,* 17(1), 35-56.



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