

**RAND**

*Allies or Rivals? The Future of  
U.S.-Japan Relations*

*John Arquilla & Theodore Karasik*

*DRU-293-CUSJR*

*May 1993*

*Prepared for the Center for U.S.-Japan Relations*

---

This Draft is intended to transmit preliminary results of RAND research. It is unreviewed and unedited. Views or conclusions expressed herein are tentative and do not necessarily represent the policies or opinions of the sponsor. Do not quote or cite this Draft without permission of the author.

## PREFACE

This Documented Briefing analyzes the possible paths that U.S.-Japan economic and security relations might follow after the Cold War. It is designed to stimulate dialogue on the issue of interdependence and its related implications for policy. This presentation should be of interest to public and private groups in both countries as they search for ways to guide bilateral relations.

This research project fuses elements of traditional thinking about international relations and game theory to create a fresh analytic framework capable of elaborating the relative importance of and interplay between strategic and economic factors. Particular emphasis is given to the effects that amending the U.S.-Japan Security Treaty might have upon bilateral economic relations, and to the manner in which movement from primarily laissez-faire to more managed trade policies might bear upon security issues.

The RAND Center for U.S.-Japan Relations has sponsored this work.

## SUMMARY

The future of U.S.-Japan economic and security relations has become a subject of increasing interest and growing debate in recent years. While the end of the Cold War may allow for the emergence of new dynamics in both the commercial and political spheres, the widely-held perception of enduring U.S.-Japan interdependence has tended to forestall any effort to alter the fundamental relationship. Indeed, most analysts contend that even deeper bilateral involvement is called for, with American goods and services selling ever more in Japan, and Japanese politico-military capabilities augmenting the American effort to provide for a peaceful, prosperous global order.

This study accepts the fact of interdependence, but focuses primarily upon analyzing whether U.S.-Japan economic and security relations asymmetrically favor one actor or the other. The technical data introduced herein suggest that the United States is not highly dependent upon Japanese investment, and could use its own economic levers of suasion to induce Japan to alter its trade practices. With regard to security matters, an even greater asymmetry persists.

The implications for economic and security policy, with which this study concludes, suggest the means by which Japan and the United States may thread their way through to a healthy post-Cold War relationship characterized, essentially, by increased economic competition and amended formal security ties. These changes, implied by the Cold War's end, will reflect America's growing need to tend to its economic revitalization, and Japan's reemergence on the international scene as a full-fledged, autonomous nation-state.

# CONTENTS

Preface .....	iii
Summary .....	v
Section	

# **Allies or Rivals? The Future of U.S.-Japan Relations**

**John Arquilla, Theodore Karasik, Ku Shin, and  
Nancy Hughes**

**Center for U.S.-Japan Relations**

**Work in Progress**

1 5/29/93 11:28 AM RAND

Viewing U.S.-Japan relations in the 20th century, one may note that a "third phase" has commenced. The first was characterized by an increasingly intense commercial and political rivalry, which culminated in the hard-fought Pacific War. The second saw the onset of something close to a fusion of Japanese and American interests, which endured throughout the Cold War. The dissolution of the Soviet Union heralds a new era, however, in which pressures and incentives for Japan and the United States to reexamine their relations are likely to emerge.

In which direction will this third phase take U.S.-Japan relations? If historical analogies are at all useful, one might consider the similarities with Anglo-Dutch relations during the 17th and 18th centuries. In this case, sharp commercial rivalry led to the outbreak of a bitter maritime conflict between the two, in the wake of which they allied, under the same sovereign, to hold off the French attempt to achieve European hegemony. The "third phase" of Anglo-Dutch relations then ensued, characterized by the reemergence of political and economic rivalry, though it was sufficiently tempered to allow for continued cooperation in efforts to expand global trade and contend with serious threats to international security.

If Japan and the United States follow the Anglo-Dutch pattern, then they are moving into an uncertain phase in which their many differences will reemerge, though their common interest in economic prosperity and international security will provide incentives for cooperation. In short, they may become both allies and rivals.

## Briefing Outline

- **Discuss background: Significance of the Cold War's end for U.S.-Japan relations**
  - **New regional dynamics**
  - **Emerging policy debate**
- **Introduce new "Strategic Interaction" model**
  - **Fusion of game theory and international relations**
  - **Economic findings and evaluation of strategic options**
- **Identify insights for policy**

2 5/28/93 11:28 AM RAND

Three topics are addressed in this briefing. First, the likely effects of the Cold War's end, in both the economic and security spheres, are considered, then compared and contrasted with the previous dynamics that governed U.S.-Japan relations. Next, a new framework for analysis is introduced, one grounded in traditional notions of international relations and game theory, but which employs them together in a novel way. Last, policy implications for Japan and the United States are derived.

