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Predictive Analysis of Potential Reactions To Japanese Attainment of Nuclear Power Status

by

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ABSTRACT

What are the potential reactions of the U.S., China, and Russia to Japanese attainment of nuclear power status? International Security Experts, Scholars, and Pundits argue, in near harmony, that Japan will not attain independent nuclear weapons capability. These experts and pundits alike focus is on the question of will Japan attain nuclear weapons or not, while others argue the broader issue of nuclear proliferation pros and cons. Conversely, few move beyond the debate to consider the potential reactions by national actors to Japanese attainment of nuclear power status. This paper offers multiple alternate future probabilities by three prominent national powers to Japanese attainment of nuclear power status. The aim is to move past current questions and debate, and explore potential reactions, not for correctly predicting the future, rather to garner an understanding of possible criterion for short/midterm planning, and glean a broader sense of indicators of change applicable to this paper's specific research question.

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"The transfer of power from West to East is gathering pace and soon will dramatically change the context for dealing with international challenges—as well as the challenges themselves. Many in the West are already aware of Asia's growing strength. This awareness, however, has not yet been translated into preparedness."

- James F. Hoge, Jr. in *Foreign Affairs*, July 2004

"Today, the Cold War has disappeared but thousands of those weapons have not. In a strange turn of history, the threat of global nuclear war has gone down, but the risk of a nuclear attack has gone up."

- President Barack Obama, April 5, 2009

I. INTRODUCTION:

The Asia-Pacific region claims two of the three largest economies, the two largest populations, and six nuclear powers collectively underscoring the region's uniqueness and growing international standing. Specifically concerning Northeast Asia, gathering momentum is debate spotlighting the possibility of Japanese attainment of nuclear power status.

The U.S.-Japan alliance matured under the Cold War, notwithstanding, the transformation of the former Soviet Union and the rise of China continue to challenge this nearly 50-year, bilateral security (Treaty of Mutual Cooperation and Security) model, but now is further tested by shifts in global, regional, and domestic security, economic, and political dynamics.

Japanese National Security Strategy, essentially, relies greatly upon a strong U.S.-Japan alliance. Arguably, the most distressing direct security concern Tokyo currently faces is a ballistic missile attack, however, bilateral relations between Japan and her neighbors are open to discussion resulting in a web of unsteady trilateral relations.

President Obama's April 2009 Prague speech calls attention to a growing concern linking Tokyo's perception of and Washington's ability to sustain a counterbalance and command of the commons globally, and more specifically for this paper—regionally.

Furthermore, misgivings between Japan and other regional actors, namely China and Russia, still lingers, saturated in historical discord. The authors of a recently published Center for a New American Security report, *The Power of Balance: America in iAsia* (2009), assert that, "The United States is fully invested in the Iraq and Afghanistan Wars. With the lion's share of American focus squarely on the Middle East and Central Asia, many worry that the United States is becoming a peripheral player on other key strategic issues" (Campbell et al., 2009, 7).

The aforementioned analysis accentuates Tokyo's apprehension concerning the ability of Washington to preserve their long-standing security paradigm of extended nuclear deterrence, while simultaneously balancing an unexpected upsurge in global conflict and threat of nuclear proliferation. A primary challenge that faces a future Northeast Asia is recent recognition by all actors chosen for this study, via their own national lens, is the significance of this issue, which also speaks to the larger question of regional security and the impact of nuclear proliferation.

Objective

This paper will neither attempt to predict the future, nor attempt to answer the question of will Japan attain nuclear weapons or not, on the contrary, it will develop alternate future probabilities related to scenarios for the issue in question, assist in analysis of criterion that could contribute to change in support of short/ midterm planning, and look beyond current assumptions in order to consider a full spectrum of future possibilities. Thus, this predictive study aims to address this relevant topic from the perspective of each actor, and will examine collected qualitative data by employing a systematic predictive method that presents plausible alternate future probabilities.

The vast consensus among Japan watchers advances a near single-mindedness, envisioning a future of continued reliance on the U.S. nuclear umbrella, and a sustained penchant by Japan toward global leadership in promoting nuclear nonproliferation.

The specific research question for this paper is: What are the potential reactions of the U.S., China, and Russia to Japanese attainment of nuclear power status? The focus of this predictive study is Japan, and the national actors are the U.S., China, and Russia. Criticisms concerning possible bias by selecting the major actors form a list of many is reasonable. The reader may infer an additional group of actors such as North Korea, South Korea, India, Pakistan, Australia, or Taiwan.

However, time and research design constraints prohibits consideration of large numbers of actors, clarified in the Research Design Section; in short, their selection is due to their current regional preeminence and national strategic capacity to project influence within the region.

There are several methods to assist in constructing comparative futures. This predictive study will utilize the Lockwood Analytical Method for Prediction (LAMP) to estimate potential reactions of the U.S., China, and Russia to Japanese attainment of nuclear power status. This report will consider three of four elements of national power and two scenarios derived from qualitative ligature reviews, place in rank order of likelihood in order to forecast plausible alternate futures.

Accordingly, the major actors have three possible Courses of Action: Diplomatic Options (DO), Economic Options (EO) and Military Options (MO). The focus national actor, Japan, has two possible future scenarios: continued commitment to nuclear energy and reliance on the U.S. extended nuclear deterrence commitment, or develop an independent nuclear arsenal.

The following section provides a qualitative literature review concerning the specific research question, whereas the distinctiveness of this predictive study accounts for the actor's perceptions and the use of the LAMP model with an anticipation of constructing a "different way of thinking about and analyzing the future's different paths" (Lockwood & Lockwood, 1993, 22).

II. QUALITATIVE LITERATURE REVIEW:

Substantial amounts of literature exist concerning Japan's history and foreign policy trends. According to Lockwood & Lockwood (1993, 35), "the purpose of a scenario [in context of the LAMP predictive method fully addressed in the Research Design section] is to account for an additional actor without having to calculate it as part of the permutations for the alternate future"

Additionally the authors warn, "Failure to conduct an adequate perceptual study of each national actor simply increases the danger that the analyst will fall into the "mirror-imaging" trap; that of substituting his own logic for that of the national actor" (Lockwood & Lockwood, 1993, 30-31). Although a literature review of the focus (Japan) nation is not required by the LAMP model, this author aspires to orientate the reader concerning how historical happenings relate to the specific research question of this predictive study.

Japan – An overview

"雨降って地固まる - The ground becomes firm after rain."
- Japanese Proverb

After Japan's defeat in 1945 this once aggressive, militaristic island nation switched paths from belligerence to pacifism. Now defenseless, Japan sought protection from the U.S., its vanquisher. For exactly this reason of past belligerence, an uneasiness still exist among Japan's neighbors. In determining the potential impact of Japanese attainment of nuclear power status is undoubtedly an important question for consideration.

Authors Nagai, Matsuo, Kitanishi and Shohno report, *Characteristics of Japanese People's Attitude Towards Nuclear Problems* (1977), explain how Japan established a new constitution in 1947 after two atomic bombs killed at least two hundred thousand people.

This prompted a new constitution, in 1947, renouncing the use of war. Further, in 1971 the Japanese Government adopted the "three non-nuclear principles" 比較三原則 (*hikaku sangensoku*). Japan will not "possess nuclear weapons, not to manufacture them, and not to allow them to be brought into Japan" (Nagai et al., 1977, 115).

However, they argue a shift in policy by the U.S. Government starting from the Korean War began a period of contradiction within Japanese politics. "Since then, the Japanese political situation has been oscillating between two contradictory policies, peace, and militarization" (Nagai et al., 1977, 116).

Mr. Ken Jimbo (2008), argues regardless of what diplomatic and security challenges Japan faces in the future; it will be a country in economic decline. Notwithstanding, he points out some trends that could assist in predicting Japanese long-term security and foreign policies.

First is demographics, specifically Japanese society is aging. Projections estimate nearly 40 percent of Japan's population will exceed age 65 by 2050. Further, he argues this shift in demographics will certainly shape future public-policy options. Second is the long-term expected slow economic growth of three (high)-to-one (low) percent per year. Mr. Jimbo's assumptions are that the U.S. will remain the dominate economic actor, and China, among other regional actors, will continue their respective economic growth. Thus, Tokyo must explore different foreign policies if it desires to remain relevant in the coming decades.

Two other related trends are domestic norms and perceptions of Japan's international role, and Japanese defense policy. As a professor at the Keio University in 1991, he notes that none of his students had any direct experience of the Cold War, and most were 10 years old when the U.S. conducted operation Desert Storm/Shield.

He argues the younger Japanese demographic removed from the pacifist movement following WW II, allows for freedom in thinking and discussing previously held social taboos. As this younger population climbs the political latter, he expects a shift in postwar era policies.

Lastly, he addresses the outlook for Japanese defense policy. Until 2004, Japan's guiding principles surrounding defense policy centered on a strong U.S.-Japan alliance. Due to the global threats of terrorism, which Japan is not exempt, prompted a willingness to seek a defense agenda independent of past U.S.-Japan shared objectives. He provides as an example, the first deployment by Self Defense Forces into a combat area, Iraq, since the end of WWII. Of major concern is North Korea's nuclear weapons program, but beyond that the most pressing military issue facing Japan is China's growing military power (Jimbo, 2008, 1).

The Japanese are particularly interested in how Washington will maintain a current policy of extended nuclear deterrence, while simultaneously reducing their nuclear arsenal. Some within Japan as well sees a conflict in President Obama's April Prague speech regarding his nonproliferation policy goal of eliminating all nuclear weapons, in addition to his plans to work with Russia in reducing the number of strategic nuclear weapons, while at the same time maintaining a strong commitment to extended nuclear and conventional deterrence for Japan.

III. MAJOR ACTORS PERCEPTIONS:

This qualitative literature review will portray the major actor's perceptions related to the prospect of a nuclear-armed Japan. Focus on these three national actors does not imply other national actors will not react to Japanese attainment of a nuclear arsenal. Nonetheless, U.S., China, and Russia merit attention for two reasons.

First, the U.S. in particular plays a unique role across the spectrum of military, economic and diplomatic dynamics concerning Japan.

China and Russia play an exceptional role across the spectrum of military, economic, and diplomatic dynamics concerning Japan. Second, time and research design restrictions prohibit this researcher's ability to consider large numbers of actors, fully explained in the Research Design Section directly following this section.

The U.S. - This actors viewpoint concerning the specific research question

"If everyone is thinking alike, then somebody isn't thinking."
- GEN George S. Patton

The United States, although not geographically part of Northeast Asia does play a key role in the region because of WWII; the U.S. shouldered the lion's share of securing the sea, air, and space commons that fostered democracy, which sparked a phenomenal regional economic growth.

The authors of *Preventing Nuclear Proliferation Chain Reactions: Japan, South Korea and Egypt* (2008), note that notwithstanding the events of WWII, Japan has twice seriously considered attainment of nuclear weapons. First in 1964 and again in 1994. The first, after China tested nuclear weapons and the second after the post-Cold War as part of re-evaluation of their global security strategy. The group of authors consists of 10 researchers from the Woodrow Wilson School of Public and International Affairs (Bakanic et al., 2008, 11-12).

Although Japan decided not to attain nuclear weapons, the researchers note Japan did institute a robust civil nuclear energy program that includes enrichment and reprocessing capabilities. The authors conclude that, "Japan's relationship with the United States, its longstanding commitment to nuclear nonproliferation, its dependence on uranium imports for power, its established policies, and Japanese public opinion all discourage the country from pursuing nuclear weapons" (Bakanic et al., 2008, 9).

