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THESIS

**THEATER MISSILE DEFENSE:
THE EFFECTS OF TMD ON U.S.-JAPAN
SECURITY RELATIONS**

by
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March 1996

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THE EFFECTS OF TMD ON U.S.-JAPAN SECURITY RELATIONS**

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Submitted in partial fulfillment of the requirements for the degree of

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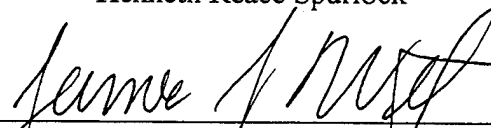
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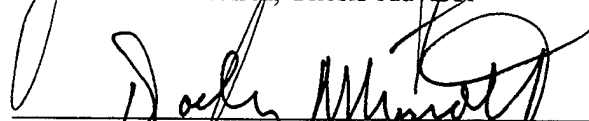
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ABSTRACT

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This study reviews the potential impact such efforts may pose on the future of the U.S.-Japan security relationship and the ability of the United States to exert its influence in the Asia-Pacific region. The environment which led to the initial security agreement in 1951 has been significantly altered and many believe that TMD may be the necessary tool to restore stability to the relationship. Through the application of three alliance theories this thesis analyzes the U.S. decision to pursue joint TMD production with Japan. This thesis provides background information for three theories and applies them to the history of the U.S.-Japan alliance, the FS-X co-production effort and the extended TMD proposals.

Based on this application and analysis, this study concludes that co-production of TMD will impede the production of TMD, and therefore not in the direct interest of the United States. In addition, the exchange of technology as well as the co-production efforts will reduce the credibility and influence of the United States within the U.S.-Japan alliance. However, if the United States alone continues with its domestic development and deploys TMD systems as part of its national military strategy, it can avoid the negative effects and degradation of its influence within the alliance.

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EXECUTIVE SUMMARY

This thesis examines the continued pursuit of co-production efforts by the United States with Japan. The President has identified the development of Theater Missile Defenses (TMD) as a priority to counter the proliferation of theater ballistic missiles (TBM) and weapons of mass destruction (WMD). In keeping with the priorities set forth by the President, the Secretary of Defense has made several proposals to the Japanese government in regards to the purchase, increased technical exchanges, and co-production of TMD systems.

This study reviews the potential impact such efforts may pose in the future of the U.S.-Japan security relationship and the ability of the United States to exert its influence within the alliance. The environment which led to the initial security agreement in 1951 has been significantly altered and many believe that TMD may be the necessary tool to restore stability to the relationship.

This thesis addresses this dilemma in six chapters. Chapter II provide background information for three alliance theories: balance of power, coalition and national attributes. Through the use of the most applicable theory, policy makers can attain a better understanding of the environment in which they are operating, predict potential outcomes and justify past actions. Most alliances theories focus on the motivations behind the creation of an alliance, however, in the absence of hostilities, all attempt to provide some justification for the preservation of existing structures.

Chapter III discusses how alliance theory applied to the history of the U.S.-Japan security relationship. The various theories will be validated by comparing the actions of both the United States and Japan with the motivation characteristics associated with each theory.

Through the analysis of the FS-X efforts, Chapter IV will illustrate how alliance theory drives the actions of both the United States and Japan. To do this, each of the alliance theories will be

ries exerts the greatest influence upon the alliance. The FS-X efforts will demonstrate the inability of a joint venture policy to achieve the desired effects of increased stability, improved weapons capability and timely-cost effective production. This case study will also reveal the ineffectiveness of a joint venture to be used as a tool in an attempt to increase influence.

Chapter V advances this analysis by substituting FS-X co-production details with those associated with TMD. Again, each of the alliance theories will be applied to the proposals in an attempt to derive the potential impact upon the U.S.-Japanese alliance. Since this joint production effort is still in its inception, only a limited comparison between the predicted outcomes and the actual course of events can be made. Regardless, through the use of this comparison and that of the FS-X, a positive or negative influence on the alliance can be forecasted. Due to the similarities between the two co-production efforts, it would appear that their combined results would have an amplified effect upon the relationship. If this is true, any negative consequence from these joint production efforts would result in increased tensions and deterioration of the U.S.-Japan alliance.

Chapter VI summarizes the collection of inductive and deductive conclusions of the previous four chapters. Additionally, these findings will be evaluated against the following criteria to determine the benefit of the proposal. Does the proposal maintain or enhance the level of U.S. influence in the U.S.-Japan alliance based upon the appropriate alliance theory?

Based upon the findings of the previous five chapters, this thesis concludes that co-development of TMD systems may provide limited benefits to both countries as well as other short term gains. However, these marginal returns will become overshadowed by new tensions that result from this effort. The addition of these new tensions would continue the split the two nations apart and make the possibility of a cohesive alliance unrealistic in circumstance short of war.

Based upon this conclusion, this thesis recommends that the United States continue with independent development of TMD. This recommendation is made to preserve the status quo of the alliance, maintain the level of U.S. influence with the alliance and most importantly expedite the production of a working TMD system.

I. INTRODUCTION

According to the February 1995 United States Security Strategy for the East Asia-Pacific Region, "there is no more important bilateral relationship than the one we have with Japan. It is fundamental to both our Pacific security policy and global strategic objectives. Our security alliance with Japan is the linchpin of United States Security policy in Asia. It is seen not just by the United States and Japan, but throughout the region, as a major factor for securing stability in Asia."¹ Despite this declared importance, security issues have often become clouded by the confrontational economic policies of both Japan and the United States. In addition, new pressures stemming from international change and the pursuit of different national interests have affected the U.S.-Japanese relationship. These developments have reduced support for the U.S.-Japan Treaty of Mutual Cooperation and Security in both countries. If this relationship is truly the linchpin to the U.S. security policy in Asia, then it is vital that appropriate measures be taken to stop the deterioration of this relationship.

Despite the euphoria experienced during the final stages of the Cold War, the period marking its aftermath was far from stable. The fear of global nuclear war was soon replaced by the threat of regional disputes, acts of terrorism, civil wars and proliferation of weapons of mass destruction. While there is little doubt that the U.S.-Japan security relationship will be forced to deal with all of these issues, this thesis is directed at what Japan considers to be its greatest threat, theater missiles (TMs) and their associated capabilities (chemical, biological and nuclear warheads).² (For a detailed summary of the TM challenges to the U.S.-Japan security interests, see appendix A.)

¹*United States Security Strategy for the East Asia-Pacific Region*, Department of Defense, February 1995, p. 10.

²"Cost-Effectiveness of TMD," *Nihon Keizai Shimbun*, September 26, 1994, p. 2.

Assuming that the recent trends in the proliferation of weapons of mass destruction (WMD) and TMs continue, the development of a credible theater missile defense (TMD) will become national priorities for both the United States and Japan. While there are many advocates for the continued development of such a defensive system, the high costs associated with research and development, domestic budget constraints, concerns over potential conflicts with existing treaties (namely the Antiballistic Missile Treaty of 1972, ABM), serve as a constant source of friction and potentially limit the development of TMDs.

Given the constraints placed upon the domestic production of TMD, the Secretary of Defense, along with key members of the Ballistic Missile Defense Organization (BMDO), have solicited the assistance of Japan for financial support, joint production/co-production, licensed production, and outright purchase offers. Despite these attempts, Japan has officially refused to commit itself to any of the U.S. proposals. Although Department of Defense (DoD) officials would like to see some sort of Japanese participation in TMD development, Japanese indecision has allowed time for a second look at U.S. proposals.

In light of the current strains on the U.S.-Japanese relationship and the importance of its continued success, it is vital that the two countries pursue measures to strengthen the alliance. The challenge facing the United States in Japan is clear: develop a strategy that addresses the threats to the region while overcoming domestic constraints. The United States has attempted to do this on several occasions by requesting increased financial and technological cooperation from Japan, but these efforts have always fallen short of their anticipated goals. The recent U.S. proposals requesting Japanese assistance in the research and development of TMD systems is the latest attempt to meet the U.S. challenge in Japan.

The co-development of this weapon could result in significant changes in the security relationship between the United States and Japan. Thus, the purpose of this thesis is to determine how joint development of TMD systems will affect the U.S.-Japanese security relationship.

A. ALLIANCE THEORY AND POLICY

While the association between policy formation and alliance theory may not be immediately evident, the two are inseparable and lie at the root of the issues surrounding the question of joint TMD development. Alliances are an integral part of international politics. They serve as a primary method for states to pursue cooperation with other nations in order to enhance their power to protect their interests. It is generally accepted that alliances are techniques of statecraft and that their formation consists of agreements made by sovereign nations to achieve a shared interest.³

Prior to making any policy decision regarding Japanese involvement in TMD development, it is important to understand the nature of the U.S.-Japanese alliance. Any policy decisions in this area will either enhance or detract from the stability of the alliance based upon the benefits or complications (security, economic or political) experienced by each country. Likewise, the U.S. decision to develop TMD systems and deploy them in Japan will also exert some measure of influence upon the alliance.

1. Definition of an Alliance

Some authors and theorists use the terms alliance, coalition, partnership, pact and bloc interchangeably. Recognizing that there are differences among these terms, this thesis defines an

³Edwin Fedder, "The Concept of Alliance," *International Studies Quarterly*, 12, 1968.

alliance as a formal agreement between two or more nations to collaborate on national security issues.⁴ In addition, this thesis uses alliance, security relationship and arrangement interchangeably.

2. Alliance Formation

According to Ole Holsti, Terrence Hopman and John Sullivan, there are three primary motivations behind the creation of alliances: balance of power, coalitions and national attributes.⁵ Balance of power advocates base their theories on the maintenance of an equilibrium⁶ Coalition theorists differ from balance of power advocates by emphasizing deductive reasoning to calculate what is necessary to win.⁷ In coalition theories, the primary goal is to produce a dominant group of nations while the balance of power advocates try to prevent such an association from developing. In contrast to the balance of power and coalition theorists, those that stress national attributes emphasize capabilities other than power. Rather than focusing on an external threat, this group tries to account for other issues such as domestic needs, internal stability and economic interests.⁸

Although all three of these motivations are represented throughout the history of the U.S.- Japanese security relationship, coalition theories seem to exert the largest influence on the alliance. This influence exerted by coalition theories may cause both the United States and Japan to continue

⁴ Ole Holsti, Terrence Hopmann and John Sullivan, *Unity and Disintegration in International Alliances: Comparative Studies*, (New York: John Wiley & Sons Inc., 1973), p. 4.

⁵Ibid., pp. 4-14.

⁶Ernest Haas, "The Balance of Power: Prescription, Concept or Propaganda," *World Politics*, 5, 1953, p. 442.

⁷William Riker, *The Theory of Political Coalitions*, (New Haven: Yale University Press, 1962), p. 32.

⁸George Liska, *Nations in Alliance: The Limits of Interdependence*, (Baltimore: Johns Hopkins Press, 1962), p. 217.

the pursuit individual interests which could result in an unsatisfactory outcome for a joint TMD effort. It is my intention to review the issues surrounding the development and deployment of TMD systems in Japan and apply them to the three alliance theories. This effort will illustrate the potential problems surrounding another joint venture as well as the shortfalls of its influence on the stability of the U.S.-Japanese alliance.

B. METHODOLOGY

There are basically three options for U.S.-Japanese TMD development: provide financial assistance; joint research/production; and the outright purchase of a final product. While all of the proposals contain some variations of these options, Japan has yet to commit to any of the offers. The first option, financial assistance is intended to extend further than the recently negotiated increase HOST nation support. Its goal is to earmark Japanese funds specifically for TMD R&D. The second option, joint production, is the most complicated of the three. Matters concerning contract negotiations for manufacturers, technology sharing, and propriety of licensed information complicate the proposals. The final option, outright purchase of completed systems, appears to be the easiest solution. However, this option does not provide sufficient immediate financial benefit and limits the potential gains that may be received from Japanese industries. The United States has made what it feels to be every possible concession on this issue and has received only minimal success. The lack of Japanese commitment to this effort may reflect the minimal influence the United States is able to exert on its ally as well as possible weaknesses in this alliance.

In order to determine the effects TMD co-production on the U.S.-Japan alliance, this paper will utilize the characteristics associated with each of the alliance theories to draw its conclusions.

According to Holsti, Hopman and Sullivan, selection of the proper alliance theory is the first step in determining the ability to exert influence on an ally.⁹ Through the use of the most applicable theory, policy makers are able to attain a better understanding of the environment in which they are operating, predict potential outcomes and justify past actions. Most alliance theories focus on the motivations of member nations. Once the motives of an ally are understood, it may be possible to predict their actions. Chapter II will provide information for three alliance theories which have been experienced throughout the U.S.-Japanese relationship.

Following a history of the U.S.-Japanese security relationship, Chapter III discusses how alliance theories applied to the relationship. The various theories will be validated by comparing the actions of both the United States and Japan with the motivation characteristics for each of the theories.

Through the analysis of the FS-X efforts, Chapter IV will illustrate how alliance theory drives the actions of both the United States and Japan. To do this, each of the alliance theories will be applied to the circumstances surrounding the FS-X development. A predicted outcome for the alliance can be then derived based upon the characteristics associated with each theory. Through the comparison of the predicted outcomes associated with each theory and the actual actions taken by each country, a determination can be made selecting one of the alliance theories as the most appropriate for the U.S.-Japan alliance. Although the FS-X project is still in development, sufficient progress has been made to determine which of the alliance theories exerts the greatest influence upon the alliance. The FS-X efforts will demonstrate the inability of a joint venture policy to achieve the desired effects of increased stability, improved weapons capability and timely-cost effective

⁹Holsti, Hopmann, and Sullivan, *Unity and Disintegration*, pp. 14-16.

production. Finally, this case study will also reveal the ineffectiveness of a joint venture as a tool to increase influence.

Chapter V advances this analysis by substituting FS-X co-production details with those associated with TMD. Again, each of the alliance theories will be applied to the proposals in an attempt to derive the potential impact upon the U.S.-Japanese alliance. Since this joint production effort is still in its inception, only a limited comparison between the predicted outcomes and the actual course of events can be made. Regardless, through the use of this comparison and that of the FS-X, a positive or negative influence on the alliance can be forecasted. Due to the similarities between the two co-production efforts, it would appear that their combined results would have an amplified effect upon the relationship. If this is true, any negative consequence from these joint production efforts would result in increased tensions and deterioration of the U.S.-Japan alliance.

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Based upon this conclusion, this thesis recommends that the United States continue with independent development of TMD. This recommendation is made to preserve the status quo of the

alliance, maintain the level of U.S. influence with the alliance and most importantly expedite the production of a working TMD system.

II. A CLOSER LOOK AT ALLIANCES

While there is no sure method of predicting the impact of policy decisions on the relationship between allied nations, alliance theories offer systematic explanations for the behavior of nations. This chapter describes three alliance theories that can explain the history of the post-war U.S.-Japan relationship. There are numerous theories relating to alliances; most refer to ideas such as balance of power, and influence. These theories provide an overview of the nature of alliances, but they fail to explain the issues created by an alliance. One of the foremost advocates of alliance theory, Hans Morgenthau, refers to alliances as a "necessary function of the balance of power."¹⁰ Unfortunately, Morgenthau only uses his theories to explain history and does not attempt to use his theories to predict the actions which may occur.¹¹

A. THREE ALLIANCE THEORIES

1. Balance of Power

Balance of power theories are among the oldest explanations of alliance behavior and emphasize some form of equilibrium in the international system. According to Edward Gulick, perceived imbalances in the distribution of international power will give rise to alliance formation.¹² Balance of power theorists treat the international system as a zero-sum game where states derive

¹⁰Hans Morgenthau, *Politics Among Nations*, (New York: Alfred A. Knopf, Inc., 1948), p. 175.

¹¹Julian Friedman, Christopher Bladen, and Steven Rosen, *Alliance in International Politics*, (Boston: Allyn and Bacon, Inc., 1970), p. 77.