## **Background: Significance of Cold War's End for U.S.-Japan Relations**

- **Bilateral status quo**
- **Regional dynamics**
  - **Potential Sino-Russian entente**
  - **Likely North Korean nuclear capability**
  - **Possible diminished American presence**
  - **Debate over role of Japanese military**
- **Policy debate**
  - **Maintain status quo**
  - **Reassess key arguments**
- **Need for alternative framework for analysis**

3 5/28/93 11:28 AM RAND

Current U.S.-Japan relations still reflect the close and specialized cooperation that developed during the Cold War. Briefly, it is characterized by the United States acting as Japan's security guarantor and provider of a large market for Japanese goods, and by Japan's financial support of the U.S. economy and conformity to American foreign policy. (See next vignette).

In the wake of the Cold War, at least two potentially threatening developments may arise. First, a Sino-Russian entente could emerge, altering the structural balance of power in Northeast Asia. Next, North Korea might succeed in acquiring weapons of mass destruction. If either occurred, a serious security dilemma would face both the United States and Japan. Could the former maintain a Cold War-style containment strategy in an era of military drawdowns? How expansive could the role of the latter's military become?

The foregoing economic and security considerations have led most analysts in both countries to urge maintenance of the status quo in U.S.-Japan relations. However, it is possible to view the same factors and argue that they call for modifying existing arrangements. For example, one might contend that the current asymmetries should be reversed, with Japan providing a larger market for American goods and assuming a primary security function in Northeast Asia.

A more balanced economic and security relationship is but one among many alternatives to the status quo. The key point, analytically, is that it is important to consider these and other possible future courses.

## Characteristics of Bilateral Status Quo

- **Japan has relied upon:**
  - **American security umbrella**
  - **Access to American market**
  - **Foreign oil and other raw materials**
  
- **United States has relied upon:**
  - **Japanese investment (treasury securities, stocks, real estate)**
  - **Japanese political support for American policy goals**
    - **Formal security alliance**
    - **Support in containing regional crises**

4/5/28/93 11:28 AM RAND

In a world as fraught with peril as it is full of hope for peaceful progress, military security remains a very high priority of nation-states. For Japan, security from aggression, and from the interruption of sources of oil and other raw materials, is largely provided by the United States. In return, Japan is expected to support American foreign policy, even to the extent of paying a sort of "security tax" from time to time, as it did to help fund the war against Saddam Hussein.

On the economic side, the American market absorbs roughly one-third of all Japanese exports, giving Japan a nearly \$50 billion trade surplus in 1992. The United States, though having a structural trade deficit with Japan, has been the recipient, over the past decade, of nearly one-half of the latter's foreign direct investment, an amount aggregating in the hundreds of billions of dollars. However, with the onset of the recession in Japan, this level of involvement has already declined sharply, and should drop even further in the near future.

## New “Strategic Interaction” Model

- **What is it?**
  - **A highly abstract structural approach**
  - **Economic Utility = GNP + Trade - Interest - Inflation**
  - **Political Utility = Alliance Prospects + Military Balance - Defense Burden**

5/28/93 11:28 AM RAND

In a very abstract way, the framework introduced herein operates at the level of relations between nation-states, which are assumed to be the relevant units of analysis. Their behavior is posited to follow rational patterns, unbounded by imperfect information or time pressure. Finally, the outcome of a given interaction is not viewed deterministically, but rather as contingent upon the choices made by each side. Thus, a weaker actor may often prevail against a stronger counterpart by choosing an optimal strategic path, or inducing the opponent to select an inferior one.

The great strengths of this approach lie in its simplicity, focus on the “big picture,” and susceptibility to rigorous quantitative analysis. Its drawbacks flow from its high level of abstraction, in which the complex web of individuals and institutions, and interlocking, often conflicting, interest groups are reduced to a single utility function.

## Operating Assumptions of the Model

- **How does it work?**
  - **Uses a macroeconomic approach**
  - **Assumes rationality of nation-state actors (Japan viewed as reactive; the U.S. as proactive)**
  - **Operates from established baseline (e.g., U.S. and Japan growth rates of 2.4 and 3.3 percent respectively)**
  - **Accounts for variations and sensitivities (e.g., relevance of time, qualitative differences)**

6/5/20/93 11:28 AM RAND

Because the units of analysis are nation-states, the appropriate form for the model is macroeconomic. While the actors are viewed as purely rational, this study hypothesizes that Japan, more satisfied with the status quo than the United States, will operate reactively, while the dissatisfaction of the latter will encourage it to adopt a predominantly proactive approach.

