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THESIS

COMPUTER AIDED NEWSPAPER
CONTENT ANALYSIS

by

Masao Hosoya

γ June 1991

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Computer Aided Newspaper Content Analysis

by

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ABSTRACT

This thesis explores issues concerning computer aided content analysis for newspaper articles. Articles relevant to the Japan Air Self Defense Force's new fighter support jet (code named FSX) were collected from three newspapers in the U.S. and Japan. These data were downloaded and stored in a PC then analyzed using word processing software. At the same time, three articles were selected and distributed, along with relevant survey questions, to over 150 people. The survey was intended to examine the readers' responses to those articles.

The results from the questionnaire and computer aided content analysis were analyzed, summarized and compared. These complementary studies were conducted to help determine whether computer aided content analysis could identify the information and impressions conveyed by these newspaper articles. The results of this complementary effort indicate that additional work is needed, particularly in software development, to make computer aided content analysis more useful. However, the results also showed the complexities of conveying and interpreting information.



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Participants in the pilot questionnaire, including Faculties and students at the NPS and their families, provided useful suggestions that helped refine the questionnaire. The participants in the main questionnaire spent their precious time to provide the data which served as the basis for the key results of this research.

It is needless to say that all remaining errors of commission and omission are entirely of the author's own.

Lastly and most importantly, the greatest support was from the author's wife, Mrs. Eiko Hosoya and from their children.

I. INTRODUCTION

A. BACKGROUND

1. Content Analysis

Krippendorff defines content analysis as follows: "Content analysis is a research technique for making replicable and valid inference from data to their context [Ref. 1:p. 21]." In particular, Krippendorff divides content analysis into the following three categories: [Ref. 1:p. 33]

1. Pragmatical content analysis: Procedures which classify signs according to their probable causes or effects (e.g., counting the number of instances which are likely to produce favorable attitudes in a given audience).

2. Semantical content analysis: Procedures which classify signs according to their meanings (e.g., counting the number of times that a given object is referred to, irrespective of the particular words that may be used to make the reference). This is subcategorized to three parts.

i. Designations analysis provides the frequency with which certain objects (persons, things, groups or concepts) are referred to (e.g., references to Soviet foreign policy).

ii. Attribution analysis provides the frequency with which certain characterizations are referred to (e.g., references to dishonesty).

iii. Assertions analysis; provides the frequency with which certain objects are characterized in a particular way as in thematic analysis (e.g., references to Soviet foreign policy as dishonest).

3. Sign-vehicle analysis: Procedures which classify content according to the psychological properties of the signs (e.g., counting the number of times the word Soviet appears).

2. Progress in Computer Data-Network

The recent progress in computers and development of data management networks has made it possible to obtain a full digitized text of newspaper articles. With such a capability, it becomes possible to analyze news articles in a more detailed quantitative framework. For example, the level and depth of coverage by a given newspaper over time may be more easily quantified and evaluated. The quantitative comparison can be made over time, over countries and over different newspapers. Focusing on the frequency with which a subissue is covered or omitted in a given controversy might give a better understanding of the preference/bias of the newspapers.

3. Computer Aided Content Analysis

In this thesis, computer aided content analysis is used to analyze articles concerning the development and procurement of the Japan Air Self Defense Force's (JASDF) next generation fighter aircraft. This aircraft is called the Fighter Support eXperimental, or FSX.

There has been a lot of debate on issues concerning the nature of U.S./Japan relationship. There are few days that U.S./Japan-related articles don't appear in a U.S. or Japanese newspaper. The FSX is one of the more complex issues in this charged relationship, and has been extensively reported by news articles in both countries. Because of the diverse viewpoints across countries and the availability of voluminous newspaper articles, this debate provides an excellent opportunity to develop a quantitative content analysis framework for this important issue.

4. Survey and Validation

A survey questionnaire was developed and distributed among military officers to collect their responses to selected newspaper articles. These answers were analyzed and used to help validate the effectiveness of the computer aided content analysis.

There are several research papers that made extensive use of content analysis. They include: "Quantitative Content Analysis of the United Nations Seabed Debates: Methodology and a Continental Shelf Case Study" [Ref. 2], "An Application of Content Analysis to the Budgetary Behavior of the Senate Armed Services Committee" [Ref. 3] and "Content Analysis of Air Force Newspapers" [Ref. 4]. However, the distinguishing characteristic of this thesis is that computer aided content analysis and the survey were conducted in conjunction with one another.

B. PURPOSE

This thesis conducts a survey and analyzes the subjective responses of a sample population to articles on the FSX that appeared in the major newspapers. Parallel to the survey, the researcher conducted computer aided content analysis that might provide added insight to the subjective analysis. The results of the two types of research are compared to determine if the content of newspaper articles could be similarly interpreted using a more quantitative computer analysis.

The primary purpose of the research is to explore effective uses of computers in conducting more quantitatively oriented content analysis of newspapers.

C. FRAMEWORK OF THE RESEARCH

1. Outline

There are three parts to this thesis. The first part provides background and introduction of this research. The second part provides the formulation and evaluation of questionnaires on selected newspaper articles concerning the FSX. It also includes the development of computer aided content analysis and its application. The third part presents findings and conclusions.

2. Database

The initial database included FSX articles that appeared in The Washington Post (March 1987 to February 1990, 36 articles), Asahi Daily News (January 1989 to December 1990, 36 articles), and The Japan Times (June 1986 to November 1990, 48 articles). Articles were chosen initially whenever the article included the word FSX in its title. Several more newspaper articles were added to this sample when the articles were judged to be predominantly FSX related, even if the articles did not contain FSX in their titles.

Because the time periods for the three papers did not exactly match, a smaller database was created that covered the same (normalized) time period for the three papers (from Jan. 1989 to Feb. 1990). The Washington Post articles were obtained through the DIALOG computer network service, while Asahi Daily News and The Japan Times were taken from the Asahi News Service network and the Nikkei Telecom network, respectively. The list of 120 articles in the original data base, and 88 articles in the normalized data base are included in Appendix A.

3. Survey Participants

The survey included mainly military personnel from both the U.S. and Japan. In order to refine the questionnaire before collecting a large number of responses, two initial questionnaires were distributed to a limited number of participants as a pilot case. To get useful recommendations and quick responses from the pilot case, the initial participants included people personally acquainted with the author. In particular, the pilot case involved students and faculty at the U.S. Naval Postgraduate School (NPS), and their families.

In this pilot case, 15 answers were obtained out of 24 mailed surveys (Response Rate (RR) = 62.5%). The main survey was conducted among three groups of participants. The first group included 60 NPS students selected randomly by their Student Mail Center (SMC) number. The second group included 67 NPS students taking a management course in the Spring quarter, 1991. The third group consisted of 24 Japan Maritime Self Defense Force (JMSDF) personnel who were studying the EAGIS Radar system in New Jersey. From the first group 18 answers were obtained (RR = 30.0%), 46 from the second group (RR = 68.7%), and 24 from the third group (RR = 100%). In total, 88 responded out of 151 (RR = 58.3%).

There are several characteristics of the participants in the main survey that are different from the U.S. and Japanese general public. First, all participants were military officers. Thus, they understand the circumstances, perspective, and focus of the FSX controversy better than the general public. Second, their level of education is higher than that of the general public. Third, their understanding and experience with other cultures may be more

extensive than the general public. In addition, as in any survey, not everyone responded to the questionnaire. It was voluntary and what we have is a "self-selected" sample in that sense. It is important to take into account these characteristics when analyzing the general applicability of these answers.

4. Commercially Available Computer Software

Personal Computers (PCs) and commercially available software were used in this research, which simplified and also limited the capability of the computer aided content analysis process. For example, the "change" command in the word processing software provides the capability to quickly count the frequency of given word. However, there was no function that counts the frequency of logical statements. Developing a computer program to achieve this function would improve the computer aided content analysis framework immensely, but that is beyond the scope of this thesis.

However, great progress in computers, software and network technology made it possible to download the desired data from the worldwide networked database, and to file and sort these data in a simpler process. Moreover, statistical analysis and data integration have become much easier using highly developed PC capabilities.

II. FSX

A. FSX DEVELOPMENT

For several years, the U.S. and Japan have been involved in a tough negotiation concerning Japan's next generation fighter support jet, known as the "FSX." The FSX is a jet for the JASDF and will replace the obsolete existing "F-1" fighter support jets. After long deliberation, Japan decided to co-develop the aircraft with the U.S. rather than developing it domestically or buying an existing plane.

There has been extensive debate in both countries concerning many aspects of the U.S./Japan FSX agreement (e.g., technology transfer, production shares, security of sensitive software, etc.). The following chronology highlights the main events in the FSX program's evolution.

B. CHRONOLOGY

- In 1984 the Japan Defense Agency (JDA) decided to replace the "F-1" close support aircraft, which was a version of the domestically developed T-33 trainer jet. This was the first fighter aircraft since the WWII designed and built in Japan without foreign assistance.

Operational requirements for the FSX included the capability of low-altitude support for ground forces.

- Through research in 1986 and 1987, JASDF selected three options: develop domestically; co-develop with the U.S. modifying the F-15, F-16, or F-18; or co-develop with European countries modifying the Tornado (developed by the Britain, German, and Italy).

At this point, the project was named the "FSX"

The Japanese aerospace industry's self-confidence was quite high because of the successful development of the Kawasaki "XT-4" (T-4)

supersonic jet trainer. This was the first Japanese aircraft where a large part of the body was made of a carbon-fiber composite. It also relied heavily on new computer technology, i.e., Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM).

- Under strong pressure from the JASDF and the Japanese aerospace industry, JDA decided to develop the FSX domestically [Ref. 5:p. 5].
- The Reagan Administration strongly pushed a "joint" project because of the massive U.S. trade deficit with Japan (\$59.8 billion in 1987) [Ref. 5:p. 5].
- In Oct. 1987, JDA Director General Yuko Kurihara announced that Japan would forgo domestic development of the FSX and adopt the General Dynamics (GD) Corp.'s F-16 as the new fighter.

In this six billion dollar Japanese funded project, Washington insisted that U.S. companies receive a specific share of the design and development work, and that the project have a method to protect U.S. leading-edge technology.

- After more than a year of protracted negotiations, the two governments concluded a Memorandum of Understanding (MOU). The MOU included the following main points.

GD would provide Japan with airframe technology relating to its current F-16.

Japan, in return, would provide the U.S. with any refinements to the U.S.-developed technology already incorporated in F-16 at no cost.

American companies also would have free access, on request, to any Japanese indigenous technology.

The U.S. share of the research and development effort would be between 35 and 45 percent.

The MOU designated Mitsubishi Heavy Industries (MHI) as the prime contractor to design and build the aircraft. The primary subcontractors included GD from the U.S. and both Kawasaki Heavy Industries (KHI) and Fuji Heavy Industries (FHI) from Japan.

JDA agreed to pay the estimated 165 billion Yen development cost of the FSX (\$1.3 billion @ \$1=130 Yen).

The project included production of 130 FSX planes by 2001. Assembly of the first prototype was scheduled for 1991, first demonstration flight for 1993, first test evaluation for completion in 1996, and initial production for 1997.

It was agreed that a separate MOU concerning the production phase would be negotiated later. [Ref. 5:p. 6, 7]

- George Bush replaced Ronald Reagan as the President of the U.S. in 1989. President Bush gave his "tentative" approval of the MOU in Mar. 1989--pending additional "clarifications," including methods to safeguard vital U.S. technology and assurances that American manufacturers would have a fairly substantial share of both the FSX development and production work.

This action greatly disappointed the Japanese government, who regarded the agreement as a done deal. More importantly, however, the call for clarifications implied a lack of trust among certain U.S. policy makers over how Japan would implement the FSX agreement.

After additional talks, a new agreement was announced by President Bush on Apr. 28, 1989. It included the following clarifications, incorporated as side letters to the original MOU.

Work Share Guarantees: The U.S. is guaranteed "about 40%" share of production work (in addition to a similar share of the development work).

Technology Transfer: Japan will not have access to key U.S. defense technologies, such as the source codes, or computer software governing the fighter's digital flight control system. Source codes for the weapon control computer will be released to Japan only to the extent they are needed to integrate Japanese avionics into the aircraft.

Technology Flowback: There are more explicit guarantees that the U.S. will have access to Japanese improvements to the F-16 technology. [Ref. 5:p. 10]

- There was still strong political pressure in the U.S. against the FSX agreement. This resistance was shared by some in the U.S. aerospace industry. Some opponents to the co-development project insisted that Japan ought to purchase GD's F-16 fighter "off-the-shelf." Two bills, H. J. Res. 254 by Sen. Alan Dixon (D, IL) and S. J. 123 by Sen. Robert C. Byrd (D, WV), were submitted to Congress and debated heatedly. [Ref. 2:p. 11]

- Company level talks followed the congressional debates. There was some disagreement on several points, including whether GD would indeed have free access to Japanese technology and complete freedom in using the technology, including transferring it to third countries.

The two governments had to reopen negotiations. Finally, they reached an agreement in Feb. 1990. The Japanese Foreign Ministry released a terse statement confirming that the Japanese government had "determined that the FSX-related military technologies were appropriate to be authorized by the Japanese government for transfer to the U.S. government." [Ref. 6:p. A11]

- As the result of these negotiations, it is expected that the FSX project will be delayed between 1 and 2 years.

C. THE U.S./JAPAN RELATIONSHIP

Along with the FSX debate, there are several other problems between the U.S. and Japan, including: the overall trade balance, trade in agricultural products, defense relationships, and the Structural Impediment Initiative (SII) talks.

As Japan has grown economically to a position just behind the U.S., both countries have developed a closer mutual relationship. This relationship is not limited to economic concerns but also includes political, cultural, defense, and international concerns. Most recent controversies seem to result in part from a mutual perception gap. There are many newspaper articles in both countries on issues that affect the U.S./Japan relationship. However, it is often difficult to understand the background of the debate and the real issues involved from the newspaper accounts. It can be said that there is too much information on "facts" to fully understand and distinguish the real issues. Consequently, it is quite difficult to convey, receive, and interpret the real meaning of "facts and events."

Considering this, it is important and useful to understand the contexts in which facts are presented. Computer aided content analysis is designed to provide a strong vehicle for this purpose. Therefore, this thesis will examine how computer aided content analysis can be used for this purpose in the case of FSX debates.

D. TYPE OF DEBATE

The central issue in the FSX debate is whether Japan should buy an existing foreign aircraft or domestically develop a new aircraft. However, the FSX issue was discussed in the broader framework of the U.S./Japan relationship. Through long and arduous negotiations, both countries reached a compromise of co-developing a new jet based on GD's F-16. However, there are still several matters to negotiate and solve.

The FSX issue can be classified as a "controversial" debate. There are various types of debates in addition to this type, including blaming, insisting, cooperating, etc. Controversial debates are more easily handled in the content analysis framework because articles often state their viewpoints (pro or con) and it is easier to find key words or phrases. Controversial debates will be described in more detail in a later chapter.

III. METHODOLOGY

A. GENERAL

The research methodology is outlined in this section.

- **Objective:** The objective of this research is (1) to examine how computer aided content analysis can be developed for FSX newspaper articles and (2) to provide information on aspects of U.S./Japan relationship through the FSX content analysis.
- **Data Collection:** (1) 120 FSX related articles from three newspapers were collected in a digitized format from the news network. (2) A survey was conducted with 127 NPS students and 24 Japanese students in New Jersey.
- **Data Processing:** Data were processed using various statistical analysis computer software, including Microsoft (MS) word for word counting and MS Excel for spreadsheet analysis.
- **Data Analysis:** Statistical analyses were carried out on the processed data to gather information on both the validity of computer aided content analysis and the perception of FSX issues among different student groups.

Figure 1 shows the general outline of the research.

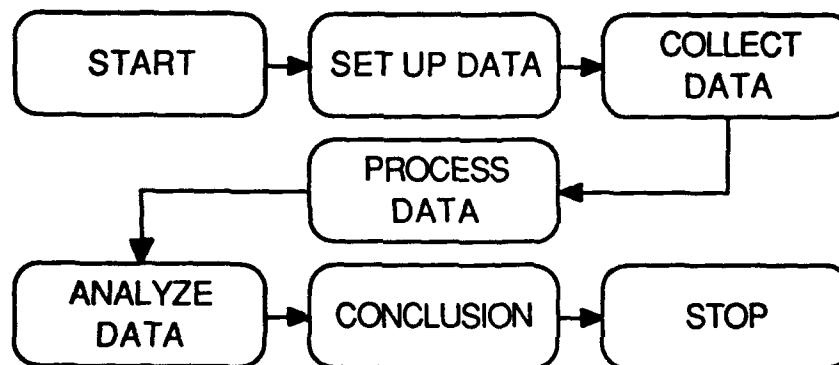


Figure 1: Research Outline

B. DATA ANALYSIS

The detail data analysis portion of the thesis is illustrated in Figure 2.