Additionally, they acknowledge the discourse concerning Japans' demographic shift, however, conclude that the Japanese "nuclear allergy" still holds the majority among the public. "While due to North Korea's nuclear test in 2006, there is a greater willingness among both the general public and the Japanese government in discussing attainment of nuclear weapons" (Bakanic et al., 2008, 11). The authors acknowledges this public discourse indicates an increase in tolerance of the subject.

With respect to concerns over the rise of China, the authors note the 2004 Japanese National Defense Program that outlined "China's nuclear forces and missile capabilities" (Bakanic et al., 2008, 11). Further, there are concerns by Japan surrounding China's role if North Korea should collapse, leading to suspicions about China propping up the North Korean regime.

The researchers conclude that no one issue would convince Japan to attain an independent nuclear arsenal. There are, however, common factors that could contribute to Japanese consideration for pursuing nuclear weapons.

First, is a significant derogation in Japan-U.S. alliance that would bring into question Washington's ability to extend its nuclear umbrella; plus if the U.S. failed to support a possible Japan-China conflict. Other considerations include a failure in denuclearization of North Korea, or unified Korea, which retains nuclear weapons. They advocate, nonetheless, it would take more than one, if not most, of these developments to occur near simultaneously to prompt Tokyo into rethinking its stance on attainment of nuclear weapons (Bakanic et al., 2008, 13-15).

In their Congressional Research Service Report, *Japan's Nuclear Future: Policy Debate, Prospects, and U.S. Interests* (2009), Chanlett-Avery and Nikitin, outline economic, diplomatic, and legal factors surrounding Japan's nuclear future.

Based on Japanese demand for energy because of their economic growth and being a country poor in natural resources, Japan developed an advanced nuclear energy program. "The Japan Atomic Energy Commission's 2005 Framework for Nuclear Energy Policy emphasizes the importance of nuclear power for energy independence and carbon emission reduction. Japan is currently the third-largest user of nuclear energy in the world, with 55 light water nuclear power reactors (49.58 million kW) operated by 10 electric power companies" (Chanlett-Avery and Nikitin, 2009, 3-4). Due to emphasis placed on nuclear energy production, two controversial aspects are at the center of debate in analyzing Japan's civilian nuclear program.

> Japan's policy is to achieve a fully independent, or "closed," fuel cycle. The closed fuel cycle promotes the use of mixed-oxide (MOX) fuel in light water reactors. Plutonium is a by-product of the uranium fuel used in all nuclear reactors. Plutonium in spent fuel is not weapons-usable. Once this reactor grade plutonium is separated out of spent fuel through reprocessing, it is potentially directly usable in nuclear weapons (Chanlett-Avery and Nikitin, 2009, 6).

This, combined with technological advances, promote criticisms surrounding Japan's civilian nuclear energy program. According to reports from 1994, former Prime Minister Tsutomu Hata stated, "It's certainly the case that Japan has the capability to possess nuclear weapons but has not made them" (Chanlett-Avery and Nikitin, 2009, 6). There is little debate that Japan possesses the *capability* to produce nuclear weapons. The question that looms, however, is the assumption that Japan would need to conduct at least one nuclear test, thus, exactly where this would take place is unclear.

Thus, the authors focus on other factors surrounding the question of Japanese attainment of an independent nuclear arsenal. Specifically, diplomatic consequences and legal constraints.

They assert any shift in Japan's policy of nuclear abstention would erode any chance of attaining a permanent seat in the United Nations Security Council. Furthermore, "it could be harmful to U.S. interests as well. Japan is generally viewed overwhelmingly positively by the international community, and its support for U.S.-led international issues can lend credibility and legitimacy to efforts such as democracy promotion, peacekeeping missions, environmental cooperation, and multilateral defense exercises, to name a few" (Chanlett-Avery and Nikitin, 2009, 12).

One more consideration the authors advance is Article 9 of the Japanese constitution, which Japan foregoes, as a "sovereign right", their ability to wage war. Just how possessing nuclear weapons fits within the context of Article 9, however, is up for debate. "Beginning with Prime Minister Nobusuke Kishi in 1957, and continuing through Shinzo Abe in 2006, Japanese administrations have repeatedly asserted that Article 9 is not the limiting factor to developing nuclear weapons" (Chanlett-Avery and Nikitin, 2009, 7).

In conclusion, the authors assess the biggest obstacle to Japanese attainment of an independent nuclear arsenal centers on the negative consequences to its diplomatic reputation.

A Senate White paper, *The Long Pole of the Nuclear Umbrella* (2009), emphasizes required diplomatic efforts in achieving support by over two dozen allies in achieving simultaneous reduction in ICBMs and assurances of protection under the U.S. nuclear umbrella. Based on the July 2009 Joint Understanding between Washington and Moscow, both are working toward limitations in strategic offensive arms. On the other hand, this presents a dilemma in just how Washington will achieve targeted reductions in ICBM numbers, while maintaining a continued acceptance of protection of the U.S. nuclear umbrella.

The Senate report recognizes Japan's required "by in" for any large effort to reduce nuclear weapons. "Our nuclear posture has long been designed to assure our allies, which in turn discourages them from pursuing their own nuclear arsenals" (Conrad et al., 2009, 14). The U.S. already cut 30- percent of its nuclear missile and delivery capable bombers since 1991. However, the U.S. now seeks to cut further the number of ICBMs to 450.

According to the authors, "A decision to cut below 450 missiles would be a decision to put at risk our entire nuclear posture. It would be unwise to eliminate any leg of the triad. It would be particularly unwise to put at risk the one that is the most stabilizing, the most assuring to our allies, and the most cost-effective" (Conrad et al., 2009, 19).

This report underscores the challenge in reducing reliance on nuclear weapons and maintaining a credible deterrence acceptable for Japan, who relies on protection under the U.S. extended nuclear deterrence alliance. Undoubtedly, this will require skill and diligence by Washington in securing acceptance by Tokyo that a continued reduction in ICBM numbers, to 450, is the right number in dissuading their desire to attain an independent nuclear arsenal.

A Joint Department of Energy and Defense Policy Paper, *National Security and Nuclear Weapons in the 21st Century* (2008), details considerations behind U.S. requirements for nuclear weapons. Besides the threat of terrorists attaining weapons of mass destruction, both China and Russia are also concerns with respect to nuclear proliferation. "China, a rapidly growing economic power and the only recognized nuclear weapons state under the Nuclear Nonproliferation Treaty…that is both modernizing and expanding its nuclear force. Concerns exist regarding Russia's modernization of its large nuclear force (including the largest non-strategic nuclear arsenal)" (Bodman and Gates, 2008, 1).

The paper also notes that both the United Kingdom and France has revitalized their respective nuclear programs. To assure allies, therefore, this document stress why the U.S. must remain committed to extended nuclear deterrence commitments.

> The United States must ensure that its allies around the world continue to judge U.S. strategic capabilities to be credible and sufficient to guarantee their security. In the absence of allied confidence in U.S. capabilities and commitments, these states could feel compelled to acquire nuclear weapons of their own. Thus, maintaining continued allied confidence in the U.S. extended nuclear deterrent is an essential element of U.S. nuclear nonproliferation policy (Bodman and Gates, 2008, 11).

In conclusion, both Secretary Bodman and Gates emphasize the importance to maintain a robust nuclear arsenal to assure its allies, most notably for this research project Japan, of its ability to provide a nuclear umbrella in efforts to limit nuclear proliferation.

China - This actors viewpoint concerning the specific research question

"**To forget one's ancestors is to be a brook without a source, a tree without root."**
- Chinese Proverb

According to Wu Xinbo in his writings, *A Chinese View of the U.S.-Japanese Alliance* (2005-06), China perceives past U.S.-Japan alliance as necessary in constraining Japan's remilitarization; however, recent developments have convinced Beijing that this alliance is now an excuse for Japan to pursue a greater role in regional security issues. "Contrary to past policies, the United States is now driving rather than constraining Japan's rearmament. In the foreseeable future, short of a major adjustment of U.S. regional security strategy, the U.S.-Japanese alliance will act as a propellant of, rather than as a cap on, Japan's military development" (Wu Xinbo, 2005-06, 120). He further comments, Beijing's concern with Japan's expanding security policies are worrisome, as Japan is already a major military power in Asia.

He questions Tokyo's desire to attain a force projection capability, greater intelligence collection capability, and ballistic missile capability improvements. However, the most pressing issue perceived by Beijing is how domestic political factions are seeking to revise Japan's long-standing constitution of peace. He cites as an example, the recent deployment by Japanese Self Defense Forces to Iraq, "this has greatly undermined the spirit of Japan's current constitution as embodied by Article 9, which forbids the deployment of Japanese forces abroad" (Wu Xinbo, 2005-06, 124).

In conclusion, Dr. Wu suggests that "normalizing" Japan's military forms the crux of current U.S.-Japanese security policy and China is seen as a strategic rival to both.

> Efforts to promote a more active Japanese military posture in order to balance a rising China and to accelerate U.S.-Japanese involvement in the Taiwan issue are all indicative of this approach. Current Chinese efforts to strengthen military cooperation with Russia, including the first joint military exercise between the two countries, held in August 2005, are a reflection of its growing concern over the U.S.-Japanese alliance (Wu Xinbo, 2005-06, 128).

According to research by Yuan, Jing-dong, *Managing Power Shift and [Rivalry]: How Beijing views Sino-Japanese Relations* (2007), Beijing's most pressing issue is whether Japan will take advantage of current international security situations to rearm. *According to a Liberation Army Daily* report, Japan "is casting off its peace constitution" and "the ghost of Japanese militarism is stirring on the Japanese archipelago" (Yuan, Jing-dong, 2007, 5). Thus, prompting discussion by Chinese analysts to speculate on conditions that would result in Japan attaining nuclear weapons.

Mr. Yuan Jing-dong notes that Chinese analysts isolated some factors that could result in achieving this end.

> The debate focus on a combination of factors: its desire to achieve greater independence of U.S. control and the sentiment of great power status, a growing emphasis on military power, fear of nuclear and missile threats in the region as well as the rise of neighboring countries (such as China), and a revisionist approach to history. Indeed, a number of Chinese analysts have suggested that North Korea's nuclear test provides a convenient excuse and could prompt Japan to reconsider its nuclear options, including discarding its non-nuclear principles (Yuan, Jing-dong, 2007 14-15).

According to Lu Yin, *Challenges of Non-Proliferation in Northeast Asia and Possible Solutions* (2009), there are challenges on the horizon concerning Northeast Asia and the question of nuclear proliferation. These are the continued North Korean crisis, potential for non-nuclear actors in attaining nuclear weapons, and the rising nuclear arms competition among existing nuclear powers.

He contends that both Japan and South Korea have the technology, materials, infrastructure and missile capabilities necessary for nuclear weapons attainment. He further advances, "A political decision is all that is needed for either country to choose the nuclear option" (Lu Yin, 2009, 5-6).

Mr. Lu Yin insists the only reasonable response for Beijing was to modernize and upgrade existing Chinese nuclear forces. He further states, a shift in vision from an old, Cold War mindset to one of confidence and trust building is the only solution in avoidance of additional nuclear proliferation.

Concerning Japan, despite their three non-nuclear principals, they continue to leave the door open. "Being the only victim of a nuclear attack historically, the Japanese society understandably has a strong aversion to nuclear weapons. But the policy of the Japanese government on nuclear matters [has] always incorporated some degree of ambiguity" (Lu Yin, 2009, 23).

He also points out a shift in domestic politics within Japan, right-wing leaning forces continue to cloud Japan's possibility of becoming a nuclear power. "More and more dignitaries from the Japanese ruling circle have claimed that Japan should strengthen its military power, and even consider developing nuclear weapons" (Lu Yin, 2009, 26).