¹²Edward Gulick, *Europe's Classical Balance of Power*, (Ithaca, Cornell University Press, 1955), pp. 61-62.

motivation to form alliances from the distribution of power. In addition, this theory claims that the primary motivation of alliance formation stems from an external threat rather than national strengths or weaknesses.¹³ According to this theory, alliances are formed as a matter of expediency, not principal.¹⁴ Thus, nations will join forces to create military capabilities needed to achieve certain policy goals. This statement is based upon the premise that when threatened, nations will align with other nations, placing security above ideology. A classic example of this alliance behavior is the Allied efforts during World War II. The ideological differences between the United States and the Soviet Union were so great that a cold war would emerge after elimination of the Nazi threat. But during the immediate conflict, the two nations fought side by side against what was thought to be a larger menace.

Certain assumptions are inherent when utilizing the balance of power theory to explain alliance behavior. The theory assumes that nations will continue to pursue rationally their own unique interests and that the equilibrium that is being established will serve the general good. If one member of the alliance assumes too much power, then the other members will attempt to neutralize the dominant state by siding with other nations. Permanent alliances will eventually promote intense international tension as well as inhibit an acceptable resolution of international problems due to the inflexibility of the alliance structure.¹⁵

¹³George Liska, *Alliances and the Third World*, (Baltimore: Johns Hopkins Press, 1968), p. 13.

¹⁴Hans Morgenthau, "Alliances in Theory and Practice," in Arnold Wolfers ed., *Alliance Policy in the Cold War*, (Baltimore: Johns Hopkins Press, 1959), p. 185.

¹⁵Holsti, Hopmann, and Sullivan, *Unity and Disintegration*, p. 6.

One of the most important aspects of balance of power theories is the prevention of one nation or group of nations from becoming a dominant actor in the international system. Following this reasoning, the members of an alliance are selected on the basis of shared goal or common needs rather than common values or a sense of community.¹⁶ Balance of power theories provide a foundation for understanding the interactions of nations however, there are several alliances that do not fit this mold. This approach places the motivation for alliance formation primarily on the attributes of the international system and the situation rather than the actors shared objectives. While some alliances may exist for precisely these reasons, the U.S.-Japanese relationship may not be based upon a zero-sum game nor reliant upon the existence of an external threat for its success.

If the balance of power theory provides the most accurate description for the environment surrounding the current U.S.-Japanese security relationship, this would suggest that co-production of TMD systems would have a detrimental effect on the alliance. This prediction is based upon three assumptions: 1) TMD successfully eliminates the external threat posed by potential aggressors and 2) co-production would give Japan the military technology and industrial capability to achieve its policy goals independently and 3) the United States continues to be the provider for Japan security without receiving compensation from Japan.

2. Coalition Theory

By contrast the North Atlantic Treaty Organization (NATO), often serves as the primary example of coalition theory in practice. The primary purpose for NATO was to extract sufficient mutual commitments from European nations in response to external threats posed by the Soviet Union and the Warsaw pact. This was accomplished by increasing the military power of the allies

¹⁶Liska, *Nations in Alliance*, p. 12.

through the combination of resources and positive cooperation.¹⁷ Commitments by individual countries were made to ensure that the overall combined military strength of NATO was sufficient to protect its members from a common enemy. It was believed that the protection of any one member was supposed to be in the interests of all.¹⁸ Conversely, coalition theorists believe that an attack on one represents an act of aggression against all members of the coalition. The presumed benefit, according to this theory, is deterrence.¹⁹

In contrast to Morgenthau, coalition theorists focus on quantitative elements and the establishment of assets necessary to maintain a coalition's dominance over its opponent. These theories provide empirical variables which can be validated through history and applied to current or future scenarios. Unlike balance of power theories that assume nations will pursue policies of extension as well as practice self restraint, coalition theorists claim that the actor's sole motivation for seeking an alliance is to develop a winning combination which will maximize its external share of the gain. Each member of the alliance must be able to make some contribution toward the overall objective or its membership will not be solicited or maintained.

Coalition theories try to account for the continued success of alliances despite the periodic tensions caused by conflicting interests. These theories claim that the foundation of an alliance is based upon the provision of a public good, namely security. There may be additional benefits that

¹⁷R. Osgood, *Alliances and American Foreign Policy*, (Baltimore: Johns Hopkins University Press, 1968), p. 21.

¹⁸Mancur Olson and Richard Zeckhauser, "An Economic theory of Alliances," *Economic Theories of International Politics*, ed. B. Russett, (Chicago: Markham Publishing, 1968), p. 26.

¹⁹Glenn Palmer, "Corralling the Free Ride: Deterrence and the Western Alliance," *International Studies Quarterly*, (1990) 34, p. 148.

stem from an alliance, such as internal security, restraint of allies and international order, however, these issues are deemed to be less important and of a secondary nature.²⁰ In the case of Japan and the United States, the initial purpose for U.S. presence in Japan was twofold: 1) contain communism and 2) prevent the militarization of Japan. Due to the increased speed and destruction capacity of today's weapons systems, modern day alliances seem to rely on contingency planning rather than the ad hoc actions that followed an outbreak of hostilities in the past.

If the behavior of the U.S.-Japan alliance is defined by coalition theory, then co-development of TMD systems will lead to an increased deterrence posture and thus stability in the U.S.-Japan alliance. This proposition is founded on the idea that an effective deterrent equals security and that the distribution of responsibility and costs within the alliance remains acceptable to both countries. There are two methods of increasing one's deterrence posture. The first is through increased weapons capabilities. The second is by increasing the probability of retaliation and inflicting an unfavorable response. The very nature of TMD systems provides a measure of deterrence. This defensive system is intended to eliminate the most threatening first strike capability of potential aggressors. This would reduce the aggressor's effectiveness as well as increase the relative military capabilities of the alliance.

3. National Attributes

While both the balance of power and coalition theories are based upon the distribution of power or military capabilities, national attribute theorists emphasize one or more unique characteristics of a member nation as the important source of motivation behind alliance policies. This approach does not deny that power will have an impact on alliance formation, nor does it downplay the effects of the international system. For example, national attribute theorists agree that any nation,

²⁰Osgood, *Alliances and American Foreign Policy*, p. 21.

despite its attributes, will pursue allies when faced with an external threat. However, these theorists emphasize that nations cannot be treated as undifferentiated actors in their search for alliance partners. They believe that foreign policy orientations reflect motives that draw upon many sources, many of which are explained by national attributes.

This theory is used to justify the actions of nations who seek membership in alliances to fill the voids of their individual capabilities.²¹ Theorists in this group believe that nations join alliances due to the limits of their national attributes. For example, many nations have limitations on their political leadership, internal stability status and economic capabilities and therefore seek outside security assistance to compensate for these weaknesses through alliances. Nations confident in their national attributes will be less willing to enter into alliances. The greater the success a nation experiences with self-reliant policies, the lower the tendency will be to join an alliance.²²

If national attributes provide the current motivation for alliance formation and stability, co-production of TMD systems will have an adverse effect on the U.S.-Japanese alliance. Co-production of this system will resolve domestic issues (constitutional conflicts and military-industrial development) for Japan and reduce their dependency and need for the alliance. The reduced dependency will allow Japan to pursue independent policies thus reducing the influence of the United States on Japan and the Pacific Region. Through TMD co-production, Japan will obtain a weapon system that will fill the void of the critical national attributes that bind the two nations together.

²¹Holsti, Hopmann, and Sullivan, *Unity and Disintegration*, p. 11.

²²Harold Guetzkow, "Isolation and Collaboration: A Partial Theory of Inter-Nation Relations," *Journal of Conflict Resolution*, 1, 1957 p. 154.

B. EXERTING INFLUENCE WITHIN ALLIANCES

Accepting that alliances can only be concluded by nations who possess sovereignty and independence often lead many to the incorrect conclusion that members of an alliance are equal. However the various motivations, capabilities and contributions of the nations seeking alliances result in differences in the level of influence exercised by members within the alliance.

The classic balance of power school of thought claims that alliance influence and the allocation of benefits²³ reflect the distribution of capabilities among its members. Due to the disproportionate distribution in an alliance, decision making would be a function of who provided the greatest capability.²⁴ If this were true, the United States would set the direction for all the alliances it has joined.

Despite the intuitive conclusion that influence is proportional to strength, it is rejected by coalition theorists who maintain that weakness may actually be a source of advantage. Since the level of contribution is often a source of tension, members try to receive the maximum benefit with minimum contribution. The disproportionality often leads to inequalities in the direction leadership and influence exerted by the major contributors. However, due to the increased value a larger partner usually places upon the preservation of the alliance, the weaker nation is able to exert a disproportionate amount of influence on the relationship. Thus if coalition theorists are correct, small nations have a disproportionate level of influence for two reasons: 1) it is hard for a large nation to

²³Morgenthau, *Alliance Policy*, p. 190.

²⁴Paul Torrence, "Some Consequences of Power Indifference in Decision Making in Permanent and Temporary Three-Man Groups," *Small Groups: Studies in Social Interaction*, (New York: Alfred A. Knopf, 1955, p. 491.

threaten credibly to reduce its contributions, and 2) the smaller nation has the ability to commit its larger ally to conflicts which may impose unacceptable losses in the defense of the weaker nation.²⁵

It is difficult to predetermine the level of influence for alliances based upon national attributes. This difficulty is due to the undefined characteristics of each member in the alliance and the relative distribution of power and value among them. However, in general, it can be expected that the nation with the greatest contribution in one area would also be the one to set the course of action for issues that effected the use of that good.

C. MAINTAINING COHESION IN ALLIANCES

Alliance cohesion has been described in several ways. Some theories refer to it as the ability of the members to agree upon strategy, tactics and employment for the attainment of shared goals. Others attempt to equate cohesion with efficiency. Finally, others refer to cohesion as simply the ability to survive. For the purpose of this thesis, cohesion will be defined as the unity of the members in the pursuit of shared goals. This will include the solidarity in decision making and approach to counter security threats.

While there is little doubt that alliance cohesion increases efficiency, most theories agree that successful alliances must demonstrate a unity in effort. In addition, alliances are most successful when they restructure their hierarchies to reduce status inconsistencies. Those that fail to do so will experience difficulties in cohesion.²⁶

²⁵Robert Rothstein, "Alignment, Nonalignment and Small Powers: 1945-1965," *International Organizations*, 20, 1966, p. 15.

²⁶E. Burnstein and R. Zajonc, "The Effects of Group Success on the Reduction of Status Incongruence in Task-Oriented Groups," *Sociometry*, 28, 1965, p. 360.

The balance of power belief that alliances are formed against something (an external threat) and that they reflect common interests in a specific situation rather than underlying common values, leads many theorists to believe that the level of cohesion depends upon the presence of an external threat. When faced with a threat, cohesion will be high. In the absence of one, unity will decline.²⁷ Following this reasoning, it is easy to assume that as the threat which gave rise to the alliance recedes, so will the cohesion within the alliance.

While cohesion in balance of power theories is based upon forces external to the alliance, coalition theorists claim that cohesion is dependant upon variables within the alliance. For example, they believe that the cohesion of an alliance created for the sake of deterrence depends upon the credibility of the deterrent.²⁸ Other factors that contribute to alliance cohesion are equality in status, responsibility and authority.²⁹ However, the greater the differentiation of functions, the greater the unity in the group.³⁰ If this theory is correct, then it can be said that any issue that supports these internal variables would increase the stability of the alliance.

Like the coalition theorists, those that believe alliances are formed on the basis of national attributes support the idea that cohesion is based upon factors within the alliance. However, they differ from coalition theorists by specifying cohesion is based upon the preservation of differences within the alliance. For instance, differences in purpose may improve alliance effectiveness, because

²⁷Arnold Wolfers, *Discord and Collaboration*, (Baltimore: Johns Hopkins Press, 1962), p. 29.

²⁸Peter Calvocoressi, "Europe's Alliance Blues," *Political Quarterly*, 37, 1966, p. 363.

²⁹Liska, *Nations in Alliance*, p. 107.

³⁰J.R. French, "The Disruption and Cohesion in Groups," *Journal of Abnormal and Social Psychology*, 36, 1941. p. 365.

they increase private, noncollective benefits from the national contributions to the alliance.³¹ Furthermore, alliances that supplement public benefits with private or noncollective ones are more cohesive than alliances that provide only collective benefits.³² According to this theory, any effort that reduces the uniqueness among alliance members also reduces the cohesion within the alliance.

D. SUMMARY

In summary, it appears that the three theories produce a range of competing predictions about what TMD will do to the U.S.-Japan alliance. According to the characteristics of two theories, balance of power and national attributes, co-production of TMD will have adverse results on the alliance. Only coalition theories predict a positive alliance outcome resulting from TMD co-production. The strategic nature of TMD increases the impact associated with negative consequences. In light of this and the variance in predictions, it becomes imperative to use the correct theory prior to making any policy decisions.

³¹Olson and Zeckhauser, "An Economic Theory of Alliances," p. 271.

³²Philip Burgess and James Robinson, "Alliances and the Theory of Collective Action: A Simulation of Coalition Processes," *Midwest Journal of Political Science*, 13, 1969, p. 194.

III. A HISTORICAL PERSPECTIVE

This chapter describes the events that occurred in the U.S.-Japan relationship from the period prior to World War II to the present. It illustrates how various characteristics of the three theories correlate to events in the history of the U.S.-Japan relationship. It will be possible to explore which theory can be used to best describe the behaviour patterns in the relationship during five specific periods of time (pre- World War II, 1945-1950, 1951-1959, 1960-1989, and 1990-present).

A. PRE-WORLD WAR II

The four main islands of Japan-Hokkaido, Honshu, Shikoku and Kyushu form a crescent off the coast of East Asia, extending from the former Soviet maritime provinces to China's Yangtze Valley. Jutting out toward Japan is the Korean peninsula and more than 4,500 miles away lies the United States. This simple geographic layout of Japan and its neighbors provide the impetus that has been the driving force behind Japan's defense policy for the last half century.³³ The proximity of Japan to Korea, China and the former Soviet Union clearly accounts for its strategic importance to the United States.

Many of Japan's concerns over control of the Japanese Self Defense Force (JSDF) stem from the pre-war era when the civilian government possessed little control over the military. During the 1920's, the Diet was supported by big business and the general public maintained firm control over the bureaucracy and the military. However, through heavy indoctrination of the Japanese people and victories in foreign campaigns, the military was able to establish itself as a domestic power equal to

³³Tatsuo Kobayashi, "Kaigun Mondai," [Naval Affairs], *Taiheiyo Senso e no Michi* [The Road to the Pacific War], vol. 1, (Tokyo: Asahi Shimbun Sha, 1962), p. 6.

the civilian government. The Japanese military eventually challenged the authority of the civilians. This transition was given public credence as many believed the military was representing the direct interests of the emperor because they reported directly to the emperor³⁴ and not the Diet. Through disciplined military training, the Japanese Army and Navy established cohesive units and a trusted leadership among their organizations, producing an effective management system and control that remained absent in the political arena. As a result, the military was able to conduct their affairs without the consent of the governing political bodies. Japan's military annexation of Korea in 1910, its intrusion into Manchuria in 1931 and the Army's continued aggression against China in 1937 were all examples of military actions taken without the consent of the government.³⁵

Although the Japanese government tried to regain control of the Imperial Army, their efforts were limited due to the constitutional constraints which gave the emperor authority over the military, not the government. Before the outbreak of World War II, Japan had managed to assert its sovereignty over Korea, all of the Kuril, Bonins, Ryukyus, Sakhalin, Taiwan, Marshall and Caroline Islands, as well as turn Manchuria into a military satellite. The pursuit of the East Asian military and economic sphere was intended to establish regional hegemony, stabilize the region, but most importantly ensure Japanese security and prosperity.

As the military continued to pursue its expansionist interests, concerns over the direction of the country were starting to emerge. The *zaibatsu*, or big business, questioned the increasing military

³⁴Edwin Reischauer, *Japan-The Story of a Nation*, (New York: McGraw Hill Publishing Co., 1990), p. 153.

³⁵LeRoy Bennett, *International Organizations-Principals and Issues*, 5th ed., (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1991), p. 27.

budgets but their efforts were insignificant.³⁶ Continued military actions would lead to Japan's involvement in World War II. As a result, the fear of a resurgent military power has resulted in Japan's current attitude toward of the civilian dominance of government.