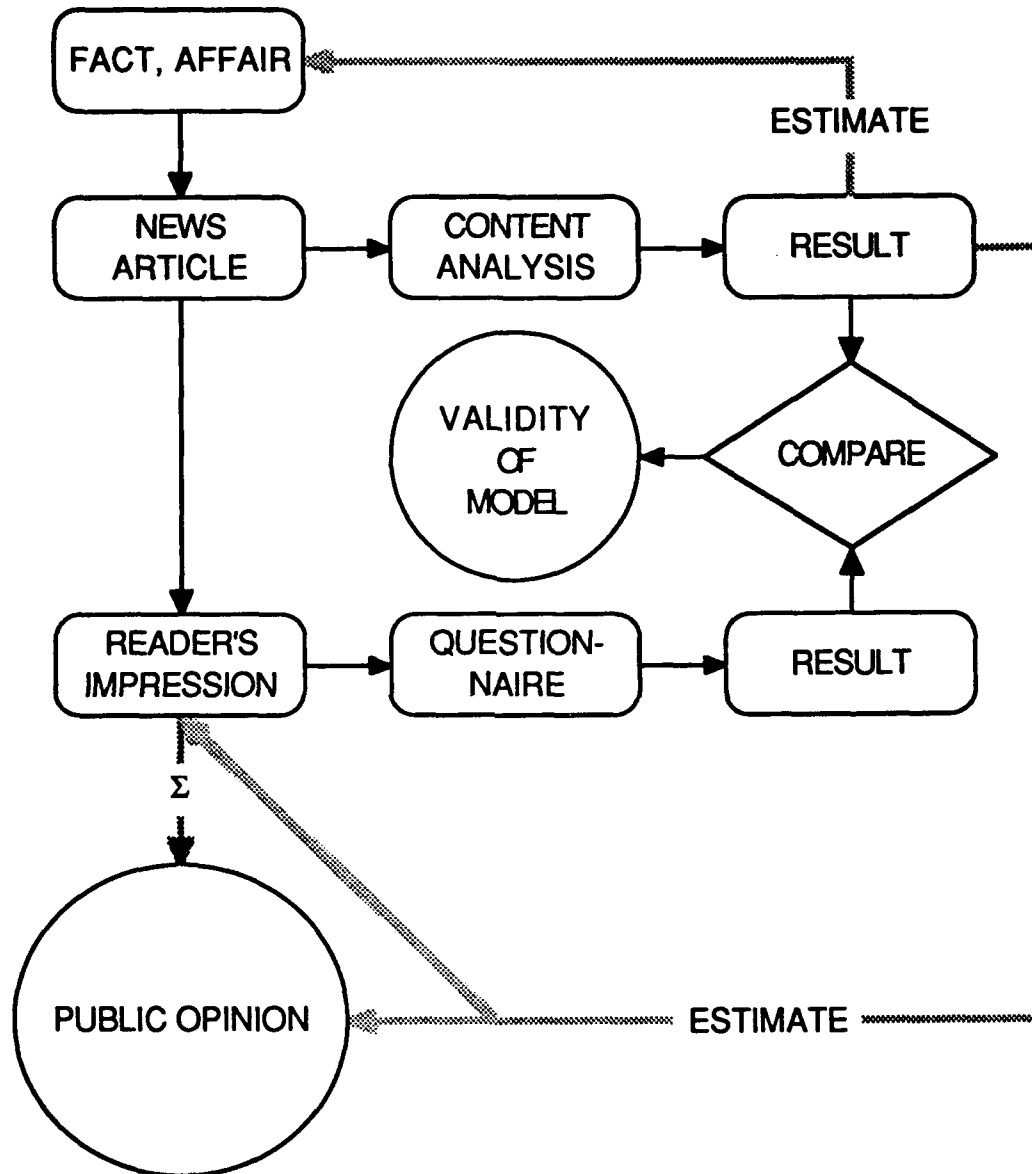


Figure 2: Logical Flow Chart of Analysis

1. Fact/Affair

Facts and affairs in the real world, for the most part, exist irrespective of how they are reported or perceived by the media¹.

2. News Articles

Real world events are reported by the news media. Since it is not possible or useful to report every aspect of the events, facts and events are abstracted in the news media. The criteria used for this abstraction may vary significantly among media types (TV, radio, and newsprint, etc.). The criteria may vary greatly even within the same media type (i.e., between newspapers like the New York Times and the National Enquirer). The criteria may even be different among reporters from the same news organization. Thus, reporting may not reflect the real world as such, but it certainly reflects the philosophies, background, and reporting principles of the news organization and the writer.

The writer's choice of criteria may even be made unconsciously. In any event, it is exceedingly difficult to ascertain the factors that played a role in establishing the reporting criteria. The aim here is more modest. It is to find some pattern among newspaper articles from a given news organization for a given controversy. This is undertaken in the content analysis section of the research. An additional objective is to get an idea of the effect an article has on a given readership.

¹ This point of view should not be confused with the notion that an observation itself might affect real world events. In both natural and social sciences, such interaction is well-recognized, as the Heisenberg Principle and Lucas Effect respectively.

3. Reader's Impression

The same article may have a totally different impact on different readers. Just as real word events may be reported in a myriad different ways by reporters, the readers' impressions may reflect the readers' backgrounds and frame of mind more than the reality of the article or event. However, by ensuring that the readers' backgrounds are relatively similar, it may be possible to estimate articles' characteristics by examining the readers' responses to the articles.

A newspaper's emphasis on a particular issue may be judged from where and how often that particular issue appears in the paper. The effect of location is particularly important among the "non-committed" readers (i.e., those who have not yet formed a definite opinion on the issue). For those readers, both the location of the article and the location of "points of view" in the article are important factors in forming an opinion. Whether a particular point of view is expressed in the first or tenth paragraph seems to make difference in the reader retaining the viewpoint. In turn, this influences the reader's perception of the issue.

4. Public Opinion

"Public Opinion" is both shaping and shaped through news media. The interaction is truly a two-way affair for many news organization.

This thesis is only interested in the pattern of writing by selected newspapers on a given issue and their potential effect on a given readership group. Similar research with different news organizations and different issues would help in understanding the role of news organizations in forming public opinion.

C. QUESTIONNAIRE

The questionnaire has two purposes: to help validate the computer-aided content analysis model, and to evaluate a given group's perception of FSX issue.

1. Objectives and Questions

Three specific objectives are:

- to identify the readers' background and their initial knowledge of the FSX issue
- to determine the readers' general impression of the articles
- to determine the readers' responses to specific questions.

Accordingly, questions were divided into three categories:

- Background questions placed before an article (e.g., "Are you familiar with the FSX debate?" and "Have you formed an opinion about the broader U.S./Japan trade debate?").
- General questions common to all three articles (e.g., "Do you think this article states mainly fact, mainly opinion, or both?" and "Has this article influenced your opinion about the FSX?").
- Specific questions for each article (e.g., "Do you think Japan is an unfair trading partner?" and "If the FSX Pact were canceled, who do you think would benefit?").

2. Answers

The type of answer was also divided into three categories:

- Scaling questions, measuring the strength of an idea between two extremes on a scale of 5 to 0 (i.e., Very familiar (5) to Unfamiliar (1), and No Opinion (0); or Strongly agree (5) to Strongly disagree (1), and No Opinion (0)).
- True/False questions (i.e., True (2), False (1), and No Opinion (0)).
- Comment questions, asking for readers' comments (i.e., "If you would like to make any comments about the FSX or the U.S./Japan

relationship, please write here." and "I would like any comments or suggestions concerning this questionnaire.").

3. Developing the Questionnaire

The questionnaire was refined through the following steps:

- **Pilot Survey:** Six of the 120 articles were selected for this purpose. Three articles were from Mar. 1989 and three were from May 1989. (One article was selected from each of the three newspapers in each time period.) Mar. and May were selected because the FSX debate heated up and more articles appeared during these periods.

Along with one background and six general questions, six article-specific questions were developed and refined. Two pilot survey questionnaires were sent to a small group of NPS faculty members and students.

- Based on the pilot survey, ambiguous phrases were eliminated and the number of the questions was cut in half to encourage greater response. Only the May articles were included in the main survey.

The main questionnaire was distributed to three groups: the first group included 60 NPS students randomly selected by their student numbers; the second group included 67 NPS students taking a management course; and the third group included 24 Japan Maritime Self Defense Force (JMSDF) students who are training at General Dynamics in New Jersey. Of the 151 questionnaires distributed, a total of 88 answers were collected and analyzed.

D. COMPUTER AIDED CONTENT ANALYSIS

1. Physical Characteristics of Articles

Physical characteristics of articles were examined as follows:

- **Number of words:** Maximum, minimum, average, and standard deviation of words per article
- **Number of articles:** Maximum, minimum, average, and standard deviation of number of articles within a monthly periods or across newspapers

2. Specific Words/Sentences

Classical content analysis techniques, which pick up specific words or phrases, were applied to the news paper articles collected about the FSX. Using the capability of computers, voluminous articles can be scanned, sorted, copied, and statistically analyzed, according to these classical techniques, in a short time period.

- **Specific words:** "specific" words were identified that represent the content of an article. Of particular interest are words that are typically emotionally charged (e.g., blame, oppose, unfair, untrustworthy, disappoint, etc. and their opposites such as support, helpful, fair, trustworthy, satisfy, etc.).

Due to time and resource limitation, following procedures were contemplated but not carried through in this thesis.

- **Specific phrases:** sorting and analysis of combinations of specific words.
- **Specific sentences:** sorting and analysis of sentences which include specific words or phrases.
- **Title/headlines:** sorting and analysis of title/headlines which represent the content of an article.

IV. ANALYSIS

A. PILOT SURVEY

The pilot survey consisted of two questionnaires, distributed to the same participants at about a one week interval. An article from each of the three newspapers (ADN, JT and WP) on Mar. 1989 was selected for the first survey. Articles, questions and tallied responses of the survey are included in Appendix B, Chapter I. The second pilot questionnaire was quite similar to the first pilot questionnaire (three articles in May and only a few questions were changed). Articles, questions and tallied responses of the participants are shown in Appendix B., Chapter II. By design, the size of the sample for the this pilot survey was relatively small (15 responses for the first questionnaire and 11 for the second). The main objective for this pilot survey was to help refine the more widely distributed main questionnaire.

The actual results for the pilot survey are discussed in Appendix B, Chapter III. Since the sample size was small, no statistical analysis was conducted on the data. The analysis is more qualitative than statistical and quantitative.

B. QUESTION REFINEMENT

Based on the pilot survey results and recommendations, each question was examined and refined for the main survey. The dominant response was that the questions were too time-consuming. The pilot study involved two questionnaires. Each questionnaire consisted of three articles and related questions and covered nine single spaced pages. In order to reduce the load

on the participants, the first questionnaire was dropped and a modified second questionnaire was distributed in the general survey.

In particular, two general questions in the second questionnaire were omitted. One asked the respondent to identify prejudicial/inflammatory words/phrases. The answers to this question took a longer time and the answers varied widely across participants in the pilot survey. The second general question that was eliminated asked participants to select the words/phrases that best represented the content of an article. Most participants selected the title or header of the article. By omitting these two time-consuming questions, response time was reduced significantly.

In the other major change, the answer "N/O" (No Opinion) was changed from a median valued response (more appropriately interpreted as neutral in opinion) to an extreme value (0). This is more consistent with the interpretation of this response. Similarly, N/O was added to many questions that had not offered this option in the pilot survey.

Finally, some participants commented that it was difficult to answer some specific questions based only on the information in the article (e.g., the third specific question from the first article in the first pilot survey asked who would be the beneficiaries/losers from the FSX MOU and the third specific question from the second article in the first pilot survey asked the technological balances between the U.S. and Japan). Answering these questions did require information that was not provided in the newspaper articles. These questions were designed to obtain information on the readers' underlying perceptions or knowledge of the issues. This information is not directly related to the content of articles, however it helps to determine to

what extent readers' underlying perceptions concerning the U.S./Japan relationship influenced their interpretation of articles concerning specific issues. No changes were made in these types of survey questions.

C. MAIN QUESTIONNAIRE¹

One article from each of the three newspapers were included in this survey: A Washington Post article that appeared on May 17; an Asahi Daily News article that appeared on May 4, 1989; and a Japan Times article that appeared on May 20, 1989. All three articles addressed the current heated U.S. congressional debate on the FSX and the Japanese responses to that debate. The results of this questionnaire will be summarized in this section. These results will be analyzed in the following section.

1. Background Questions

The background questions were the same as those used in the pilot questionnaires. The results of these questions are shown in Figures 3 and 4.

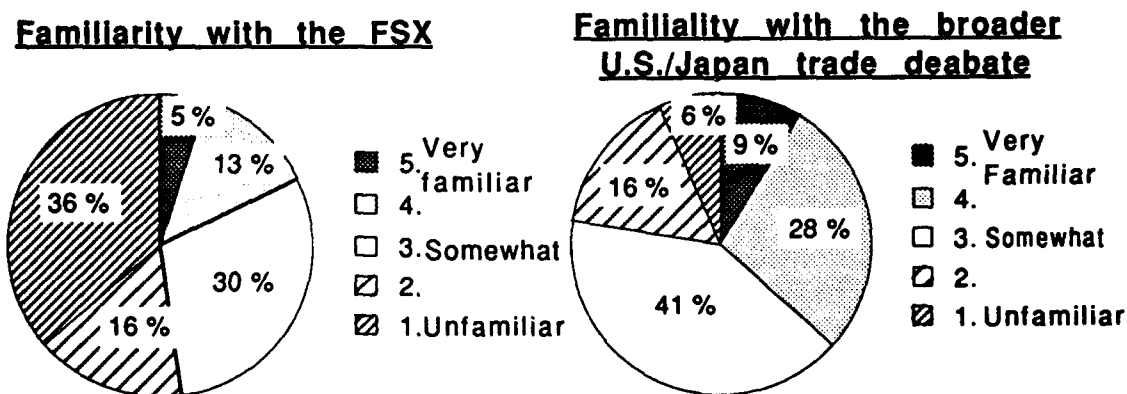
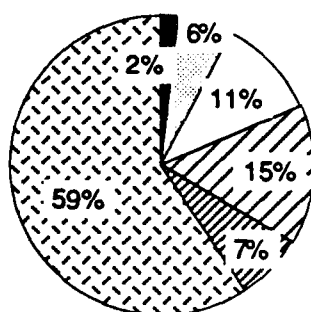


Figure 3: Background Question (BQ1 and BQ3)

¹The main questionnaire without articles (articles are included in this analysis chapter) and tallied responses of the participants are included in Appendix C, the summary of responses is shown in Appendix D.

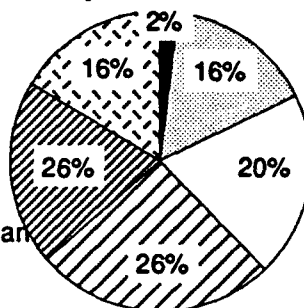
- 48% of the participants indicated they were familiar with the FSX debate (Response 5 thorough Response 3) and 78% were familiar with the broader U.S./Japan trade debate.

Opinion on the FSX



- 5. Favors U.S.
- 4.
- 3. Fair
- ▨ 2.
- ▨ 1. Favors Japan
- ▨ 0. N/O

Opinion on the broader U.S./ Japan trade relationship



- 5. Favors U.S.
- 4.
- 3. Fair
- ▨ 2.
- ▨ 1. Favors Japan
- ▨ 0. N/O

Figure 4: BQ2 and BQ4

- 59% and 16% of the participants expressed no opinion (Response 0) concerning the FSX deal and the broader U.S./Japan trade relationship, respectively.

Of those expressing an opinion, more felt that the FSX deal favors Japan than felt it favors the U.S. (22% as opposed to 8%). On the broader U.S./Japan trade relationship, more felt the relationship favors Japan than felt it favors the U.S. (52% as opposed to 18%).

Among the NPS students, more expressed familiarity with the broader U.S./Japan trade relationship than with the FSX deal. In contrast, the JMSDF personnel expressed more familiarity with the FSX than with the broader U.S./Japan trade relationship. This indicates that JMSDF personnel are more concerned about specialized Japanese defense issues than they are about the general U.S./Japan relationship. NPS students have the opposite emphasis.

2. First Article

The first article was "Senate Narrowly Approves FSX Jet Deal With Japan" from the Washington Post, May 17, 1989. The full article is reproduced below:

The Senate yesterday approved the joint development with Japan of a new-generation fighter plane, the FSX, by a narrow 52-to-47 vote that was described as a key test of the United States' relationship with its closest Pacific ally.

The vote provided a congressional go-ahead to an agreement that has been mired in controversy since it was announced in the last months of the Reagan administration. President Bush was forced to alter the agreement to gain congressional support.

In order to kill the deal, both houses of Congress had to vote against it. The House, which was considered to have a better chance of defeating the FSX, could not complete its hearing process before the Senate vote.

Sen. Richard G. Lugar (R-Ind.), former chairman of the Senate Foreign Relations Committee and a proponent of the deal, said disapproving the FSX would mark "a significant break" with Japan. "This is not the time to break the entire relationship with Japan," he said. "This is the time to stay with Japan, to stay with our ally."

Three days of debate before yesterday's vote exposed raw nerves in the relationship between the United States and Japan. That relationship is marked by close security ties as well as a \$52 billion U.S. trade deficit with Tokyo that has sparked accusations that Japan is an unfair trading partner and an untrustworthy ally.

The debate marked the first time that congressional frustration over the U.S. trade deficit had spilled over into the national security relationship with Japan.

"There is a lot of anger out there ...and the sooner the Japanese recognize it and start talking frankly, the better off that relationship will be," said Sen. Robert C. Byrd (D-W.Va.), an FSX opponent.

Opponents charged that the deal is a giveaway of crucial American technology that would help Japan develop its own civilian aviation industry. They urged that Japan buy the U.S.-made F16 fighter to help reduce the U.S. trade deficit and to get a bigger bang from its limited defense expenditures.

But the administration argued that the deal would strengthen U.S.-Japan defense ties and provide new technology to American manufacturers. Defense Secretary Richard B. Cheney said the deal would involve \$2.4 billion in Japanese purchases from the United States, easing the trade imbalance.

Opposition cut across party lines and drew votes from both liberals and conservatives. It was clear that some senators voted in favor of the agreement even though they did not like it. Senate Finance Committee Chairman Lloyd Bentsen (D-Tex.) delivered a scathing attack of Japanese trade practices, saying "Japan means to dominate any sector that is in the high end of the economy." He said Japan should have bought U.S.-made planes "to reciprocate" for U.S. defense and trade policies that he said allowed it to prosper.

"If we had this to do over," Bentsen said, "I would not accept this deal." But he added he would vote in favor the FSX because it has gone too far to stop.

Sen. John C. Danforth (R-Mo.) said Japan should have bought the F16 to help cut the trade deficit, but added that "it would be a mistake to pull the rug out from under the Bush administration" after the president tightened the agreement.

Sen. Alfonse M. D'Amato (R-N.Y.) said the Japanese should buy an American plane as "a question of fundamental fairness and fair play" and as a symbol of free trade.

"If Japan doesn't buy," he said, "the United States should bar certain Japanese products from our country. We are being blackmailed into it because we don't have the courage to say the Japanese are not treating us fairly." Later yesterday the Senate approved by a 72-to-27 vote a resolution sponsored by Byrd that firms up concessions the administration said it received from the Japanese. The resolution said the production agreement should guarantee American companies at least 40 percent of the work involved in making the plane and its spare parts, and should keep critical engine technology in the United States. The administration opposed the resolution, but Rep. Richard A. Gephardt (D-Mo.) said he would try to bring it before the House today.

a. General Questions for the Washington Post Article

In making judgements about the intensity of responses, responses are classified into three categories (strong, mild, and neutral opinion) based on the average scores (A) of the responses: strong opinion for either $A > 4.5$, or $A < 1.5$; mild opinion for either $4.5 \geq A \geq 3.5$, or $2.5 \geq A \geq 1.5$; and neutral opinion for $3.5 > A > 2.5$. In general, the group thought that this Washington Post article stated both opinion and fact ($A = 2.55$), mildly favored the U.S. ($A = 2.18$), was neutral to the readers' prior beliefs ($A = 3.23$), and had a relatively small influence on readers' opinions about the FSX ($A = 2.18$).

b. Specific Questions for the Washington Post Article

The first specific question for the first article asked the participants' view of whether Japan was unfair as a trading partner (#1SQ1, read first article, specific question 1). The second specific question asked

whether Japan was untrustworthy as an ally (#1SQ2). The choice of words "unfair" and "untrustworthy" were made based on their use in the Washington Post article (the fifth paragraph.) The results of each group and total averages are shown in Figure 5. The groups as a whole thought Japan was somewhat unfair ($A = 3.50$) and disagreed with the statement that Japan was an untrustworthy ally ($A = 2.27$). However, in #1SQ1 there were difference between group 3 and groups 1 and 2. The NPS students tended to mildly agree with the statement that Japan is an unfair trading partner (group 1: $A = 4.18$; group 2: $A = 3.74$). The JMSDF students tended to mildly disagree with that statement (group 3: $A = 2.52$). There was no significant difference between groups in #1SQ2.