The "strange logic of many elites in Japan is that the possession of nuclear weapons by [North Korea] is absolutely unacceptable, while they themselves seem entitled to pursue the nuclear option, if needs be" (Lu Yin, 2009, 27). Mr. Lu Yin concludes that, considering Japan's military enhancements, ambiguity with respect to their constitution and three non-nuclear principals, the only step remaining in attaining a nuclear weapon is political.

Russia - This actors viewpoint concerning the specific research question

"We have observed a rise in Japanese investment into the Russian economy."
- Prime Minister Vladimir Putin, 12 May 2009

In the Proliferation Papers, *Russia's Nuclear Policy in the 21st Century Environment* (2005), Dr. Dmitir Trenin outlines Russian defense policy that addresses three sets of threats. These include territorial disputes, managing the traditional Cold War agenda, and new threats including weapons of mass destruction proliferation and global terrorism.

Dr. Trenin contends that Moscow's approach towards nuclear proliferation is complex and at times appears contradictory towards nuclear proliferation issues. He declares that although the U.S. and Russia are no longer enemies, they are not friends either. Nonetheless, Moscow does address nuclear proliferation issues from a more national interest perspective, focusing more on her neighbors and other actors located on her periphery.

"All said, Russia's specific attitudes towards concrete cases of proliferation, only partially coincide with those of its Western partners. They reflect a plethora of strategic, political, and economic considerations" (Trenin, 2005, 23).

In making his argument, Dr. Trenin highlights two contrasting Russian reactions. He maintains that Russia "made no accusations and threatened no sanctions" when both India and Pakistan attained nuclear power status. From Russia's perspective, "India and Pakistan represent two very different cases" (Trenin, 2005, 23). Considering India's rising Asian status and valued client, Moscow's reaction was positive; conversely, Pakistani nuclear tests, due to past stressed relations, resulted in labeling the Musharraf rule as "a military junta with nukes" (Trenin, 2005, 24).

Dr. Trenin additionally characterizes Moscow's reaction to North Korean, Iranian, and Israeli nuclear programs as not necessarily positive, but assessed as being no threat to Russian interests. Therefore, the real issue is the domino effect, especially within the Middle East. He further notes, "Similarly, it is worried about long-term stability in East Asia, should the North Korean example is followed by others (Japan, South Korea, Taiwan)" (Trenin, 2005, 25).

As a final observation, Dr. Trenin predicts, Russia will continue diplomatic efforts in support of global nonproliferation efforts. "As in the case of North Korea, Russia will support the use of diplomatic means and legal instruments for resolving Iran's nuclear problem. However, Moscow roundly rejects the idea of military intervention and the use of force against the problem states. This position is unlikely to change in the foreseeable future" (Trenin, 2005, 28).

According to writings by Vadim Trukhachev, *Japan To Have Nuclear Weapons 64 Years After Hiroshima?* (2009), he emphasizes that despite Japan holding the first international conference to ban nuclear weapons in 1955, and recent statements by Japanese Prime Minister Aso concerning Japan's commitment to their three non-nuclear principles, Japan's intentions are not peaceful.

In a Pravda.Ru 2009 interview Vladimir Anokhin, Vice President of the Academy of Geopolitical Problems, states Japan's intentions are not as they seem. "The subject of the nuclear disarmament is the most important aspect of Japan's foreign politics. However, the Japanese administration simply exploits the subject for its own interests. Japan may have nuclear weapons in the nearest future already." However, "The situation is far from being that dramatic", declares Viktor Pavlyatenko, a senior scientist at the Institute of Far Eastern Studies who disagrees with Anokhin (Trukhachev, 2009, 1).

In his own article, *Japan Split Over Nuclear Armament Ban* (2009*),* Viktor Pavlyatenko declares the debate over Japan's attainment of nuclear weapons is underway, however, that does not translate into actually doing so; rather, Japan is seeking a new role in regional and global affairs. "Japan is looking for a new role–from becoming a bigger regional and international player to having a new constitution that for more than 60 years has been perceived as American-written" (Pavlyatenko, 2009, 1).

Dr. Alexei Bogaturov summarizes in his Brookings Institute Northeast Survey writings, *Russia's Priorities in Northeast Asia: Putin's First Four Years* (2003-04), six factors for why Japan plays an import role to ensure stability in an evolving Northeast Asia region. The first three factors revolve around political and geopolitical factors resulting from a decreasing U.S. role, allowing for improvements in bilateral relations. The forth factor, is that Japan is a strong economic and technological leader; this allows for a military strong enough to defend itself.

This, Bogaturov argues, does not mean an immediate end to the U.S.-Japanese alliance, but does invite questions about what form in the mid-to-long term this alliance will take. "Yet benevolent American supremacy may not be considered an eternal grant from above.

With all neighboring nations acquiring stronger military capabilities, how long may Japan rely exclusively upon American protection" (Bogaturov, 2003-04, 97) ?

The fifth factor is Japan's strong international reputation. He argues few nations perceive Japan as an expansionist country. Japan is stable, a democratic nation, "unlikely to pursue a traditional great-power policy of expansion and domination" (Bogaturov, 2003-04, 97). The sixth factor for Japan's strategic future depends on internal, domestic political issues. Dr. Bogaturov declares that as Japanese domestic politics continues to evolve, so will past values and cultural views with respect to its peace constitution.

Dr. Bogaturov argues despite publicly taking a stand against nuclear proliferation, the great nuclear powers have already lost control of nuclear proliferation. Russia: "Without saying so, the world is slowly shifting from the epoch of nuclear non-proliferation to an era of 'controlled proliferation'" (Bogaturov, 2003-04, 84). Therefore, he concludes the challenges facing Russia in the long term is improving Russian-Japan relations, encompassing a full spectrum of shared issues. "A militarily stronger Japan would not necessarily pose a direct threat to Russia, however, as long as Russia remains a superior nuclear power. Moscow would not be particularly concerned by an eventual change in Japan's nuclear status" (Bogaturov, 2003-04, 89). Conversely, he states, the real issue is how China will react.

> China, which is obtaining additional navy capabilities, is centrally located in the region and her coastal areas cannot be easily blocked. The nuclear umbrella provided by the United States would be ineffective against a conventional threat Tokyo might face from increased Chinese navy activities in direct proximity to Japan's national territory, especially in the areas of the disputed Senkaku islands. Such factors may push Japan toward taking a stronger military role (Bogaturov, 2003-04, 96).

A Quick Look – Economy

The following information is straight from the CIA – World FactBook. See reference page for URL and last access information. The intent here is to orient the reader with current economic data, at the time of this paper, and possible problems for each national actor.

JAPAN

Japan's huge government debt, estimated to have reached 192% of GDP in 2009, and an aging and shrinking population are two major long-[term] problems.

U.S.

The U.S. has the largest and most technologically powerful economy in the world, with a per capita GDP of $46,900. The global economic downturn, the sub-prime mortgage crisis, investment bank failures, falling home prices and tight credit pushed the United States into a recession by mid-2008. GDP contracted till the third quarter of 2009, making this the deepest and longest downturn since the Great Depression.

CHINA

[In 2009, China] stood as the second-largest economy in the world after the U.S., although in per capita terms the country is still lower middle-income. The Chinese government faces numerous economic development challenges, including: strengthening its social safety net sustaining adequate job growth deemed not worth saving; reducing corruption and other economic crimes; and containing environmental damage and social strife.

RUSSIA

[In 2009, Russia] became the world's largest exporter of both oil and natural gas and is also the third largest exporter of steel and primary aluminum - and other less competitive heavy industries that remain dependent on the Russian domestic market.

Long-term challenges include a shrinking workforce, a high level of corruption, and poor infrastructure in need of large capital investment. The following chart encapsulates four leading economic indicators for each of the major actors and Japan.

Leading Economic Indicators

Actor	GDP (purchasing power parity)	Real Growth Rate	Budget	Public Debt
JAPAN	$4.141 trillion (2009 est.) $4.392 trillion (2008 est.) $4.423 trillion (2007 est.) **note:** data are in 2009 U.S. dollars	-5.7% (2009 est.) -0.7% (2008 est.) 2.3% (2007 est.)	**revenues:** $1.614 trillion **expenditures:** $1.997 trillion (2009 est.)	192.1% of GDP (2009 est.) 172.1% of GDP (2008 est.)
U.S.	$14.26 trillion (2009 est.) $14.61 trillion (2008 est.) $14.56 trillion (2007 est.) **note:** data are in 2009 U.S. dollars	-2.4% (2009 est.) 0.4% (2008 est.) 2.1% (2007 est.)	**revenues:** $1.914 trillion **expenditures:** $3.615 trillion (2009 est.)	39.7% of GDP (2009 est.) 34.6% of GDP (2008 est.)
CHINA	$8.767 trillion (2009 est.) $8.088 trillion (2008 est.) $7.42 trillion (2007 est.) **note:** data are in 2009 U.S. dollars	8.4% (2009 est.) 9% (2008 est.) 13% (2007 est.)	**revenues:** $31.31 billion **expenditures:** $37.87 billion (2009 est.)	18.2% of GDP (2009 est.) 15.6% of GDP (2008 est.)
RUSSIA	$2.103 trillion (2009 est.) $2.298 trillion (2008 est.) $2.176 trillion (2007 est.) **note:** data are in 2009 U.S. dollars	-8.5% (2009 est.) 5.6% (2008 est.) 8.1% (2007 est.)	**revenues:** $205.3 billion **expenditures:** $306.6 billion (2009 est.)	6.9% of GDP (2009 est.) 6.5% of GDP (2008 est.)

Summary - Qualitative Literature Review

The purpose of the qualitative literature review was to gather data from the actor's perceptions to possible Japanese attainment of nuclear power status. In addition, facilitate critical thinking concerning the specific research question beyond current analysis, and avoid falling into the trap of mirror imaging.

The aforementioned data represents the respective actors view of Japanese attainment of nuclear power status, while considering three elements of national power: diplomatic, economic, and military.

Little journalistic or scholarly literature exists relating *specifically* to potential reactions by U.S., China, and Russia to Japanese attainment of nuclear power status. Much of the literature, however, provides an analysis independent of other actors, and presents analysis from their respective cultural, nationalistic view. In addition, most provide only a summation of historical or current events, thus heavily relying on extrapolation focused only on debating the question of why Japan will or will not attain nuclear power status.

However, the uniqueness of this paper is utilization of the LAMP method, and incorporating all actors' views in order to minimize subjectivity, while maximizing objectivity within a systematic model for analysis. Moreover, some scholarly-based works *attempted* to analyze potential reactions, but mostly reverted back to explaining why Japan will or will not attain nuclear power status by utilizing a variation of Hypothesized Futures, while one utilized the Delphi Technique.

An advantage for using the LAMP technique versus Delphi technique is that this researcher is working autonomously and the author's lack of direct access to leading experts on the issue. Conversely, the Delphi technique's strength is to utilize a panel of experts.

Additionally, utilizing the LAMP versus Hypothesized Futures will account for a full spectrum of possibilities, and it progresses one-step further than Hypothesized Futures by conducting a pair-wise comparison. (Lockwood & Lockwood, 1993 16-22). Utilizing the systematic LAMP method will link, optimistically, the data gathered to provide realistic alternative future scenarios beyond the body of literature currently available.

Specific Research Question

The specific question this paper aims to answer is: What are the potential reactions of the U.S., China, and Russia to Japanese attainment of nuclear power status?

Premise

A point that stands out from analysis of the abovementioned literature review section is the actor's contradictory stance on how the role of Japanese history affects their decision-making process concerning attainment of nuclear weapons. On the one hand, presented is a history of belligerence; however, on the other, a nation that forgoes nuclear power status and demonstrates a strong nonproliferation stance. This is an interesting observation concerning differences the selected actors hold concerning the Japanese nuclear decision.