Existing interactions, as of 1992, form the baseline for analysis of changes. However some assumptions about future trends have also been made, most notably with regard to baseline growth rates. The United States is assumed to have an underlying growth rate of 2.4 percent, while Japan's is 3.3 percent. This may not reflect the current American recovery, or Japan's possibly deepening economic problems. This makes the study's approach very conservative, for positing a stronger American baseline position would generate even greater gains than those that are derived from the lower baseline.

Finally, the model is well-suited to sensitivity analysis, as a variety of different degrees of interaction may be modeled (e.g., tariffs are analyzed at a variety of levels).

## Strengths and Limitations of the Model

- **Strengths**

- Provides a simple framework
- Focuses on the “Big Picture”
- Eases quantification
- Identifies new and important questions

- **Limitations**

- Restricts itself to a bilateral perspective
- Employs a limited time horizon
- Does not consider sub-national units of analysis
- Generates insights, not conclusions for policy

7/25/93 11:28 AM RAND

While there are many attractions to this admittedly abstract analytic framework, one must also remain cognizant of its limitations. For example, its simplicity, though appealing, requires the acknowledgment that it views interaction through the “lens” of bilateral U.S.-Japan relations, leaving out the EC, for example, as another “primary” actor. Also, the model’s ability to depict the macro-level relationship has been limited in time to the following two years.

Additionally, the model excludes all subnational actors, implicitly limiting its scope to generating useful insights, and raising important questions that might not arise in less value-neutral analytic contexts. Finally, it is crucial to note that, in both the economic and security spheres, the likely actions of other states are considered in calculating the outcomes of essentially bilateral interactions. However, utility functions for these other actors are not developed in specific detail in this study.

		United States		
		Strategies	"Muddle Along"	Limited Pressure
Japan	Accommodate			
	Limited Concessions		○	
	Determined Resistance			

8 5/29/83 11:28 AM RAND

The figure above describes the three predominant strategies that either Japan or the United States might employ in their interactions. The United States is assumed to be pursuing changes in the economic and security aspects of the status quo. A "muddling along" strategy has little coherence, with occasional, scattered demands emerging from the complex American domestic political system. Limited pressure may consist of more demands, but also posits that they enjoy greater coherence. Forceful persuasion assumes well-integrated policies also, differing from the middle strategy only in degree. Japan's strategies vary, from routinely giving in to most requests, to denying virtually all. The two more assertive Japanese strategies, like their American counterparts, cohere well.

The above matrix format delineates the nine "cells" in which strategic choices meet. A given event would appear as a single point of intersection within a cell. Though the figure is neatly compartmentalized, the strategies should be viewed as existing on continua. For example, the small circle above denotes a range of interactions in which Japan is assumed to be making some concessions, though it is often close to being strongly resistant. The United States, on the other hand, is depicted as sometimes "muddling along," and sometimes applying limited pressure.

<b>A New Framework for Analyzing U.S.-Japan Relations</b>					
		<b>United States</b>			
		<b>Strategies</b>	<b>"Muddle Along"</b>	<b>Limited Pressure</b>	<b>Forceful Persuasion</b>
<b>Japan</b>	<b>Accommodate</b>				
	<b>Limited Concessions</b>		○		
	<b>Determined Resistance</b>				

RAND

(text continued from previous page)

A concrete economic example that might fall within the circle would consist of American efforts to open up the Japanese rice market. Since Japan allows some foreign rice sales, such as in sushi, but is still quite resistant, the point of intersection would fall at the bottom of the circle. In the security area, an example would be America's pressure upon Japan to support its Persian Gulf policy in 1990-91. Japan responded in a limited way, providing large financial but virtually no military support, a limited concession.

In addition to describing where given interactions might fit, the model follows a game theoretic structure that implies a goal of evaluating the "payoff" for each side from the interplay of strategic choices. For example, which side gains if the United States muddles along while Japan makes limited concessions? Or if forceful persuasion encounters determined resistance? Since each cell contains both economic and security interactions, the payoff figures must be derived from each. In the economic sphere, results are derived from econometric modeling. With regard to security issues, the payoffs are based on qualitative judgments, regarding matters such as which side can reach out more readily to new alliance partners.