It is not surprising that the JMSDF students would be neutral or at least mildly disagree with with statements like these that are critical of Japan. If anything, it is surprising that the disagreement was not stronger. Similarly, it is not surprising that the NPS students felt Japan was a more trustworthy ally than a fair trading partner. Most NPS students know members of the Japan Self Defense Forces, and many have spent time in Japan. These opportunities to cooperate in various activities would help promote mutual trust in defense that does not exist in the broader trade context.

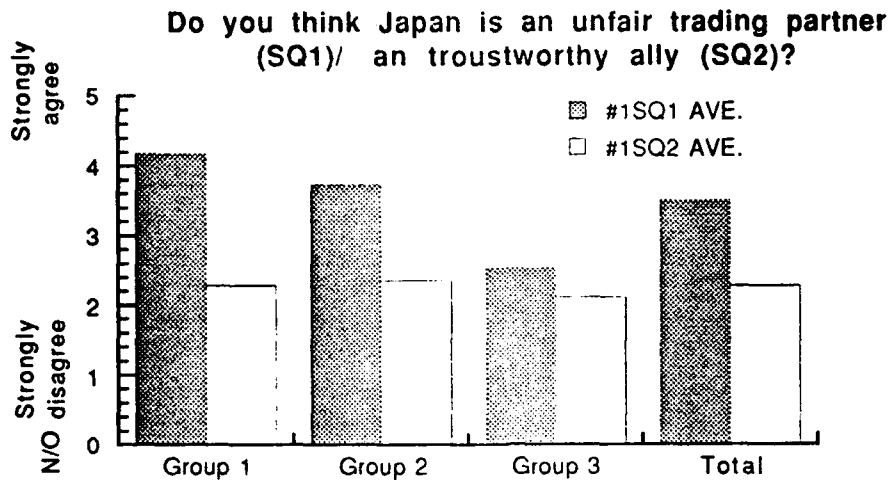


Figure 5: #1SQ1 and #1SQ2

Figure 5-A correlates the perceived familiarity of the trade issue to the fairness issue (i.e. the question #1SQ1). The figure seems to indicate that the more familiar the participants thought they were on U.S.-Japan trade issues, the more strongly they felt that Japan was an unfair trading partner.

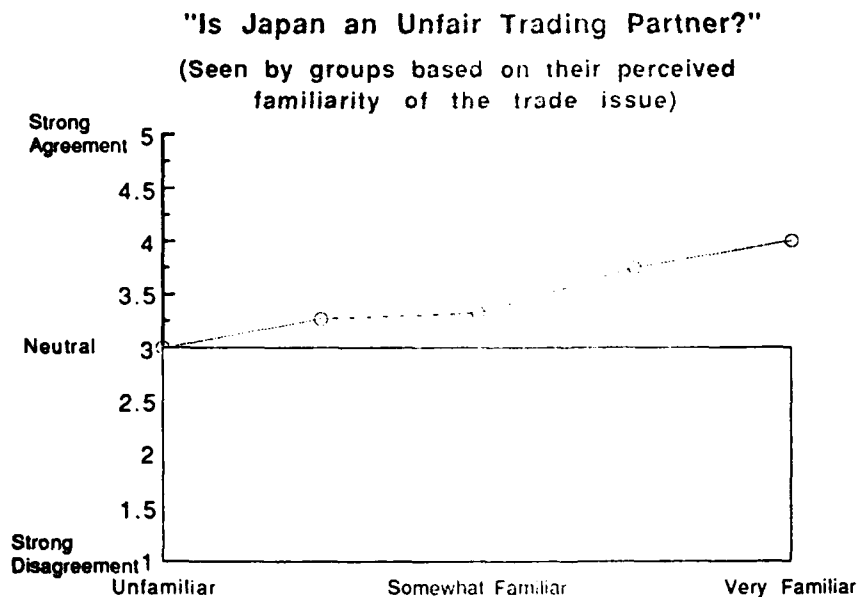


Figure 5-A: Conditional Response to #1SQ1

The subparts of #1SQ1 asked for specific knowledge of the Japanese and U.S. trading policy (i.e., whether Japan had higher tariff barriers or quantitative import restrictions than the U.S.; whether Japan restricts imports in the areas of aerospace, energy, and agriculture; and whether the Japanese government had preferential purchasing policies that favor Japanese manufacturers). Contrary to the fact, but frequently implied in the news media, almost all participants thought Japan had higher tariff barriers, and higher quantitative import restrictions¹. In particular, those who thought Japan is an unfair trading partner believed erroneously that Japan had higher tariffs and quotas than the U.S. An equally interesting finding is that those who strongly disagreed that Japan is unfair trading partner also thought that Japan had higher tariffs and quotas than the U.S. Figures 5-B and 5-C illustrate this situation.

#1SQ3 asked what group would benefit from cancelling the FSX deal. Only the European aerospace industry was thought to be a strong beneficiary. The Japanese and U.S. aerospace industry, and Japanese and U.S. tax-payers were were not thought to benefit from canceling the FSX project.

¹ Both Japan and U.S. restricts import in the areas where the other country enjoys comparative advantage, and exercises some form of government preferential purchasing policies. The groups correctly noted these practices.

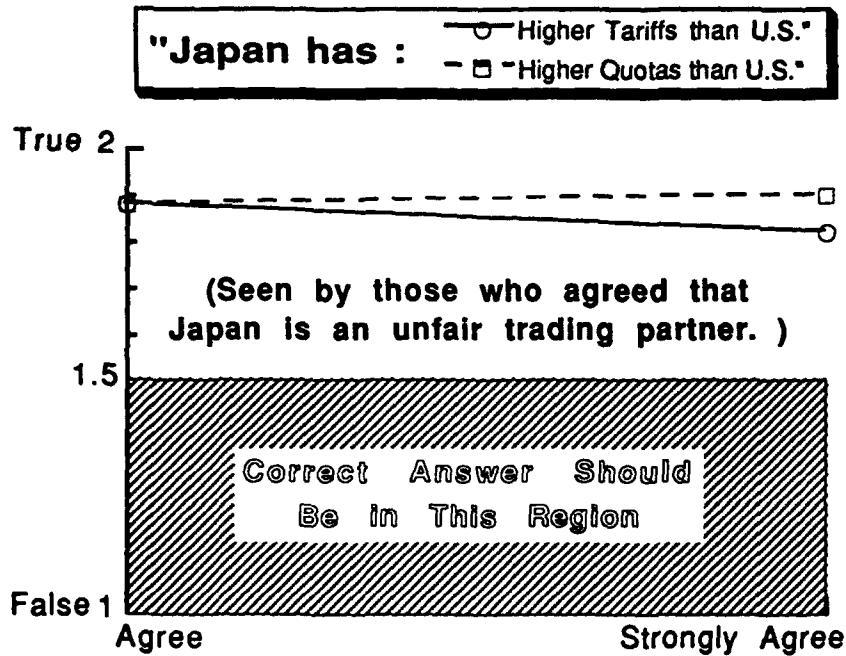


Figure 5-B: Conditional Response to #1SQ1A

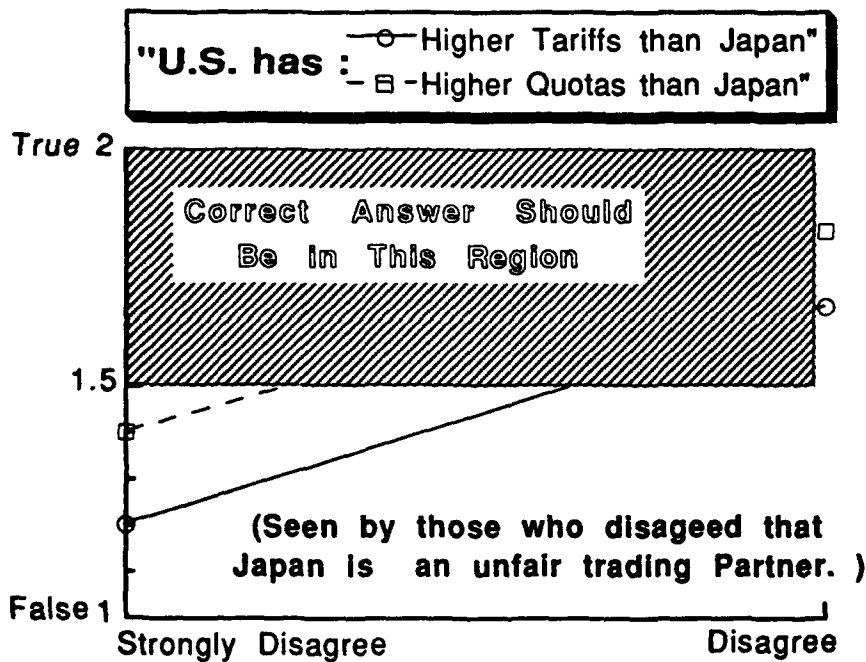


Figure 5-C: Conditional Response to #1SQ1B

3. Second Article

The second article was "Japanese Press Harshly Critical of FSX Accord With United States" from Asahi Daily News, May 4, 1989. The full article is reproduced below.

TOKYO -- Japanese newspapers have lashed out against the accord announced by President George Bush on the joint development of a new jet fighter for Japan, saying Japan is giving away valuable technology to the United States.

In an editorial, the influential daily Asahi Shimbun called the accord "far too one-sided." The Asahi and other newspapers were critical of limits placed on the Japanese use of U.S. technology brought to the project. At the same time, the United States is to be allowed the unconditional use of Japanese technology, including high-tech materials to be used for the fuselage of the jet, called the FSX.

"Is this worthy of being called a mutually beneficial joint production?" the Asahi asked. "In a worst-case scenario, it is possible that the results of the project, financed 100 percent by Japanese taxpayers, will flow out of the United States to third countries in the form of weapons and weapons technology."

The Mainichi Shimbun called the accord "deplorable" and said in an editorial that the "almost unilateral concession by Japan is likely to perpetuate the hardline attitude in Congress rather than alleviate discontent with Japan."

"This was the worst possible conclusion," said the Nihon Keizai Shimbun, a financial daily known for its pro-U.S. editorial stance.

Japanese Foreign Ministry and Defence Agency officials defended the accord, saying that any concessions made by Japan were necessary to enable work to begin on the project.

"The agreement was intended to be of help to the U.S. administration, which is finding it difficult to persuade Congress to approve the accord," said one official, who added that Bush now owes Japan a "debt of gratitude."

Press criticism was also directed against Japanese officials who were caught off guard by the change in the U.S. negotiating position after Bush became president. President Ronald Reagan had already endorsed an accord that was for more beneficial to Japan. But Bush decided to review the project after opposition in Congress began to build.

"More than half the blame should be placed on the Japanese government, which bungled the negotiations," the Asahi Shimbun said. In a separate article, the Asahi said the Bush administration seems to place more importance on its relations with Congress than on reaching an amicable settlement of problems with a friendly nation.

In an editorial that ran under the headline "Crisis in Japan-U.S. Relations," the Yomiuri Shimbun said that if a change in the U.S. president "means the end of an agreement, trust in the U.S. government will be lost."

a. General Questions for the Asahi Daily News Article

In general, this article was thought to state both opinion and fact (A = 2.55), mildly favored Japan (A= 3.94), was neutral to the readers' prior beliefs (A = 2.81), and had a relatively small influence on readers' opinions about the FSX (A = 2.19).

In #2GQ1 (read article 2, general question 1) and #2GQ2, there are significant differences between the NPS and JMSDF students, as shown in Figures 6 and 7.

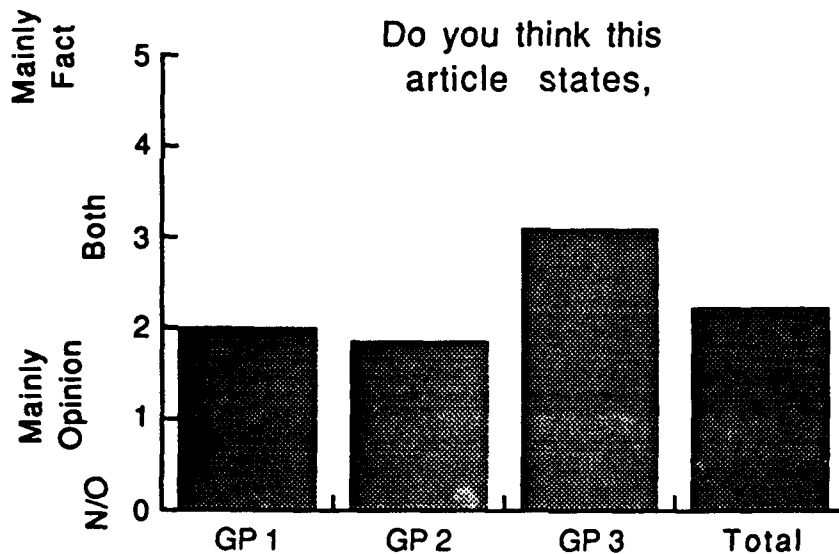


Figure 6: #2GQ1

The JMSDF students thought this article stated both fact and opinion and felt it had a relatively neutral viewpoint. In contrast, NPS students thought it expressed more opinion than fact and that it favored Japan. This difference was not apparent in the same questions regarding the

other two articles (i.e., #1GQ1, #1GQ2, #3GQ1, and #3GQ2). This difference could reflect the context of the article. The article states that the Japanese press is criticizing the FSX Pact, Japanese government policy, and the Bush Administration. U.S. students might believe that this criticism is opinion, while JMSDF students might believe that the article stated more fact.

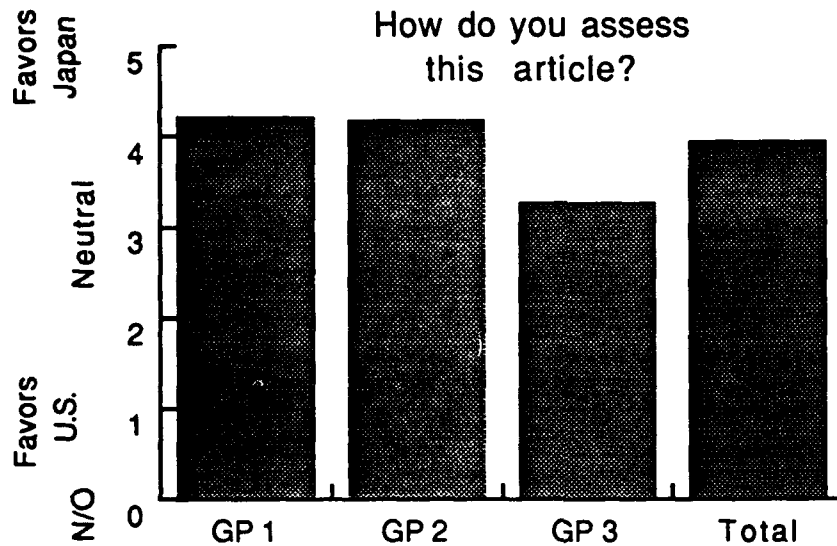


Figure 7: #2GQ2

b. Specific Questions for the Asahi Daily News Article

#2SQ1 and #2SQ2 asked what benefit Japan and the U.S. received from the FSX deal. For Japan, access to U.S. engine, computer, and aerospace development and production technologies were thought to bring relatively strong benefits ($A > 3.5$). Figure 8-A relates the level of perceived familiarity on FSX issues to their knowledge of Japan's benefits. In a way, this tests the respondents objective familiarity. In contrast to the trade issue, the students were indeed more (objectively) familiar with the FSX issue. They have correctly identified the areas where Japan might benefit, except for the computer software area. For the U.S., access to Japanese composite materials

technology was thought to bring relatively strong benefit ($A > 3.5$), while employment and improved balance of trade with Japan were considered to bring moderate benefits ($A = 3.07$ and 2.91 , respectively). This means that despite the heated negotiation and inferences to the trade imbalance, students do not expect much benefit from the FSX in terms of improving the trade balance. This is probably accurate because the dollar value of the FSX itself is not large compared to trade deficit. Figure 8-B shows the level of U.S. benefits chosen by different groups based on their familiarity with the FSX issue.