B. 1945-1950

On August 14, 1945, the emperor broadcasted the surrender announcement and the war in the Pacific was over. As a result of the war, Japan suffered the loss of more than three million people, 40 percent of its cities, and nearly 100 percent of its industrial capability.³⁷ The end of the war found Japan stripped of its overseas holdings, bombed out and on the verge of economic and political collapse. This devastating loss scarred the nation and its people. Allied Occupational forces provided initial security and ensured the transition to a peaceful democracy. The American Supreme Commander for the Allied Powers (SCAP) was established as the highest authority in Japan. It lasted for almost seven years, from September 1945 to May 1952.

The surrounding countries in the region who fell victim to Japan's aggression were protected through arms or security guarantees from either the United States or the Soviet Union. These countries insisted that Japan should never be allowed to repeat such hostile actions in the future. Initial steps to prevent these aggressions were taken when General Douglas MacArthur and his staff ordered the Japanese Government to disband and abolish the Imperial Army and Navy which were more than six million strong and the end of the war, and tried Japan's military leaders as war

³⁶Reischauer, *Japan*, p. 165.

³⁷Ibid., p. 180.

criminals. In addition certain provisions were included in Japan's new constitution. Article 9 specifically states:

Aspiring sincerely to an international peace based on justice and order, the Japanese people forever renounce war as a sovereign right of the nation and the threat or use of force as a means of settling international disputes.

In order to accomplish the aim of the preceding paragraph, land, sea, and air forces, as well as other war potential, will never be maintained. The right of belligerency of the state will not be recognized.³⁸

With this article, Japan officially renounced war and its ability to wage war and committed itself to a pacifist future.

The results of these efforts seemed to be effective. Japan was demilitarized and possessed neither the capability nor the desire to take up arms. At the time, the United States incorrectly assumed that Japan was the only threat to the peace in the Pacific Region and committed its efforts to Japanese demilitarization. Despite this commitment, many of the nations wanted guarantees that Japan would never be able to repeat such hostilities. Thus, the Occupational forces accomplished two purposes: (1) they provided security for Japan, and (2) they ensured the region that Japan would not become a threat to its neighbors. When the Occupational forces established themselves as the protectorates of Japan's security, they set the precedence of disproportionality in the future alliance. The "father-son" security relationship had been established.

In 1946, as the demilitarization program was being instituted, the security environment in East Asia began to change. The United States and the Soviet Union began to contest the development of

³⁸*Asahi Shimbun Japan Almanac 1993*, (Tokyo, Asahi Shimbun Publishing Company, 1992), p. 275.

the post-war world. Mao Zedong and the Communists forces were in the final stages of their conquest of China, while Chaing Kai-shek transferred his defeated forces to Taiwan. Kim Il Sung, under the tutelage of the Soviet Union, eliminated any democratic forces and installed a Stalinist regime just north of the 38th parallel demarcation line. Meanwhile, in Vietnam, Ho Chi Minh was preparing to oust democratic ideals along with the French.

Japan's growing concerns over regional turmoil also provided a cause for hope. As a defeated nation, Japan expected a punitive peace settlement. Japan feared that the wartime alliance between the United States and the Soviet Union would continue and result in the imposition of stringent restrictions that would impede the redevelopment of Japan. Despite these fears, the regional conflicts created additional tensions on the U.S.-Soviet relations. Realizing the necessity of a protectorate, Japan maintained hopes that the United States would have an interest in making it an ally. Without the protection of the United States, Japan would be unarmed and defenseless in a region of growing hostility. With the growing regional conflicts and East-West tensions, it was evident that as the world was getting a reprieve from the second World War, it was experiencing the dawn of a new conflict, the Cold War.³⁹

With the dramatic political change of events taking place in Asia, the Truman administration realized that it was necessary to incorporate Japan as an ally in its war against communism. In Kennan's *Foreign Affairs* article dated July 1947, he outlined the importance of containing Soviet expansion and provided the intellectual foundation for the Truman Doctrine.⁴⁰ Kennan's objectives

³⁹Frank Gibney, *The Pacific Century-America and Asia in a Changing World*, (New York: Charles Scribner's Sons, 1992), pp. 195-200.

⁴⁰Osgood, *Alliances and American Foreign Policy*, p. 36.

for Japan were simple: prevent it from becoming a Communist stronghold and utilize it as the foundation for the United States in the Pacific. The Truman Doctrine, backed by Kennan's theory of containment lead to a considerable extension of American commitments. The Special emissary of the Secretary of State, John Foster Dulles, advocated the remilitarization of Japan as a necessity to future regional defense alliances (similar to NATO) that would have included the United States, Japan, Australia, New Zealand, and the Philippines.⁴¹ This push for Japanese remilitarization marked a dramatic reversal in U.S. policy. Although concerned with future security issues, the majority of the Japanese population, government and military remained war wary and embraced MacArthur's push for Japanese neutrality. Foreign Minister Ashida solution was to seek U.S. security guarantees for Japan in the event of foreign aggression. He believed that Japan's strategic value, its willingness to combat communism, and its desire to cooperate with the United States against a Soviet attack constituted a reasonable basis for a mutual defense relationship. His intention was not to become militarily dependant upon the United States but a primary ally.⁴²

Prime Minister Yoshida Shigeru did not want to commit Japan to the high costs of fielding a military. Instead, he emphasized revamping Japanese industry and ensuring economic self-sufficiency. Despite the complications experienced in getting the Japanese economy back on its feet, these efforts could not have started soon enough. In February of 1950, the Chinese Communist Government and the Soviet Union reassured their support through the signing of the Treaty of Friendship, Alliance and Mutual Assistance, which was directly aimed at potential Japanese

⁴¹Kenneth Pyle, *The Japanese Question-Power and Purpose in a New Era*, (Washington, D.C.: American Enterprise Institute, 1992), p. 23.

⁴²Martin Weinstein, *Japan's Postwar Defense Policy, 1947-1968*, (New York: Columbia University Press, 1971), p. 26.

hostilities.⁴³ Later, Kim Il Sung invaded South Korea on June 25, 1950 and the first response by President Truman was the redeployment of American forces in Japan to Korea. The first test of the U.S.-Japanese security relationship was about to take place.

1. Evaluating Theory

During the initial phase of the U.S.-Japanese relationship, there was little doubt that Japan required protection. The ensuing alliance possessed all of the characteristics supporting balance of power theorists. The expedient manner in which the United States reversed its views toward Japanese remilitarization, reflects the magnitude of the perceived Soviet threat. Japan had little to offer an alliance, other than its strategic location but it was considered vital in the developing U.S. containment policy. The emerging bipolar nature of the international community made all countries in the Pacific region assets to be secured. Any nation that did not ally with the United States was "lost." The regional turmoil that started in 1946 created an imbalance in the distribution of power and the pursuit of Japan as an ally was one step in regaining regional equilibrium.

Coalition and national attribute theories have difficulty in explaining this period due to the inability of Japan to make meaningful contributions to an alliance. As a result, Japan was placed in a position where it had to accept what was offered to it. Japan's decision to ally with the United States provided the only means for the nation to continue pursuit of its professed interests.

⁴³According to Article I of the treaty, "Both high Contracting parties undertake jointly to take all the necessary measures at their disposal for the purpose of preventing a repetition of aggression and violation of peace on the part of Japan..." "Treaty of Friendship, Alliance and Mutual Assistance Between the Union of Soviet Socialist Republics and the People's Republic of China, (February 14, 1950), *United Nations Treaty Series*, X, pp. 334-338.

2. Alliance Strength and Cohesion

Although the official alliance was not signed during this period, this initial phase set the groundwork for the first official treaty. It was in this period that posted the benchmark from which future comparisons for alliance strength and cohesion could be made. The international factors that drove the United States and Japan together were of such magnitude that the two nations overlooked their cultural and ideological differences to form a bond against the Soviet Union. In the face of a credible threat, cohesion and strength are increased.⁴⁴ In addition, George Liska claims that a polarized international system increases cohesion.⁴⁵ Since this period marked the beginning of the alliance, both nations remained optimistic over the contributions expected from the other. Similarly, the alternative of non alliance posed unacceptable problems for both countries.

C. 1951-1959

The Korean War produced additional pressures on both Japan and the United States to remilitarize Japan. Prime Minister Yoshida continued to reject all proposals to establish a Japanese military, but he remained open to the creation of a formal alliance. The internal security vacuum created by the American forces stationed in Japan that were sent to Korea was filled when MacArthur established a 75,000 man Japanese Police Reserve Force (this would later develop into the JSDF).⁴⁶

⁴⁴Muzafer Sherif and Carolyn Sherif, *Groups in Harmony and Tension*, (New York: Harper, 1953).

⁴⁵Liska, *Nations in Alliance*, p. 149.

⁴⁶Pyle, *The Japanese Question*, p. 26.

As the war progressed, it became clear that the United States needed resources to supplement its forces in the Pacific. The U.S. State Department believed that Japan could contribute to the war effort and conducted studies to evaluate the Japanese military potential. The United States created *tokujo*, or "special procurement programs," allowing the purchase of more than \$2.2 billion⁴⁷ of Japanese fabricated military hardware for U.S. and United Nations' forces. This injection of capital into the Japanese economy quickly reduced the war-time balance of payments and launched Japan's industry into the world market.

On September 8, 1951, the United States offered Japan a declaration of peace and formal security treaty to ensure its commitment to Japan's defense. The Security Treaty was intended to be a mutual defense agreement, however it fell far short in many areas. The treaty was intended to be a "provisional arrangement,"⁴⁸ that offered Japan a temporary measure of security. The United States never guaranteed Japan against an external attack. The United States was, "willing to maintain certain of its armed forces in and about Japan,"⁴⁹ and that, "such forces may be utilized to contribute to the maintenance of international peace and security in the Far East and to the security of Japan against armed attack."⁵⁰ The most notable deficiency was the absence of provisions for joint consultation or joint action. Despite its intentions, the U.S.-Japan Mutual Security Treaty (MST) of 1952 only deepened Japanese concerns as the treaty specifics proved to give the United States a greater reign

⁴⁷Gibney, *The Pacific Century*, p. 205.

⁴⁸"Security Treaty Between Japan and the United States of America, "U.S. Department of State, *United States Treaties and Other International Agreements*, pp. 3329-32.

⁴⁹*Ibid.*, preamble.

⁵⁰*Ibid.*, preamble.

in Japanese affairs. The treaty justified the U.S. presence in Japan, made Japan's military forces an extension of America's, provided bases for United States forces, gave the United States veto power over any third party's military in Japan, and provided a legal basis for the U.S. to project power from Japan against a third party for an indefinite period of time.

Following Japan's acceptance of the MST, Yoshida had started to compromise on his views toward remilitarization. He claimed that the "renunciation of war does not mean the renunciation of self defense." Yoshida viewed America's Cold-War hysteria as an opportunity to conduct "Blackmail by the weak" and sought to take full advantage of the situation. Yoshida recognized that, "the day [for rearmament] will come naturally when our livelihood recovers. It may sound devious (*zurui*), but let the Americans handle it [Japan's security] until then. It is indeed our Heaven-bestowed good fortune that the Constitution bans arms. If the Americans complain, the Constitution gives us a perfect justification. The politicians who want to amend it are fools."⁵¹ Prime Minister Yoshida's goals soon became known as the Yoshida Doctrine and advocated the following tenants:

1. Japan's economic rehabilitation must be the prime national goal. Political-economic cooperation with the United States was necessary for this purpose.
2. Japan should remain lightly armed and avoid involvement in international political-strategic issues. Not only would this low posture free the energies of its people for productive industrial development, it would avoid divisive internal struggles.
3. Gain a long-term guarantee for its own security, Japan will provide bases for the U.S. army, navy, and air force.⁵²

⁵¹Tetsuya Kataoka, *The Price of a Constitution: The Origin of Japan's Postwar Politics*, (New York: Crane Russak, 1991), p. 118.

⁵²Pyle, *The Japanese Question*, p. 25.

Despite Yoshida's concessions regarding remilitarization, U.S. pressure for Japan's increased participation in the alliance continued. Congress passed the Mutual Security Assistance (MSA) Act in October 1951, in hopes of solidifying the alliance through the supply of weapons and equipment. This effort eventually led to the March 1954 MSA agreement which stated that "Japan will itself increasingly assume responsibility for its own defense," and that "the present Agreement will be implemented by each Government in accordance with the constitutional provisions of the respective countries."⁵³ The purpose of the agreement was two fold: establish a legal basis for the furnishing of military equipment and technology by the United States to Japan and to clarify the terms of Japan's contribution to the support of the United States forces in Japan. Despite the promising intentions, the agreement never resulted in new military assignments or commitments to regional security by Japan. Nonetheless, additional Japanese legislation in the same year, formally established the Japanese Defense Agency as well as the Japanese Self Defense Forces.

1. Evaluating Theory

This period was marked by Korean War, the formalization of the MST, Japan's dependence upon U.S. security and Japan's first real contribution (military supplies) to the alliance. Yoshida's change in attitude toward remilitarization reflects a calculated estimation of what was necessary to keep the alliance and U.S. commitment intact and is consistent with coalition theories. Due to its involvement on the Korean peninsula, the United States could not afford to jeopardize its foothold in Japan, thus the United States was forced to accept the disproportionality in contributions to the alliance.

⁵³Pyle, *The Japanese Question*, p. 29.

Although the international system had undergone significant regional changes, the bipolar nature had become solidified. The immediate Soviet threat that existed in the aftermath of Japan's defeat had become routine and had lost its edge. If the external threat perception was high enough to cause Japan to provide unlimited resources to the alliance then it could have been said that this period reflects balance of power characteristics.

It is difficult to apply national attribute theories to this period due to the one-sided nature of the relationship. American motivations for the U.S.-Japan alliance were not to fill a void but to prevent a loss. If the United States became dependant upon an attribute of Japan then this theory could apply.

2. Alliance Strength and Cohesion

When North Korea crossed the 38th parallel into South Korea, American interests were challenged. While this aggression did not directly threaten Japanese interests, Japan was fully aware of the U.S. commitment to defend South Korea. Japan responded positively to all of the U.S. requests for assistance in the war effort with the exception of providing forces. Unable to commit military forces due to Constitutional restrictions, Japan assumed the responsibility of its internal security, thus freeing the Occupational forces for use in Korea.

Although Japan did not agree with all of the U.S. actions, it provided unwavering support for U.S. policies. Even with the disproportionality of the MST, Japanese leaders knew that this was not the time to voice their discontent with security issues. Despite the minor disagreements over MST issues, both nations could not help but to remain optimistic about the future of the alliance. The newly formed relationship was still in an infantile state and both nations were taking necessary measures to demonstrate their commitment.

D. 1960-1989

On June 23, 1960, the MST was revised into the Treaty of Mutual Cooperation and Security. Although this document was updated to account for the use of nuclear deterrence, it failed to formalize reciprocal commitments and address burden sharing. The lopsided characteristics of this treaty firmly established the dependant nature of Japan upon the United States. Once the treaty was signed, the United States had assumed the responsibility to protect Japan and there was no reason for Japan to expedite the reinforcement of its defense forces.

Following China's detonation of their first nuclear test in 1964, the United States extended its nuclear umbrella to include Japan. Based upon this insurance, Prime Minister Eisaku Sato announced Japan's three nonnuclear principals in 1967: Japan will not possess, produce or permit the introduction of nuclear weapons in its soil.⁵⁴ In the same year, he announced the four pillars of Japan's nonnuclear policy:

1. Reliance on the US nuclear umbrella
2. The three nonnuclear principals
3. Promotion of worldwide disarmament
4. Development of nuclear energy for peaceful purposes.