Application of this case-based line of thought solution is acceptable when considering actors operating outside established global standards. But, is questionable for one that not only adheres to, but also at times has led, over a six-decade period, multilateral, global cooperation initiatives.

Thus, with respect to a target national actor such as Japan, anchoring on Japanese domestic factors should not be the primary factor in consideration for attainment of nuclear power status. More exactly, primary focus should be on the individual actor's own potential actions/reactions with respect to their capacity to project elements of national power vis-à-vis the target, or actor's capacity to resist or willingness to collaborate - the preverbal sticks verses carrots.

Therefore, national actors behave rationally when considering and evaluating their own levers of influence and actions employed while determining specific effects in the quest of their strategic, national objectives.

Primary Hypothesis

The ***primary hypothesis*** for this paper is that both individually and collectively, but to a lesser degree, the actor's reactions will not significantly change between each scenario.

Specifically, considering Japanese attainment of nuclear power status, the predicted reactions by the three major actors will oscillate, but remain relatively similar between scenarios. As the primary goal for each major national actor in scenario one is prevention (carrots) after attainment of nuclear power status, scenario two, a shift in options or change in reaction may take place in favor of deterrence (sticks) but might also include a neutral reaction. Notable, the degree and form each option could take might be marginal, but it is beyond the scope of this estimate for such calculation of subcategories for each potential course of action option.

III. RESEARCH DESIGN:

As stated in the opening of this paper, uncertainty within the Northeast Asia region will continue, generally surrounding security matters, influenced by diplomatic, economic, and military dynamics. Recently, this specifically converges on the issue of Japanese attainment of nuclear weapons status, thus this paper aims to forecast potential reactions by the U.S., China and Russia concerning the specific research question.

This requires a method for prediction, whereas the purpose is to avoid strategic surprise by considering possible focal events and indicators in facilitating better planning and decision-making. Although there are many models for use in predictive analysis, this paper will utilize the LAMP method.

The ongoing debate on Japanese attainment of nuclear power status focuses on reasons why Japan will or will not attain an independent nuclear status.

However, the debate narrows as most experts and pundits limit their findings to one scenario and almost exclusively ignore potential reactions by other actors. Further, they lack exploration of a full range of alternate future probabilities. By utilizing the LAMP technique, this paper will estimate and rank order the "most likely" results for the specific research question. To consider all possible future permutations, this paper will use two scenarios and three courses of action by the major actors.

This section address the philosophy of the LAMP method, its steps, its limitations, and analysis made by the researcher based on collected data. According to Lockwood & Lockwood, 1993, 26), "The LAMP approach asserts that we can only know the possibility of a given alternate future relative to all other possible alternate futures". From these, the author's advance two key elements that account for all possible alternative futures. These include accounting for each actor's viewpoint. As each national actor evokes its own "free will", this will influence the future. The following presents the systematic LAMP method
(Lockwood & Lockwood, 1993 27-28):

1. Determine the issue for which you are trying to predict the most likely future.
2. Specify the national "actors" involved.
3. Perform an in-depth study of how each national actor perceives the issue in question.
4. Specify all *possible* courses of action for each actor.
5. Determine the major scenarios within which you will compare the alternate futures.
6. Calculate the total number of permutations of possible "alternate futures" for each scenario.

7. Perform a "pair-wise comparison" of all alternate futures to determine their relative probability.

8. Rank the alternate futures for each scenario from highest relative probability to the lowest based on the number of "votes" received.

9. Assuming that each future occurs, analyze each alternate future in terms of its consequences for the issue in question.

10. Determine the "focal events" that must occur in our present in order to bring about a given alternate future.

11. Develop indicators for the focal events.

12. State the potential of a given alternate future to "transpose" into another alternate future. *

(*A recent update to the LAMP method moves the "transpose" step from 10 to 12 and the "focal events" and indicators for the focal events up respectively.)

No method is without limitations and according to the authors (Lockwood & Lockwood, 1993, 91-92), "LAMP cannot easily handle a large number of actors and courses of action…does not easily lend itself to quantitative analysis…and does not allow for ambiguity".

This is particularly salient for this paper, as all LAMP computations made are without software support. Additionally, as this study's aim is prediction of potential reactions by three actors to Japanese attainment of nuclear power status, the probability of uncertainty is even greater due to the underlining interaction by all the actors' "free will". However, the advantages are, unlike other methods, the researcher is able to systematically construct a reliable prediction of alternate futures without falling into "groupthink" traps. Lastly, see Appendix C for the conceptual framework used for this paper.

LAMP Step One - Determine the issue for which you are trying to predict the most likely future.

The key aspect for step one is to select a topic that is neither too broad, nor narrow. For this paper, the specific research question and importance of this issue is as follows.

What are the potential reactions of the U.S., China, and Russia to Japanese attainment of nuclear power status? Recent recognition by all actors chosen for this study underscores the significance of this issue, converging specifically on their potential reactions regarding Japanese attainment of nuclear power status.

Thus, this predictive study aims to address this relevant topic from the perspective of each actor that will examine collected data and employ a systematic predictive method, in order to present valid, alternative future possibilities.

LAMP Step Two - Specify the national "actors" involved.

The focus of this predictive study is Japan, and the three major actors are the U.S., China, and Russia. Criticisms concerning possible bias by selecting the actors from a list of many are reasonable. The reader may infer an additional group of actors such as North Korea, South Korea, India, Pakistan, Australia, or Taiwan. However, time restrictions placed on the researcher prohibits consideration of a large number of actors, further highlighted in the following steps.

LAMP Step Three - Perform an in-depth study of how each national actor perceives the issue in question.

This is an important step in avoiding mirror imaging. Section III, The Major Actors Perceptions, fulfilled this step. The literature review provides data gathered from the respective actors' views, from policy-based, some scholarly and a few journalistic works. A summary will assist in review of how each actor perceives the specific research question.

U.S. View – Synthesis From Collected Data

The United States plays a key role in the Asia-Pacific region, and Tokyo and Washington share a longstanding, mutually supportive alliance. However, growing concern linking Tokyo's perception of and Washington's ability to sustain its current nuclear deterrence commitment due to shifts in the global security environment underscores the importance of this paper.

The underling potential reactions that resonate form the data collected from the U.S. viewpoint would be surprise, a major blow to nuclear nonproliferation efforts, possible loss of trust by other allies and a re-examination of diplomatic efforts. Current global commitments and domestic economic troubles frame the debate for this papers specific research question.

Chinese View – Synthesis From Collected Data

The underling potential reactions, which resonates form the data collected from China's viewpoint would entail military, diplomatic, and possibly economic reactions. Beijing is particularly focused on Tokyo's domestic political developments and continued efforts to revise its constitution.

The data suggest Japan is taking steps to normalize its military, thus China has already taken steps to hedge, or signal Tokyo by upgrading and modernizing its own nuclear force and attempting to strengthen military ties with Russia. Concerning Japanese motives, China still holds suspicions stemming from WWII, is engaged in territorial disputes, and is in direct competition with Japan for fossil resources, which fuels, respectively, both actors' economic engines.

Russian View – Synthesis From Collected Data

The underling potential reactions, which resonates form the data collected from Russia's viewpoint, is more complex and ambiguous than either of the other two actors; however, the balance of collected data suggests a diplomatic, or possibly an economic reaction. From the Russian viewpoint, Moscow does not perceive Japan as a direct military threat to its national interests. Although, like China, there are disputes that linger from WW II, unlike China however, these greater collaborative economic possibilities currently overshadow these disputes.

V. CASE STUDY/ANALYSIS/FINDINGS:

LAMP Step Four - Specify all *possible* courses of action for each actor.

While the potential exists for a wide range of options by each actor, these options permeate from one of three elements of national power dependent on each actor's unique perception of the issue, which are Diplomatic Options (DO), Economic Options (EO), and Military Options (MO). Drawn from the collected data the U.S., outlined in the Literature Review section, will play the principal role and suggests that Washington's decisions will influence Chinese and Russian decisions concerning Japanese attainment of nuclear power status.

U.S. Options – Synthesis From Collected Data

Diplomatic Options (DO)

Washington would most likely rely on diplomatic options and would consider this as a first option in response to Japanese attainment of nuclear power status. Followed by possible "soft" military actions and no economic actions. Washington could possibly first engage Tokyo unilaterally, but this could progress into a geopolitical option. For example, the U.S. could take action within the U.N., or another international forum.

Economic Options (EO)

The data collected is silent on possible economic actions Washington could take if Japan attains nuclear power status. This is possibly due to their respective economies are firmly intertwined and dependent upon each other. A conclusion, therefore, this is Washington's least likely option in response to Japanese attainment of nuclear power status.

Military Options (MO)

The data collected is also silent on possible military actions Washington would take if Japan attains nuclear power status.

An assumption, therefore, is a possible "soft" military option, in which Washington could limit military technology transfers and joint exercises.

However, the U.S., unlike China and Russia, may have a positive, supportive reaction. This might include performing an advisory role on doctrine, conducting command and control exercises and improving Strategic Missile Defense Initiatives. Consequently, military options for the U.S. do not necessarily translate into a negative, or denial reaction.

Chinese Options - Synthesis From Collected Data

Diplomatic Options (DO)

Beijing would most likely rely on diplomatic options in conjunction with other options, in various form and degree. Beijing could consider an international response, or possibly unilateral diplomatic options, but due to past and current differences between the two actors a geopolitical response is likely. It is possible that unsatisfactory diplomatic actions either multilaterally or unilaterally would likely progress to economic and military options.

Economic Options (EO)

Beijing is growing its regional and global economic influence and makes this a likely response to Japanese attainment of nuclear power status. Both actors are heavily dependent on importation of fossil and other natural resources, and awareness of China's rise also contributes to this as a likely response.

Military Options (MO)

The data suggest Beijing is more likely than the other actors in taking military actions against Tokyo if it attains nuclear power status. However, a direct military response is unlikely; rather, Beijing will probably pursue a strategy along the lines of "military show of force", increase/seek out regional partners for participation in joint exercise in pursuit of a military policy of alignment.

Russian Options - Synthesis From Collected Data

Diplomatic Options (DO)

Moscow would "most likely" take diplomatic actions, but again, it is unclear to what degree or form this option may take.

Economic Options (EO)

In response to Japanese attainment of nuclear power status, an economic response from Russia is likely, but less likely if Moscow is successful in developing closer economic ties with Japan, expands its energy exports, and continues to seek Japanese technological expertise.

Military Options (DO)

The data collected suggest Moscow would not take direct military action if Japan attains nuclear power status. However, if Moscow perceives Japan's military expansion as a direct security threat to Russian national interests, the likelihood of a military option increases, but less likely of the three options.

LAMP Step Five - Determine the major scenarios within which you will compare the alternate futures.

According to Lockwood & Lockwood (1993, 34-35), the two purposes for use of a scenario, is First, to account for assumptions that will influence actions by the actors. Second, to allow for "an additional actor without having to calculate it as part of the permutations for the alternate futures".