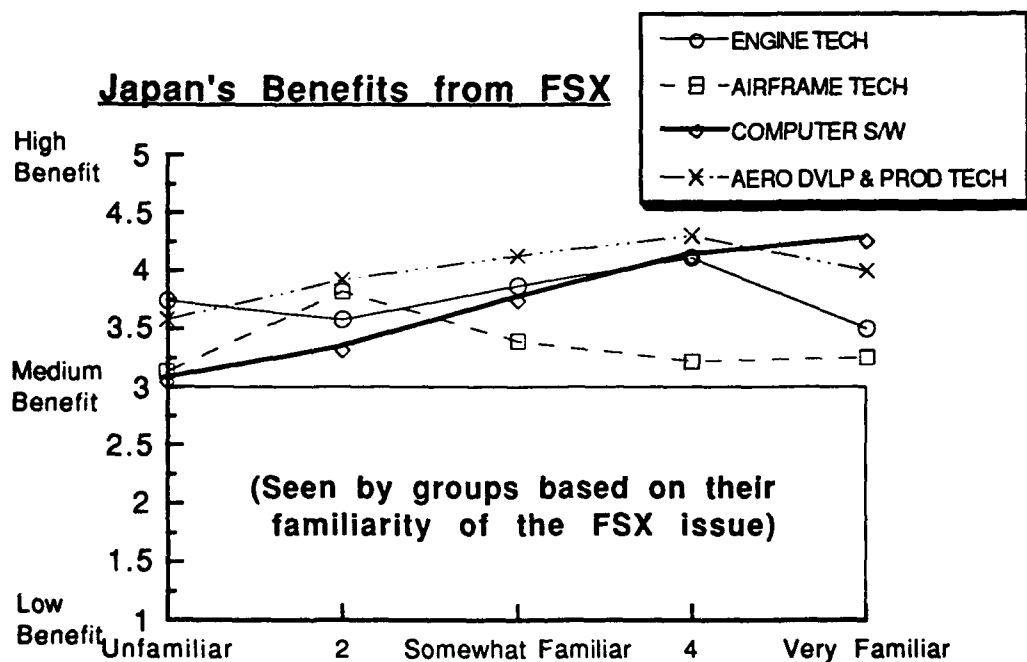


Figure 8-A: Effect of Perceived Familiarity

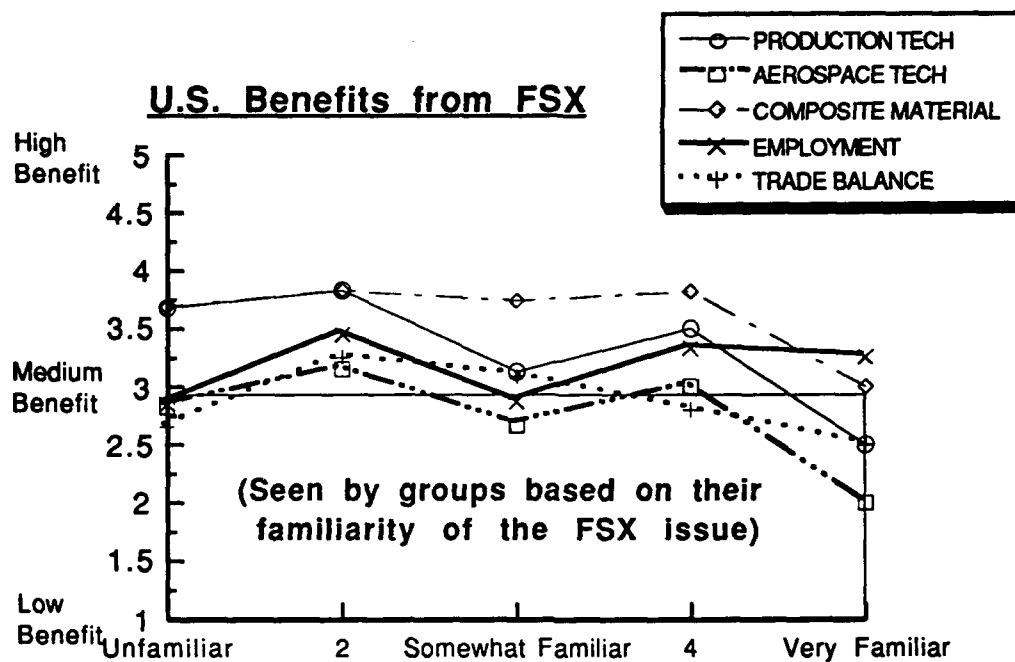


Figure 8-B: Effect of Perceived Familiarity

#2SQ4 and #2SQ5 asked how the reader assessed the U.S. as a trading partner with Japan, and Japan as a trading partner with the U.S., respectively. The results are shown in Figure 9.

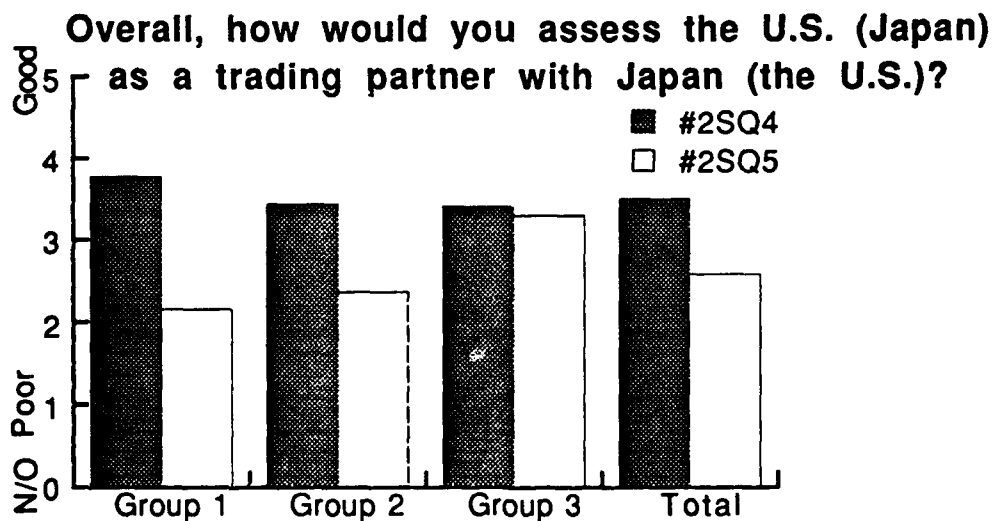


FIGURE 9: #2SQ4 (SQ5)

All groups felt that the U.S. was a relatively good trading partner with Japan. The JMSDF students also felt Japan was a relatively good trading partner with the U.S. However, the NPS students were more moderate in their assessment of Japan as a trading partner. Sub-questions to #2SQ4 and SQ5 asked how the U.S. (Japan) rated in providing large accessible markets, consistent policies, making reasonable concessions, and repaying previous concessions. The U.S. was rated relatively good in the area of providing a large accessible market (A = 4.17), while Japan was rated relatively poorly in providing large accessible markets (A = 2.24) and making reasonable concessions (A = 2.43). In each sub-question, the JMSDF students' answers differed from the NPS students' answers. JMSDF students rated both the U.S. and Japan as providing a large accessible markets (A = 3.68, A = 3.23, respectively). They also rated Japan as making reasonable concessions (A = 2.60).

4. Third Article

The third article was "Japan Expects Bush's Veto" from the Japan Times, May 20, 1989. The full text is reproduced below.

Japan expects U.S. President George Bush to veto a recent congressional amendment, which protects American interests in the joint development plan for the FSX, Japan's next-generation support fighter, Defense Agency Director General Kichiro Tazawa said Friday.

Tazawa conveyed this message to U.S. Ambassador Michael Armacost when they met at the agency Thursday.

"I think the ambassador understood my plea, because he did not object to it," Tazawa told reporters after the Cabinet meeting.

The U.S. Senate voted Tuesday 52-47 to allow the U.S. to go ahead with the controversial joint development project for the FSX, which will be modeled after the U.S.-made F-16 fighters.

At the same time, however, the Senate voted 72-27 on the amendment proposed by Sen. Robert Byrd. The Byrd amendment in question calls for the U.S. government to ban transfer of "critical engine technologies" to Japan and to receive more than 40 percent share of the plane's production for American firms.

"The amendment could require the revision of the memorandum of understanding (MOU) on the project, which was signed by the two governments last year and set the U.S. work shares at 35 to 45 percent," Tazawa said.

He also told Armacost, in their Thursday session, that trade and defense should not be linked with each other and that the Japanese government was "very shocked" when the U.S. government called for clarifications on the joint project earlier this year, according to Tazawa.

a. General Questions for the Japan Times Article

There were only General Questions for this article. In general, this article was thought to state both opinion and fact ($A = 3.42$), though it tended more toward fact than the previous two articles. As for the biases, each group thought it had a relatively neutral viewpoint ($A = 3.22$). The article neither challenged nor reinforced the readers' prior beliefs ($A = 3.10$), and had a relatively small influence on readers' opinions about the FSX ($A = 2.30$). There was no significant difference between groups in these responses.

5. Summary Question

There was a summary question at the end of the questionnaire that was intended to collect suggestions or comments. There were 20 useful and valuable responses. The following are examples.

- If your purpose of this survey is to find out the controversial wording in the newspaper, I would suggest you to pick out some more articles than you had here.
- Defense and trade are a separate problem and should be discussed separately. Japan can make the better FSX without U.S. help.
- I am somewhat biased in my personal opinions because I do not have that much exposure to Japanese view points. I would like to see Japan and the U.S. cooperate and share technology on the FSX. But I believe

that U.S. firms face more barriers to entry in Japan than Japanese firms in the U.S. For example, Japanese agricultural markets should be opened to U.S. produced rice.

- Very well done, good subject. Moreover take into account your polling population and their attributes.
- I have a feeling that these questionnaires are just another way to form an opinion. It's purely academic in nature.
- I believe that Japan and the U.S. benefit greatly from our mutual trade. The fundamental problem is that Japan is using their constitutional prohibition against fielding an offensive military to save money on defense and dedicating those resources to economic competition. I like and admire the Japanese but they are more than back on their feet from the WWII and it's time the U.S. moved resources from the defense of Japan towards economic competition with Japan.
- Excellent questionnaire. I found it very enlightening to see how much control the press can have on forming opinions. However, none of the articles dampen my opinions that projects such as the FSX are necessary to continue the growth of technology for both countries.

D. COMPUTER AIDED CONTENT ANALYSIS

1. Statistical Analysis

a. Number of Articles

The researcher collected total of 120 FSX-related articles between 1986 and 1990 from The Washington Post (WP), Asahi Daily News (ADN), and The Japan Times (JT)¹. The monthly distribution of articles from each paper is shown in Figure 10 and 11. Figure 10 shows that the coverage by WP

¹Unfortunately, the periods collected for the three papers are not the same. The Washington Post articles were collected for the period Mar. 22, 1987 through Feb. 11, 1990. The Asahi Daily News were collected for Jan. 11, 1989 through Dec. 21, 1990. The Japan Times were collected for Jun. 14, 1986 through Nov. 22, 1990. The common period for the three papers are Jan. 11, 1989 through Feb. 11, 1990.

during 1987-1988 time frame was extremely light (2 articles) in comparison to JT (29 articles). More articles appeared around June 1987, when Defense Secretary Weinberger visited Japan to ask Japan for joint development of FSX.

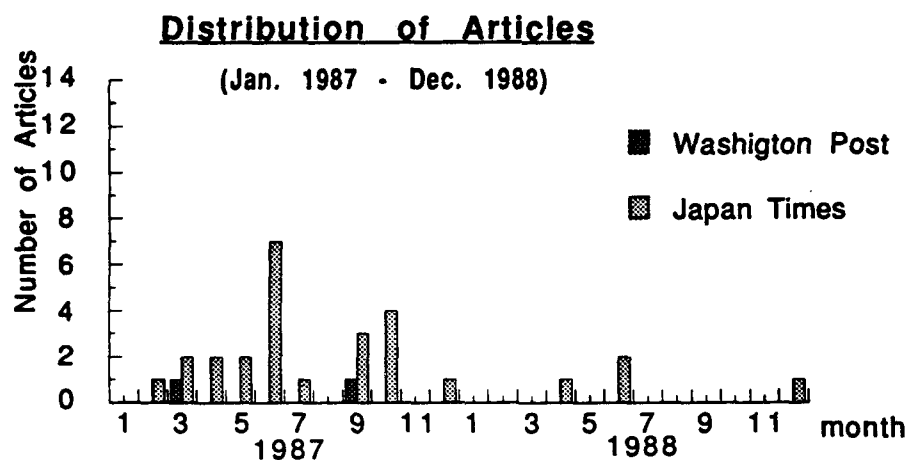


Figure 10: Monthly Distribution of Articles in 1987-1988

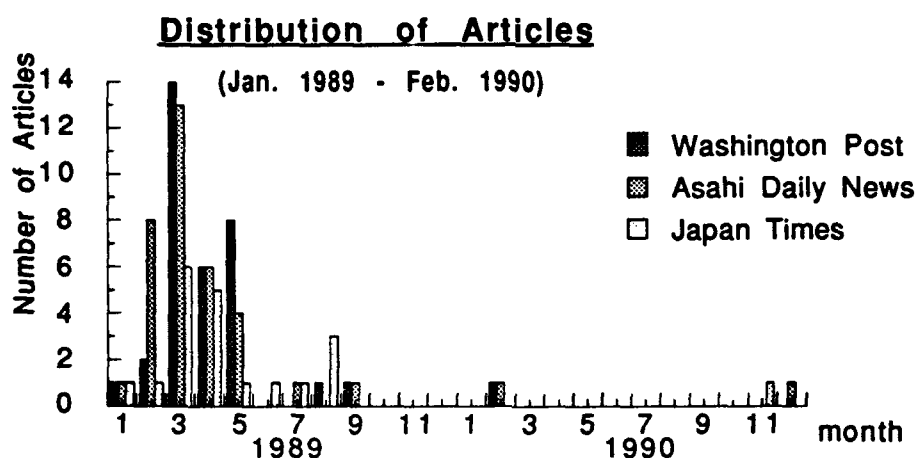


Figure 11: Monthly Distribution of Articles in 1989-1990

Figure 11 shows a large increase in coverage by the three papers in the early part of 1989. This concentration of articles reflects new concern over the FSX issue. In the early stages of the FSX's evolution (prior to 1987),

Japan intended to develop the aircraft domestically. Although it was a big project, it did not attract international attention. However, the policy was changed to co-development and controversies between both countries began to emerge, e.g., MOU negotiation, congressional debates, concern over the U.S./Japan trade deficit, etc. The number of articles seems to reflect the level of international interest. In particular, articles in all three newspapers peaked in Mar. 1989. This is when President Bush gave his tentative approval of the FSX deal pending additional clarifications. This led to various diplomatic activities and media interest in both countries. However, the FSX coverage by the media stopped by October of 1989, and the FSX became pretty much a dead issue in 1990 as far as the media is concerned.

b. Word Count

Total, average, maximum, and minimum number of words per article for each newspaper are shown in Table 1.

TABLE 1: WORD COUNT

	WP	ADN	JT
PERIOD	87/3-90/2	89/1-90/12	86/6-90/11
# ARTICLE	36	36	48
TOTAL	25,277 words	10,307 words	18,077 words
AVE.	702.1 words	286.3 words	376.6 words
MAX.	128 words	68 words	42 words
MIN.	2,224 words	692 words	1,042 words

From this table, articles in the WP are longer on average than articles from the two Japanese newspapers. One possible reason is differences in writing style. An article that exceeds half a page is relatively rare in Japan.

c. Period Normalization

As mentioned above, there are differences in when articles appeared. For quantitative content analysis, the time period must be normalized to unify the database. The common time period covered by all three newspapers is Jan. 1989 to Feb. 1990. During this period there are total of 88 articles; 34 in the WP, 35 in the ADN, and 19 in the JT. These data are shown in Appendix A Chapter IV. Total, average, maximum, and minimum number of words per article for each newspaper during this time period is shown in Table 2. The same tendency is evident in this sample: WP articles are longer than the two Japanese newspapers (about 2.4 times as long as the ADN and 1.8 times as long as the JT).

TABLE 2 WORD COUNT IN NORMALIZED PERIOD

	WP	ADN	JT
PERIOD	89/1 - 90/2		
# ARTICLE	34	35	19
TOTAL	23,226 words	10,091 words	7,243 words
AVE.	683.1 words	288.3 words	381.2 words
MAX.	128 words	68 words	42 words
MIN.	2,224 words	692 words	1,042 words

d. Articles and Words in Normalized Period

Figure 12 to 14 show the monthly distribution of articles (Figure 12), words (Figure 13), and average number of words (Figure 14) for the normalized time period. A few key events seem related to the timing of the peaks in the distribution of articles and words. These events include:

- Mar. 1989: JDA Vice Chief traveled to the Washington to settle details of the MOU in an effort to settle the budget execution plan in Japan. After the discussion, President Bush gave "tentative" approval pending additional "clarifications".
- Apr. 1989: The MOU was revised with clarifications as side letters to the original MOU.
- May 1989: After a heated debate in Congress, the Senate narrowly voted to approve the FSX deal.
- Aug. 1989: Bush vetoed a congressional effort to curb the FSX project.
- Sept. 1989: The Senate failed to override the President's veto by 1 vote.

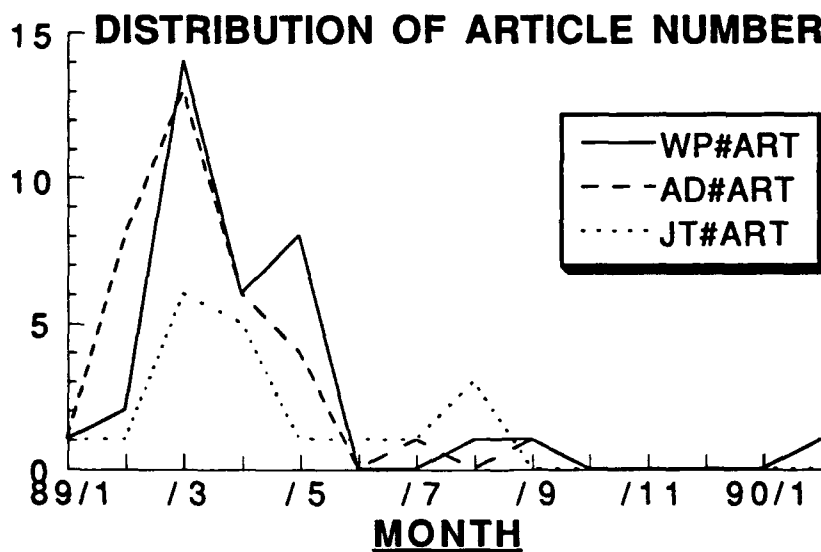


Figure 12: Monthly distribution of Article

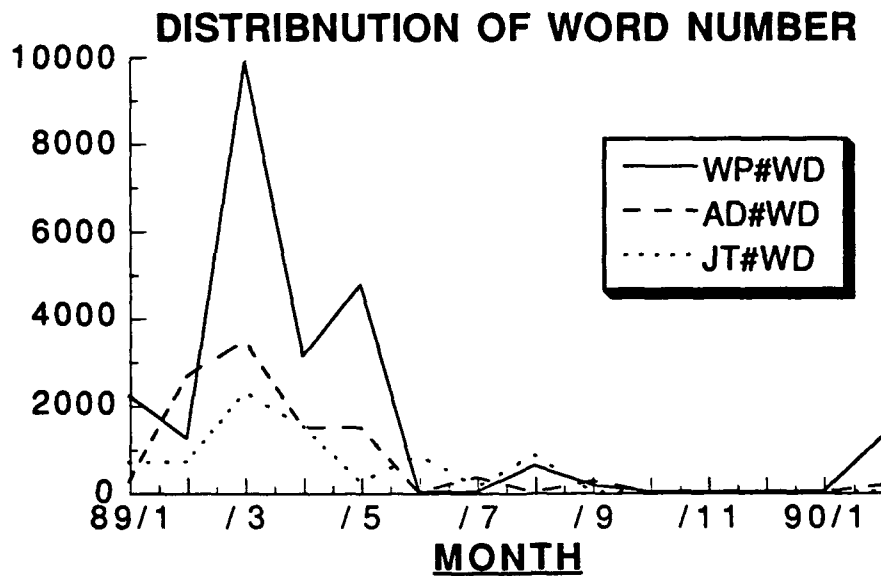


Figure 13: Monthly Distribution of Total Words

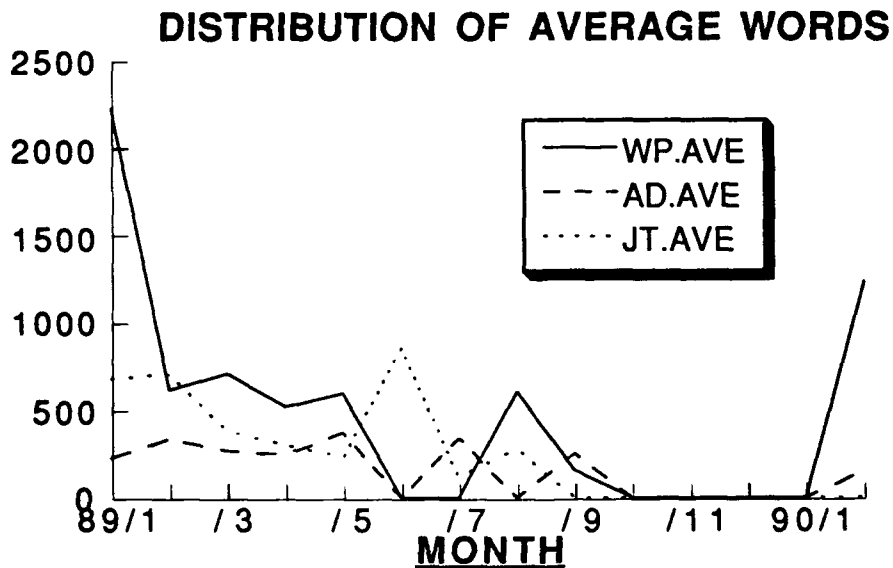


Figure 14: Monthly Distribution of Average Words

2. Key Word Analysis

The key word analysis is one of the oldest content analysis techniques. However, the computer makes it possible to scan for specific words within hundreds of pages of articles in a few seconds. In fact, the 88

articles from the three newspapers included in this analysis constitute about three hundred pages of print. It would take tremendous time to manually look for even one word in this data base.