As the Vietnam War came to an end, the United States tried to reduce its forces stationed in the region. President Nixon released the "Nixon Doctrine," which set out to reassure the Japanese (and other countries in the region) that the United States would guarantee their protection via its nuclear umbrella if they actively participated in the containment of communism. Although this

⁵⁴Holland, *Japan Challenges America*, p. 105.

doctrine pledged the support of U.S. naval and air forces, it was intended to shift the region's dependency from conventional forces to nuclear assets.⁵⁵

U.S.-Japanese relations during the 1970's were characterized by Japan's increased self confidence following its economic success and growing concerns over possible entanglement in regional conflicts stemming from the U.S. alliance. These trends led Japan to pursue policies independent of those prescribed by the United States. Japan did not agree with the U.S. recognition of the Chinese Nationalists government of Formosa nor America's intervention in Vietnam. Japan believed that these actions were imperialistic and against their regional interests but eventually sided with the United States because of their economic and security dependency. Regardless of the governments alliance with the United States, the "dovish" Japanese press referred to the North Vietnamese troops not as communist but as liberation troops.⁵⁶ As a result of these unilaterally driven issues, many in Japan realized that the country was acting as an extension of U.S. policy and believed that Japan would be the first to bear regional aggressions aimed against the United States. The Japanese believed that America could safely maintain an openly hostile posture to China, Vietnam and North Korea without suffering regional consequences. Due to the proximity of unfriendly neighbors and its dependency upon foreign energy and raw materials, Japan desired to pursue its *zenhoi gaiko*, or omni-directional foreign policy, which proposed cordial relations with all countries. Japan thought policies such as self imposed restrictions upon its military spending (limiting its defense expenditures to less than one percent-this later became official policy through the National Defense Program

⁵⁵Pyle, *The Japanese Question*, p. 35.

⁵⁶Kataoka and Myres, *Defending an Economic Superpower: Reassessing the U.S.-Japan Security Alliance*, (Boulder: Westview Press, 1989), pp. 42-43.

Outline in 1976) and creating a *senshu boei*, or exclusively defensive defense would reduce regional concerns of renewed Japanese militarization.

Japan's repeated attempts at an independent foreign policy soon created conflicts with American interests as well as strains on the security relationship. In 1979, the United States solicited the cooperation of its allies in applying economic sanctions against Iran following the seizure of the American embassy in Tehran. Japan failed to comply with the request and continued with its large purchases of Iranian oil. Later in the same year, Japan sought to capitalize on the U. S. imposed embargo on the USSR following its invasion of Afghanistan by replacing the U.S. markets lost by the embargo.⁵⁷ Although Japan formally apologized, it was never able to prevent its economic interests from interfering with its security relationship with the United States.

As the thirtieth anniversary of the U.S.-Japan Treaty of Mutual Cooperation and Security approached, the nature of the relationship remained virtually unchanged. The United States continued to pressure Japan to increase its defense efforts, while Japan institutionalized the Yoshida Doctrine. Slowly the Japanese military expanded to acquire modern military hardware-fully capable of interoperability with U.S. forces, and assumed a marginal increase in their areas of responsibility by expanding their area of patrol from 300 to 1000nm. In light of the increased Japanese military capabilities and the demise of the Soviet Union, new questions began to arise over the necessity of an interdependent U.S.-Japanese security relationship.

⁵⁷Kabota Tractor of Japan replaced Catapilar as the supplier for heavy equipment to the Soviet Union. Raymond Vernon, Debora Spar, and Glen Tobin, *Iron Triangles and Revolving Doors: Cases in U.S. Foreign Economic Policymaking*, (Westport: Praeger Publishers, 1991), p. 117. In addition, Toshiba sold industrial milling machines capable of producing submarine screws (a violation of the MST and MSA agreements) despite the economic sanctions restricting trade with the USSR.) Richard Samuels, *Rich Nation Strong Army*, (Annapolis: Naval Institute Press, 1994), p. 183.

1. Evaluating Theory

Increased independence from economic success and continued coexistence with a Soviet threat gave Japan the flexibility to exert itself through policies independent from the United States. While this Japanese independence was exercised in economic arenas, it often overlapped with security issues with precedence given to economic concerns. Both countries sought to minimize their commitments to the alliance yet still wanted to ensure protection of their national interests. The emergence of domestic issues as priorities over the alliance, a reduction from an external threat, inter-alliance competition and the inability of the United States to meet all of the security needs for the entire alliance are developments that conflict with pure balance of power politics.

Despite the pursuit of individual interests by both nations, they continued to make concessions which preserved the foundation of the alliance. Coalition theories account for the periodic tension caused by competing interests by emphasizing the continued viability of the alliance. Through concessions, the U.S.-Japan alliance matured and eventually became the cornerstone for U.S. policy in the region. With this understanding, it appears that one can use coalition theories to explain the alliance behavior of Japan and the United States during this period.

2. Alliance Strength and Cohesion

Japan's pursuit of independent policies and its government's open disapproval for U.S. regional policies indicated a decline in the cohesion of the alliance. During this period, it is evident that the two nations sought nationalistic priorities above those of the alliance. Only when the existence of the alliance was threatened did either country make concessions. Interdependence between the two countries in other areas (economic, political, etc.), may have led to sources of competition but they also served as a means to keep the two nations together. While there is no

indication that the strength of the alliance has declined, it in the absence of an external threat, it appears that its cohesion has been reduced.

Although Japan did not try to gain additional commitments from the United States, their reluctance in compliance and questions over American commitment indicated that the stability of the alliance was shifting. Despite their dissatisfaction, Japan was still reliant upon the United States for their defense. This period demonstrated the growing separation between the U.S. and Japanese interests and the effects this schism could have on the alliance.

E. 1990-PRESENT

Doubts over the necessity of the U.S.-Japanese security relationship were squelched as soon as Iraq invaded Kuwait. Even though this hostile action was directed against another nation, it affected the life blood of Japan's industry-oil. The implications of Iraqi domination of the oil flow to the free world clearly had global implications. While the United States possessed diversified sources of energy, Japan obtained nearly 70 percent of its oil from the Persian Gulf. Japan desperately needed the assistance of an ally to ensure that their primary source of energy remained secure.

When the invasion occurred, the United States prompted the United Nations to establish a multinational coalition force to liberate Kuwait. The United States asked Japan for assistance by providing forces, troop transportation, naval vessels, and financial support. Despite the importance of this military action, Japan refused on all accounts except for contributing financial support (\$4 billion). Japanese debates over use of the SDF for peace keeping operations (PKO) did not apply since the Gulf War involved combat action. Increased pressure was put on Japan as the military campaign progressed and the associated costs exceeded the allocated funding. The Japanese response was an

additional \$9 billion⁵⁸ (the total campaign costs were estimated at \$61.1 billion.) Japan eventually agreed to send a detachment of minesweepers to assist in the Coalition patrol however, the conflict was over before the vessels arrived on station.

Ichiro Ozawa recognized the damage dealt by not supporting the U.S. led Coalition with military assets and urged Japan to assume a leadership role commensurate to its economic capabilities. The Gulf War demonstrated that even with the end of the Cold War, the world was still prone to conflict. It also illustrated that these conflicts have increased global effects and that they cannot be altered or avoided by economic affluence alone.

1. Evaluating Theory

Coalition theorists claim that nations join alliances in order to minimize their defense expenditures while maintaining an appropriate level of security (public good). Based on this belief, Mancur Olson and Richard Zeckhauser state that the merger between nations of unequal capabilities leads to disproportionality and “free riding.” This stems from the non-excludability since the initial non-provider has little incentive to supply or pay for a good that is being provided to a whole.⁵⁹ The larger member, or the member that would solely provide for the largest portion of the security, bears the burden of this unequal trend.⁶⁰ Regardless of this disproportionality, the end goal is designed to create an effective deterrent posture.

⁵⁸Ichiro Ozawa, *Blueprint for a New Japan*, (Tokyo, Kondansha International, 1994), p. 38.

⁵⁹Palmer, “Corralling the Free Rider, p. 149.

⁶⁰Richard Olson, *The Logic of Collective Action: Public Goods and the theory of Groups*, (Cambridge: Harvard University Press, 1965), p. 35.

If the U.S.-Japanese security relationship were to be influenced by the motivations included in the balance of power theory, both nations would have demonstrated unrestricted support for common objectives that exerted a direct impact on the two nations. However, during the Persian Gulf War, the United States fulfilled the role of the larger nation and bore the brunt of the financial and military responsibility. Japan's contributions remained minimal and were submitted only as a last resort. Therefore, even in the face of challenges to Japan's vital interests, its actions remained consistent with those prescribed by coalition theories. If Japan were to have refrained from making concessions-contributions to the Persian Gulf War (especially from sending the minesweeper) and solicit the assistance of the United States, then its actions may have been characterized by national attribute theories.

2. Alliance Strength and Cohesion

Prior to the Persian Gulf War, Japan was concerned over the U.S. commitment to the alliance. The relative decline of the U.S. economy brought questions regarding what America was willing to accept in the defense of its allies. Trade conflicts cast skepticism over the reliability of U.S. security guarantees. In light of these doubts, Japan desired to modernize its forces, increase its HOST nation support and expressed desires for assuming a greater role in the regional security and in the alliance. In exchange for Japan's additional responsibility, Japan requested increased consultation and larger roles in the decision making process on all issues regarding security.

Despite the apparent success of the Coalition forces, the disproportionate contributions made by Japan and the United States placed a great deal of strain on the relationship. From the initial onset of the hostilities, Japan remained reluctant to commit its assets for use in the coalition. The minimal concessions to the combined effort were insufficient and would eventually result in Japan's increased

financial support and reconsideration of SDF troop utilization. In addition, the aftermath of the war brought resurfaced commitment concerns as a “zero casualty” policy appeared to become institutionalized by U.S. officials.

While it appears that Japan did make an effort to maintain the effectiveness of the alliance, the negative effects of the disproportionality continued to place a strain on the relationship. The increased differences in economic and foreign policies have worked their way into security issues and have reduced the overall cohesion of the alliance. It is impossible to measure the effects of the reduced cohesion on the alliance, but there is little doubt that associated strength has declined.

IV. THE FS-X ATTEMPT AND THE ALLIANCE

Increasing military expenditures continue to be a difficult pill for the American public to swallow. The high cost of maintaining the world's strongest military force often conflicts with other priorities such as social welfare programs, deficit reduction and a balanced budget. Despite this close scrutiny, there is a reluctance in the government and American industry to promote joint military ventures between the United States and other leading G-7 nations, namely Japan. Part of this reluctance is due to growing concerns over the trade deficit and growing technonationalism between the United States and Japan.⁶¹ Regardless of the inhibitions, a token attempt, the Fighter Support Experimental (FS-X), was made in the mid 80's, to overcome the problems facing joint weapons development ventures. The outcome of this effort, illustrates the scope of the problems facing both the United States and Japan in their security relationship.

A. THE ABSENCE OF AN INDUSTRY

As a result of the limitations imposed by the United States during the Occupation period, a distinct military-industrial complex, like that of the United States, was never developed in Japan. Instead, there was a close integration of industries whose foundations were in the manufacturing of commercial industrial goods and military production capabilities. Japanese defense technology soon became indistinguishable from most Japanese industry and eventually, the largest and best commercial

⁶¹J. Richard Walsh, "Technonationalism in U.S.-Japanese Security Relations," *Armed Forces & Society*, Vol. 19, Spring 1993, (New Brunswick: Transnational Periodicals Consortium, Rutgers University), p. 377.

producers became Japan's best military producers as well.⁶² Corporations such as Mitsubishi Heavy Industries (MHI), Fuji Heavy Industries (FHI) and Kawasaki Heavy Industries (KHI), and their subsidiaries focused on the development of dual use technology-technology that could have been a "spin off" of military design but applied to commercial markets.⁶³ Despite Japan's R&D efforts, significant breakthroughs in military technology did not occur as often as in other developed nations. To compensate for this, Japan sought foreign licensing and production to fill the gaps for its indigenous R&D weaknesses.⁶⁴ Foreign licensing combined with diversification of Japan's industry ensured that more than 80% of Japan's military hardware could be produced domestically.⁶⁵

B. WHY CO-PRODUCTION?

With the relative success of Japan's military development and indigenous production, why did it seek joint production over continued licensing (all from the United States) and foreign purchase of selected items? Japan, like many other Asian countries sought a policy of self reliance in its defense production. Few states, however, possessed the infrastructure to build state-of-the-art fighter aircraft. Japan needed foreign assistance but due to the limitations placed upon it by the MSA, it could only receive military technology from the United States. Military technology was normally transferred

⁶²Samuels, *Rich Nation*, p. 183.

⁶³Richard J. Samuels and Benjamin C. Whipple, "Defense Production and Industrial Development: The Case of Japanese Aircraft," *Politics and Productivity: The Real Story of Why Japan Works*, ed. Chalmers Johnson, Laura Tyson and John Zysman, (New York: Ballanger, 1989), p. 283.

⁶⁴Samuels, *Rich Nation*, p. 183.

⁶⁵Kenneth Krause, *Arms and the State: Patterns of Military Production and Trade*, (Toronto: Cambridge University Press, 1992), p. 129.

through licensing programs where Japanese companies received contracts to manufacture U.S. designed goods for the JSDF. The benefit of licensing was simple, the United States gained contracts for increased markets while Japan obtained the technology to produce its goods. Licensing was intended to restrict their production and operational development. However, previous licensing experiences, such as McDonnell Douglas' F-15, provided Japan with many lessons it desired never to repeat. The F-15's supply and maintenance support (not part of the licensing production) restricted Japan's aircraft readiness (30 of 100) as the planes were grounded at the same time as they awaited repair to their Hughes' (U.S.) radar antennas.⁶⁶

Japan's original intention for the FS-X, was to create its own development program, similar to that of their aging fleet Mitsubishi F-1s. This new fighter aircraft would be a culmination of Japan's technological advances to include composite materials, an active phased-array radar, advanced high-speed computers and inertial navigation systems using ring laser gyroscopes. Despite these advanced technologies, the Japanese Defense Agency (JDA), did not believe that Japanese aviation industry would be able to bridge the technological gap between the F-1 and next generation of fighter/attack aircraft without a virtual overhaul of the entire Japanese aviation industry. The main Japanese opposition to indigenous production came from the Ministry of Foreign Affairs (MOFA). They believed that a venture would overturn the negative condemnation that Japan was receiving from the United States over the sale of milling machine technology to the Soviet Union by Toshiba.⁶⁷ In

⁶⁶Bob Johnstone, "Research and Innovation, Air Supremacy," *Far Eastern Economic Review*, 22 July, (Hong Kong: Dai Nippon Printing Co., 1993), p. 64.

⁶⁷The U.S. considered this to be a violation of the MDA, but Japan considered the technology to be dual use in nature and not related to defense issues: Vernon, Spar, and Tobin, *Iron Triangles*, p. 117.

addition, despite Japan's high-tech reputation, Japan's aircraft industry was notoriously inefficient. It had difficulty manufacturing components specifically for limited military production, such as jet engines.⁶⁸ The limited production rate associated with the aircraft industry and military specifications denied true economies of scale as well as discouraged investment in automation. To Japan, joint development was considered to be a means of modernizing the military aviation industry as well as providing a means to wean itself off the dependency for U.S. military technology.⁶⁹

Japan selected the General Dynamics F-16 airframe as the foundation for their next generation defense aircraft. Although the cheapest option would have been to purchase the aircraft "off the shelf," Japanese officials insisted on participating in development of the fighter. They claimed that Japan's military requirements (strictly defensive) were distinct from those of other nations and that the standard F-16 maintained offensive capabilities (Japan's constitution allowed only defensive aircraft). Semantics over changing the name to fighter support vice fighter attack also helped to sell the weapon domestically.⁷⁰

While Japanese officials promoted the FS-X in Japan, efforts in the United States were also being made to facilitate this joint venture. A decrease in U.S. military aviation exports⁷¹ and increased

⁶⁸Paul Proctor, "Japanese Firms Forge Advanced Aircraft Industry," *Aviation Week and Space Technology*, 29 July, (New York: McGraw Hill Inc., 1991), p. 43.