Two Major Scenarios

Scenario # 1	**Scenario # 2**
Japans continues commitment to nuclear energy and reliance on U.S. extended nuclear deterrence commitment	Japan attains independent nuclear power status

Regional Assumptions

Northeast Asia	Uncertainty hangs over this region's future
	Decisions by actors are determined by self-interest

Initial Findings based on data collected

Actor	**Element of National Power: Diplomatic**
Japan	Will continue to play an evolving role (domestic and regionally)
U.S.	Will continue to play a status quo role (globally and regionally)
China	Will continue to play an increasing role (globally and regionally)
Russia	Will continue to play a status quo role globally; but an increasing role regionally
Actor	**Element of National Power: Economic**
Japan	Will continue prominence; but at a decreasing rate (globally and regionally)
U.S.	Will continue dominance; but at a decreasing rate (globally and regionally)
China	Will continue to grow; and at an increasing rate (globally and regionally)
Russia	Will continue an energy focus role; will play an increasing regional role
Actor	**Element of National Power: Military**
Japan	Will continue efforts of normalization; will play an increasing regional role
U.S.	Will continue to play a key role; but will play a more "shared" regional role
China	Will continue to modernize and develop; will play an increasing regional role
Russia	Will continue to play a status quo role within the region

Scenario # 1 - Continue with the status quo, by maintaining a commitment to nuclear energy and reliance on the U.S. nuclear umbrella.

This scenario assumes global successes concerning nonproliferation issues, improved bilateral and multilateral relations, economic relations, and a favorable geopolitical climate. Japan will continue military efforts of normalization, but remain reliant on current U.S.-Japan security policies, will maintain fully, or at an acceptable level, its economic and technological edge, become a global leader of alternative, nuclear energy, and will continue to evolve politically, stopping short of adopting nuclear weapons as part of constitutional reforms due, in part, to continued domestic popular support of its historic nonproliferation stance.

Scenario # 2 - Develop an independent nuclear arsenal and attain nuclear power status.

This scenario assumes continued failures in global nuclear proliferation; diminishing trust among actors resulting in negative shifts in geopolitical relations, Japan will continue military efforts of normalization, however, faith in current U.S.-Japan security policies wanes.

Japan will not experience an economic recovery, *or* maintain an acceptable level, which negatively alters its international standing. The U.S. experiences a continued downward trend in its economy and an increasing focus on global terrorist threats. A continuing growth in both Chinese and Russian economy's, resulting in these actors increasing their military, economic, and diplomatic influence in order to fill gaps shaped by a diminishing U.S. role in the region.

LAMP Step Six - Calculate the total number of permutations of possible "alternate futures" for each scenario.

According to Lockwood and Lockwood (1993, 38), "Here is where the necessity of limiting the number of actors and choices becomes most apparent". Step six requires a formula for determining the possible alternate futures:

$$X^y = Z$$

X = Number of courses of action open to each actor **(3)**
y = Number of actors (**3** - Remember, Japan is the focus and is accounted for by the scenarios)
Z = Total number of alternate futures (**27**)

Scenario #1 ($3^3 = 27$) AND Scenario #2 ($3^3 = 27$)

LAMP Step Seven - Perform a "pair-wise comparison" of all alternate futures to determine their relative probability.

According to Lockwood & Lockwood (1993, 40), "A pair-wise comparison analyzes the alternate futures two at a time, always assuming that the two futures being compared at the moment are the only ones that exist". For example, a comparison is made between possible alternate future number one and alternate future number two, then based on the collected data, determine which alternate future is "more likely to occur", then give that "winner" one vote.

After completing all comparisons for alternate future number one, this process repeats for alternate future number two, three, and so on. After completion of voting of all alternate futures, the future with the most votes has the highest *relative probability*. Again, this step requires a formula to determine the total number of votes possible.

$$X = (n-1) + (n-2)\ldots + (n-n)$$

X = Total number of pair-wise comparisons
n = Total number of alternate futures for analysis

$$X = (27-1) + (27-2)\ldots + (27-27)$$

The following tables will separately depict the number of possible alternate futures for each actor for each scenario.

TABLE 1
Pair-wise Comparison

Scenario # 1 - Continue with the status quo, by maintaining a commitment to nuclear energy and reliance on the U.S. nuclear umbrella				
# of Possible Alternate Futures	**U.S.**	**China**	**Russia**	**# of Votes***
1	MO	MO	MO	0
2	MO	MO	EO	1
3	MO	MO	DO	4
4	MO	DO	DO	6
5	MO	DO	MO	3
6	MO	DO	EO	3
7	MO	EO	EO	7
8	MO	EO	MO	7
9	MO	EO	DO	4
10	EO	EO	EO	15
11	EO	EO	MO	10
12	EO	EO	DO	17
13	EO	MO	MO	10
14	EO	MO	EO	12
15	EO	MO	DO	15
16	EO	DO	EO	20
17	EO	DO	DO	15
18	EO	DO	MO	21
19	**DO**	**DO**	**DO**	**26**
20	DO	DO	MO	17
21	**DO**	**DO**	**EO**	**25**
22	DO	MO	DO	15
23	DO	MO	MO	16
24	DO	MO	EO	17
25	**DO**	**EO**	**DO**	**24**
26	DO	EO	MO	18
27	DO	EO	EO	23
				351 Votes

Military Options (MO)
Economic Options (EO)
Diplomatic Options (DO)
*See Appendix A

TABLE 2
Pair-wise Comparison

Scenario # 2 - Develop an independent nuclear arsenal and attains nuclear power status.				
# of Possible Alternate Futures	**U.S.**	**China**	**Russia**	**# of Votes***
1	MO	MO	MO	4
2	MO	MO	EO	17
3	MO	MO	DO	18
4	MO	DO	DO	8
5	MO	DO	MO	7
6	MO	DO	EO	11
7	MO	EO	EO	15
8	MO	EO	MO	10
9	MO	EO	DO	15
10	EO	EO	EO	14
11	EO	EO	MO	9
12	EO	EO	DO	6
13	EO	MO	MO	15
14	EO	MO	EO	19
15	EO	MO	DO	17
16	EO	DO	EO	4
17	EO	DO	DO	3
18	EO	DO	MO	5
19	DO	DO	DO	12
20	DO	DO	MO	7
21	DO	DO	EO	15
22	**DO**	**MO**	**DO**	**26**
23	DO	MO	MO	18
24	**DO**	**MO**	**EO**	**25**
25	**DO**	**EO**	**DO**	**21**
26	DO	EO	MO	11
27	DO	EO	EO	19
				351 Votes

Military Options (MO)
Economic Options (EO)
Diplomatic Options (DO)
*See Appendix A

LAMP Step Eight - Rank the alternate futures for each scenario from highest relative probability to the lowest based on the number of "votes" received.

This step ranks the "most likely" to the "least likely of all possible alternative possibilities based on relative probability (Lockwood & Lockwood, 1993, 43).

TABLE 3
Rankings– Relative Probability

Scenario # 1 - Continue with the status quo, by maintaining a commitment to nuclear energy and reliance on the U.S. nuclear umbrella				
# of Possible Alternate Futures	**U.S.**	**China**	**Russia**	**# of Votes**
19	**DO**	**DO**	**DO**	**26**
21	**DO**	**DO**	**EO**	**25**
25	**DO**	**EO**	**DO**	**24**
27	**DO**	**EO**	**EO**	**23**
18	EO	DO	MO	21
16	EO	DO	EO	20
26	DO	EO	MO	18
20	DO	DO	MO	17
12	EO	EO	DO	17
24	DO	MO	EO	17
23	DO	MO	MO	16
15	EO	MO	DO	15
22	DO	MO	DO	15
10	EO	EO	EO	15
17	EO	DO	DO	15
14	EO	MO	EO	12
13	EO	MO	MO	10
11	EO	EO	MO	10
7	MO	EO	EO	7
8	MO	EO	MO	7
4	MO	DO	DO	6
9	MO	EO	DO	4
3	MO	MO	DO	4
6	MO	DO	EO	3
5	MO	DO	MO	3
2	MO	MO	EO	1
1	MO	MO	MO	0
				351 Votes

Military Options (MO) Economic Options (EO) Diplomatic Options (DO)

TABLE 4
Rankings– Relative Probability

Scenario # 2 - Develop an independent nuclear arsenal and attains nuclear power status.				
# of Possible Alternate Futures	**U.S.**	**China**	**Russia**	**# of Votes**
22	**DO**	**MO**	**DO**	**26**
24	**DO**	**MO**	**EO**	**25**
25	**DO**	**EO**	**DO**	**21**
27	**DO**	**EO**	**EO**	**19**
14	EO	MO	EO	19
23	DO	MO	MO	18
3	MO	MO	DO	18
15	EO	MO	DO	17
2	MO	MO	EO	17
13	EO	MO	MO	15
9	MO	EO	DO	15
7	MO	EO	EO	15
21	DO	DO	EO	15
10	EO	EO	EO	14
19	DO	DO	DO	12
26	DO	EO	MO	11
6	MO	DO	EO	11
8	MO	EO	MO	10
11	EO	EO	MO	9
4	MO	DO	DO	8
20	DO	DO	MO	7
5	MO	DO	MO	7
12	EO	EO	DO	6
18	EO	DO	MO	5
16	EO	DO	EO	4
1	MO	MO	MO	4
17	EO	DO	DO	3
				351 Votes

Military Options (MO) Economic Options (EO) Diplomatic Options (DO)

LAMP Step Nine - Assuming that each future occurs, analyze each alternate future in terms of its consequences for the issue in question.

Before reviewing and analyzing the alternate future possibilities, first consider two opposing theories concerning nuclear proliferation. Very briefly, first, the theory of a slow spread of nuclear weapons will increase peace and stability. Kenneth Waltz, in his writings "*The Spread of Nuclear Weapons: More May Be Better*" (Waltz ,1981, Adelphi Papers, Number 171) advocates there are no "happy choices".

Thus, he argues from a Rational Deterrence Theory viewpoint, among many other reasons, nuclear weapons make war less likely. On the other hand, Scott Sagan, "*The Spread of Nuclear Weapons: A Debate Renewed"* (2003) advocates, from an Organizational Theory viewpoint, that less is better. "Military organizations, unless managed by strong civilian-control institutions, will display organizational behaviors that are likely to lead to deterrence failures and deliberate or accidental war, because of common biases, inflexible routines, and parochial interests" (Sagan, 2003, 220).

They both provide examples in support of their respective theories, notwithstanding, this section will analyze the alternate futures derived from steps seven and eight in terms of their *relative probability* and move beyond the debate of pros and cons of nuclear weapons proliferation in order to gain a better understanding of possible reactions to Japanese attainment of nuclear power status. The Asia-Pacific region and more specifically Northeast Asia will continue to offer opportunities and challenges regardless of which scenario plays out. Uncertainties and corresponding possibilities surrounding this region's future will see continued shifts in diplomatic, economic, and military dynamics, as well as greater demands on energy, all makes necessary the reason for this study.

This paper will discuss in detail only the top three "most likely" futures for each scenario, but before that, the following briefly compares and contrasts the *relative probability ranking* outcomes for each scenario.

Notable Similarities

1. For both scenarios, the 4th "most likely" ranking was alternate future number 27 (DO, EO, EO), and the 14th "most likely" alternate future number 10 (EO, EO, EO).

2. For both scenarios, the likelihood for all 3 actors reacting simultaneously with a military option, the alternate future number 1 (MO, MO, MO), was extremely low. For scenario 1, it ranked last, 27 of 27, and for scenario 2 it ranked next to last, 26 of 27.

3. For both scenarios, the top 5 "most likely" rankings resulted in an exclusive U.S. DO reaction.

4. For both scenarios, the top 4 "most likely" rankings resulted in neither the U.S. nor Russia reacting with a military option.

5. For both scenarios, the top 2 "most likely" rankings received, respectively, the same number of votes. Scenario 1, alternate future number 19 received 26, and alternate future number 21 received 25 votes. For scenario 2, the "most likely" alternate future number 22 received 26, and alternate future number 24 received 25 votes.

Notable Differences

1. For Scenario number 2, China (exclusively) reacted with a military option, and was ranked the "most likely" and 2nd "most likely" alternate future reaction.