In the first stage of this analysis, key words were selected and classified into groups. Then the frequency of their appearance was counted for each newspaper. Using an Apple Macintosh PC, the "change" command in the Microsoft Word program was used to count the number of times each specific word appeared in each article.

a. Selection and Grouping of Key words

Six groups of 72 words were selected. The groups included: "standard" (11 words), "party" (20), "adjective" (11), "verb" (13), "noun" (12), and "other" (5). Each word was counted in each paper. Three criteria were used to compare the frequency of each word: Frequency per one thousand words, frequency per article, and frequency per "FSX." Frequency per one thousand words was measured as total occurrence divided by total number of words measured in thousands. Frequency per article was measured as total occurrence divided by number of articles. Frequency per FSX was measured as total occurrence divided by total occurrence of the word FSX.

All three ratios showed approximately the same pattern. Therefore, the frequency per 1,000 words (FPW) will be used as the main criterion in this analysis. The result is shown in Table 3.

In order to count frequency, several points should be addressed. One is abbreviations. In counting the frequency of "DOC" (Department of Commerce), the computer counts all words including the letters "DOC", which may mean "dock", "doctor", "doctrine", "document", etc. While this

problem did not occur in this thesis, it can typically be resolved through judicious use of computer software search functions. Conversely, to count references to the Department of Defense, it was necessary to add all the words and abbreviations that signify the Department of Defense, including: DOD, Department of Defense, Secretary of Defense, SecDef, etc. This summation was done manually in this thesis. Another concern is combinations of words. An article that states "Japan is fair" is making the opposite point of an article stating that "Japan is not fair." Unfortunately, the computer cannot search for combinations of words or for context in a sentence. Thus, these combinations could not be counted.

b. Results

The following table shows the result.

TABLE 3: FREQUENCY AND ITS RATIO OF SELECTED KEY WORD

PAPER		WP* 1		ADN* 2		JT* 3	
WORD		FRQ	FPW	FRQ	FPW	FRQ	FPW
STANDARD							
FSX		196	8.44	136	13.48	86	11.87
Program		21	0.90	5	0.50	6	0.83
Project		33	1.42	95	9.41	71	9.80
Pact		22	0.95	3	0.30	2	0.28
Accord		12	0.52	24	2.38	16	2.21
	SUM	88	3.79	127	12.59	95	13.12
Japan		376	16.19	199	19.72	114	15.74
Japanese		158	6.80	82	8.13	42	5.80
Tokyo		34	1.46	20	1.98	3	0.41
	SUM	568	24.46	301	29.83	159	21.95
U.S./United States		347	14.94	226	22.40	133	18.36
American		92	3.96	26	2.58	24	3.31
Washington		80	3.44	53	5.25	17	2.35
	SUM	519	22.35	305	30.22	174	24.02

*1 FPW=FREQ/23.226 *2 FPW=FREQ/10.091 *3 FPW=FREQ/7.243

**TABLE 3: FREQUENCY AND ITS RATIO OF SELECTED KEY WORD
(CONTINUED)**

PARTY						
Japanese Gov't	1	0.04	13	1.29	11	1.52
Prime minister	7	0.30	5	0.50	5	0.69
JDA/Defense Agnc	11	0.47	38	3.77	31	4.28
MITI/M of Int'l Tr	2	0.09	0	0	0	0
MHI/Mitsubishi	31	1.33	18	1.78	19	2.62
Diet	0	0	2	0.20	2	0.28
LDP	1	0.04	13	1.29	0	0
SUM	53	2.28	89	8.82	68	9.38
U.S. Government	0	0	21	2.08	15	2.07
Administration	106	4.56	15	1.49	13	1.79
President	63	2.71	35	3.47	16	2.21
DOD/D of Defense	2	0.09	3	0.30	3	0.41
DOS/D of State	9	0.39	4	0.40	1	0.14
DOC/D of Comc	2	0.09	7	0.69	3	0.41
GD/General Dym	33	1.42	16	1.59	10	1.38
Congress	75	3.23	39	3.86	21	2.90
House	52	2.24	13	1.29	3	0.41
Senate, Senator	64	2.76	24	2.38	10	1.38
SUM	396	17.05	177	17.54	95	13.12
Official	99	4.26	43	4.26	33	4.56
Press	18	0.77	18	1.78	11	1.52
Public	13	0.56	8	0.79	19	2.62
ADJECTIVE						
Fair	13	0.56	1	0.10	1	0.14
Unfair	2	0.09	0	0	1	0.14
Untrustworthy	1	0.04	0	0	0	0
Critical	6	0.26	2	0.20	4	0.55
Controversial	11	0.47	2	0.20	2	0.28
SUM	33	1.42	5	0.50	8	1.10
Good	8	0.34	1	0.10	0	0
Better	17	0.73	0	0	1	0.14
Best	15	0.65	5	0.50	3	0.41
Bad	4	0.17	2	0.20	0	0
Worse	2	0.09	0	0	0	0
Worst	1	0.04	2	0.20	1	0.14
SUM	47	2.02	10	0.99	5	0.69

**TABLE 3: FREQUENCY AND ITS RATIO OF SELECTED KEY WORD
(CONTINUED)**

VERB						
Agree	26	1.12	11	1.09	5	0.69
Cooperate	10	0.43	1	0.10	1	0.14
Favor	8	0.34	1	0.10	3	0.41
Trust	3	0.13	5	0.50	1	0.14
Disagree	0	0	0	0	3	0.41
Refuse	3	0.13	1	0.10	2	0.28
Blame	1	0.04	1	0.10	0	0
Criticize	1	0.04	1	0.10	5	0.69
Accuse	3	0.13	0	0	0	0
Oppose	7	0.30	4	0.40	0	0
Hammer	3	0.13	2	0.20	1	0.14
Demand	15	0.65	24	2.38	6	0.83
Veto	29	1.25	2	0.20	5	0.69
NOUN						
Debate	23	0.99	0	0	3	0.41
Controversy	8	0.34	3	0.30	1	0.14
Concession	7	0.30	9	0.89	1	0.14
Agreement	128	5.51	35	3.47	18	2.49
Negotiation	17	0.73	9	0.89	5	0.69
SUM	183	7.88	56	5.55	28	3.87
Defense	96	4.13	91	9.02	75	10.4
Trade	76	3.27	8	0.79	11	1.52
Relation	49	2.11	8	0.79	7	0.97
Economic	54	2.32	5	0.50	2	0.28
Security	34	1.46	11	1.09	5	0.69
Technology	192	8.27	71	7.04	27	3.73
Share	31	1.33	24	2.38	5	0.69
OTHER						
" "	180	7.75	65	6.44	50	6.90
Said	181	7.79	49	4.86	50	6.90
Must	22	0.95	3	0.30	8	1.10
Should	47	2.02	15	1.49	8	1.10
Ought	19	0.82	6	0.59	2	0.28
SUM	88	3.79	24	2.38	18	2.49

c. Standard group

- In this group, "FSX;" "program," "project," "pact," "accord;" "Japan," "Japanese," "Tokyo;" "U.S.," "United States," and "Washington" were selected. "Program," "project," "pact," and "accord" have almost same meaning in the context of the FSX issue. The WP used these four words evenly, while the Japanese newspapers used them selectively.

Such difference may be mainly attributable to writing style rather than difference in substance.

- Each word "Japan," "Japanese," and "Tokyo" on the Japanese side and the word "U.S.," "United States," and "Washington" on the U.S. side showed high FPW and appeared in almost same pattern among the three papers. This is not surprising in that the FSX issue was being discussed in the Japan vs. U.S. context.
- The word most frequently appearing in articles was "Japan" in WP, and "U.S./United States" in ADN and JT.

d. Party group

- There listed organizations or agencies in both Japanese and U.S. sides, and third party. Organizations or agencies in both sides were thought to have closer interest on the FSX issue.
- WP listed 7.5 times more of the U.S. side parties (17.05 FPW) than Japanese side parties (2.28 FPW for Japan). However, ADN listed only twice as many the U.S. side parties than the Japanese ($17.54/8.82=2.0$), and JT listed 1.4 times more of the U.S. side parties ($13.12/9.39=1.4$). Every paper stated more on the U.S. side than Japan side. This could mean "issues were raised mainly in U.S. side court". A higher frequency of WP's reference of U.S. side parties might reflect the paper's familiarity and easier access to these news sources.
- MITI was used in WP but was not used in ADN and JT. Diet was used in ADN and JT, but not in WP. This could mean that WP was more concerned on trade aspect of FSX issue.
- In the FSX issue, MOFA (Ministry of Foreign Affairs) and MOF(Ministry of Finance) played important roles, but did not appear in the article. This means that in spite of their important roles, these organizations were out of papers' concern.

e. Adjective group

- In this group, such words as "fair", "unfair", "untrustworthy", "critical", and "controversial" were used more often in WP than ADN and JT. This is consistent with the casual observation that writing style of WP is much more "colorful" than those of ADN and JT.

f. Verb group

- There are not significant differences in usage of verbs among the three papers.

g. Noun group

- "Trade" and "economic" were more frequently mentioned in WP (3.27 and 2.32 FPW) than in the Japanese papers (0.79 and 0.5 for ADN; 1.52 and 0.28 for JT). "Defense" was the most frequently mentioned noun in the selection by the Japanese papers (9.02 FPW for ADN and 10.4 FPW for JT), but it was only the second for WP (4.13 FPW). The most frequently used word for WP was "technology" (8.27 FPW). This is consistent with the U.S. emphasis of a broader FSX framework inclusive of trade and economic relationship, and the Japan's more defense-oriented framework.

h. Other group

- This category included the counting of quotations and imperatives such as "must," "should" and "ought". WP scored higher in these two categories than either ADN or JT. This, along with a heavier use of colorful adjectives, contributed to a more "forceful" and arguably more persuasive writing style of WP.

i. Summary

There were not many surprises in the above findings. However, it is interesting to note that in the "standard" category, "other side" is more frequently cited than the paper's home country. WP cites "Japan" more often than "U.S." In contrast, both ADN and JT cite "U.S." more often than "Japan."

As for the "party" category, the U.S. side is mentioned more often than Japan by every paper. This might reflect the nature of the FSX controversy, i.e. the recent controversy was started by the desire of some U.S. groups to renegotiate the agreement.

One of the more interesting results of the analysis is that it showed the different emphasis of the papers. The Washington Post reflected the U.S. interest in expanding the FSX discussion to include economic and

trade issues, while Asahi Daily News and the Japan Times reflected Japan's more narrowly focused attention on defense matters.

The analysis also showed a clear difference in writing style of the papers both quantitatively and qualitatively. The Washington Post articles, on average, are 2 to 3 times longer than the Japanese counterpart. The WP articles tend to use more variety of words (hence, possibly more articulate), and 15 to 50 % more quotes (hence, possibly more specific), and 50 % more imperative words (hence, possibly more forceful).

It was also concluded that it was not possible to determine whether or not the papers have biases under the current research setup. It would require a special programming that would enable the computer to categorize and count a particular logical statement. For this reason, survey results which were intended to validate the computer aided content analysis framework were not incorporated at this time.

V. CONCLUSION

The main questionnaire indicated that the NPS students surveyed for this thesis had much stronger opinions concerning the U.S./Japan trade relationship than the FSX issues. In general, they believed that both the trade relationship and the FSX agreement favored Japan. In particular, the students felt that Japan was not a fair trading partner. The opinion seemed to be largely based on the fact that the bilateral trade balance had been favorable to Japan in the past years without considering the effects of the more fundamental economic forces at work. However, these "impressions" were strong enough that even those who felt very familiar with the trade issue held the counterfactually incorrect belief that Japan had higher tariffs and quotas than the U.S.

If indeed these feelings were nurtured by the constant barrage of inadequate reporting on the part of the news media, then the so-called well-informed people might simply mean well-misinformed people. The results in this thesis clearly demonstrate the dichotomy of "familiarity" vs "objective knowledge." Future surveys could be designed to generate more tests of this nature. The objective "familiarity" test in this thesis could be viewed as a pilot experiment in this direction.

The computer aided content analysis in this thesis could not achieve the original goal of examining the biases and preferences of the papers. This was mainly due to the inability to design the software that could recognize the logical statement in a speedy fashion. However, the analysis indicated that the U.S. press has a more articulate and forceful writing style than the

Japanese press. It also indicated that the U.S. press discussed the FSX issue in a broader framework of the trade relationships, as opposed to the specific FSX context. The Japanese press, on the other hand, focused the FSX issues in a much narrower defense context. These emphases may reflect the respective government's negotiating strategy.

Selecting information sources, identifying accurate information, and distinguishing fact from opinion are crucial for better decision-making in this "Information Age." Avoidance of misconception and maintenance of good international relations require increased exposure to "other" information sources and other cultures. Interpersonal interactions among students from different countries at the NPS has greatly expanded this researcher's viewpoint. The continued and improved communication would enhance the mutual defense relations in the 1990s.

APPENDIX A. SUMMARY OF ARTICLES

The followings are summary of articles including date, number of words, and title:

I. THE WASHINGTON POST

NO	DATE	NO OF WORD	TITLE
1	2/11/90	1,232	Rethinking the Japanese Mess; Let's Stop Making the Mistakes That Made the FSX a Disaster.
2	9/14/89	160	Senate, by 1 Vote, Fails to Override Bush Veto of FSX Jet Resolution.
3	8/1/89	608	Bush Vetoes Effort to Curb FSX Project; President Says Congress Sought to Restrict His Constitutional Power.
4	5/17/89	672	Senate Narrowly Approves FSX Jet Deal with Japan.
5	5/16/89	570	GAO Criticizes FSX Jet Fighter Deal with Japan; Report Says U.S. Has Little to Gain from Joint Project; Senate Vote Scheduled Today.
6	5/13/89	432	Senate Urged to Approve FSX Agreement; Lugar Calls Fighter Plane Pact Important in Keeping Asian Ties.
7	5/12/89	576	Senate Panel Narrowly Backs FSX; Debate Builds over U.S.-Japan Fighter.
8	5/11/89	608	Senators Step up Attack on FSX Deal with Japan.
9	5/4/89	528	Officials Try to Soothe Congress on FSX; 3 Insist That U.S. Interests Will Be Protected in Deal with Japan.
10	5/3/89	544	FSX Critics in Congress Act to Defeat Agreement; Resolutions of Disapproval Introduced.
11	5/3/89	832	Why We Backed the FSX Deal.
12	4/29/89	528	Japan's FSX Concessions Avoid Split with the U.S.
13	4/29/89	800	U.S., Tokyo to Build Jet Fighter; Bush Hails New Pact for Japanese FSX; Battle Vowed on Hill.
14	4/20/89	352	LETTERS TO EDITOR--The FSX Deal Should Be Scrapped.
15	4/17/89	448	LETTERS TO EDITOR--The FSX Deal.
16	4/8/89	400	U.S. Japan Agree to Modify Jet Pact.
17	4/3/89	592	LETTERS TO EDITOR--The FSX Deal: Casper Weinberger Replies.
18	3/30/89	528	'Ball Is Entirely in Japan's Court' on FSX Jet Deal, U.S. Says.
19	3/30/89	816	The FSX Deal with Japan Is a Large Fire Sale.
20	3/27/89	1,824	FSX Become Symbol of a New Age; Aircraft Dispute Shows Technology Is Now Political Tool.