## Testing the Model

- **Results from running the model**
  - **Economic findings**
  - **Summary of strategic interaction**
- **Overall assessment based on model**
  - **Japan depends more on the U.S. market than the reverse**
  - **Both sides have forceful dominant strategies**

10 9/28/93 11:28 AM RAND

Initial operation of the model, which consisted of “playing out” the various hypotheses in the economic sphere, has generated several insights into U.S.-Japan commercial interactions, with particular emphasis being given to the gains and losses from the interplay of strategic choices. Though less subject to quantification, the findings in the security area, derived from similar “play,” provide further insights, allowing for the complete scoring of the interaction cells.

In the broadest terms, two assessments emerge. First, U.S.-Japan interdependence is substantial, but asymmetrically favors the United States in both the economic and the security spheres. Second, each side’s dominant strategy, the course that achieves best results regardless of the opponent’s choice, appears to be to engage in noncooperative behavior.

## Economic Findings

- **Cooperation (U.S.-"muddle along," Japan - "accommodate")**
  - **Each country seeks lower output gap and lesser trade imbalance**
  - **Policy coordination results in world-wide interest rate reductions**
  - **Dollar depreciates; yen appreciates**

11 5/29/93 11:28 AM RAND

In the economic sphere, if Japan simply accommodates the occasional American request, and interactions remain in this cell, then the United States will enjoy slightly greater relative gains. (See the next vugraph for the quantified results). If, on the other hand, Japan and the United States each apply limited pressure, then the former's relative gains are greater, and grow even larger if the Americans lapse into muddling along while Japan holds firm.

**“Muddling Along” and Accommodation  
Case, Projected 1993-94 Annual Average**

	<u>U.S.</u>	<u>Japan</u>
<b>Output</b>	<b>+0.24</b>	<b>+0.31</b>
<b>Trade balance</b>	<b>+0.88</b>	<b>-1.57</b>
<b>Interest rate</b>	<b>-1.36</b>	<b>-0.58</b>
<b>Inflation</b>	<b>+0.36</b>	<b>+0.12</b>
<b>Exchange rate</b>	<b>--</b>	<b>+4.92</b>

**Note: Results are percentage deviations from 1992  
baseline**

12 5/26/93 11:28 AM **RAND**

The key point here is that the most cooperative strategies (those that comprise the upper left cell of the matrix), if consistently followed by each party, would generate slight relative gains for the United States, due primarily to the salutary effects on the trade balance of Japan's acceding to occasional American requests.

The “output gap” here is synonymous with movement in GNP from a given baseline. Therefore, this scenario suggests that, if Japan generally accommodates American requests as they arise, then U.S. and Japanese GNPs will rise by nearly a quarter or a third of a percent, respectively. With regard to the trade balance, the U.S.'s deficit will decline by nearly one percent, while Japan's surplus will shrink by one and one-half percent from its current \$50 billion level. Finally, American interest rates will ease more than Japan's, though the former's inflationary pressures will be relatively greater.

## Economic Findings (cont.)

- **Non-cooperation (U.S.-“forceful persuasion,” Japan-“determined resistance”)**
  - **Test 1: impact of U.S. tariffs at 50% with no Japanese retaliation**
    - **American GNP rises and trade deficit falls with dollar appreciating in the near term**
  - **Test 2: impact of U.S. tariffs at 50% with Japanese retaliation**
    - **Gains to U.S. GNP result in diminished returns in the near term**
    - **U.S. reduces trade imbalance, but decrease is smaller**

13 5/28/93 11:28 AM RAND

The other interesting scenarios arise when U.S. economic behavior grows more forceful. For exemplary purposes, two tariff interactions are depicted herein, one in which Japan simply absorbs the action passively (corresponding to the upper right cell of the matrix), the other in which it retaliates in a tit-for-tat fashion (the lower right cell). In both cases, the United States does relatively better than Japan, even when Japan retaliates. However, under these latter circumstances, U.S. gains begin to erode after tariffs have been in place for two years.

It is also important to note that many different tariff levels were tested in this study, the results from which consistently affirm the relative pattern of utility payoffs. The 50% figure depicted here is used illustratively, to provide an example of a notionally extreme form of noncooperation.

## Case of U.S. Forceful Persuasion with Japanese Accommodation and Determined Resistance

	Case 1: Without Japanese Retaliation		Case 2: With Japanese Retaliation of 50% Tariff Against U.S. Goods	
	U.S.	Japan	U.S.	Japan
<b>Output</b>	+0.23	-0.45	+0.16	-0.2
<b>Trade balance</b>	+0.48	-0.17	+0.21	-0.4
<b>Interest rate</b>	+0.24	+0.72	+0.46	+0.6
<b>Inflation</b>	+0.12	+0.35	+0.38	+0.3
<b>Exchange rate</b>	--	-16.0	--	-10.7

14 5/28/93 11:28 AM RAND

In each of the above scenarios, American GNP and trade improve while Japan's key indicators worsen. Japan's interest rates would also show greater increases, while its inflation would be slightly more moderated than the U.S.'s in the retaliatory case. Without retaliation, Japan's inflation effects would be nearly treble that of its American counterpart.