⁶⁹Under co-production, the original manufacturer licenses a foreign producer to assemble, or even manufacture parts or all of, an aircraft, but the licensee does not participate in its design and development. Japan wanted to be included in the development and production phases, thus making this arrangement unique: Clyde Prestowitz, *Trading Places: How We are Giving Our Future To Japan and How to Reclaim It*, (New York: Basic Books Inc., 1988), p. 9.

⁷⁰*Ibid.*, p. 64.

⁷¹Don Flamm, "Downturn Continues for US Aerospace Industry," *Asian Defense Journal*, March, (Kuala Lumpur, Malaysia: Syed Hussain Publications Sdn. Bhd., 1995), p. 32.

foreign competition sparked a concentrated push from the U.S. aviation industry to seek expanded markets. Amid the talks of increased markets, many U.S. companies were also hoping to gain advanced technologies in such areas as carbon and composite materials production, phased array radar technology and inertial guidance systems from Japanese companies. Don Fuqua, President of the Aerospace Industries Association of America Inc. (AIAA) claims, "this somewhat protected market has enjoyed a high degree of support from the upper echelons of the Administration...as well as consistent government backing."⁷² To facilitate overseas marketing and in demonstration of support for the U.S. defense industry, Congress passed legislation such as the "Federal Technology Transfer Act of 1986,"⁷³ as well as the 1984 National Cooperative Research Extension Act,⁷⁴ to ease antitrust restrictions governing cooperative R&D.

In November of 1988, the United States and Japan signed a Memorandum of Understanding (MOU), outlining technology transfers and production responsibilities for the two countries.⁷⁵ The MOU called for the development of the F-16-based fighter, with modifications to incorporate Japan's defense needs, increase maneuverability and integrate Japanese-based avionics and weapons systems.

⁷²Ibid., p. 32.

⁷³International agreements: "(B) give preference to business units located in the U.S. which agree that products embodying inventions made under the cooperative research and development agreement or produced through the use of such inventions will be manufactured substantially in the U.S. and in the case of any industrial organization or other person subject to the control of a foreign company or government, as appropriate, take into consideration whether or not such foreign government permits U.S. agencies, organizations, or other persons to enter into cooperative research and development agreement and licensing agreements.(U.S., *Statutes at Large*, "Federal Technology Transfer Act of 1986", 20 October, 1986).

⁷⁴Holly Idelson, "Senate Bill Aims to Spur Joint Manufacturing," *Congressional Quarterly*, 29 February,(Washington D.C.: Congressional Quarterly Inc., 1992), p. 464.

⁷⁵Walsh, "Technonationalism in U.S.-Japanese Security," p. 377.

Five Japanese companies and their subcontractors were to receive 60% of the development funds, while the U.S. companies would be left with the remaining 40% of the funding.⁷⁶ This 40% was agreed upon as compensation for the technology Japan would receive from existing U.S. F-16 developments. In the course of development and modification of the F-16s, the agreement called for Japan to provide the United States with access to improved technology and any new technology developed for the FS-X.

The following year, the Bush administration submitted the FS-X MOU for congressional review under the provisions set forth in the Arms Control Act, believing that it would pass without hesitation. However, the project immediately became the center stage for defense controversy. American industry analysts claimed that the technology transfer would greatly undermine America's economic competitiveness in civilian avionics and related industries. They believed that regardless of the U.S.-Japanese alliances, Japan must be considered and treated as an economic rival. This linkage of economic and defense issues clouded the policy making process and posed the first major foreign policy challenge for the new Bush administration. Until the controversy, U.S.-Japanese bilateral security relations remained aloof from economic pressures. Congress and critics attacked the Bush administration for submitting such a proposal without understanding the potential adverse consequences joint production could cause. The MOU, in its proposed form was too ambiguous and required significant clarification prior to receiving U.S. Congressional approval.

⁷⁶"Joint FS-X Team at Work," *Aviation Week and Space Technology*, July 29, (New York: McGraw Hill Inc., 1991), p. 44.

C. THE RISE OF "TECHNONATIONALISM"

"Technonationalism," was a phrase first used by Robert Reich in his article, "The Rise of Technonationalism," to describe the deteriorating economic environment between the United States and Japan.⁷⁷ The concept was based upon technological development by multinational industries and their unequal exploitation by a single country, namely Japan. This rhetoric was supported by the close relationship Japanese weapons manufacturers shared with their commercial counterparts, who exploited military advances for consumer goods. Additional fuel to this argument came from the increasing trade deficit between the United States and Japan as it became a permanent fixture in the trade relationship in the 1970's. By 1985 it was \$149.⁷⁸ The aviation industry was one of the few industries where the United States maintained a positive trade balance and sought protective measures to maintain it.

Many U.S. industry analysts who supported the FS-X venture argued that at the time of the proposed MOU, the United States has already entered into foreign licensing agreements with ten countries for F-16 manufacturing so a limitation on technology transfers was too late. Those opposed to the joint production feared that Japan's Ministry of International Trade and Industry's (MITI) push in the aerospace industry would lead to extensive spin off commercialism of the F-16 technology.⁷⁹

⁷⁷Although the specific phrase was not used by the Japanese, this concept regarding the U.S.-Japanese trade relationship was commonly referred by the Japanese as part of the "Japan Inc." concept: Walsh, "Technonationalism in U.S.-Japanese Security," p. 378.

⁷⁸Shotaro Ishinomori, *Japan Inc.*, translated by Betsy Scheiner, (Berkeley: University of California Press, 1986), p. 7.

⁷⁹Francis Fukuyama and Kongdan Oh, *The U.S.-Japan Security Relationship After the Cold War*, (Santa Monica: RAND National Defense Research Institute, 1993), p. 64-5.

American analysts believed that the modifications and development of indigenous Japanese phased-array radar systems and F-110 jet engine technology would bring Japan's dated aviation industry into competition with the United States.

Many thought that the 60/40 split and the original MOU was sufficient to appease U.S. defense industries and Japan's domestic production coalition, however, the understanding still required approval from the Congress. Since the MOU was not signed until 1988, it was subject to the provisions of the Defense Authorization Act of 1989, and required the consultation with the Commerce Department prior to approval. President Bush was concerned about the FS-X opposition and ordered the National Security Council (NSC) to conduct an interagency review. For the first time, the NSC included commercial concerns as primary issues for the FS-X venture.⁸⁰ As a result, the Defense Department and Commerce Department became deadlocked over issues concerning technology transfer. The Department of State and DoD supported the FS-X program, believing that the alternative was to lose out on the contracts as Japan developed its new fighter indigenously. In addition, they argued that the result of the program, a new Japanese aircraft would enhance the security relationship between the United States and Japan, something which has been sought for since the 1950's. The Commerce Department and White House Chief of Staff, John Sununu proposed that Japan purchase the F-16's outright and modify them at their own expense. The special interagency review submitted a joint paper which proposed three options: 1) continue with the original MOU 2) draft a new MOU or 3) clarify the existing MOU. This stalemate between the DoD and Commere

⁸⁰Walsh, "Technonationalism in U.S.-Japanese Security," p. 381.

led to an NSC meeting in which President Bush presided. A compromise was reached through clarification of the MOU which allowed continuation of the FS-X program under three provisions⁸¹:

1. Restrictions were to be placed on the release of avionics computer software that had never been applied to any other ally.
2. The U.S. would receive at least 40% of the work during the production stage.
3. Specific steps would be taken to insure that technology derived by Japan during the project development would be transferred to the U.S.

In the attempt to clarify the MOU, the Bush administration came to the conclusion that the co-production would disproportionality benefit Japan. In an attempt to limit the disproportionality, the restriction of avionic software codes would prevent their exploitation as well as force Japan to develop a separate system from which the United States could gain information on Japanese high technology development processes.

This display of resolve by the Commerce Department led the Japanese government to override the desires of the JDA, and seek continuation of the FS-X program as set forth in the listed conditions. The Japanese government believed that co-production would be the only way Japan could maintain control over the development schedule and produce a new aircraft.

U.S. opponents of co-production still claimed that the MOU disproportionately favored Japan and that issues of reciprocity needed to be addressed. The Commerce Department was fighting for an unknown value, access to new undeveloped technology, while DoD contested that the overall benefits would surpass the relative technology losses. There were two problems with the argument from the Commerce Department. First, the modifications did not guarantee that any new technology would be needed. If there were new developments, how could the United States gain access to them

⁸¹Ibid., p. 381.

if the Japanese chose to withhold their advances? The Commerce Department's argument was later strengthened by an independent report requested by the Senate Armed Services Committee and published by the General Accounting Office (GAO). According to the report, the Japanese were approximately ten years behind the development of the United States in the areas of composite fiber and phased array radar technology, two areas where the United States hoped to gain advanced technology from Japan. The report also made special note of an article that was printed in the *Nihon Keizai*, a newspaper which outlined Japan's aircraft industry strategy. The article claimed that Japan desired to be a world class aerospace manufacturer and sought to update its industry through joint ventures. The article stated, "Those in the United States who oppose transferring technology to Japan have pierced through to the true root of Japanese intentions."⁸²

The AIAA supported the DoD position and emphasized that the disproportionality was not as great as reported by the GAO report. The AIAA claimed that by the time the FS-X was ready for production, the United States would be in the production phase of the next generation of fighter aircraft. They also noted that Japan was already had access to more sophisticated technology through its licensing agreements with McDonnell Douglas for the F-15 aircraft. In addition, the AIAA believed that Japan would increase its civil aviation potential through other joint ventures with American and European commercial aviation companies who were not bound by government restrictions regarding arms sales.⁸³

The DoD also countered the GAO reports with independent findings from the USAF research staff. The USAF team inspected the same production facilities and reported that the Japanese were

⁸²Prestowitz, *Trading Places*, p. 32.

⁸³Walsh, "Technonationalism in U.S.-Japanese Security," p. 385.

implementing "modular technology," not the "soldering iron vintage," facilities as reported in the GAO findings.⁸⁴

Regardless of the remaining arguments, the Bush administration pressed for a Senate vote. After extensive debate the outcome was a 52 to 47 vote and the deal went through. Senator Robert Byrd tried to amend the MOU by submitting a resolution that called for no less than 40% of the production and spare parts acquisitions be awarded to U.S. companies. This measure was quickly approved by the House but President Bush vetoed the proposal to avoid renegotiating the entire MOU. His veto was upheld by one vote⁸⁵ and the FS-X co-production effort was finally approved. There was no argument that the Japanese aviation industry would be strengthened, however, delay in development and production were anticipated due to the U.S. technology that was withheld.

D. THE FUTURE FOR FS-X

Although the FS-X venture is still in the developmental stage and has yet to be ruled a success, the policies implemented to shape the technology transfers have been tested and for the most part have been inconclusive. Despite the efforts of U.S. industry to prevent Japan from developing into a competitor in the aviation industry, Japan has managed to absorb U.S. technology, modernize, and surpass the United States in certain areas.⁸⁶ Japan has been able to capitalize on U.S. aviation

⁸⁴Ibid., p. 387.

⁸⁵Prestowitz, *Trading Places*, p. 57.

⁸⁶Walsh, "Technonationalism in U.S.-Japanese Security," p. 387.

contracts by receiving royalties for FS-X derived technology including phased array radar systems, central computer system, inertial navigation system and integrated electronic warfare systems.⁸⁷

The once hard line toward joint manufacturing may have softened in many respects but remains controversial whenever Japan is involved. On 27 February, 1992, the Senate passed a bill (S 479) whose purpose was to loosen antitrust restrictions in regards to joint manufacturing. The proposal was to assist high-tech industries that required extensive capital investment for development. The bill was also touted to encourage joint manufacturing that would bring "substantial" benefit to the U.S. economy, however, it was selectively applied. The bill's chief sponsor Patrick Leahy (D-VT), used the semiconductor industry as his primary example stating that, "We invented it...and it has been turned into an engine for Japanese jobs and growth."⁸⁸ Ironically, the United States applied VIE's to force its way into the Japanese semiconductor market. If the administration is serious about increasing joint manufacturing, it must recognize that U.S. industries will not always be the sole or primary benefactor.

The FS-X controversy forced the United States and Japan to face and resolve several fundamental differences in their relationship. It also made the United States address internal issues such as the conflicts between U.S. national security policies, geopolitical interests and industrial strength. Japanese politicians were forced to resolve conflicts between their defense needs, separation

⁸⁷Michael Lavitt, "Industry Outlook," *Aviation Week and Space Technology*, 11 April, (New York: McGraw Hill Inc., 1994), p. 13.

⁸⁸Idleson, "Senate Bill Aims to Spur," p. 464. (A similar bill was put through the House 28 May 1993. Rep. Jack Brooks (D-TX) sponsored a bill that extended protection previously granted to only joint research and development ventures. The new law was made to include co-production ventures as well: "Law Enacted to Encourage Joint Production Ventures," *1993 Congressional Quarterly Almanac*, (Washington D.C.: Congressional Quarterly Inc., 1993), p. 248.

of economics and politics, and free trade principals and industrial policies. The most important results of the FS-X negotiations were the confrontation and resolution of trade and security issues which have long been avoided. As illustrated, the FS-X negotiations left much room for improvement and it is clear that if the U.S. and Japan find it in their interest to pursue another joint development and production venture, many of the issues that clouded the FS-X talks would need to be readdressed.

The first FS-X prototype rolled off the assembly line January 12, 1995⁸⁹ and completed its maiden test flight October 7 of the same year.⁹⁰ The aircraft turned out to be the world's most expensive fighter-bomber (\$123 million initial delivery costs)⁹¹ and has yet to start production. The enormous cost overruns and time delays in producing this aircraft were not without justification. The FS-X was built upon an accumulation of Japanese technology that was developed for various aircraft and later integrated with American systems. The associated time and financial cost of accomplishing this task were virtually the same as producing a completely new aircraft. Further delays from internal Japanese debates over the necessity and quantity have also delayed the start up of mass production. The JDA intended to produce 141 aircraft over a 12-year period but the enormous cost associated with production is expected to result in decreased production rates. In addition to Japan's internal debate, a production MOU has yet to be drafted.⁹² Although the production MOU will most likely include a 40/60 distribution split, three problems have arisen concerning production: 1) determining how the 40/60 workloads will be allocated (initial production, spare parts, future development, etc.)

⁸⁹"Problems Piled for FSX Mass Production," *Nikkei Sangyo*, 12 Jan 95, p. 10.

⁹⁰"FSX Successfully Completes First Test Flight," *Kyodo*, 7 Oct 95.

⁹¹"FSX Successfully Completes First Test Flight," *Kyodo*, 7 Oct 95.

⁹²"Problems Piled for FSX Mass Production," *Nikkei Sangyo*, 12 Jan 95, p. 10.

2) differences in calculating the cost for aircraft contractors⁹³ and 3) disputes over the use of U.S. fabricated or licensed products.⁹⁴

Despite the initial problems, the FS-X co-production effort experienced a deepening of mutual cooperation between defense official and defense related industries in the United States and Japan. This effort will be a critical test that will determine the manner in which future U.S.-Japanese cooperation efforts are handled in defense related fields. If bilateral understandings between the two countries improve, then there is a possibility of a second or third venture of this sort. On the other hand, should the production of the FS-X be held up or halted causing irrecoverable financial losses to both Japan and the United States, then the future of such ventures would be in jeopardy.

E. ALLIANCE THEORY FORECASTS

Although policy decisions can be made regardless of alliance theory, each decision is usually considered to be an integral tool in the implementation of a nation's overall plan to achieve its interests. A calculated result of the policy's impact can be derived through the use of theories which offer systemic explanations for the behavior of the nations involved. While each of the theories may offer possible motivations which support the pursuit of a co-production policy, they differ greatly in their forecast on the alliance.

1. Balance of Power

Given the circumstances surrounding the FS-X co-production venture, it is difficult for balance of power theories to account for the behavior between the United States and Japan.

⁹³"Current Status and Future Prospect for FSX," *Nikkei Sangyo*, 25 Jan 95, p. 12.

⁹⁴"Defense Agency's FS-X Mass-Production Plans," *Nikkei Sangyo*, 12 Sep 95, p. 11.