THE WASHINGTON POST (CONTINUED)

21	3/24/89	128	Bush Advisers, Japanese Discuss FSX Fighter Plan.
22	3/23/89	816	Japan Calls on U.S. to Honor FSX Jet Pact.
23	3/21/89	640	Bush Asking for Changes in FSX Deal; Restrictions Sought in Japan's Use of Technology for Fighter Plane.
24	3/17/89	416	The FSX Decision.
25	3/17/89	544	Bush Undecided on Building Jet with Tokyo.
26	3/16/89	784	The FSX: Don't Junk That Deal.
27	3/16/89	928	Bush Is Pressed to Kill Japan Jet Deal; President Seeks Additional Data on Controversial FSX Project.
28	3/15/89	896	U.S.-Japan Collaboration on Jet Draws Fire; The Issue: What Role Should Economics Have in Foreign Policy?
29	3/13/89	464	Accord Set on Technology Transfers; Commerce Dept., Pentagon to Share Power in Approving Deals.
30	3/9/89	576	U.S.-Japan Military Jet Plan Falters.
31	3/5/89	528	Bush Set to Back Modified U.S.-Japan Deal on Jet.
32	2/17/89	544	U.S. Delays Decision on Helping Japan to Build New Fighter; Concerns over Transfer of Military Technology Deeply Divide Bush Administration on FSX Jet.
33	2/4/89	688	Japanese Prime Minister Confident of U.S. Approval of Warplane Deal.
34	1/29/89	2,224	Giving Japan a Handout; Why Fork over \$7 Billion in Aircraft Technology?
35	9/28/87	964	Japan May Postpone Development of New Jet; Delay Seen as Reaction to U.S. Proposals.
36	3/22/87	1,087	Allies Zero in on Japan's New Fighter; U.S., Europe Seek Contracts to Build Planned FSX Plane.
	AVERAGE	702.1	
	MIN.	128	TOTAL = 25,277 WORDS
	MAX.	2,224	

II. ASAHI DAILY NEWS

NO	DATE	NO OF WORD	TITLE
1	12/21/90	216	FSX Development Cost Likely to Increase to \$250 Billion.
2	2/21/90	151	Development of FSX to Start in March.
3	9/4/89	254	Japan to Develop FSX Computer.
4	7/20/89	344	Japan's Defense Contractors to Begin FSX Development in Fall.
5	5/23/89	692	FSX: Not a Bad Deal.
6	5/19/89	72	Baker Opposes FSX Amendments.
7	5/4/89	418	Japanese Press Harshly Critical of FSX Accord with U.S.
8	5/1/89	302	Japan Agrees to Make Concessions to U.S. on FSX project.
9	4/28/89	306	Japan Making Concessions over FSX Development Plan.
10	4/24/89	73	More FSX Talks Being Held in Washington.
11	4/21/89	68	FSX Negotiations Facing Difficulty.
12	4/7/89	179	Democrats Urge Opening of FSX Talks Details.
13	4/3/89	612	FSX Starting Security Relations.
14	4/3/89	250	Japan's Defense Chief Raps U.S. Deadlock on FSX Project.
15	3/31/89	406	Japan Starts Joint FSX Project Despite U.S. Standoff.
16	3/30/89	179	Japan Starts FSX Project Worried about Its Future.
17	3/27/89	233	U.S. to Get 35-45% Share of FSX Production Work.
18	3/27/89	245	FSX Dispute Sparks Japanese Concerns.
19	3/27/89	153	FSX Agreement to Be Confirmed in Letter.
20	3/27/89	648	FSX Dispute Raises Fears of Japanese 'Techno-nationalism'.
21	3/24/89	205	Vice Defense Chief Opens FSX Talks with U.S. Government.
22	3/23/89	313	Japanese Defense Official to Washington for FSX Talks.
23	3/23/89	217	U.S. Seeks over 40% Share of Work in FSX Production.
24	3/22/89	150	Bush to Go Ahead with Plan with Condition.
25	3/17/89	116	Bush's Decision on FSX Project Being Delayed.
26	3/16/89	176	Bush Close to Giving Go-ahead for FSX Plan.
27	3/8/89	430	U.S. to Conditionally Okay Joint FSX Project.
28	2/17/89	206	U.S. Refusing to Give Japan FSX Engine Data.
29	2/16/89	525	Fighting over the FSX.
30	2/16/89	257	U.S. Gov't Decides to Review FSX Agreement.
31	2/15/89	385	Ruling Party Members Demand Review of FSX project.
32	2/10/89	274	FSX Agreement Hits Snag in Washington.
33	2/10/89	434	Japanese Angered at Senate's Stalling of FSX Project.
34	2/9/89	140	Tokyo to Urge U.S. OK for FSX Tech Transfer.
35	2/6/89	453	U.S. Senators Seek Review of FSX Pact.
36	1/11/89	225	Japan U.S. Agree on FSX Development Shares.
	AVERAGE	286.3	
	MIN.	68	TOTAL = 10,307 WORDS
	MAX.	692	

III. THE JAPAN TIMES

NO	DATE	NO OF WORD	TITLE
1	11/22/90	719	Problems on Fighter Fronts.
2	8/20/89	421	Defense Agency Head Seeks U.S. Visit.
3	8/2/89	121	Defense Agency Welcomes Bush Veto of FSX Amendment.
4	8/1/89	305	FSX Work Gets under Way.
5	7/26/89	120	Data Exchange on FSX Begins.
6	6/28/89	854	Research Center Works on New Types of Radars.
7	5/20/89	236	Japan Expects Bush's Veto.
8	4/30/89	123	Defense Agency Head Welcomes Conclusions of FSX Talks.
9	4/29/89	228	Defense Chief Hammers out Accord.
10	4/8/89	189	U.S. Understanding Stressed.
11	4/5/89	702	The FSX Issue and Ambivalence.
12	4/1/89	269	Tazawa Blasts U.S. over FSX.
13	3/31/89	283	Defense Signs FSX Contract.
14	3/27/89	254	Defense Vice-minister Extends Stay in D.C. to Discuss FSX Missile.
15	3/25/89	140	U.S. Japan Still Have Differing Opinions over FSX Deal.
16	3/23/89	358	Defense Agency Official to Go to D.C. to Discuss Joint FSX Project.
17	3/18/89	217	Defense Chief Hopes for Fast Endorsement of FSX Project.
18	3/9/89	1,042	Japan Optimistic of FSX Deal.
19	2/28/89	703	The FSX: Together or Alone.
20	1/30/89	678	FSX: Co-development with Caution.
21	12/6/88	665	The FSX as Technology Booster.
22	6/15/88	659	The FSX Agreement: Working Together.
23	6/4/88	436	U.S., Japan Reach Accord on FSX Development.
24	4/5/88	674	Some Concerns about FSX Project.
25	12/6/87	213	New Defense Chief to Meet with Carlucci in January.
26	10/27/87	606	FSX Decision Reached, Finally.
27	10/24/87	106	National Security Council Endorses Agency's Decision to Adopt F-16 for FSX.
28	10/20/87	42	General Dynamics F-16 to Be the FSX.
29	10/18/87	231	U.S., Japanese Defense Experts End Talks on FSX.
30	9/15/87	611	The Meeting of the FSX Decision.
31	9/12/87	119	Japanese Defense Contractors OK McDonnell Douglas Design for FSX.
32	9/2/87	247	Defense Agency Official Recommends Joint FSX Development from U.S. Fighters.
33	7/20/87	400	Agency to Sound out U.S. Before Choosing FSX.
34	6/30/87	277	Weinberger Asks Kuranari That Japan Buy U.S. Fighters for FSX Program.

THE JAPAN TIMES (CONTINUED)

35	6/30/87	157	Kurihara to Visit U.S. Before Making Decision of FSX.
36	6/30/87	537	Nakasone Pledges Tightened Control on Technology Exports.
37	6/29/87	384	Weinberger Makes Pitch for American-made FSX.
38	6/27/87	232	Weinberger Arrives for Talks with Defense Agency, Foreign Minister.
39	6/25/87	166	Weinberger, Kurihara Talks to Center on FSX Issue.
40	6/21/87	192	Pentagon Warns Against Japan's Own Development FSX.
41	5/22/87	383	Base FSX Choice on Defense, Not Industry Interests, Says Defense Chief.
42	5/3/87	174	Weinberger Asks Japan to Buy U.S. Made Fighters.
43	4/29/87	569	Politicizing the FSX.
44	4/2/87	264	Kurihara Favors Joint U.S.-Japanese Development of FSX Fighter.
45	3/31/87	231	Defense Agency Studies FSX Proposals.
46	3/10/87	416	Business War Expected over Next Generation Fighter.
47	2/25/87	797	Developing the FSX Fighter.
48	6/14/86	327	Hughes Aircraft Head Wants to Help Build FSX.
	AVERAGE	376.6	
	MIN.	42	TOTAL = 18,077 WORDS
	MAX.	1,042	

IV. NORMALIZED PERIOD (FEB. 1990 - JAN. 1989)

The following table include the articles within the normalized period (Feb. 90 - Jan. 89), each number is corresponding to that of former three tables.

The Washington Post			Asahi Daily News			The Japan Times		
NO	DATE	#Word	NO	DATE	#Word	NO	DATE	#Word
1	2/11/90	1,232	2	2/21/90	151	2	8/20/89	421
2	9/14/89	160	3	9/4/89	254	3	8/2/89	121
3	8/1/89	608	4	7/20/89	344	4	8/1/89	305
4	5/17/89	672	5	5/23/89	692	5	7/26/89	120
5	5/16/89	570	6	5/19/89	72	6	6/28/89	854
6	5/13/89	432	7	5/4/89	418	7	5/20/89	236
7	5/12/89	576	8	5/1/89	302	8	4/30/89	123
8	5/11/89	608	9	4/28/89	306	9	4/29/89	228
9	5/4/89	528	10	4/24/89	73	10	4/8/89	189
10	5/3/89	544	11	4/21/89	68	11	4/5/89	702
11	5/3/89	832	12	4/7/89	179	12	4/1/89	269
12	4/29/89	528	13	4/3/89	612	13	3/31/89	283
13	4/29/89	800	14	4/3/89	250	14	3/27/89	254
14	4/20/89	352	15	3/31/89	406	15	3/25/89	140
15	4/17/89	448	16	3/30/89	179	16	3/23/89	358
16	4/8/89	400	17	3/27/89	233	17	3/18/89	217
17	4/3/89	592	18	3/27/89	245	18	3/9/89	1,042
18	3/30/89	528	19	3/27/89	153	19	2/28/89	703
19	3/30/89	816	20	3/27/89	648	20	1/30/89	678
20	3/27/89	1,824	21	3/24/89	205			
21	3/24/89	128	22	3/23/89	313			
22	3/23/89	816	23	3/23/89	217			
23	3/21/89	640	24	3/22/89	150			
24	3/17/89	416	25	3/17/89	116			
25	3/17/89	544	26	3/16/89	176			
26	3/16/89	784	27	3/8/89	430			
27	3/16/89	928	28	2/17/89	206			
28	3/15/89	896	29	2/16/89	525			
29	3/13/89	464	30	2/16/89	257			
30	3/9/89	576	31	2/15/89	385			
31	3/5/89	528	32	2/10/89	274			
32	2/17/89	544	33	2/10/89	434			
33	2/4/89	688	34	2/9/89	140			
34	1/29/89	2,224	35	2/6/89	453			
			36	1/11/89	225			
TOTAL		23,226	TOTAL		10,091	TOTAL		7,243
AVERAGE		683.1	AVERAGE		288.3	AVERAGE		381.2
MIN.		128	MIN.		68	MIN.		120
MAX.		2,224	MAX.		692	MAX.		1,042

APPENDIX B. PILOT QUESTIONNAIRE AND RESULTS

I. FIRST QUESTIONNAIRE

The following questionnaire was distributed to 24 individuals and 15 answers were collected. The absolute number and percentage of participants selecting each response is indicated for each question.

A. COVER LETTER AND BACKGROUND QUESTION

QUESTIONNAIRE 1

Mar. 1991

Dear

The purpose of this questionnaire is to gather data on readers' responses to selected newspaper articles. The data from this questionnaire will be used in my graduate thesis (Title: Computer Aided Newspaper Content Analysis). In particular, the data will be used to develop and validate a quantitative content analysis framework. Responses will be aggregated and the individual respondents' confidentiality will be maintained.

1. General Information

You will receive two questionnaires with a one week interval in between. Each questionnaire will contain three articles; one from the Washington Post, one from Asahi Daily News, and one from the Japan Times.

Each article discusses the FSX (the Japan Air Self Defense Force's (JASDF) new fighter support jet). The FSX is a co-development program involving Japan and the U.S. Japan decided to co-develop the FSX rather than developing it domestically or buying an existing plane.

There has been extensive debate concerning many aspects of this deal in both countries (e.g., technology transfer, production shares, security of sensitive software, balance of trade, etc.). This debate provides a good opportunity to develop a quantitative content analysis framework because of the diverse viewpoints across countries and the voluminous newspaper coverage.

2. Background Questions

Q1 Are you familiar with the FSX debate?

Very familiar Somewhat Unfamiliar

5--- ---4--- ---3--- ---2--- ---1

1 (7%) 3 (20%) 4 (27%) 3 (20%) 4 (27%)

Q2 Have you formed an opinion concerning the FSX deal?

Favors U.S. Fair Favors Japan No opinion

5--- ---4--- ---3--- ---2--- ---1--- ---0 (N/O)

0 (0%) 1 (7%) 2 (13%) 1 (7%) 1 (7%) 10 (67%)

Q3 Are you familiar with the broader U.S./Japan trade debate?

Very familiar Somewhat Unfamiliar

5--- ---4--- ---3--- ---2--- ---1

3 (20%) 2 (13%) 8 (53%) 2 (13%) 0 (0%)

Q4 Have you formed an opinion about the broader U.S./Japan trade relationship?

Favors U.S. Fair Favors Japan N/O

5--- ---4--- ---3--- ---2--- ---1--- ---0

0 (0%) 0 (0%) 4 (27%) 4 (27%) 1 (7%) 6 (40%)

Q5 If you would like to make any comments about the FSX or the U.S./Japan relationship, please write here.

(1 Answered)

Thanking you in advance,

Masao (Mar) Hosoya

Please send your answer by 25 Mar. to SMC #1362.

B. FIRST ARTICLE

JAPAN CALLS ON U.S. TO HONOR FSX JET PACT.

THE WASHINGTON POST, MARCH 23, 1989, FINAL EDITION

1. Article

TOKYO, March 23 (Thursday) Japan has called on the United States to honor the agreement it signed last fall for codevelopment of a fighter jet, even as Japanese officials privately struggled to find a formula that would save the controversial pact.

Foreign Ministry officials were trying to find a way to satisfy U.S. demands for modifications of the pact without appearing to make such sweeping concessions that the deal would lose political support here.

President Bush said Tuesday that he is only seeking "clarifications" of the agreed-upon memorandum of understanding, but officials here and in Washington said his requests for clarification in fact raise basic issues that were the subject of two years of negotiation. The U.S. demands for changes have angered some officials and caused others to say Japan should work with a European company instead of General Dynamics Corp.

"We want the U.S. to respect what has been agreed to in the memorandum of understanding," said Kichiro Tazawa, director-general of the Defense Agency. The agreement, he said, "is not something that should be changed, and we want to ensure that it is not."

The government announced today that it would dispatch the second-highest official in the defense agency to Washington in the hopes of resolving the issue by the end of the week. Officials said Seiki Nishihiro is authorized to provide assurances to assuage U.S. concerns about the existing agreement. But Nishihiro is likely to insist that there is no time to negotiate substantial changes.

Plans for joint development of the new fighter, code-named the FSX, sparked the first major foreign policy battle within the Bush administration. Although the fighter is to be modeled on the U.S. F16, Japan's Mitsubishi Heavy Industries would be the lead contractor.

Officials of the Defense and State departments who support the deal have said it would give the United States access to Japanese technology and strengthen U.S.-Japan relations. The Commerce Department, backed by many members of Congress, argues that the deal would give Japan valuable technology that it could use to build its own aircraft industry, eventually to compete with U.S. firms.

Japanese officials are somewhat bewildered by the sudden reemergence of the FSX controversy. Originally they had planned to build their next-generation fighter without U.S. assistance, but agreed to use the F16 as a model under strong pressure from then-Defense Secretary Caspar W. Weinberger and other Reagan administration officials.

But now, with more than two years invested in the FSX arrangement, Japan is eager to preserve the pact, officials said, both for the sake of U.S.-Japan relations and because it would take too long to start again from scratch.

"There is no second-best alternative, or third-best, or fourth-best," one government official said. "There is maybe a tenth-best alternative, and this would be detrimental to us." The official said the two nations are not too far apart on substance, but have conflicting political needs. The Bush administration needs to show Congress it has won new concessions from Japan, while the Japanese government needs to assure nationalists within its party that it has not given too much away, this official said.

Prime Minister Noboru Takeshita's negotiating room has been further squeezed by a raging scandal that has dimmed his popularity and led to calls for new elections.

"We have our own politics to worry about," said one official who strongly supports the FSX deal. "There is a very narrow path for both of us."

Ironically, the issue of technology transfer to Japan, which prompted Bush to reopen the FSX question, no longer seemed the major stumbling block.

A Mitsubishi official said it is "only natural" that the United States would limit the transfer of certain proprietary computer codes that have been at the center of the controversy. He said the codes would not be of much use in developing a civilian plane anyway.

But Japanese officials said they were troubled by reported U.S. demands for a guaranteed share of production work once the FSX moves beyond the development stage.

Japan promised General Dynamics 35 to 40 percent of the \$1.3 billion cost of developing a prototype, but has said it cannot legally promise a fixed share of what could be a \$7 billion production project.

One official, noting that McDonnell Douglas has won 40 percent or more of the work on the F15 fighter that Japan is producing under license, said the same would likely be true for the FSX.

"But we can't really write that down," the official said. "I don't know if Americans will be satisfied with a vague expression of intent."

A Mitsubishi official added that if General Dynamics is limited to making only the wings and tail of the FSX, it would be difficult for it to reach the 35 percent level. Japanese officials also told the Japanese press that the United States intends to use Commerce Department officials to monitor the project and make sure Japan is passing along valuable technology as promised.

2. General Questions

Q1 Do you think this article states,

Mainly fact Both Mainly opinion

5--- ---4--- ---3--- ---2--- ---1

0 (0%) 6 (40%) 4 (27%) 4 (27%) 1 (7%)

Q2 How do you assess this article?

Favors Japan Neutral Favors U.S. N/O

5--- ---4--- ---3--- ---2--- ---1--- ---0

2 (13%) 6 (40%) 3 (20%) 3 (20%) 0 (0%) 0 (0%)

Q3 Does this article reinforce or challenge your prior beliefs about the FSX?

Reinforces Neutral Challenges

5--- ---4--- ---3--- ---2--- ---1

0 (0%) 0 (0%) 14 (93%) 1 (7%) 0 (0%)

Q4 Has this article influenced your opinion about the FSX?

High influence Somewhat No influence N/O

5--- ---4--- ---3--- ---2--- ---1--- ---0

0 (0%) 1 (7%) 6 (40%) 1 (7%) 6 (40%) 1 (7%)

Q5 Underline (Circle) any inflammatory words/phrases in the text that bias the article against Japan (against U.S.).

Underlined: Ave. = 5.2 Circled: Ave. = 3.1

Q6 Please select any words/phrases which best represent the content of this article.

(14 Answered)

3. Specific Questions

Q1 Do you think that the U.S. is a reliable ally from the Japanese perspective?

Strongly agree		N/O		Strongly disagree	
5	4	3	2	1	
0 (0%)	5 (33%)	2 (13%)	6 (40%)	1 (7%)	

Q2 Do you think that reneging on the FSX MOU (Memorandum Of Understanding) will damage the credibility of U.S. foreign policy?

Strongly agree		N/O		Strongly disagree	
5	4	3	2	1	
5 (33%)	7 (47%)	1 (7%)	1 (7%)	0 (0%)	

Q3 Who (and what) do you think will be the beneficiaries/losers from the FSX MOU?