2. For Scenario number 2, at least two actors simultaneously reacted with a military option ranked number 6, and for scenario number 1, ranked number 11.

3. For Scenario number 1, a unanimous DO reaction by all 3 actors ranked number 1, but for scenario number 2, it ranked number 15, while a unanimous EO reaction by all 3 actors ranked number 14 for both scenarios, and a unanimous MO reaction by all 3 actors ranked 27 of 27 for scenario number 1, and 26 of 27 for scenario number 2.

This is interesting, as it reveals a trend toward unity of effort preference by all 3 actors, especially with respect to a simultaneous use of a military option, and reveals the inverse correlation between a DO and EO courses of action when contrasting each scenario.

For all 3 actors, a unanimous MO reaction was virtually the same in both scenarios and ranked as a "least likely" alternate future possibility (27 of 27 for scenario 1 and 26 of 27 for scenario 2), converging in the middle with a unanimous EO reaction (ranked 14 of 27 for both). A unanimous DO reaction for scenario number 1, ranked the "most likely" alternate future possibility, while in scenario number 2 it ranked 15 of 27.

Scenario # 1 – Top Three "Most Likely" Alternate Future Possibilities

TABLE 5

Scenario # 1 - Continue with the status quo, by maintaining a commitment to nuclear energy and reliance on the U.S. nuclear umbrella				
# of Possible Alternate Futures	**U.S.**	**China**	**Russia**	**# of Votes**
19	**DO**	**DO**	**DO**	**26**
21	**DO**	**DO**	**EO**	**25**
25	**DO**	**EO**	**DO**	**24**

General - Applied for Top 3 Alternate Future Possibilities in Scenario #1

In terms of general consequences, seizing on optimal nonproliferation efforts all three alternate future possibilities will shepherd amicable bilateral and multilateral relations based on greater trust and positive shifts in political, cultural, and demographic dynamics. This will result in, more or less, future possibilities that all responsible, trusting global partnerships should expect.

Both China and Russia will continue positive, free market, capitalist reforms, all culminating domestically within Japan electing more moderate politicians and stopping short of revising its constitution and maintaining a status quo of reliance on the U.S. extended nuclear deterrence policy and commitment to nuclear energy developments. The possibility for armed conflict among the actors is extremely low.

Conversely, in terms of possible negative consequences, most would resemble current reality.

Notwithstanding, some negative consequences might center on continued debate over the U.S. ability to extend nuclear deterrence to its allies, and questions continuing to loom concerning overextension by the U.S. in Asian matters.

Thusly, a continued status quo reaction concerning geopolitical and ideological differences currently experienced. Lastly, an expansion of nuclear energy power production, leading to unchecked global nuclear proliferation and general considerations of nuclear energy safety.

Alternate Future #19

Specifically within the Northeast Asia region, all actors will experience expected economic growth rate, while Japan will assume a global leadership role in nuclear energy production and technology, resulting in decreasing pressers on fossil fuel demands and avoidance of potential conflicts over competition for natural recourses.

Global terrorist threats decrease, and the Japanese-U.S. alliance will remain constant, or possibly expand in the long-term, countering possible Chinese midterm military expansionism. Although China's economy will continue to grow; it will fall-in- line with other global and regional economies, thus slowing military modernization and expansion over the long-term. Whereas, Russia will continue to expand its economic position in Northeast Asia, and perceives no direct security threat to its national interests by Japan.

In terms of consequences, there are few, with a possible exception of the U.S. grappling with a decreasing ability to influence others. Albeit, other consequences may center on the continued debate over the U.S. ability to extend nuclear deterrence to its allies, questions continue to loom concerning overextension by the U.S., both economically and militarily.

Additionally, a domestic, regional, or global backlash against Japan concerning its continued development of nuclear power plants and nuclear advancements is a possible consequence.

Potential for terrorist attacks against Japanese nuclear power plants, perceived as “soft targets”, resulting in disastrous human and economic losses; or, human error, or simply a mechanical breakdown could have similar negative consequences.

Ultimately, a major negative consequence for Tokyo, is an inability to capitalize economically on nuclear energy developments, leading to decreasing international standing, and intensifying competition for limited natural resources.

Alternate Future #21

Russia’s economy continues to expand within the Northeast Asia region, while Japan continues its nuclear energy developments. However, in the midterm, it is likely that increasing global demands for fossil fuel and Japan’s inability to offset their domestic energy consumption rates with nuclear energy will result in competition between both China and Japan for Russian oil.

Further complicating this alternate future is a possible lag in Japanese-Russian developing trade and economic relations and Russian dissatisfaction with a perceived expanding and strengthening Japanese-U.S. alliance. As a potential consequence, this could negatively affect other gains made region-wide, as the faith in perceived constructive relations deteriorate.

Alternate Future #25

In this alternate future, China establishes itself as the dominate regional, and possibly global, economic national actor. China’s economy continues to expand at or slightly above expectations, both globally and regionally, while competition for fossil fuel and other natural resource intensifies between Japan and China.

In terms of consequences, this might result in continued diminishing U.S. influence, and Russian perception of China as the preferred trading partner.

This could place greater stress on Tokyo to seek alternative technological solutions, and intensify measures to keep pace economically with China.

Scenario # 2 – Top Three "Most Likely" Alternate Future Possibilities

TABLE 6

Scenario # 2 - Develop an independent nuclear arsenal and attains nuclear power status.				
# of Possible Alternate Futures	**U.S.**	**China**	**Russia**	**# of Votes**
22	**DO**	**MO**	**DO**	**26**
24	**DO**	**MO**	**EO**	**25**
25	**DO**	**EO**	**DO**	**21**

General - Applied for Top 3 Alternate Future Possibilities in Scenario #2

In general terms of possible consequences, Japan will play an increasing military role within the region, in turn results in greater self-reliance for national defense and counter strike capability due to increased reactions by neighbors, and a continuance of global asymmetric/terrorist threats; thus, Tokyo severs its dependence on Washington's nuclear deterrence commitment.

Additionally, disappointment in nonproliferation efforts, and a greater mistrust among actors results in negative shifts in political, cultural, and demographic dynamics. Japan does not regain its economic and technological edge at an acceptable level; thus, placing an even greater strain on already tenable bilateral and multilateral relations with other regional actors.

All culminating domestically within Japan electing more ring-wing politicians and revision of its constitution and attainment of nuclear power status.

Alternate Future #22

The likelihood for a direct-armed conflict between China and Japan is extremely low.

China, however, assessed as the "most likely" actor to react with a military option, will engage Japan unilaterally (other than a DO option) based on this alternate future possibility. Exactly, however, to what degree and form this military response will take is uncertain.

Nonetheless, again, based on this alternate future possibility, China, unable to convince the U.S. and Russia of Japan's return to its historical militaristic role, and thus, will most likely engage Japan unilaterally with "shows of force", demonstrations, and continued modernizations and expansion efforts of their nuclear force. In turn, Russia concerned over a growing nuclear China, will slow, or contract its free market, democratic reforms as a hedge in protecting self interests domestically, and the U.S. will continue to play a key stabilizing role within the region to advert the possibility of a new arms race.

Alternate Future #24

Again, the likelihood for a direct-armed conflict between China and Japan is extremely low. China, however, assessed as the most likely actor to react with a military option, will engage Japan multilaterally (2 of 3 actors use other than DO) based on this alternate future possibility. Again, however, exactly to what degree and form this military response will take is uncertain.

Nonetheless, based on this alternate future possibility, China, is able to somewhat convince Russia of Japan's regional threat; thus, Russia will respond with an economic reaction. Russia, recognizing Japan's attainment of nuclear power status, still does not perceive Japan as a direct security threat, but will hedge and implement additional elements of national power, specifically economic, but stop short of military options.

The U.S., although still a key regional influencer, and most likely disappointed in Japan's lack of faith in an extended U.S. nuclear deterrence commitment still supports Japan and remains a stabilizing force within the region.

In turn, this will place an even greater stress on all actors' elements of national power, to prevent, deter, or deny nuclear proliferation and deal a damaging blow in marshalling continued acceptance and support of the Nuclear Nonproliferation Treaty globally. Lastly, this alternate future represents a possibility for a new arms race.

Alternate Future #25

China will engage Japan unilaterally (other than DO) based on this alternate future possibility with an economic response. China's economy growing at or above expected levels makes this a likely scenario. As China continues to expand its economic regional and global power, it will seek other than military options, as China perceives Japan as a growing threat. Russia, seeking to capitalize on continued shared benefits developing from increased trade and political relations previously established, will engage Japan, like the U.S., by continuing a status quo policy of diplomatic efforts.

Final Findings - Answering the Specific Research Question

What are the potential reactions of the U.S., China, and Russia to Japanese attainment of nuclear power status? The possibility exist that there are two ways in answering this question based on considering each actor individually, or collectively.

The ***primary hypothesis*** is that both individually and collectively, but to a lesser degree, the actor's reactions will not significantly change between each scenario. Specifically, considering Japanese attainment of nuclear power status, the predicted reactions by the three major actors will oscillate, but remain relatively similar between scenarios. In comparing the actors reactions, the following will highlight the "most likely" alternate futures from the relative probability rankings for each scenario, Tables 3 and 4.

Table 7 depicts the top three "most likely" alternate futures forecasts that the U.S. will "most likely" retain a DO reaction regardless the scenario. China has the highest degree of undulation, encompassing all three possible options, while Russian reactions remain consistent with a DO reaction for the first and third "most likely" alternate futures and an EO reaction for both scenarios as the second "most likely" alternate futures. This suggests that both U.S. and Russian reactions will not fluctuate much if Japan attains nuclear power status, but China will vacillate, searching for the right response in coping with a new nuclear neighbor, Japan.

TABLE 7

Alternate Futures	Scenario #1	Scenario #2
1st "most likely"	U.S. - DO	U.S. - DO
	China - DO	China - MO
	Russia - DO	Russia - DO
2nd "most likely"	U.S. - DO	U.S. - DO
	China - DO	China - MO
	Russia - EO	Russia - EO
3rd "most likely"	U.S. - DO	U.S. - DO
	China- EO	China - EO
	Russia - DO	Russia - DO

Of note, the forth "most likely" alternate future forecasts the same response for both scenarios (DO, EO, EO), converging in the middle, fourteenth "most likely" alternate future, with the same reaction by all actors (EO, EO, EO) for both scenarios. The bottom half "most likely" reactions are sporadic, but trends toward an inverse relationship between each scenario.

LAMP Step Ten – Determine the "focal events" that must occur in our present in order to bring about a given alternate future.

Within this step of the LAMP model, this paper will highlight focal events for the top three alternate future probabilities for each scenario. A focal event, according to Lockwood & Lockwood (1993, 55) is, "an occurrence of sufficient magnitude that it changes the relative probability of the universe of alternate futures".

In other words, at present each of our three actors have a future goal with respect to each scenario, however as each actor progress in time toward that future goal, each will confront choices, and dependent on the choice made, the future could lead to a different, alternate future. Also, according to the authors, "In fact, our present might so closely resemble that of the alternate future that no focal events need occur" (Lockwood & Lockwood, 1993, 56).