According to this theory, nations in an alliance are motivated to take actions in response to a direct threat, alliances that do not conform to this behavior are considered to be deviant cases and represent lapses from rational policy.⁹⁵ Therefore, if both the United States and Japan made the decision to pursue co-development, this decision should have been influenced by an external threat. Since this project started in the mid 80's when the fear of the Soviet Union was declining, balance of power theories cannot be used to explain the "irrational" actions of the alliance members.

Under these circumstances, if this project continued, despite the lack of a specific external threat, FS-X co-production may have resulted in the preservation of U.S. influence within the U.S.-Japan alliance. While the production of a better aircraft enhances the overall capability of the alliance, the FS-X would not alter the relative position of either Japan or the United States in the relationship. This project was designed not to provide any new capabilities but rather modernize and replace existing ones in either country. Without a change in the relative power distribution in the alliance, the United States would have maintained its dominance as the larger member thus ensuring its influence within the alliance.

2. Coalition Theory

Assuming that coalition theories accurately describe the behavior within the U.S.-Japan alliance, it is logical to view the FS-X co-production effort as the necessary measure that ensured the success of the alliance. This project would provide a method to extract calculated commitments from both countries, allow each country to pursue individual interests, and increase the overall public good. All of which, according to coalition theorists would serve to strengthen the alliance.

⁹⁵Holsti, Hopman, and Sullivan, *Unity and Disintegration*, p. 6.

Although the 60/40 distribution of the FS-X MOU's was created to ensure the distribution of labor and associated profits, it would have allowed the differentiation of functions and capitalization of the various strengths of each nation's industrial capability. This feature would have increased the cohesion within the alliance as well as elevate Japan as a more than equal partner in the project. While Japan's status may have increased to a major player in the FS-X venture, it would have remained dependant upon the United States for the bulk of its defense. Thus, as the weaker member of the alliance, Japan would maintain a disproportionate level of influence within the alliance and the United States would continue with the status quo in this area.

3. National Attributes

Like balance of power theories, national attribute theories have trouble justifying the actions of the United States and Japan during this project. According to this theory, Japan's lack of indigenous aircraft production, defense industry or related markets would have led it to seek an ally who could provide Japan with these assets, not one that would help it develop them. Likewise, national attributes have difficulty accounting for the behavior of the United States who possessed the capabilities to produce the aircraft yet sought co-production for increased markets and prospective new technology.

Regardless, if the FS-X had been attempted under these conditions, it is likely that this effort would have improved the cohesion and decreased the level of U.S. influence within the alliance. Again, the 60/40 clause in the MOU would have distributed the contracts and production among Japanese and American companies. This division would provide private benefits for both countries while improving the overall capability of the alliance. While this effort replaced an aging weapons system, it gave Japan an aviation industrial capacity. This addition to Japan's industry would have

filled a void thereby eliminating one of the dependent factors which made Japan reliant upon the United States. As the FS-X increases Japan's autonomy it also decreases its dependency on the United States, and reduces U.S. influence within the alliance.

F. THE IMPACT OF THE FS-X ON THE ALLIANCE

Of the three theories, it is evident that only coalition theories can be used to account for the behavior of both Japan and the United States. While this theory was correct in predicting that co-production would extract additional commitments from the other while the nations tried to pursue their own goals, it failed to foresee the problematic long term effects which would burden the alliance. While co-production initially provided opportunities for private gain to both countries, the enormous cost overruns and production delays resulting from dissimilar standards and integration of foreign components created additional tensions that remained past the duration of the benefits.

When coalition theorists Olson and Zeckhauser emphasize that the foundation of an alliance was based the provision of a public good through the dedication of private goods,⁹⁶ they assumed that the contributions of private goods maintained their value. This assumption holds true when used in reference to military equipment such as tanks and aircraft. For example, when such hardware is used in the provision of security, their removal from the public whole leaves a void equal to the value of that unit. However, when information such as technology is offered as a private good, its value decreases as other members of the alliance absorb its benefit. Once it has been submitted to the public good, it cannot be retrieved. Therefore, a nation cannot continue to receive prolonged benefits for its intellectual contributions to an alliance. In the case of the FS-X, cohesion within the alliance

⁹⁶Olson and Zeckhauser, "Economic Theory of Alliances," pp. 266-79.

improved during the initial development stages, but once the production phase was reached, the status of the alliance returned to the same state that existed prior to the co-production effort.

V. DEVELOPMENTS IN TMD

Until recently, the development of TMD systems and their associated technologies symbolized the super power struggle and the Cold War. It was during the early 80's that the United States, under the direction of the Reagan Administration, created the Strategic Defense Initiative (SDI). Later, in 1993, the focus of SDI was shifted, prioritizing TMs and the Theater Missile Defense Initiative (TMDI) was created.⁹⁷ Since that time, steady progress has been made in the development of TMD systems, but a working system has yet to be produced.

According to the *United States Security Strategy for the East Asia-Pacific Region*,

Our strategy seeks to stem the proliferation of such weapons and to develop an effective capability to deal with these threats. Regional TMD systems have a key role to play in this strategy and are essential to counter long range ballistic missile delivery systems in the inventory of many East Asian nations....The United States forces and those of our allies in the region must also be prepared to deter, prevent and defend against the use of such weapons (WMD and their associated delivery vehicles)....The fielding of Theater Missile Defense (TMD) systems in the region will be a key element of this non-proliferation strategy.⁹⁸

If the United States and our regional allies must be prepared to defend against TMs and the "linchpin" to the region depends upon the United States for its protection, then it is imperative that the United States obtain a credible TMD for the protection of our interests, allies and the region.

⁹⁷John Pike and Marcus Corbin, "Taking Aim at the ABM Treaty: THAAD and U.S. Security," *Arms Control Today*, May 1995, p. 3.

⁹⁸*United States Security Strategy for the East Asia-Pacific Region*, pp. 20-21.

A. STATUS OF U.S. DEVELOPMENTS

The Theater Missile Defense Initiative (TMDI) was drafted to delineate the Department of Defense's areas of responsibilities in regards to TMD. This draft was to include:

[A] detailed consideration of plans for theater and tactical missile defense doctrine, training, tactics, and force structure, and a detailed acquisition strategy which includes a consideration of acquisition and life cycle costs through the year 2005 for programs, projects and activities associated with TMDI.⁹⁹

According to the document, there are two methods employed by military units designed to inhibit, prevent or reverse the spread of WMD: counterforce operations and active defenses. Counterforce operations are intended to neutralize TMs prior to their launch while active defenses engage missiles once they are airborne. Although counterforce operations are a vital aspect of the TMDI, this thesis is concerned with only active defenses.

Active defenses are all designed to engage TMs at some point in the missiles' trajectory, either boost, post-boost, midcourse, or terminal phases. In addition to the various phases of flight which, TMD systems are designed to engage TMs, each system must possess seventeen other attributes listed in the TMDI.¹⁰⁰ (For a complete listing of these attributes see Appendix B.) Based upon these attributes and intercept profiles, five areas of TMD systems have been approved for continued R&D: (1) lower tier, (2) upper tier, (3) boost phase intercept, (4) warning and surveillance and (5) command, control, communications and intelligence. Currently, all of the proposed TMD systems are in various stages of development, however, none entered into production.

⁹⁹David Israel, *1993 Report to Congress on the Theater Missile Defense Initiative (TMDI)*, (Washington: Government Printing Office, 1993), p. EX-1.

¹⁰⁰*Ibid.*, p. EX-6.

1. Lower Tier Intercept

Lower tier interceptors are intended to provide a complete point defense system. They are not intended to be the sole defensive system since they rely on other TMD systems to reduce the number of incoming warheads to a manageable number. The lower tier interceptors consist of three different missile and associated radar systems. The Patriot (PAC 3) is based on the currently deployed Patriot (PAC 2), which experienced limited success during the Persian Gulf War. The PAC 3 will have significant modifications, which are intended to increase the capabilities of the associated ground-based radar (GBR) and missiles. Instead of the PAC 2 missile, the improved Patriot will use an extended range intercept missile (ERINT) which is under development by Loral Vought Systems. The projected cost for completion of this project is \$3.4 billion and is expected to be in service by 1998.

The Navy's contribution to the lower tier intercept is the Aegis/Standard Missile (SM 2) Block IVA. This concept will utilize the existing SPY radar and vertical launch system (VLS) already incorporated on several naval combatants. Efforts to modify the current ship configurations into effective TMD platforms will require the enhancement to the existing radar and missile guidance systems. The Projected cost for completion of this project is \$3.3 billion and it is expected to be in service by 1997.

The final lower tier system will be employed by the Marine Corps. Like the other systems, modifications will be made to existing systems, in this case the AN/TPS-59 radar and the HAWK missile system. Of the three lower tier intercept systems the AN/TPS-59-HAWK system is expected to provide the smallest area of protection for point defense.

2. Upper Phase Intercept

Upper phase intercept systems are being designed to engage the missile in the upper atmosphere where the air is thinner and the likelihood of damage caused by the shrapnel is reduced. There are two primary systems in this category, theater high altitude area defense (THAAD) and the lightweight exoatmospheric projectile (LEAP). THAAD in conjunction with the TMD-GBR is intended to provide broad area coverage by increasing its intercept envelop with a higher speed missile with greater range. Since this system provides the greatest coverage, it will be able to be employed for the protection of industrial resources and population centers. Due its high speed and altitude capabilities, this system had drawn criticism for conflicting with the 1972 Antiballistic Missile Treaty (ABM). This project is expected to cost more than \$9.1 billion and will be completed by 1996.

Additional research is being accomplished in conjunction with the Navy's development of the enhanced capability SM 2 Block IVA. These efforts are focused in creating an extended range (ER) missile that will be capable of exoatmospheric intercepts. The LEAP system does not have a separate budget from the lower tier intercept development or a projected completion date.

3. Boost Phase Intercept

Boost phase intercept (BPI), is far from reaching the development stage. Military experts have yet to decide on design criteria and are still discussing the overall feasibility of the system. There are several variations under consideration ranging from unmanned attack vehicles (UAV's) to F-16's armed with air-to-air missiles. Questions regarding the operational effectiveness, logistical requirements, C3I requirements, leakage, and counter-counter measures have yet to be resolved.

Funding for this project has been minimal and will remain at such level until a future course of development can be agreed upon.

4. Warning and Surveillance

Although not a weapon system in its own right, warning and surveillance systems are critical to TMD. Currently the warning and surveillance systems consist of the Joint Tactical Ground Station (JTGS) and the Tactical Surveillance Demonstration (TDS) systems. They provide prompt detection of enemy missile launches and accurate queuing information for point defense systems. A new system, Brilliant Eyes is currently under development. Questions over its development and potential conflicts with the ABM treaty have slowed its progress. Brilliant Eyes is being designed to acquire and track strategic and longer range TMs from the boost phase till the midcourse separation of warheads (if applicable). It is estimated that if development of Brilliant Eyes continues, the system will be operational shortly after the year 2000 and will cost \$3.3 billion.

5. Command, Control, Communications and Intelligence

Command, control, communications and intelligence (C3I) elements are designed to enhance the integration and standardization of messages and elements of control necessary for the cooperative utilization of the proposed TMD systems. Prevalent among the C3I elements is the Joint Tactical Information System (JTDS). This system was designed to accommodate the integration of all military assets, however, individual service needs and preferences have reduced this systems effectiveness.

B. WHY JAPAN?

The United States has made efforts to solicit the assistance of France, Germany and Israel in the development of TMDs but not nearly to the extent it has pursued Japan. The United States would

only request assistance from those that it believes has the capacity to contribute to TMD development but the above-mentioned countries have an established defense industrial base while Japan is almost strictly commercially oriented. The United States shares unique bonds and numerous common interests with many nations that will most likely act as reliable future partners. Still, it remains reluctant to call upon them for this project.

There are several reasons why the United States would choose Japan as the nation to co-produce TMD systems. Japan has the financial capacity to fund such a costly program. A joint TMD program may have some positive effects on the trade deficit. Despite its commercial orientation, Japan's great industrial capability can easily be transformed into a state-of-the-art military industry. The United States and Japan have established a distinct partnership over the last 50 years. However, the most important reason is the shared threat perception and understanding of the damage this threat can inflict upon U.S.-Japanese interests.

Although the Japanese government has not officially endorsed the R & D associated with TMD, there are numerous companies that have already commenced on "studies" to evaluate the potential of several associated TMD systems. Some of these programs have been requested by the JDA but official government funding has not been provided. A list of example projects illustrates the significant level of involvement Japanese have committed to TMD:

- Mitsubishi Electric Corporation (MEC) has commenced work on a new medium range surface-to-air (SAM) missile that receives targeting information from either ground or satellite sources. (The use of space for targeting information is under debate in the Diet as a possible conflict with the Japanese constitution.) This new

missile system is expected to be available by 1996. If a joint venture is announced, MEC will certainly participate as a key Japanese player.¹⁰¹

-Fujitsu Ltd. is conducting research on TMD sensors for launch detection and command networks for queuing however, it claims to have no specific intention of developing and deploying equipment.¹⁰²

-Nissan Motor Co., was contracted by the JDA to study missile flight control technology for TMD. Subsequently, the company was instructed to conduct a test launch within the next two years. The focus of their "study" is centered on the development of a high speed missile which is boosted by solid fueled rocket. The projectile will utilize ducted ports and side thrusters instead of vanes or fins which have proven to be ineffective in extreme altitudes. In addition, the missile will be designed to have an initial speed of Mach 4-5 and if there is a successful increase of the rocket's combustion through the implementation of heat resistant materials (ceramic), it is expected to have speeds up to Mach 9.¹⁰³ The characteristics of this missile are extremely close to the THAAD or ERINT design. One major difference is the intercept speed which is higher than the designed specifications of U.S. missiles.

-Fuji Heavy Industries has launched a program to develop unmanned reconnaissance plane which is intended to fly at altitudes of 20-30 kms in association with their study of TMD feasibility. The intended use of the UAV is to provide detection information and targeting data which would normally be provided by satellite.¹⁰⁴ If this is successful, Japan would be able to employ these units instead of using satellite information and thus avoid potential conflicts with their constitutional interpretation.

¹⁰¹"Mitsuibishi Team to Study Air Defense System," *Nihon Keizai Shimbun*, May 3, 1994, p. 10.

¹⁰²"Fujitsu Sets Up Team to Study TMD Project," *Nihon Keizai Shimbun*, August 6, 1994, p. 8.

¹⁰³The characteristics of this missile is extremely similar to THAAD and ERINT with the major exception being intercept speed. Since Japan was not a signatory to the AMT Treaty, it is not constrained by the Foster Box limitations or the 4km/sec intercept speed. "Nissan Motor Develops Missile Technology," *Tokyo Nikkei Telcom Database*, October 6, 1994.

¹⁰⁴"Fuji To Develop Unmanned Reconnaissance Plane," *Nihon Keizai Shimbun*, January 6, 1995, p. 12.

In addition to the specific projects proposed by these companies, the Japanese Defense Equipment Industry Association, which is chaired by MEC and consists of 38 companies capable of weapons manufacturing, have held routine meetings to "study" TMD concepts. The purpose of the group is to consolidate the technical research and development efforts among the member companies according to their unique areas. These meetings are supposed to remove the barriers that may exist among potentially rival companies, thus enabling a free exchange of ideas¹⁰⁵ and ensuring an equitable distribution of ensuing contracts. This kind of effort is not found among U.S. defense contractors who view other companies as adversaries competing for contracts instead of sources of assistance and expertise.

All of the preparatory projects and collaboration among the Japanese industries indicate their overwhelming desire for participation in TMD co-development. The commercial interests expressed by these manufacturers are not the product of their desires to increase Japan's defensive capabilities, but rather the exploitation of another market. The coordination of Japan's industry reflects an "us vs. them" mentality which could easily result in another source of inter-alliance tension.