	Beneficiary		N/O		Loser	
U.S. Department of Defense	5	4	3	2	1	
	2(13)	5(33)	4(27)	2(13)	1(7)	
U.S. Department of State	5	4	3	2	1	
	1(7)	6(40)	5(33)	0(0)	1(7)	
U.S Department of Commerce	5	4	3	2	1	
	2(13)	5(33)	3(20)	4(33)	0(0)	
U.S. Congress	5	4	3	2	1	
	2(13)	2(13)	7(47)	2(13)	1(7)	
General Dynamics	5	4	3	2	1	
	2(13)	9(60)	1(7)	1(7)	0(0)	
Japan Defense Agency	5	4	3	2	1	

	2(13)	7(47)	2(13)	2(13)	1(7)
Japan Ministry of Foreign Affairs	5	4	3	2	1
	1(7)	3(20)	8(53)	0(0)	2(13)
Japan Ministry of International Trade and Industry					
	5	4	3	2	1
	2(13)	7(47)	4(27)	1(7)	0(0)
Japan Diet (Congress)	5	4	3	2	1
	1(7)	1(7)	10(67)	1(7)	1(7)
Mitsubishi Heavy Industry	5	4	3	2	1
	5(33)	5(33)	1(7)	1(7)	2(13)

C. SECOND ARTICLE

1. Article

JAPANESE DEFENSE OFFICIAL TO WASHINGTON FOR FSX TALKS

ASAHI NEWS SERVICE, MARCH 23, 1989

TOKYO -- Following President George Bush's decision to endorse joint U.S.-Japanese development of Japan's next-generation fighter, a senior Defense Agency official left here for Washington Mar. 23 to discuss U.S. and Japanese shares in the production work.

An agency official said an agreement may be reached by the weekend between Seiki Nishihiro, deputy director-general of the Defense Agency, and Washington officials after talks with Secretary of State James Baker and Secretary of Defense Richard Cheney.

The official said Nishihiro was dispatched in response to a strong call from the Foreign Ministry, because "we imply don't have time to communicate with Washington in writing, for the deadline for the execution of the budget for this particular project comes on Mar. 31."

Some members of U.S. Congress are strongly concerned about the accord because they fear it amounts to a giveaway of much U.S. technology to Japanese businesses for purposes other than the joint development of the FSX, an advanced version of the General Dynamics F-16 fighter.

Under the agreement, the American aerospace maker would join forces with Japan's Mitsubishi Heavy Industries in the development project. The American production share was set at a range of 35 to 40 percent under this accord, which was later fixed at 40 percent in U.S.-Japan talks in January.

The officials said Washington sought March 20 a share of upwards of 40 percent of the production work and a ban on the use by other industries of software from the F-16.

The demand of more than 40 percent was made by Secretary of Commerce Robert Mosbacher, who wants to see fewer Japanese components and American parts used in the production process.

While Washington demands a specific percentage figure, senior agency officials hope to reach accord with the Americans "in indirect expressions." The official said that Japan "cannot say at this juncture anything definite about the production process."

2. General Questions

Q1 Do you think this article states,

Mainly fact		Both		Mainly opinion
5---	---4---	---3---	---2---	---1
4 (27%)	6 (40%)	4 (27%)	0 (0%)	1 (7%)

Q2 How do you assess this article?

Favors Japan		Neutral		Favors U.S.	N/O
5---	---4---	---3---	---2---	---1---	---0
0 (0%)	5 (33%)	9 (60%)	1 (7%)	0 (0%)	0 (0%)

Q3 Does this article reinforce or challenge your prior beliefs about the FSX?

Reinforces		Neutral		Challenges
5---	---4---	---3---	---2---	---1
0 (0%)	1 (7%)	11 (73%)	1 (7%)	1 (7%)

Q4 Has this article influenced your opinion about the FSX?

High influence		Somewhat		No influence	N/O
5---	---4---	---3---	---2---	---1---	---0
0 (0%)	0 (0%)	4 (27%)	2 (13%)	7 (47%)	1 (7%)

Q5 Underline (Circle) any inflammatory words/phrases in the text that bias the article against Japan (against U.S.).

Underlined: Ave. = 1.2 Circled: Ave. = 1.6

Q6 Please select any words/phrases which best represent the content of this article.

(11 Answered)

3. Specific Questions

Q1. For each organization below (left column), select the issue(s) from the right column that this article indicates as the organization's concern.

U.S. Department of Defense____ A-1 B-7 C-2 D-2 H-1 K-2 L-5	A. U.S. commercial tech-transfer B. U.S. defense tech-transfer
U.S. Department of State____ B-3 C-1 D-2 E-3 F-1 G-1 H-1 K-2 L-5	C. U.S. software tech-transfer D. Transfer of U.S. technology to third country
U.S. Department of Commerce____ A-5 C-4 D-1 E-8 F-7 L-1	E. U.S. trade deficit to Japan
U.S. Congress____ A-4 B-5 C-6 E-6 F-5 G-1 H-1 K-1	F. U.S. employment
General Dynamics____ A-2 C-3 D-3 F-6 G-3 H-4 K-3 L-2	G. Japanese commercial tech-transfer H. Japanese production tech-transfer
Japan Defense Agency____ A-1 B-4 C-1 G-1 H-2 I-1 J-5 L-3	I. Japanese employment
Japan Ministry of Foreign Affairs____ B-1 G-1 H-1 I-1 J-8 L-4	J. Time delay K. General interest
Japan Ministry of International Trade and Industry____ B-1 E-1 G-1 I-3 J-2 K-1 L-6	L. Not indicated
Japan Diet (Congress)____ G-1 H-1 I-1 K-3 L-8	
Mitsubishi Heavy Industry____ A-3 B-4 C-4 F-1 G-1 H-3 I-4 J-1 K-2 L-5	

Q2. What U.S. production share would be fair in the FSX program?

50%	45%	40%	35%	30%	25%	0%	N/O
2(13)	1(7)	4(27)	1(7)			1(7)	5(33)

Q3. For each of following areas, indicate what you speculate is the technological balance between the U.S. and Japan?

	U.S.leads		equal		J.leads N/O	
a. Airframe technology	5	4	3	2	1	0
	5(33)	4(27)	0(0)	0(0)	2(13)	3(20)
b. Aircraft engine technology	5	4	3	2	1	0
	6(40)	4(27)	2(13)	1(7)	1(7)	0(0)
c. Semiconductor technology	5	4	3	2	1	0
	2(13)	0(0)	5(33)	1(7)	4(27)	1(7)
d. Computer technology	5	4	3	2	1	0
	3(20)	5(33)	4(27)	1(7)	1(7)	0(0)
e. Materials technology	5	4	3	2	1	0
	0(0)	5(33)	1(7)	1(7)	4(27)	3(20)
f. Manufacturing technology	5	4	3	2	1	0
	0(0)	1(7)	1(7)	4(27)	8(53)	0(0)
g. Computer software technology	5	4	3	2	1	0
	5(33)	4(27)	3(20)	1(7)	0(0)	1(7)
h. Overall technological balance	5	4	3	2	1	0
	2(13)	4(27)	4(27)	1(7)	1(7)	2(13)

D. THIRD ARTICLE

1. Article

DEFENSE AGENCY OFFICIAL TO GO TO D.C. TO DISCUSS JOINT FSX MISSILE PROJECT

THE JAPAN TIMES, MAR. 23, 1989

The government decided Wednesday evening to send the deputy director general of the Defense Agency to Washington D.C. today to try to seek an early settlement to the dispute over FSX joint development project, an official said.

The official said Seiki Nishihiro will fully explain to American officials the Japanese interpretation of a memorandum of understanding related to the joint development project of a next-generation support fighter, code named FSX. Speaking on condition of anonymity, the official said he expected the issue would be settled hopefully in line with the earlier agreement between the two governments by the end of this week.

The high-ranking official expressed optimism on the settlement of the dispute over transfer of military high technology, saying, "We are not too worried because President Bush has at least decided to go ahead with the joint development plan."

Nishihiro's hastily-arranged trip to Washington was announced after Prime Minister Noboru Takeshita conferred with Nishihiro and Vice Foreign Minister Ryohei Murata over the FSX issue at his official residence.

The government decided to dispatch him to the U.S. apparently because the timing is running out for its disbursement of an FSX fund in its budget for fiscal 1988, which is due to end on March 31, an informed source said.

During his stay in Washington until March 26, Nishihiro is expected to assist Japanese Ambassador Nobuo Matsunaga in conveying Japanese views to U.S. Secretary of State James Baker, Secretary of Defense Dick Cheney and other high officials, according to the official.

The official, however, refused to disclose what kind of Japanese view Matsunaga and Nishihiro will represent to the U.S. government officials.

Commenting on Matsunaga's meeting with Baker in Washington on Monday, the official said, "From what I hear, it is not certain whether the U.S. side simply expressed the U.S. government's view on the project or wants a response from Japan."

He declined to comment what kind of "certain clarifications" President George Bush has demanded on the joint development project. He merely noted that Monday's meeting was the first official talk the two governments have had on the FSX issue since the start of the Bush administration.

2. General Questions

Q1 Do you think this article states,

Mainly fact		Both		Mainly opinion
5---	---4---	---3---	---2---	---1
3 (20%)	3 (20%)	2 (13%)	4 (27%)	3 (20%)

Q2 How do you assess this article?

Favors Japan		Neutral		Favors U.S.	N/O
5---	---4---	---3---	---2---	---1---	---0
0 (0%)	2 (13%)	10 (67%)	0 (0%)	0 (0%)	3 (20%)

Q3 Does this article reinforce or challenge your prior beliefs about the FSX?

Reinforces		Neutral		Challenges
5---	---4---	---3---	---2---	---1
0 (0%)	0 (0%)	13 (87%)	1 (7%)	0 (0%)

Q4 Has this article influenced your opinion about the FSX?

High influence		Somewhat		No influence	N/O
5---	---4---	---3---	---2---	---1---	---0
0 (0%)	0 (0%)	1 (7%)	2 (13%)	9 (60%)	3 (20%)

Q5 Underline (Circle) any inflammatory words/phrases in the text that bias the article against Japan (against U.S.).

Underlined: Ave. = 2.5 Circled: Ave. = 0.5

Q6 Please select any words/phrases which best represent the content of this article.

(13 Answered)

II. SECOND QUESTIONNAIRE

The following questionnaire was distributed as a follow-on to the same 24 individuals as the first questionnaire. This time 11 answers were collected. The absolute number and percentage of participants selecting each response is indicated for each question.

A. COVER LETTER

QUESTIONNAIRE 2

Mar., 1991

Dear

This is the second set of questionnaires, quite similar to the former one.

Please answer these questions and send to SMC #1362 by Apr. 1.

Thanking you in advance,

Masao (Mar) Hosoya

B. FIRST ARTICLE

1. Article

SENATE NARROWLY APPROVES FSX JET DEAL WITH JAPAN.

THE WASHINGTON POST, MAY 17, 1989, FINAL EDITION

The Senate yesterday approved the joint development with Japan of a new-generation fighter plane, the FSX, by a narrow 52-to-47 vote that was described as a key test of the United States' relationship with its closest Pacific ally.

The vote provided a congressional go-ahead to an agreement that has been mired in controversy since it was announced in the last months of the Reagan administration. President Bush was forced to alter the agreement to gain congressional support.

In order to kill the deal, both houses of Congress had to vote against it. The House, which was considered to have a better chance of defeating the FSX, could not complete its hearing process before the Senate vote.

Sen. Richard G. Lugar (R-Ind.), former chairman of the Senate Foreign Relations Committee and a proponent of the deal, said disapproving the FSX would mark "a significant break" with Japan. "This is not the time to break the entire relationship with Japan," he said. "This is the time to stay with Japan, to stay with our ally."

Three days of debate before yesterday's vote exposed raw nerves in the relationship between the United States and Japan. That relationship is marked by close security ties as well as a \$52 billion U.S. trade deficit with Tokyo that has sparked accusations that Japan is an unfair trading partner and an untrustworthy ally.

The debate marked the first time that congressional frustration over the U.S. trade deficit had spilled over into the national security relationship with Japan.

"There is a lot of anger out there ...and the sooner the Japanese recognize it and start talking frankly, the better off that relationship will be," said Sen. Robert C. Byrd (D-W.Va.), an FSX opponent.

Opponents charged that the deal is a giveaway of crucial American technology that would help Japan develop its own civilian aviation industry. They urged that Japan buy the U.S.-made F16 fighter to help reduce the U.S. trade deficit and to get a bigger bang from its limited defense expenditures.

But the administration argued that the deal would strengthen U.S.-Japan defense ties and provide new technology to American manufacturers. Defense Secretary Richard B. Cheney said the deal would involve \$2.4 billion in Japanese purchases from the United States, easing the trade imbalance.

Opposition cut across party lines and drew votes from both liberals and conservatives. It was clear that some senators voted in favor of the agreement even though they did not like it. Senate Finance Committee Chairman Lloyd Bentsen (D-Tex.) delivered a scathing attack of Japanese trade practices, saying "Japan means to dominate any sector that is in the high end

of the economy." He said Japan should have bought U.S.-made planes "to reciprocate" for U.S. defense and trade policies that he said allowed it to prosper.

"If we had this to do over," Bentsen said, "I would not accept this deal." But he added he would vote in favor the FSX because it has gone too far to stop.

Sen. John C. Danforth (R-Mo.) said Japan should have bought the F16 to help cut the trade deficit, but added that "it would be a mistake to pull the rug out from under the Bush administration" after the president tightened the agreement.

Sen. Alfonse M. D'Amato (R-N.Y.) said the Japanese should buy an American plane as "a question of fundamental fairness and fair play" and as a symbol of free trade.

"If Japan doesn't buy," he said, "the United States should bar certain Japanese products from our country. We are being blackmailed into it because we don't have the courage to say the Japanese are not treating us fairly." Later yesterday the Senate approved by a 72-to-27 vote a resolution sponsored by Byrd that firms up concessions the administration said it received from the Japanese. The resolution said the production agreement should guarantee American companies at least 40 percent of the work involved in making the plane and its spare parts, and should keep critical engine technology in the United States. The administration opposed the resolution, but Rep. Richard A. Gephardt (D-Mo.) said he would try to bring it before the House today.

2. General Questions

Q1 Do you think this article states,

Mainly fact Both Mainly opinion

5--- ---4--- ---3--- ---2--- ---1

0 (0%) 4 (36%) 1 (9%) 1 (9%) 5 (45%)

Q2 How do you assess this article?

Favors Japan Neutral Favors U.S. N/O

5--- ---4--- ---3--- ---2--- ---1--- ---0

0 (0%) 3 (27%) 2 (18%) 2 (18%) 4 (36%) 0 (0%)

Q3 Does this article reinforce or challenge your prior beliefs about the FSX?

Reinforces Neutral Challenges

5--- ---4--- ---3--- ---2--- ---1

1 (9%) 1 (9%) 9 (81%) 0 (0%) 0 (0%)

Q4 Has this article influenced your opinion about the FSX?

High influence Somewhat No influence N/O

5--- ---4--- ---3--- ---2--- ---1--- ---0

0 (0%) 1 (9%) 1 (9%) 3 (27%) 5 (45%) 1 (9%)

Q5 Underline (Circle) any inflammatory words/phrases in the text that bias the article against Japan (against U.S.).

Underlined: Ave. = 4.5 Circled: Ave. = 1.4

Q6 Please select any words/phrases which best represent the content of this article.

(9 Answered)

3. Specific Questions

Q1 Do you think Japan is an unfair trading partner?

Strongly agree N/O Strongly disagree

5 4 3 2 1

3 (27%) 2 (18%) 4 (36%) 1 (9%) 1 (9%)

a. If your previous selection is either 1 or 2, answer this question.

Otherwise, proceed to question b.

True N/O False

(1) Japan has a higher tariff barrier than the U.S.

3 2 1

0(0) 1(50) 1(50)

(2) Japan has higher quantitative import restrictions than the U.S.

3 2 1

0(0) 1(50) 1(50)

(3) Japan restricts imports in areas where the U.S. has advantages, such as aerospace, energy, and agriculture.

3 2 1

0(0) 1(50) 1(50)

(4) The Japanese government has a preferential purchasing policy that favors Japanese manufacturers.

3 2 1

0(0) 2(100)

0(0)

(5) List two other reasons that you think that Japan is an unfair trading partner.

(No Answer)

b. Answer this question only if your answer in question 1 is either 3, 4 or

5:

True N/O False

(1) The U.S. has a higher tariff barrier than Japan.

3 2 1

1(11) 2(22) 6(66)

(2) The U.S. has higher quantitative import restrictions than Japan.

3 2 1

0(0) 3(33) 6(66)

(3) The U.S. restricts imports in areas where Japan has advantages, such as automobiles, electronics, and shipbuilding.

3 2 1

4(44) 2(33) 3(33)

(4) The U.S. government has a preferential purchasing policy that favors U.S. manufacturers.

3 2 1

6(66) 1(11) 2(22)

Q2. Do you think that Japan is an untrustworthy ally?

Strongly agree

N/O

Strongly disagree

5 4 3 2 1

0 (0%) 4 (36%) 1(9%) 2 (18%) 4 (36%)

a. If your previous selection is either 5, 4 or 3, answer this question.

Otherwise, proceed to question b.

(1) Japan votes more often against U.S. at U.N. than other allies.

True N/O False

3 2 1

0(0) 4(80) 1(20)

(2) Japanese companies allow more shipments of national-security sensitive items to communist countries than other allies.

3 2 1

1(20) 3(60) 1(20)

(3) List two other reasons that you think that Japan is an untrustworthy ally.

(2 Answered)

b. Answer this question only if your answer in question 2 is either 1 or 2:

(1) Japan votes more often against U.S. at U.N. than other allies.

3	2	1
0(0)	3(50)	3(50)

(2) Japanese companies allow more shipments of national-security sensitive items to communist countries than other allies. 3 2 1

0(0)	5(83)	1(17)
------	-------	-------

(3) List two other reasons that you think that Japan is a reliable ally.

(1 Answered)

Q3. If the FSX Pact was canceled, who do you think would benefit?

	Yes	N/O	No
(1) Japanese aerospace industry	3	2	1
	1(9)	2(18)	8(72)
(2) U.S. aerospace industry	3	2	1
	3(27)	5(45)	3(27)
(3) European aerospace industry	3	2	1
	5(45)	4(36)	2(18)
(4) Japanese tax-payers	3	2	1
	1(9)	4(36)	6(54)
(5) U.S. tax-payers	3	2	1
	1(9)	5(45)	5(45)

C. SECOND ARTICLE

1. Article

JAPANESE PRESS HARSHLY CRITICAL OF FSX ACCORD WITH UNITED STATES

ASAHI NEWS SERVICE, MAY 4, 1989

TOKYO -- Japanese newspapers have lashed out against the accord announced by President George Bush on the joint development of a new jet fighter for Japan, saying Japan is giving away valuable technology to the United States.

In an editorial, the influential daily Asahi Shimbun called the accord "far too one-sided." The Asahi and other newspapers were critical of limits placed on the Japanese use of U.S. technology brought to the project. At the same time, the United States is to be allowed the unconditional use of Japanese technology, including high-tech materials to be used for the fuselage of the jet, called the FSX.