Summary of Strategic Interaction					
		United States			
		Strategies	"Muddle Along"	Limited Pressure	Forceful Persuasion
Japan	Accommodate	+ United States	++ United States	+++ United States	O u t c o m e s
	Limited Concessions	++ Japan	+ Japan	++ United States	
	Determined Resistance	+++ Japan	++ Japan	+ United States	
		* over time			
		15 5/28/93 11:28 AM RAND			

Based on the foregoing economic analyses, and the more qualitative judgments that characterized assessments in the security issue area, the above figure depicts the relative gains and losses for each side, across the range of possible strategic interactions. For example, one can see that the slight U.S. economic gain from mutually cooperative interaction, when coupled with Japanese accession to occasional U.S. requests in the security sphere, generates a small net gain for the United States. If Japan continues to accommodate, and the United States ratchets up the pressure, as with the 50% tariff, then American gains are even greater. On the other hand, if Japan retaliates economically, much of the American gains are diminished. (See the lower right-hand corner cell).

In game theoretic terms, both sides have dominant strategies. That is, each has one strategy by which it achieves its best relative results, regardless of the strategy adopted by its opponent. These strategies are the non-cooperative ones for each side.

<b>Examples of Utility Calculations (1)</b>		
<b>Accommodation and "Muddling Along"</b>	<b>Japan</b>	<b>U.S.</b>
• <b>Utility Factors</b>		
– <b>Output</b>	+	
– <b>Trade</b>		++
– <b>Interest</b>		+
– <b>Inflation</b>	+	
– <b>Alliances</b>		=
– <b>Balance</b>		+
– <b>Burden</b>	+	
		16 5/28/93 11:28 AM RAND

Each of the "cells" of the interaction matrix are composed of the net scores for all seven of the economic and politico-military variables. In this case, the most cooperative one, Japan scores slightly worse on the economic factors, due to the very sizeable American gains on the trade front. On the security side, no measurable relative change in the alliance sphere would arise from continued cooperation. On the other hand, the United States would likely continue to modernize its pre-eminent military capabilities, though this activity would also imply a continued willingness to shoulder the burdens of acting as security guarantor in Northeast Asia.

<b>Examples of Utility Calculations (2)</b>		
<b>Determined Resistance and Forceful Persuasion</b>	<b>Japan</b>	<b>U.S.</b>
• <b>Utility Factors</b>		
– <b>Output</b>		+
– <b>Trade</b>		+
– <b>Interest</b>		+
– <b>Inflation</b>	+	
– <b>Alliances</b>		+
– <b>Balance</b>	+++	
– <b>Burden</b>		+
<small>17 5/28/93 11:28 AM RAND</small>		

In this scenario, the least cooperative one, the United States shows small relative gains in each of the economic variables, except for inflation. On the security side, Japan would show very large gains in the bilateral military balance. Again, these are relative gains. The chart is not implying that Japan would become three times as strong as the United States. With regard to alliances, the scoring indicates this study's assessment that Japan would have greater difficulty than the United States in reaching out to new alliance partners. Finally, Japan's renationalization would increase its defense spending burden relative to that of the United States, generating a slight bilateral gain for the latter.

## Insights for Policy

- **For the United States:**
  - **Tougher economic policy will generate near-term gains in trade, GNP**
  - **Security Treaty may warrant amending**
- **For Japan:**
  - **Strategy of accommodation may preempt American economic moves**
  - **Benefits may accrue from amending Security Treaty**

18 5/28/03 11:28 AM RAND

For the United States, the implications of this study in the economic sphere suggest that a tough stance will likely achieve positive results. In the politico-military realm, the corollary is that it is safe to reduce American costs even further by substantially amending the U.S.-Japan Security Treaty.

For Japan, the best hope it has to avoid a spiral of non-cooperative economic interaction is to move pre-emptively to an accommodation strategy. This would generate small gains for the United States, but would likely head off American incentives to move toward a more forceful strategy. In the security realm, Japan should welcome the amending of its treaty with the United States. Though it implies the need to increase defense spending, it is also a vote of confidence in Japan, an invitation to become once again a traditionally well-integrated, "normal" nation making its way in the international system.