C. INDICATORS THAT SUPPORT CO-PRODUCTION

1. Japanese Defense Industry Support

Regardless of the willingness of the Japanese defense industry to participate in another co-production effort, what will prevent this project from ending up like the FS-X, over-budget and past due? While there are no guarantees that this will not happen, there are several differences that may

¹⁰⁵"Defense Industry's Group to Study TMD Concept," *Mainichi Shimbun*, August 17, 1994, p. 1.

make the possibility of a TMD joint venture more successful. Despite the reluctance of the Japanese government to commit to such a program, the country's industry has already become involved and the momentum may be great for it to stop. The Japanese defense industry has undergone significant cutbacks as the need for conventional military equipment has plummeted with the decline of the Soviet Union. Many of these companies view TMD as the next generation of weaponry that may keep their industry alive. While most companies are holding back from financially committing themselves, two companies have already negotiated distribution and sole agent contracts in anticipation of government approval. Itochu Corporation was given sole agent status by Loral Vought Systems, producers of the ERINT, to sell the PAC 3 missile system.¹⁰⁶ This move places Itochu in direct competition with NISSAN who was contracted by the Japanese government to "study" a similar missile. Mitsubishi has also managed to obtain the distributorship of THAAD in Japan from Lockheed Corporation,¹⁰⁷ in the event the Japanese government does eventually agree to purchase or commit to licensed production. Since many of the companies are already involved in this program in some fashion-- unlike the FS-X project which was strictly controlled by the government-- they are able to provide a source of domestic pressure on the Diet and Prime Minister to commit to the program.

2. MOFA and JDA Support

This domestic pressure has also been assisted by the JDA and MOFA. The MOFA has promoted this effort as a major step in reconstructing the U.S.-Japan security framework claiming, "it is difficult for Japan to ensure the nation's security by itself, peace will be maintained under the

¹⁰⁶"Itochu Named to Become ERINT Missile Agent," *Nihon Keizai Shimbun*, November 11, 1994, p. 11.

¹⁰⁷"Mitsubishi Becomes Missile Systems Distributor," *Nihon Keizai Shimbun*, November 22, 1994, p. 15.

bilateral security framework...maintaining alliance relations and the smooth operation of the U.S.-Japan security system is also important for the Asia-Pacific region." It continues by specifying six issues that it views will strengthen the relationship. Of the six, three are directly related to TMD. They are the TMD projects itself, exchanges in defense technology, sharing the financial burden for defenses, reorganization of military bases in Japan, continuation of joint military exercises, and financing commodities for forces.¹⁰⁸ While the JDA Director General, Atsushi Kanda does not hold a cabinet position, he is able to exert a great deal of influence among other government officials. Kanda has openly expressed his support for TMD and claims that the acquisition of such a weapon system is a necessity for Japan's defense.¹⁰⁹

3. Compatibility with the Constitution

While the Diet continues to hold debates regarding the effectiveness and feasibility of TMD systems as a whole, it has not become stalemated over the constitutionality of the platform. Due to the precision intercept profiles and intended employment methods, it is clear that TMD is a defensive weapon. Although there has been some debate over the use of Bright Eyes and other associated satellites for targeting, (which some Japanese consider a non peaceful use of space and a violation of their constitution) many of the systems have alternative queuing systems which fall within the confines of the constitution.

¹⁰⁸"MOFA Plans to Push U.S.-Proposed TMD Project," *Sankei Shimbun*, January 25, 1995, p. 1.

¹⁰⁹"Defense Agency Chief Urges TMD Use to Counter DPRK Missiles," *Yomiuri Shimbun*, June 15, 1994, p. 3.

4. The Lack of an Acceptable Alternative

Unlike the FS-X, if Japan does not contribute to this program and a TMD system is not developed, it will have no alternative but to remain without that measure of defense. Some believe the reluctance and reason for delay in the production of the FS-X was due to the security already provided by U.S. assets. The United States had similar aircraft deployed in Japan. Therefore, in the absence of a legitimate threat, there was little urgency to expedite production. As far as TMD is concerned, Japan cannot rely on the United States to provide a weapon system that it does not have. The air defense systems currently in place have been proven ineffective during recent conflicts. The longer TMD remains in the research phase, the longer Japan will remain vulnerable in this area.

D. U.S. PROPOSALS

Despite the apparent progress, an operational U.S. TMD system has yet to be produced. Due to the high financial costs, limited number of defense contractors and the prospect of using Japanese developments to circumvent potential conflicts with the ABM treaty, the Secretary of Defense, as well as other DoD officials have made several official and unofficial proposals to entice the Japanese in participation in the TMD effort. The unofficial proposals were attempts to sound out possible responses from the Japanese defense industry and an attempt to gain their support so they could apply domestic pressure for TMD approval to the Japanese government. While the specifics of each proposal are slightly different, they all carry a similar theme: purchase, provide financial assistance, or joint production for U.S. TMD systems.

The first proposal was made in early 1993, when the Secretary of Defense Les Aspin stated that Japan should contribute to the TMD effort not only by offering whatever technical support it was

capable of but by also purchasing U.S.-made equipment to help U.S. defense manufacturers defer the costs of R&D. The initial Japanese response was cautious and appeared to be without promise. Japanese officials made it clear that they would not participate in the venture without conducting in-depth studies on the feasibility of the systems.¹¹⁰ In other words, they graciously said no to the U.S. request.

On April 23, 1994, DoD officials briefed the JDA and Japanese defense industry about the associated developments in TMD and their costs. Claiming that the entire project would exceed \$30 billion, DoD officials requested the assistance from Japanese industry to participate in the development of TMD systems, or provide advanced associated technology equivalent to help defer the development costs.¹¹¹ Special emphasis was placed upon the prospective business opportunities involved with TMD development to entice Japanese defense industry to become involved with the project.

In May, the U.S.-Japanese working group met for the second time to discuss the introduction into Japan. It was here that the Ballistic Missile Defense Organization (BMDO) submitted a 40-page document entitled, "Japan's Choices Regarding TMD."¹¹² Included in the report was an outline of the threats (missile attacks from North Korea, China or both) confronting Japan. Based upon these threats, four TMD packages were offered. The first package is intended to counter a limited missile attack, similar to what might be expected from North Korea. Plan A incorporates upper and lower

¹¹⁰"Businesses Wary of Participation in TMD Plan," *Asahi Shimbun*, p. 9.

¹¹¹"Pentagon Seeks Cooperation in Developing TMD," *Mainichi Shimbun*, April 24, 1994, p. 9.

¹¹²"Introduction of TMD System Considered," *Mainichi Shimbun*, March 17, 1995, p. 3.

phase interceptors and includes the assignment of 2 Aegis ships (and two reserve ships) to the Sea of Japan, deploys 24 PAC-3 ground units and 4 AWACs. Plan A is expected to cost \$4.5 billion and be deployed as early as 1996. The remaining three plans under this proposal were intended to counter a slightly larger missile threat, assumingly one posed by China itself of in concert with North Korea. Plan B includes the deployment of 6 Aegis capable units, an unspecified number of PAC-3 batteries, 4 AWACs and associated surveillance radar. This is the most expensive proposal estimated at \$16.3 billion and deployable by 2005. Plan C incorporates 6 THAAD batteries, an unspecified number of PAC-3 units, 4 AWACs and associated surveillance radar systems. Its cost is \$8.8 billion and expected to be available by 2004. The final plan, D, utilized all of the above-mentioned assets, 5 THAAD batteries, 2 AEGIS vessels, an unspecified number of PAC-3 units, 4 AWACs and surveillance radar support. Although this plan incorporates the most assets its estimated cost is \$8.9 billion and will be available around 2004.¹¹³

The next proposal was made on June 18, 1994, when DoD officials presented specific areas for joint development. Washington expressed interest in the co-development of a compact, mobile launching devices that would utilize Japanese high technology dual-use capabilities. Other areas of interests included composite material technology for the reduction of weight, the exchange of technology in optical electronics (necessary for guidance systems) and radar/electronic production methods.¹¹⁴ Later at the U.S.-Japan System and Technology Forum (S&TF) another MOU was

¹¹³"Pentagon's TMD Project Offered, Options Described," *Sankei Shimbun*, September 6, 1994, p. 1.

¹¹⁴"U.S. Taps Government on TMD System Development," *Nihon Keizai Shimbun*, June 19, 1994, p. 1.

signed with promoted the exchange of ducted rocket engines (necessary for THAAD) which ensured the continuation of joint research which was already in progress.¹¹⁵

Another formal proposal was issued by Secretary of Defense, William Perry in which he states:

Japan can purchase TMD systems completed by the United States, or share those jointly developed by the two nations. The U.S. Government believes the most efficient way is to promote the TMD project through joint development, production, and introduction between the United States and Japan. This approach will expand Japan-U.S. cooperation in defense related fields and substantially strengthen security ties between the two nations.¹¹⁶

The proposal requested Japanese companies' participation in the TMD project and government-level consultations on how to develop the TMD systems. To facilitate joint development, the letter stated that the United States intended to offer Japan expanded strategic information concerning regional proliferation threats, as well as operational C3I associated with TMD. Perry's letter called for an early decision by Japan to join the project, saying Japan may lose a chance to have a significant role in development of defensive systems because TMD developments were making rapid progress in the United States.

¹¹⁵"Accord With U.S. on Military Research Likely," *Nihon Keizai Shimbun*, August 22, 1994, p. 1.

¹¹⁶"Kono, Tamazawa Receive U.S. Proposal on TMD," *Sankei Shimbun*, October 9, 1994, p. 1.

E. THEORETICAL PREDICTIONS FOR TMD

In light of the perceived threats that face both the United States and Japan and the domestic political conflicts each nation is experiencing, co-production of TMD systems seems justified. However, since theories can produce a range of predictions based upon variables drawn from the circumstances surrounding a policy decision, it is important to apply each theory to understand the variation of results that may come about.

1. Balance of Power

If the behavior pattern of the U.S.-Japan alliance is best described by balance of power theories, then co-production of TMD would be promoted at all cost until the system is operational. Assuming that the proposed TM threat is considered to be a national priority by both countries, this theory dictates that members of the alliance would contribute to any effort until the external threat subsides, regardless of the cost. Failure to do so would indicate a lower perceived threat or a failure of this theory to apply to the situation.

Since both nations would have possession of a new defensive system, the relative capabilities among the member nations within the alliance would stay the same. Both nations would share in the additional measure of protection provided by TMD but for the most part, Japan would remain dependant upon the United States for the remainder of its security. With the power distribution of the alliance intact, the United States would be able to continue exerting its influence over the alliance.

While this situation may appear to be inherently positive, it would eventually lead to a deterioration of the alliance. If TMD eliminates the only threat that binds the United States and Japan together, the two nations may have nothing left to stabilize the alliance. A reduced threat environment might allow Japan to conduct its affairs without its protectorate, the United States as well as reduce

Japan's motivation to contribute to the alliance. The continuation of disproportionality in conventional defense contributions by the United States could provide an area of tension and eventually deterioration of the stability of the alliance.

2. Coalition Theory

Based upon the characteristics associated with coalition theories, co-development of TMD should be supported by both the United States and Japan. The level of contributions from the two countries would place a disproportionate amount of the cost on the United States. However, Japan would contribute as necessary to prevent the alliance from deteriorating. Similar to nuclear deterrence, TMD provides a truly public good, which directly addresses the purpose of coalition alliances. Assuming TMD co-development is similar to the distribution of responsibilities experienced during the FS-X efforts, a differentiation of functions would be created which would provide the means for increased cohesion. In addition, the success of TMD would increase the credibility of the U.S.-Japanese deterrence posture thus further enhancing the cohesion within the alliance.

While cohesion and stability may be improved through TMD production, U.S. influence is most likely to remain the same, low. It is the intent of the United States to forward deploy TMD assets in countries other than the United States. With an inadequate number of TMD systems to ensure the protection of the U.S. homeland, the United States can still not afford a nuclear exchange. The possibility of unacceptable losses received from the involvement in conflicts resulting from allied nations, maintains a disproportionate amount of influence for the smaller nation, Japan.

3. National Attributes

Assuming that behavior patterns associated with the U.S.-Japan alliance are most accurately described by national attributes, joint TMD development will have an adverse effect on the future of

the security relationship. According to this theory, Japan would avoid assuming any additional commitments regardless of the threat. Instead, it would use its national attributes to secure alliances with nations that could offer protection. However, if the pursuit of TMD co-production were continued and a system developed, the result would be a deterioration of the alliance and a reduction in the level of U.S. influence experienced in the relationship.

Japanese involvement in the development of TMD systems would provide it with many of the assets it currently depends upon the United States. Like the joint FS-X development, TMD co-production would enhance the military-industrial complex of Japan, giving it the capability to compete in the world market, should the need arise. In addition, due to the purely defensive nature of TMD, Japan would be able to provide a substantial portion of its security through indigenous production. Finally, TMD would give Japan a method of protecting itself from a missile attack, and the associated WMD. This capability would significantly reduce the dependency upon the United States and increase Japan's autonomy. Faced with these developments, the United States would suffer a reduction in the level of influence it could exert within the alliance and the region.

F. THE IMPACT OF TMD ON THE ALLIANCE

While Japan openly expresses heightened concerns over Chinese and North Korean TM threats, the Japanese government remains reluctant to engage in a program designed to neutralize their fears. Although, commercial interests reflect a strong urgency and desire for co-production, it appears they stem from the prospect of new markets and a means to rejuvenate a depressed Japanese military industry. If the alliance behavior was supported balance of power theories, then Japan, its government and industry, would openly accept any of the U.S. proposals in an attempt to expedite

the development process. The association of the perceived threat to the behavior of the alliance makes balance of power theories most applicable during actual conflicts and those just short of hostilities. This theory does not lend itself well to peacetime situations nor does it account for situations when a super power conflict does not exist. Based upon these observations, one can assume that the behavior patterns of the U.S.-Japan alliance are not consistent with balance of power theories.

Although it may seem as if co-production of TMD is representative of national attribute theories, a fundamental aspect of the theory is often overlooked and therefore leads to incorrect assumptions. The primary motivation behind national attribute alliances is the pursuit of missing elements, not improved ones. Therefore, if either Japan or the United States were void of an element, it would pursue an alliance with a nation that could adequately fulfil its needs. The commonly expressed U.S. motivations behind TMD co-production are not the quests for missing elements but the pursuit of assistance (financial and technical) in various areas. Domestic development of TMD appears to be well within the capabilities of the United States thus leaving only the lack of patience and willingness to finance the development to be desired. If the alliance were in keeping with national attribute theories, Japan would court the protection of the U.S. with its TMD systems after it has been developed. With the growing capabilities of Japan's SDFs, current efforts to justify the use of the SDF in situations other than direct national defense, and an apparent reduction in a perceived threat, Japan had managed to reduce its reliance upon U.S. security. In light of these developments, the U.S.-Japan alliance does not fill a void but enhances the overall capability of Japan's security and therefore does not conform to the behavior patterns associated with national attribute alliances.

Of the three theories, it appears that the circumstances surrounding TMD co-production efforts are most accurately represented by coalition theories. This conclusion is reached based upon

the series of concessions made by both Japan and the United States as part of a calculated policy necessary to keep the alliance in tact. An example of this taken from the TMD developments is the Diet's approval \$2 million to conduct detailed "studies" on the benefits and feasibility of TMD. This action represents a margin of hope for acceptance of the U.S. proposals but for the most part, it is insignificant. This action, did nothing to further advance the actual development, but it did provide Japan a means to put off an actual commitment and buy time during which the system could be completed by the United States. The United States, on the other hand, has presented numerous proposals to Japan in hope of gaining any degree of assistance. According to coalition theories, peacetime alliances will focus on issues other than defense. This appears to be true as economic issues take increasing precedence over those related to security. While coalition theories cannot account for all of the interactions that occur between Japan and the United States, they do provide acceptable justifications for a majority of the nations' behavior patterns. Supported by this observation, it can be said that coalition theories most accurately describe the nature of the current U.S.-Japan alliance interactions and those affecting TMD co-production.