Scenario # 1 - Continue with the status quo, by maintaining a commitment to nuclear energy and reliance on the U.S. nuclear umbrella

Alternate Future #19 All three major actors use diplomatic option in response to Japan maintaining a commitment to nuclear energy and reliance on the U.S. nuclear umbrella. (26 votes)

FOCAL EVENT- Japan sustains current penchant to forgo nuclear weapons and maintains reliance on current Treaty of Mutual Cooperation and Security with the U.S.
FOCAL EVENT- U.S. maintains acceptable nuclear deterrence
FOCAL EVENT- China sustains or increases its perception as a cooperative neighbor
FOCAL EVENT- Russia continues constructive policies regarding the Asia-Pacific market

Alternate Future # 21 Both the U.S. and China use diplomatic options, and Russian uses economic options for the second "most likely" future for scenario one. (25 votes)

FOCAL EVENT- Japan sustains current penchant to forgo nuclear weapons and maintains reliance on current Treaty of Mutual Cooperation and Security with the U.S.
FOCAL EVENT- U.S. maintains acceptable nuclear deterrence
FOCAL EVENT- China sustains or increases its perception as a cooperative neighbor
FOCAL EVENT- Russia shifts its economic relations with Japan, as a response in flagging diplomatic relations

Alternate Future # 25 Both the U.S. and Russia use diplomatic options, and China uses economic options for the third "most likely" alternate future for scenario one. (24 votes)

FOCAL EVENT- Japan sustains current penchant to forgo nuclear weapons and maintains reliance on current Treaty of Mutual Cooperation and Security with the U.S.
FOCAL EVENT- U.S. maintains acceptable nuclear deterrence
FOCAL EVENT- China Rise
FOCAL EVENT- Russia continues constructive policies regarding the Asia-Pacific market

Scenario # 2 - Develop an independent nuclear arsenal and attains nuclear power status

Alternate Future #22 Both the U.S. and Russia use diplomatic options, and China uses military options for the "most likely" future for scenario two. (26 votes)

FOCAL EVENT- Japan forgoes continued reliance on U.S. nuclear deterrence; establishes independent nuclear arsenal and attains nuclear power status reliance on current Treaty of Mutual Cooperation and Security with the U.S.
FOCAL EVENT- U.S. demonstrates inability to maintain global influence
FOCAL EVENT- China Rise
FOCAL EVENT- Russia continues constructive policies regarding the Asia-Pacific market

Alternate Future #24 The U.S. uses diplomatic options, China uses military options, and Russia uses economic options for the second "most likely" future for scenario two. (25 votes)

FOCAL EVENT- Japan forgoes continued reliance on U.S. nuclear deterrence; establishes independent nuclear arsenal and attains nuclear power status reliance on current Treaty of Mutual Cooperation and Security with the U.S.
FOCAL EVENT- U.S. demonstrates inability to maintain global influence
FOCAL EVENT- China Rise
FOCAL EVENT- Russia shifts its economic relations with Japan, as a response in flagging diplomatic relations

Alternate Future #25 The U.S. and Russia uses diplomatic options, and China uses economic options for the third "most likely" future for scenario two. (21 votes)

FOCAL EVENT- Japan forgoes continued reliance on U.S. nuclear deterrence; establishes independent nuclear arsenal and attains nuclear power status reliance on current Treaty of Mutual Cooperation and Security with the U.S.
FOCAL EVENT- U.S. demonstrates inability to maintain global influence
FOCAL EVENT- China Rise
FOCAL EVENT- Russia continues constructive policies regarding the Asia-Pacific market

LAMP Step Eleven - Develop indicators for the focal events.

According to Lockwood & Lockwood (1993, 56), "this step links the LAMP technique with the more "traditional" Indications and Warning function. For each focal event associated with a list of indicators that such an event either has occurred or is about to occur".

FOCAL EVENT- Japan sustains current penchant to forgo nuclear weapons and maintains reliance on current Treaty of Mutual Cooperation and Security with the U.S.

KEY INDICATOR- Japan continues its support of, and leadership role in the Nuclear Nonproliferation Treaty
KEY INDICATOR- Continues efforts to recognize past belligerent actions acceptable to neighbors
KEY INDICATOR- Continues productive nuclear energy development; maintains international economic standing

FOCAL EVENT- U.S. maintains acceptable nuclear deterrence

KEY INDICATOR- Ability to maintain nuclear deterrent commitments and acceptable command of the global commons

KEY INDICATOR- Ability to successfully defeat and deter global terrorism

KEY INDICATOR- Successfully regains domestic economic recovery

FOCAL EVENT- China sustains or increases its perception as a cooperative

KEY INDICATOR- Moves toward mutual agreement of disputed territories

KEY INDICATOR- Continues with a constructive behavior regionally and globally

FOCAL EVENT- Russia continues constructive policies regarding the Asia-Pacific market

KEY INDICATOR - Maintains positive trajectory of market, democratic reforms

FOCAL EVENT- Russia shifts its economic relations with Japan, as a response in flagging diplomatic relations

KEY INDICATOR - Russian-Japanese nuclear energy negotiations diminish

KEY INDICATOR - Russian-Japanese economic relations, other than nuclear energy, diminish

KEY INDICATOR – Russia selects favorable trade relations with China over Japan

KEY INDICATOR – Russia unwilling to use military options in response to flagging diplomatic relations

FOCAL EVENT- China Rise

KEY INDICATOR – Chinese-Japanese competition for economic dominance intensifies

KEY INDICATOR – Chinese-Japanese competition for access to greater amounts of fossil fuels intensifies

KEY INDICATOR – Chinese-Japanese competition for natural resources, other than fossil fuels, intensifies

KEY INDICATOR – Contention over disputed territories intensifies

KEY INDICATOR – Increases in military exercises

KEY INDICATOR – Increases/Improves nuclear forces/Conducts nuclear tests

FOCAL EVENT- Japan forgoes continued reliance on U.S. nuclear deterrence; establishes independent nuclear arsenal and attains nuclear power status reliance on current Treaty of Mutual Cooperation and Security with the U.S.

KEY INDICATOR – Japan expands influence in region beyond economic influence

KEY INDICATOR – Withdraw or decreases support of Nuclear Nonproliferation Treaty

KEY INDICATOR – Moves toward election of more right-wing politicians

KEY INDICATOR – Demographic shifts in domestic populace stance and views of nuclear weapons

KEY INDICATOR – Continued normalization of conventional military forces

KEY INDICATOR – Adopts new constitution
KEY INDICATOR – Abandons one, two or all three of its "three non-nuclear principles"

FOCAL EVENT- U.S. demonstrates inability to maintain global influence
KEY INDICATOR – Inability to deter global nuclear proliferation
KEY INDICATOR – Inability to sustain global freedom of movement; thus lacking ability to command the global commons
KEY INDICATOR – Inability to advance/build global partnerships
KEY INDICATOR – Inability to maintain domestic economic growth
KEY INDICATOR – Inability to achieve victory in Central Asia, and defeat extremist ideologies

LAMP Step Twelve - State the potential of a given alternate future to "transpose" into another alternate future.

The potential exists for alternate futures to "transpose" into another alternate future. After framing potential consequences of alternate futures, this last step in the LAMP technique will consider the "potential for transposition into another alternate future, since this may affect the relative probability of these futures as events unfold" (Lockwood & Lockwood 1993, 55).

Possible Transpositions in Scenario 1

The possibility that alternate future number 27 may transpose into either alternate future number 19, or 25. Alternate future number 19 is the "most likely" ranked alternate future for scenario one, that forecasts (U.S. - DO, Chinese - DO, Russian - DO) reaction, and alternate future number 25 (U.S. - DO, Chinese - EO, Russian – DO) reaction.

Alternate future number 27, forth "most likely alternate future, forecasts (U.S. - DO, Chinese - EO, Russian - EO) reaction is a likely transposition for both, due to competition for natural resources, which Moscow possesses and both Beijing and Tokyo requires for sustaining their economic engines. As China continues to develop economically, Moscow may oscillate between Beijing and Tokyo as a preferred trading partner, or simply seeking to maximize profits, allowing current market conditions to shape future events.

Possible Transpositions in Scenario 2

The possibility that alternate future number 27 may transpose into either alternate future number 22, 24, or 25. Alternate future number 22 is the "most likely" ranked alternate future for scenario two, that forecasts (U.S. - DO, Chinese - MO, Russian - DO) reaction, alternate future number 24 is the second "most likely ranked alternate future that forecasts (U.S. - DO, Chinese - MO, Russian - EO) reaction, and alternate future number 25 is the third "most likely ranked alternate future that forecasts (U.S. – DO, Chinese – EO, Russian – DO) reaction.

Alternate future number 27, forth "most likely alternate future, forecasts (U.S. - DO, Chinese - EO, Russian - EO) reaction is a likely transposition for all three, due to competition for natural resources, which Moscow possesses and both Beijing and Tokyo requires for sustaining their economic engines.

As China continues to develop economically, Moscow may shift between Beijing and Tokyo as a preferred trading partner, or simply seek to maximize profits, allowing current market conditions to shape future events. However, realizing little utility in further escalating military tensions, and/or working more closely with the U.S. alternate future number 27 is a likely transposition for any of the top three "most likely" alternate futures.

The possibility that alternate future number 23 may transpose into either alternate future number 22, 24, or 25. Alternate future number 22 is the "most likely" ranked alternate future for scenario two, that forecasts (U.S. - DO, Chinese - MO, Russian - DO) reaction, alternate future number 24 is the second "most likely ranked alternate future that forecasts (U.S. - DO, Chinese - MO, Russian - EO) reaction and alternate future number 25 is the third "most likely ranked alternate future that forecasts (U.S. – DO, Chinese – EO, Russian – DO) reaction.

Alternate future number 23, sixth “most likely” alternate future, forecasts (U.S. - DO, Chinese - MO, Russian - MO) reaction is a likely transposition for all three, due to a perceived threat to Russian national interests. In this transposition, Moscow perceives Japan’s growing military as a direct threat and responds in kind. Or else, indirectly as Moscow reacts to a growing Chinese military response and responds in kind. Another reason for transposition is, the U.S., in support of Japan, implements coercive diplomatic response in response to both or either actor (China and Russia) that results in a military response. This, “worst case” alternate future is “more likely” to result in a new arms race.

IV CONCLUSION:

The ongoing debate concerning Japanese attainment of nuclear power status, converges on the question of why Japan will or will not attain nuclear weapons. Specifically, this near single-mindedness envisions a future of continued reliance on the U.S. nuclear umbrella, and a sustained penchant by Japan toward global leadership in promoting nuclear nonproliferation.

However, nuclear proliferation as Kenneth Waltz suggests, is a very likely future probability especially when considering current and recent nuclear proliferation trends. Examples include India, Pakistan, North Korea, questions concerning Iranian nuclear status, and Iraq.

Based on these trends it would appear that a growing number of national actors and possibly non-state actors would attain nuclear power status in the near future. Hence, for U.S. policymakers the importance of understanding possible focal points and indicators, and potential consequences will assist in short/midterm planning and develop a better understanding for possible cooperation, or conflict.

However, not all actors will act rational, nor continue on a current path of expectation, as "free will" sparked by shifting diplomatic, economic, and military dynamics mark the transition from potential ***"least likely"*** projected futures into, as history teaches us, future realties.

Some will aspire to attain nuclear weapons, while others that maintain the capability for nuclearization will choose to either forego, or decide to attain nuclear power status. This hinges on their ability to resist, or willingness to cooperate vis-à-vis other national actors capacity to influence.

Thus, this paper advanced that both individually and collectively, but to a lesser degree, the three major actors considered will not significantly change their potential reactions between a scenario of Japanese maintaining the status quo of foregoing nuclear power status, and one that forecasts Japanese attainment of nuclear power status.

For, at least, the "most likely" alternate futures the findings suggests that both U.S. and Russian reactions will not fluctuate much if Japan attains nuclear power status, but China will vacillate, searching for the right response in coping with a new nuclear neighbor, Japan.