4

VI. CONCLUSION

The intent of this thesis was to determine what effects joint development of TMD systems would have on the U.S.-Japanese security relationship. To do this, this thesis provided an overview of three alliance theories which have demonstrated their ability to explain and predict the events that occurred throughout the security relationship. In addition, these theories were applied to the history of the relationship to validate their behavior patterns. To further the application of theory to the behavior of the U.S.-Japan alliance, an analysis of the FS-X co-production effort was used to develop a preliminary understanding of the competing predictions resulting from the three theories. (The results from the alliance theory predictions are provided in Table 1.) Through the application of the three theories to the issues surrounding TMD co-production, similar predictions for this future project were obtained. Included in the predictions were indicators revealing how U.S. influence might be affected by TMD co-production. The desired results of strengthening the alliance, increasing U.S. influence and improving cohesion were not predicted by any one theory. (The results from the alliance theory predictions are provided in Table 2.)

Based upon the findings of the previous five chapters, this thesis concludes that co-development of TMD systems may provide limited benefits (other than security) to both countries. The majority of these benefits are short term private returns (such as immediate cost cutting measures or increased program support) which will fade as development progresses or become overshadowed by negative tensions resulting from unexpected delays or cooperation disputes. The addition of new sources of friction to the U.S.-Japan alliance will eventually serve as part of the problem driving the two nations apart rather than act as a potential solution.

In light current proposals and variations of possible outcomes, it appears that the effects desired by the United States from TMD co-production are unattainable. Due to the disparity and conflicting results from the three theories, this thesis does not endorse TMD co-production efforts with Japan.

ALLIANCE THEORY PREDICTIONS FOR FS-X CO-PRODUCTION			
Theory\Results	Effect on Alliance	Influence	Cohesion
Balance of Power	None	U.S. Dominant	Decreased
Coalition Theory	Positive	Continued Disproportionate	Improved*
National Attributes	Minimal	Continued Disproportionate	Improved

Table 1.

*short term

ALLIANCE THEORY PREDICTIONS FOR TMD CO-PRODUCTION			
Theory\Results	Effect on Alliance	Influence	Cohesion
Balance of Power	Negative	U.S. Dominant	Decreased
Coalition Theory	Positive	Continued Disproportionate	Improved*
National Attributes	Negative	Decreased	Decreased

Table 2.

*short term

While some of the conclusions of this thesis are based upon the interpretation of alliance behavior during the most recent case study, the FS-X, it should be noted that there are several differences between the nature of the two co-production ventures. Differences between TMD and FS-X include: the nature of the weapons (strategic vs. conventional), the motivating threat behind production (TMs vs. ?), and domestic changes due to the associated time periods. In light of these

differences, one should realize that the two co-production efforts are not interchangeable, therefore the results from one should not be accepted as substitutes for the other. However, the similarities between the two ventures are sufficient to justify the use of FS-X results as a starting point for analysis when there is an inadequate amount of information to conduct an analysis for TMD issues.

A. EVALUATION OF THEORY

When theories cannot account for the situations or circumstances that occur in a relationship, it is difficult to justify their use to provide predictions. The narrowly defined motivations behind balance of power and national attribute theory alliances result in their failure to provide a reasonable clarification of the behavior patterns within the U.S.-Japan relationship. Balance of power theories make no attempt to offer explanations for the Japanese government's reluctance to participate in TMD efforts in the face of an expressed threat, the inconsistent policy actions between the Department of State and DoD toward China (Japan has similar discrepancies in their economic and security policies with China and North Korea), or the existence of an alliance beyond immediate security concerns. Likewise, national attribute theories claim that the weaker nation tries to maximize the "free rider" concept and cannot account for even Japan's minimal involvement in the participation of TMD "studies."

As mentioned earlier, coalition theories use issues other than those expressly related to security as part of the motivation behind action in an alliance. With this attribute, this theory provides explanations for behavior patterns that cannot be justified by other theories. While it may be impossible to provide a refined prediction due to the Japanese government's indecision regarding support for co-production or the diversity of issues included in the various U.S. proposals, it is clear

that the behavior patterns of Japan and the United States are consistent with coalition theories. Therefore if any attempt is made to predict the course of events for TMD development, it is imperative that the characteristics of this theory are incorporated.

B. THE KEYS TO THE PRESERVATION OF INFLUENCE

While there have been many policies designed to increase or preserve the level of U.S. influence in alliances, many have resulted in either no change or a decrease in influence. Using the history and case studies provided in this thesis, it appears that the key to the preservation of U.S. influence in the U.S.-Japan alliance is the maintenance of a superior bargaining position within the alliance. While co-production of TMD systems may possess positive security aspects, it does not (according to the various alliance theories) increase the U.S. bargaining position. In essence, influence can be equated to a “trump card” whose value (determined by the other members of the alliance) is based upon its significance to by the other member of the alliance and the willingness to withhold its use from the alliance. Therefore, a simple question: Does TMD co-production increase the value of the trump card?, can be used with the application of each theory to determine the impact of a policy decision on U.S. influence within an alliance.

When this question is applied to coalition or national attribute theories, one can easily draw the conclusion that TMD co-production will either have negative effects or continue to disproportionately favor Japan. This conclusion is made from the understanding that co-production of a weapon system will give Japan irrecoverable intellectual “know how “as well as the infrastructure to produce the weapons systems. This is contrary to the traditional alliance contribution of physical assets which can be removed, if necessary, leaving Japan with the original need or void in their

security posture. Since co-production information is irrefragable it prevents the United States from withholding the "trump card." The added capability of TMD systems would increase the relative military power of Japan (to the United States), reduce Japan's dependency on the United States in another area yet maintain their position as the smaller nation. Since both coalition and national attribute theories place a disproportionate level of influence on the smaller nation, Japan would continue at a minimum to exert this influence, while its reduced dependency may allow it to exert more.

In a balance of power alliance, the level of influence is determined by the size of the contributions made to the alliance. Assuming co-production results in equal or nearly equal contributions from Japan and the United States, one can conclude that their associated level of influence would remain unchanged.

C. RECOMMENDATIONS

Although it is impossible to make a policy decision that produces positive results in every situation, through the analysis of potential variations, decisions can be made that reduce the likelihood for unfavorable outcomes. If the intent of the joint TMD proposals were to produce a working system, strengthen the alliance, and maintain U.S. influence within the alliance, I would recommend continuation of independent TMD development with certain projects contracted to Japanese industries based on an as needed requirement. While this promotes "free riding" as expressed by coalition and national attribute theories, it has the greatest opportunity for achieving the desired goals in the various areas.

If the United States were to independently complete the development of TMD (or use specific contractual agreements with Japan to produce limited items), it may be able to attain its goal. The production of the system provides the same degree of security regardless of how it is produced. Therefore, independent production will have the same net result on the overall defense posture of the alliance.

However, the additional benefits independent development would give the United States stems from the sole proprietorship of TMD system. Having this would allow the United States to withdraw the system from its use in the alliance should the need arise. This level of control over a system that has such great importance in the alliance would preserve the “trump card” and definitely increase the U.S. level of influence.

Through the use of selected contractual agreements, the United State might be able to achieve benefits similar to those attained through co-production. Depending on the nature of the contracts (size, number of companies involved, costs associated, etc.) it may be possible to produce sufficient private benefits to cause increased cohesion as outlined in coalition theories. It should be noted that these contracts should seek to maximize the capabilities of Japan’s industry, but should not become the limiting factors required for production. If this were to happen, all of the benefits mentioned may be lost.

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APPENDIX A: THREATS AND CHALLENGES TO U.S.-JAPANESE INTERESTS

Over the last two decades the use of TMs in regional conflicts has become commonplace. The increased, availability, versatility and success of TMs has made them the future weapons of choice. During recent campaigns, TMs have been militarily insignificant. However, due to their availability and capability to deliver WMDs, TMs have been able to incite terror upon the masses within the populations. There have been six documented conflicts in which TMs were used, four within the last seven years.¹¹⁷ Currently, there are over ten countries that produce TMs; five (other than the United States and its allies) are suspected of distributing them as part of their military aid packages or as primary sources for hard currency.¹¹⁸ The proliferation of this technology has allowed the widespread adoption of TMs by at least twenty countries.¹¹⁹ From the list of suspected producers, there are nine that do not support U.S. policies. Some have displayed open hostility towards the United States or its allies.¹²⁰ The list of nations which may pose a threat to either the United States and Japan include: China, India, Iran, Iraq, Libya, North Korea, Pakistan, Russia and Syria. This list of threats will most likely increase unless a credible deterrent is produced.

Although Japan is working to improve its relations with all of the countries of the Pacific region, the Japanese remain concerned about the large military capabilities of its two closest neighbors, China and North Korea. Both of these countries have demonstrated hostile actions decreasing stability across the Pacific Rim. China, a declared nuclear state since 1964, has amassed one of the largest arsenals and has become one of the largest producers of delivery vehicles (missiles).

China's actions pose two major threats to U.S.-Japanese interests in the region. First, China has possession of five¹²¹ missiles that could reach the Japanese homeland and two mobile tactical missiles that could threaten Japan's regional interests.¹²² Although intercontinental ballistic missiles (ICBMs) comprise the majority of the Chinese missile arsenal, defense against these

¹¹⁷CRS Report for Congress, "Nuclear, Biological, and Chemical Weapon Proliferation: Potential Military Countermeasures, 5 July 1994, p. 2.

¹¹⁸Steven Zaloga, "Ballistic Missiles in the Third World-Scud and Beyond," *International Defense Review*, November 1988, p. 1427.

¹¹⁹Israel, "1993 Report to Congress," pp. 1-5.

¹²⁰Barry Schneider, "Radical Responses to Radical Regimes: Evaluating Preemptive Counter-Proliferation," (Washington: National Defense University Press, 1995), pp. 5-6.

¹²¹Janes

¹²²Bill Gertz, "Missile Tests Raise Fear of Chinese Aggression in Asia," *The Washington Times*, August 15, 1995, p. A1.

systems would not be covered through theater missile defenses (TMDs) and are therefore excluded from this thesis. The remainder of the Chinese missile force is comprised of several tactical nuclear capable and other intermediate range missiles. The ranges of these TMs vary from 185 nm (DF-11) to 1,700 (DF-3).¹²³ Although China claims to have a minimum deterrence nuclear strategy, targeting only a small number of U.S. and Russian cities, their testing and deployment of missiles may indicate otherwise.¹²⁴ Missile tests (DF-21s and M-9s) conducted between July 21-26 approximately 100 nm from Taiwan, provided a high-profile example of their military capabilities. Known DF-21 launch sites are well within range to threaten Japan as well as to interfere with shipping traffic in the Straits of Malacca.

The second threat created by Chinese missile development is an indirect threat to U.S.-Japanese interests as the result of extensive Chinese military arms sales. China has been a major proliferator of sensitive commodities which have assisted other nations in their nuclear weapons and missile programs. Chinese aid helped Pakistan, Iran, Libya, Syria and possibly North Korea attain missile components or technology to develop their programs.¹²⁵ Although these countries have not yet targeted Japan specifically, their hostile actions have created disruptions in vital trade to both the United States and Japan. China has recently signed formal agreements restricting their sales of M-9 missiles, however, many U.S. officials suspect that their sales and technical assistance to Pakistan has not ceased.

It is estimated that China maintains about 300 nuclear warheads for its missile forces.¹²⁶ Currently, the large numbers of missiles in the Chinese arsenal and the absence of a defensive system, makes the protection of Japan against a missile attack impossible. If China initiates hostilities against Japan to resolve territorial disputes over the Senkaku Islands, for example, Japan would have to capitulate.

In addition to the perceived threat posed by China, the Japanese are concerned about military developments in North Korea. Within the last three years, North Korea has experienced a significant change in political leadership, increased its military development program and experimented with nuclear capabilities. All of these issues increase uncertainty about North Korean intentions. Japan's interests in North Korean military developments heightened in May of 1993 when North Korea successfully test fired its "Labor-1" (Nodong-1) in the Sea of Japan, thus giving it ballistic missile capabilities with a range of over 1,000 kilometers (and the

¹²³Leonard S. Spector, and Mark G. McDonough, *Tracking Nuclear Proliferation*, (Washington: Carnegie Endowment for International Peace, 1995), p. 53.

¹²⁴"Building a More Secure Asia Through Missile Defense," *Asian Studies Center-Background*, No. 138, 24 October 1995, p. 4.

¹²⁵Spector, McDonough and Miderios, *Tracking Nuclear Proliferation*, p. 49.

¹²⁶"Chinese Nuclear and Conventional Forces 1993," *Arms Control Today*, 1993, p. 29.

ability to reach Tokyo).¹²⁷ Later in 1994, the development of two additional missiles with greater ranges, Taepo Dong-1 & 2 were discovered. With these new TMs in their arsenal, North Korea could directly threaten U.S. bases in Guam.¹²⁸

Although coverage of North Korea's missile development program has recently become sidelined by its possible nuclear weapons progress, North Korea has remained focused and made several significant advances. Besides improving its domestic capabilities, North Korea has expanded its production to become what Robert Walpole, Deputy Director of the CIA's Nonproliferation Center calls, the largest proliferator of ballistic missiles.¹²⁹ North Korea has provided many nations hostile to the United States with ballistic missile capabilities in exchange for hard currency. Iran reportedly provided the substantial financial support necessary for missile research and development, assembly and production in exchange for finished products nuclear-capable Scud Mod B & C's.¹³⁰

While there are some in Japan, such as Social Democratic Party of Japan, (SDPJ), who believe the likelihood of a missile attack from either of these two countries is extremely low and the threat could be reduced through diplomatic means,¹³¹ others have become increasingly aware of the inadequacies of Japan's defensive capabilities.¹³² The concerns of the later group were multiplied as a result of the Persian Gulf War. Although the TMs used in this campaign were militarily ineffective, they were strategically significant because they created havoc among the Coalition forces and civilians. The war also demonstrated the shortfalls of current U.S. defensive systems (Patriot) which were of a superior technology to those in place in Okinawa (Nike J).¹³³ Japan's air defense system is dated and intended to counter aircraft, not missiles. Many Japanese

¹²⁷Aihiko Ueda, "Japan-U.S. Military Technology Cooperation," FBIS, 10 March 1994, p. 3.

¹²⁸The range of the Taepo Dong-2 is disputed. Russian and South Korean estimates claim the missile has a 6,200 mile range but U.S. estimates predict a 2,500 mile range. Heritage Foundation *Asian Studies Center Backgrounder* No. 138, October 24, 1995, p. 5.

¹²⁹Thomas Lippman, "U.S. Hopes to Break a Pattern," *The Washington Post*, June 14, 1994, p. A16.

¹³⁰Spector, McDonough and Miderios, *Tracking Nuclear Proliferation*, p. 105.

¹³¹"Japan-U.S. Joint Development of TMD Opposed," *Mainichi Shimbun*, September 27, 1994, p. 5.

¹³²"Defense Agency Chief Urges TMD Use to Counter DPRK Missiles," *Yomiuri Shimbun*, p. 3.

¹³³"SDF Deployment of Patriot Missiles Questioned," *Ryukyu Shimpo*, July 6, 1994, p. 5.

Defense Agency (JDA) officials believe that a joint TMD program will provide the means for the nation to update its capabilities and give Japan a credible defense.¹³⁴

¹³⁴"Businesses Wary of Participation in TMD Plan," *Asahi Shimbun*, December 30, 1993, p. 9

APPENDIX B: TMDI'S REQUIRED ATTRIBUTES FOR TMD

In addition to the various phases of flight TMD systems are designed to engage TMs, the TMDI outlines seventeen attributes current systems must possess. The characteristics are:

- capable of quick and easy movement by air,
- capable of forward deployment by ship in the crisis area
- available for rapid utilization after deployment
- flexible to accommodate a wide range of operational locations and scenarios
- capable of tactical movement with troops and mobile military assets
- able to achieve a high degree of availability and sustainability
- provided with inherent survivability features in a variety of NBC environments
- provide early and accurate launch detection and impact point protection
- provide extended surveillance ranges and altitudes
- provide low leakage defense of assets and areas
- provide a preferential defense capability
- be effective against a range of TM threats and resistant to countermeasurers
- intercept missiles high enough to minimize effects from NBC debris
- integrate with CINC and NCA structures
- integrate with theater offensive operations
- integrate with air defense operations
- integrate with the C3I of allies.¹³⁵

¹³⁵Israel, Report to Congress, p. EX-5.

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