In considering the specific research question, this paper utilized a systematic approach in better understanding potential reactions by three dominate nuclear powers in response to Japanese attainment of nuclear power status. This paper did not fully explore all possible actors, nor every possible criterion.

Optimistically, it did assist in identifying potential consequences, focal points and indicators that contributes to the ongoing body of knowledge.

The future is full of both potential opportunities for cooperation and possibility for conflict, and in the end, each actor will evoke "fee will" in determining what actions are best in promoting their respective national security interests.

The potential reactions by the three major actors may or may not significantly change if Japan moves from a future path of status quo to one of attaining nuclear power status.

However, this paper suggests that for at least the U.S. and Russia, their respective "most likely" potential reactions will shift slightly between scenarios. China, on the other hand, will "most likely" fluctuate between various elements of national power seeking strategies to better cope with yet another nuclear neighbor.

As a final observation, this paper did not, nor could any study explore *all* possible actors neither potential reactions of *all* possible criterions. Additionally, the United Nations emerged as a potential actor not previously considered in this paper. Consideration of technical capability, nuclear military doctrine and force structure requirements and research of case studies of how the major actors responded to Indian, North Korean, and Pakistani attainment of nuclear power statuses are all worthy of consideration as a next step in researching this topic.

Notwithstanding these worthy candidates for consideration, this paper utilized a systematic analytic predictive approach, the Lockwood Analytical Method for Prediction, with the aim of maximize objectivity; avoiding the "mirror-imaging" and "groupthink" traps concerning the chosen actors, used two plausible scenarios and creditable, realistic criterion all in facilitating a a broader sense in promoting "a different way of thinking" regarding potential reactions by the U.S., China, and Russia to Japanese attainment of nuclear power status.

VII. REFERENCE LIST:

Bodman S. and Gates R. 2008. *National Security and NuclearWeapons in the 21st Century.* Joint Policy Paper , Washington, D.C: US Government.

Bogaturov, Alexei. 2004. *Russia's Priorities in Northeast Asia: Putin's First Four Years.* "Academic Educational Forum On International Relations." *Publications AD Bogaturov.* Unknown Unknown, 2002-2007.http://translate.googleusercontent.com/translate_c?hl=en&sl=ru&u=http://www.brookings.edu/fp/cnaps/papers/survey2004/6russia.pdf&prev=/search%3Fq%3DAlexei%2BBogaturov%2BAND%2B%2BRussia%25E2%2580%2599s%2BPriorities%2Bin%2BNortheast%2BAsia:%2BPutin%25E2%258 (accessed March 1, 2010).

Campbell, Patel,Singh. 2008. *The Power of Balance: America in iAsia. "*Center for a New American Security", (June) 2008: p.7.

Chanlett-Avery E. and Nikitin M. 2009. *Japan's Nuclear Future: Policy Debate, Prospects, and U.S. Interests (RL34487).* Governmet (Congress), Washington D.C.: Congressional Research Service.

CIA. *CIA World Factbook.* March Bi-monthly, 2010. https://www.cia.gov/library/publications/the-world-factboo (accessed March 5, 2010).

Clark, Robert M. 2009. *Intelligence Analysis.* Washington D.C.: CQ Press, 2010.

Conrad , Baucus, Dorgan, Landrieu,Tester, Enzi, Hatch, Bennett, Vitter, Barrasso. 2009 *The Long Pole of the Nuclear Umbrella* "Criticality of the Intercontenental Ballistic Missile to United States Security". White Paper, Washington D.C.: US Senate.

Bakanic, Christopher, Das, Freeman, Hodgson, Hunzeker, Kemp. 2008. *Preventing Nuclear Proliferation Chain Reactions:Japan, South Korea, and Egypt.* Woodrow Wilson School of Public and International Affairs, Princeton N.J.: Princeton University.

Pfetsch, F. 2008. *Conflict Barometer.* Heidelberg Institute For International Conflict Research, Department of Political Science, University of Heidelberg, Heidelberg, Germany. http://hiik.de/en/konfliktbarometer/pdf/ConflictBarometer_2008.pd (accessed March 20, 2010)

James F. Hoge, Jr. 2004. *A Global Power Shift in the Making* FOREIGN AFFAIRS, (July/August) 2004: 1-4. http://www.foreignaffairs.com/articles/59910/james-f-hoge-jr/a-global-power-shift-in-the-making (accessed February 22, 2010).

Jimbo, Ken. 2008. *Long-term Outlook for Japan's Foreign and Security Policies.* 17th session of the Japan-US future leaders policy dialogue (the Tokyo-Reischauer Group)., Washington D.C.: Tokyo Foundation.

Jones, Morgan D. 1998. *The Thinker's Toolkit 14 Powerful Techniques for Problem Solving.* New York: Three Rivers Press.

Lockwood & Lockwood. 1993. *IN520 The Lockwood Analytical Method for Prediction (LAMP).* Washington D.C.: The Joint Military Intelligence College, on behalf of the US Government.

Nagai, Matsuo, Kitanishi, Shohno. 1997. *Characteristics of Japanese People's Attitude Towards Nuclear Problems.* University, Hiroshima, Japan: Research Institute for Theoretical Physics.

Obama, Barack President. 2009. "President Obama Remarks in Prague, Czech Republic." *America.gov.* April 5, 2009. http://www.america.gov/st/texttrans-english/2009/April/20090406115740eaifas0.9701763.html (accessed February 27, 2010).

Pavlyatenko, Viktor. 2009. *RT Top Stories.* August 06, 2009. http://rt.com/Top_News/2009-08-06/hiroshima-nagasaki-nuclear-bomb.html (accessed March 5, 2010).

Sagan, Scott D, and Kenneth N. Waltz. 2003. *Harvard.edu.* Harvard.edu. http://www.people.fas.harvard.edu/~plam/irnotes07/Sagan_Waltz_1995.pdf (accessed March 11, 2010).

Trenin, Dmitri. 2005. *Russia's Nuclear Policy in the 21st Century Environment.* Proliferaton Papers, Paris: Atomic Energy Commission, Autumn 2005.

Trukhachev, Vadim. 2009. *Pravda.Ru.* August 7, 2009. http://english.pravda.ru/world/asia/07-08-2009/108687-hiroshima-0 (accessed February 12, 2010).

Waltz, Kenneth. 1981. *The Spread of Nuclear Weapons: More May Be Better, Adelphi Papers, Number 171.* UNK UNK, 1981. http://www.mtholyoke.edu/acad/intrel/waltz1.htm (accessed March 11, 2010).

Xinbo, Wu. 2005-06. *A Chinese View of the U.S.-Japanese Alliance. The Washington Quarterly*, Winter 2005-06: 120-128.

Yin, Lu. 2009. *Challenges of Non-Proliferation in Northeast Asia and Possible.* Institue for Security and Development Policy, 2009.

Yuan, Jing-dong. 2007. *Managing Power Shift And Rivlary: How Beijing Views Sino-Japanese Relations.* Working Papers. Stockholm-Nacka, Sweden: Monterey Institue of International Studies, February 2007.

APPENDIX A

VOTING

Scenario # 1 – Continue with the status quo, by maintaining a commitment to nuclear energy and reliance on the U.S. nuclear umbrella

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
2	x	3	4	5	2	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
3	x	x	4	3	3	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
4	x	x	x	4	4	7	8	4	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
5	x	x	x	x	6	7	5	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
6	x	x	x	x	x	7	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
7	x	x	x	x	x	x	8	7	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
8	x	x	x	x	x	x	x	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
9	x	x	x	x	x	x	x	x	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
10	x	x	x	x	x	x	x	x	x	10	11	10	10	10	16	10	18	19	10	21	22	23	24	25	26	27
11	x	x	x	x	x	x	x	x	x	x	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
12	x	x	x	x	x	x	x	x	x	x	x	12	12	12	16	17	18	19	12	21	12	12	12	25	26	27
13	x	x	x	x	x	x	x	x	x	x	x	x	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14	x	x	x	x	x	x	x	x	x	x	x	x	x	15	16	17	18	19	20	21	22	23	24	25	14	27
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16	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	16	16	19	20	21	16	16	16	25	26	27
17	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	18	19	20	21	17	17	17	25	26	27
18	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	19	18	21	18	18	18	25	18	27
19	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	19	19	19	19	19	19	19	19
20	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	21	22	20	24	25	26	27
21	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	21	21	21	21	21	21
22	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	23	24	25	22	27
23	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	24	25	26	27
24	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	25	26	27
25	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	25	25
26	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	27
27	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Scenario # 1 – Continue with the status quo, by maintaining a commitment to nuclear energy and reliance on the U.S. nuclear umbrella

# of Possible Alternate Futures	# of Votes
1	0
2	1
3	4
4	6
5	3
6	3
7	7
8	7
9	4
10	15
11	10
12	17
13	10
14	12
15	15
16	20
17	15
18	21
19	**26**
20	17
21	**25**
22	15
23	16
24	17
25	**24**
26	18
27	23

VOTING

Scenario # 2 - Develop an independent nuclear arsenal and attain nuclear power status.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	2	3	1	1	6	1	1	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
2	x	3	2	2	6	2	2	9	2	2	2	13	14	2	2	2	2	2	2	2	22	23	24	25	2	2
3	x	x	3	3	6	7	3	9	3	3	3	3	3	3	3	3	3	19	3	21	22	3	24	25	3	3
4	x	x	x	5	6	7	4	9	4	11	13	13	14	15	4	4	4	19	4	4	22	23	24	25	4	27
5	x	x	x	x	5	7	8	9	10	11	12	13	14	15	16	5	5	5	5	21	22	23	24	25	5	27
6	x	x	x	x	x	7	8	6	6	6	12	13	14	15	16	6	6	19	20	21	22	23	24	6	6	27
7	x	x	x	x	x	x	7	7	10	11	7	13	7	15	7	7	7	7	7	7	22	23	24	7	26	27
8	x	x	x	x	x	x	x	8	10	8	12	13	14	15	8	8	8	8	8	8	22	23	24	25	26	27
9	x	x	x	x	x	x	x	x	10	11	12	9	9	9	9	9	9	9	9	9	22	23	24	25	9	27
10	x	x	x	x	x	x	x	x	x	10	10	13	14	15	10	10	10	19	10	10	22	23	24	10	10	27
11	x	x	x	x	x	x	x	x	x	x	11	13	14	15	16	11	18	11	11	21	22	23	24	25	26	27
12	x	x	x	x	x	x	x	x	x	x	x	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
13	x	x	x	x	x	x	x	x	x	x	x	x	14	15	13	13	13	13	13	21	22	23	24	25	26	27
14	x	x	x	x	x	x	x	x	x	x	x	x	x	14	14	14	14	14	14	14	22	14	24	25	14	27
15	x	x	x	x	x	x	x	x	x	x	x	x	x	x	15	15	15	15	15	21	22	15	24	25	15	27
16	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	17	18	19	20	21	22	23	24	25	26	27
17	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	18	19	20	21	22	23	24	25	26	27
18	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	19	20	21	22	23	24	25	26	27
19	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	19	21	22	19	24	25	19	27
20	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	21	22	20	24	25	26	27
21	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	22	21	24	25	21	27
22	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	22	22	22	22	22
23	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	24	25	23	23
24	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	24	24	24
25	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	25	26
26	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	27
27	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Scenario # 2 - Develop an independent nuclear arsenal and attain nuclear power status.

# of Possible Alternate Futures	# of Votes
1	4
2	17
3	18
4	8
5	7
6	11
7	15
8	10
9	15
10	14
11	9
12	6
13	15
14	19
15	17
16	4
17	3
18	5
19	12
20	7
21	15
22	**26**
23	18
24	**25**
25	**21**
26	11
27	19

APPENDIX B

Conceptual Framework