"Is this worthy of being called a mutually beneficial joint production?" the Asahi asked. "In a worst-case scenario, it is possible that the results of the project, financed 100 percent by Japanese taxpayers, will flow out of the United States to third countries in the form of weapons and weapons technology."

The Mainichi Shimbun called the accord "deplorable" and said in an editorial that the "almost unilateral concession by Japan is likely to perpetuate the hardline attitude in Congress rather than alleviate discontent with Japan."

"This was the worst possible conclusion," said the Nihon Keizai Shimbun, a financial daily known for its pro-U.S. editorial stance.

Japanese Foreign Ministry and Defence Agency officials defended the accord, saying that any concessions made by Japan were necessary to enable work to begin on the project.

"The agreement was intended to be of help to the U.S. administration, which is finding it difficult to persuade Congress to approve the accord," said one official, who added that Bush now owes Japan a "debt of gratitude."

Press criticism was also directed against Japanese officials who were caught off guard by the change in the U.S. negotiating position after Bush became president. President Ronald Reagan had already endorsed an accord that was for more beneficial to Japan. But Bush decided to review the project after opposition in Congress began to build.

"More than half the blame should be placed on the Japanese government, which bungled the negotiations," the Asahi Shimbun said. In a separate article, the Asahi said the Bush administration seems to place more importance on its relations with Congress than on reaching an amicable settlement of problems with a friendly nation.

In an editorial that ran under the headline "Crisis in Japan-U.S. Relations," the Yomiuri Shimbun said that if a change in the U.S. president "means the end of an agreement, trust in the U.S. government will be lost."

2. General Questions

Q1 Do you think this article states,

Mainly fact Both Mainly opinion

5--- ---4--- ---3--- ---2--- ---1

0 (0%) 1 (9%) 2 (18%) 1 (9%) 7 (63%)

Q2 How do you assess this article?

Favors Japan Neutral Favors U.S. N/O

5--- ---4--- ---3--- ---2--- ---1--- ---0

5 (45%) 4 (36%) 2 (18%) 0 (0%) 0 (0%) 0 (0%)

Q3 Does this article reinforce or challenge your prior beliefs about the FSX?

Reinforces Neutral Challenges

5--- ---4--- ---3--- ---2--- ---1

0 (0%) 0 (0%) 6 (54%) 4 (36%) 0 (0%)

Q4 Has this article influenced your opinion about the FSX?

High influence Somewhat No influence N/O

5--- ---4--- ---3--- ---2--- ---1--- ---0

0 (0%) 1 (9%) 1 (9%) 0 (0%) 7 (63%) 1 (9%)

Q5 Underline (Circle) any inflammatory words/phrases in the text that bias the article against Japan (against U.S.).

Underlined: Ave. = 1.4 Circled: Ave. = 3.1

Q6 Please select any words/phrases which best represent the content of this article.

(9 Answered)

3. Specific Questions

Q1. What benefit does Japan receive from the FSX deal?

	High				Low N/O	
a. Access to U.S. engine technology	5	4	3	2	1	0
	1(9)	3(27)	1(9)	1(9)	1(9)	4(36)
b. Access to U.S. airframe technology	5	4	3	2	1	0
	2(18)	1(9)	0(0)	1(9)	2(18)	5(45)
c. Access to U.S. computer software	5	4	3	2	1	0
	1(9)	3(27)	2(18)	1(9)	2(18)	2(18)
d. Access to U.S. aerospace development	5	4	3	2	1	0
and production technology	5(45)	0(0)	3(27)	1(9)	0(0)	2(18)

Q2. What benefit does the U.S. receive from the FSX deal?

a. Access to Japanese production	5	4	3	2	1	0
technology	3(27)	3(27)	3(27)	0(0)	0(0)	2(18)
b. Access to Japanese aerospace	5	4	3	2	1	0
technology	0(0)	1(9)	2(18)	0(0)	2(18)	5(45)
c. Access to Japanese composite materials	5	4	3	2	1	0
technology	2(18)	6(54)	2(18)	0(0)	0(0)	1(9)
d. Employment of U.S. labor	5	4	3	2	1	0
	3(27)	0(0)	3(27)	1(9)	2(18)	2(18)
e. Improved balance of trade with Japan	5	4	3	2	1	0
	2(18)	2(18)	4(36)	2(18)	0(0)	1(9)

Q3. Which country has made the greatest concessions in the FSX program?

Japan	Both	U.S.	N/O
5	4	3	2
1	1	1	0

0(0) 2(18) 5(45) 1(9) 1(9) 2(18)

Q4. Overall, how would you assess the U.S. as a trading partner with Japan?

Good Poor N/O

5 4 3 2 1 0

3(27) 0(0) 7(63) 0(0) 1(9) 0(0)

How would you rate the U.S. in each of the following areas?

Good Poor N/O

a. Provides large accessible market

5 4 3 2 1 0

5(45) 3(27) 0(0) 1(9) 1(9) 1(9)

b. Consistent policies

5 4 3 2 1 0

0(0) 2(18) 3(27) 2(18) 4(36) 0(0)

c. Makes reasonable concessions

5 4 3 2 1 0

1(9) 2(18) 4(36) 2(18) 1(9) 1(9)

d. Repays previous concessions

5 4 3 2 1 0

2(18) 2(18) 2(18) 1(9) 2(18) 2(18)

Q5. Overall, how would you assess Japan as a trading partner with the U.S.?

Good Poor N/O

5 4 3 2 1 0

0(0) 1(9) 4(36) 0(0) 4(36) 0(0)

How would you rate the Japan in each of the following areas?

Good Poor N/O

a. Provides large accessible market

5 4 3 2 1 0

0(0) 2(18) 1(9) 3(27) 4(36) 1(9)

b. Consistent policies

5 4 3 2 1 0

	1(9)	2(18)	5(45)	2(18)	0(0)	1(0)
c. Makes reasonable concessions	5	4	3	2	1	0
	2(18)	1(9)	3(27)	3(27)	1(9)	1(9)
d. Repays previous concessions	5	4	3	2	1	0
	2(18)	2(18)	3(27)	1(9)	1(9)	2(18)

D. THIRD ARTICLE

1. Article

JAPAN EXPECTS BUSH'S VETO

THE JAPAN TIMES, MAY.20,1989

Japan expects U.S. President George Bush to veto a recent congressional amendment, which protects American interests in the joint development plan for the FSX, Japan's next-generation support fighter, Defense Agency Director General Kichiro Tazawa said Friday.

Tazawa conveyed this message to U.S. Ambassador Michael Armacost when they met at the agency Thursday.

"I think the ambassador understood my plea, because he did not object to it," Tazawa told reporters after the Cabinet meeting.

The U.S. Senate voted Tuesday 52-47 to allow the U.S. to go ahead with the controversial joint development project for the FSX, which will be modeled after the U.S.-made F-16 fighters.

At the same time, however, the Senate voted 72-27 on the amendment proposed by Sen. Robert Byrd. The Byrd amendment in question calls for the U.S. government to ban transfer of "critical engine technologies" to Japan and to receive more than 40 percent share of the plane's production for American firms.

"The amendment could require the revision of the memorandum of understanding (MOU) on the project, which was signed by the two governments last year and set the U.S. work shares at 35 to 45 percent," Tazawa said.

He also told Armacost, in their Thursday session, that trade and defense should not be linked with each other and that the Japanese government was "very shocked" when the U.S. government called for clarifications on the joint project earlier this year, according to Tazawa.

2. General Questions

Q1 Do you think this article states,

Mainly fact		Both		Mainly opinion
-------------	--	------	--	----------------

5---	---4---	---3---	---2---	---1
------	---------	---------	---------	------

3 (27%)	0 (0%)	3 (27%)	5 (45%)	0 (0%)
---------	--------	---------	---------	--------

Q2 How do you assess this article?

Favors Japan		Neutral		Favors U.S.	N/O
--------------	--	---------	--	-------------	-----

5---	---4---	---3---	---2---	---1---	---0
------	---------	---------	---------	---------	------

1 (9%)	3 (27%)	7 (63%)	0 (0%)	0 (0%)	0 (0%)
--------	---------	---------	--------	--------	--------

Q3 Does this article reinforce or challenge your prior beliefs about the FSX?

Reinforces		Neutral		Challenges
------------	--	---------	--	------------

5---	---4---	---3---	---2---	---1
------	---------	---------	---------	------

0 (0%)	2 (18%)	8 (72%)	1 (9%)	0 (0%)
--------	---------	---------	--------	--------

Q4 Has this article influenced your opinion about the FSX?

High influence		Somewhat		No influence	N/O
----------------	--	----------	--	--------------	-----

5---	---4---	---3---	---2---	---1---	---0
------	---------	---------	---------	---------	------

0 (0%)	1 (9%)	1 (9%)	1 (9%)	7 (63%)	1 (9%)
--------	--------	--------	--------	---------	--------

Q5 Underline (Circle) any inflammatory words/phrases in the text that bias the article against Japan (against U.S.).

Underlined: Ave. = 0.8 Circled: Ave. = 0.7

Q6 Please select any words/phrases which best represent the content of this article.

(9 Answered)

E. SUMMARY QUESTION

Q. I would welcome any comments or suggestions concerning this questionnaire.

(6 Answered)

Thank you very much again, and please send your answer by Apr. 1 to SMC #1362.

III. ANALYSIS

A. BACKGROUND QUESTIONS

- About a half of the respondents indicated familiarity with the FSX debate, and a higher number of respondents (87%) were familiar with the broader U.S./Japan trade debate.
- Roughly two thirds (67%) stated they had not formed an opinion concerning the FSX deal.

A higher number of respondents (60%) formed an opinion concerning the U.S./Japan trade debate. None felt that trade favors U.S., while about half felt that trade favors Japan. The other half felt the the trade benefits both countries about equally.

In the circumstance of recent heated debate on the U.S./Japan trade relationship, the survey results indicate that people are more familiar with trade issues than the FSX debate. More have formed an opinion on trade rather than on FSX, and found that the trade favors Japan rather than U.S.

B. FIRST ARTICLE

1. General Questions

- A larger number of respondents thought that the article is more factual than opinion-piece.
- Eight out of 14 respondents felt that the article is favorable to Japan, and three felt it is favorable to U.S. The remaining three thought the article is neutral to the both countries.
- 93% (14 out of 15) felt that the article neither reinforced nor challenged their prior beliefs about the FSX. Only one out of 15 respondents felt it had some influence in that the article challenged his prior belief.
- The respondents found on average 5.2 words/phrases that bias the article towards Japan. They found 3.1 words/phrases that bias the article towards U.S.

2. Specific Questions

- 47% (7 out of 15) thought that the U.S. was not a reliable ally for Japanese, while 33% (5 out of 15) thought otherwise.
- 80% thought that reneging on the FSX MOU would damage the credibility of U.S. foreign policy.
- The respondents, on the average, thought each agency was beneficiary than loser of the FSX MOU.

The largest percentage of the respondent (70%) found the General Dynamics as the beneficiary. This was followed by Mitsubishi Heavy Industries (66%). The US Congress (26%) and the Department of Commerce (46%) were rated lower than the Department of State (47%) as the beneficiary.

C. SECOND ARTICLE

1. General Questions

- As in the previous article, a larger number of respondents thought the article was more factual than opinion-piece. This characteristic is even stronger for this article than the previous Washington Post article (67% vs 40%.)
- Five out of 15 respondents (33%) thought the article was favorable to Japan, one felt it was favorable to U.S. The remaining nine thought that the article was neutral to both countries.
- 73% (11 out of 14) felt that the article neither reinforced nor challenged their prior beliefs about the FSX. One felt it reinforced his prior belief, and two felt it challenged their beliefs.
- The respondents found on average 1.2 words/phrases that bias the article towards Japan. They found 1.6 words/phrases that bias towards U.S.

2. Specific Questions

- The following Table A-1, for each organization (left column), appropriate organizational concern (right column) were selected by the respondents based on their reading of the article.

TABLE A-1: ORGANIZATION AND ITS CONCERN

Organization	Organizational Concern
1. U.S. DOD	A. U.S. commercial technology transfer
2. U.S. DOS	B. U.S. defense technology transfer
3. U.S. DOC	C. U.S. software technology transfer
4. U.S. Congress	D. Transfer of U.S. technology to third country
5. General Dynamics	E. U.S. Trade deficit to Japan
6. Japan Defense Agency	F. U.S. Employment
7. M. of Foreign Affairs	G. Japanese commercial technology
8. M. of Int'l Trade and Industries	H. Japanese production technology transfer
9. Japanese Diet	I. Japanese employment
10. Mitsubishi Heavy Industries	J. Time delay
	K. General Interest
	L. Not Indicated

Summarized results are shown in a matrix form in Table A-2. The number in the matrix indicates frequency at which particular "concern" was selected for the given organization's concern. For example, the cell DOS/E shows "3". This means three respondents selected "U.S. trade deficit to Japan" as the concern for "the Department of State" based on the article.

TABLE A-2: ORGANIZATION'S CONCERN

Org.	Concern												
	A	B	C	D	E	F	G	H	I	J	K	Sub Total	L
DOD	1	7	2	2				1			2	15	5
DOS		3	1	2	3	1	1				2	13	6
DOC	5		4	1	8	7						25	1
Cong.	4	5	6		6	5	1	1			1	29	
GD	2		3	3		6	3	4			3	24	2
JDA	1	4	1				1	2	1	4		14	3
MOFA		1					1	1	1	8		12	4
MITI		1			1				3	3	1	9	6
Diet							1	1		1	3	6	8
MHI	3	4	4			1	1	3	3	2	2	23	5
Total	16	25	21	8	18	20	9	13	8	18	14	170	40

- The respondents found that the article indicated that "B": U.S. defense technology transfer (25); "C": software technology transfer (21); and "F": employment (20) are the three major concerns of the organizations involved. The Congress, the Department of Commerce and the General Dynamics are found to be most concerned with the issues mentioned.
- As U.S. production is concerned, three out of 14 thought 45% and above was a "fair" share. Six thought 40% and below was a fair share. Five chose "No Opinion" for this question.
- The U.S. was thought to lead airframe (60% of the respondents) aircraft engine (67%), computer (53%) and software (60%) technologies. Japan was thought to lead semiconductor (34%) and manufacturing (80%) technologies. The two countries were thought to be even in material technology. 40% thought U.S. leads the overall technological balance, while 14% thought Japan leads. 27% thought the two countries are equal.

D. THIRD ARTICLE

1. General Questions

- In contrast to the previous two articles, a larger number of respondents thought the article was more opinion-piece than factual (47% vs 40%).
- Two out of 15 respondents (13%) thought the article is favorable to Japan, but none felt it was favorable to U.S. The majority (67%) thought that the article was neutral to both countries.
- 87% (13 out of 14) felt that the article neither reinforced nor challenged their prior beliefs about the FSX. One felt it challenged his prior belief.
- The respondents found on average 2.5 words/phrases that bias the article towards Japan. They found 0.5 words/phrases that bias towards U.S

APPENDIX C. MAIN QUESTIONNAIRE AND RESULTS

I. QUESTIONNAIRE

The following questionnaire was distributed to 151 individuals. These participants can be divided into three groups. The first groups consists of 60 NPS students selected randomly by their SMC number. The second group contained 67 NPS students who were taking MN 4145 (Policy Analysis) in the spring quarter, 1991. The third group contained 24 Japan Maritime Self Defense Force (JMSDF) who were studying in New Jersey. In total 88 (18, 46, and 24) answers were collected. There are numbers and those percentages of answers which were chosen under each question.

This questionnaire was based on the pilot case questionnaires. Articles were the same as the second of the pilot case, but some of the questions were refined based on the results of the pilot study.

A. COVER LETTER

QUESTIONNAIRE

Apr. 12, 1991

Dear Colleague

The purpose of this questionnaire is to gather data on readers' responses to selected newspaper articles. The data from this questionnaire will be used in my graduate thesis (Title: Computer Aided Newspaper Content Analysis). In particular, the data will be used to develop and validate a quantitative content analysis framework. Responses will be aggregated and the individual respondents' confidentiality will be maintained.

1. General Information

This questionnaire contains three articles; one from the Washington Post, one from Asahi Daily News, and one from the Japan Times.

Each article discusses the FSX (the Japan Air Self Defense Force's (JASDF) new fighter support jet). The FSX is a co-development program involving Japan and the U.S. Japan decided to co-develop the FSX rather than developing it domestically or buying an existing plane.

There has been extensive debate concerning many aspect of this deal in both countries (e.g., technology transfer, production shares, security of sensitive software, balance of trade, etc.). This debate provides a good opportunity to develop a quantitative content analysis framework because of the diverse viewpoints across countries and the voluminous newspaper coverage.

2. BACKGROUND QUESTIONS

Q1 Are you familiar with the FSX debate?

Very familiar		Somewhat		Unfamiliar
---------------	--	----------	--	------------

5---	---4---	---3---	---2---	---1
------	---------	---------	---------	------

4 (5%)	11 (13%)	26 (30%)	14 (16%)	31 (36%)
--------	----------	----------	----------	----------

Q2 Have you formed an opinion concerning the FSX deal?

Favors U.S.		Fair		Favors Japan		No opinion
-------------	--	------	--	--------------	--	------------

5---	---4---	---3---	---2---	---1---		---0 (N/O)
------	---------	---------	---------	---------	--	------------

2 (2%)	5 (6%)	10 (11%)	13 (15%)	6(7%)		51 (59%)
--------	--------	----------	----------	-------	--	----------

Q3 Are you familiar with the broader U.S./Japan trade debate?

Very familiar		Somewhat		Unfamiliar
---------------	--	----------	--	------------

5---	---4---	---3---	---2---	---1
------	---------	---------	---------	------

8 (9%)	24 (28%)	35 (41%)	14 (16%)	5 (6%)
--------	----------	----------	----------	--------

Q4 Have you formed an opinion about the broader U.S./Japan trade relationship?

Favors U.S.		Fair		Favors Japan		N/O
-------------	--	------	--	--------------	--	-----

5---	---4---	---3---	---2---	---1---		---0
------	---------	---------	---------	---------	--	------

2 (2%)	14 (16%)	17 (20%)	23 (26%)	17 (20%)		14 (16%)
--------	----------	----------	----------	----------	--	----------

Q5 If you would like to make any comments about the FSX or U.S./Japan relationship, please write here.

(12 Answered) (13.6%)

Thanking you in advance,

Masao (Mar) Hosoya

Due to the time constraints, I would appreciate receiving your answer by Apr. 18. Please send your answer to SMC #1362.

II. RESULTS

A. FIRST ARTICLE

SENATE NARROWLY APPROVES FSX JET DEAL WITH JAPAN.

THE WASHINGTON POST, MAY 17, 1989, FINAL EDITION

1. General Questions

Q1 Do you think this article states,

Mainly fact	Both		Mainly opinion		N/O
5---	---4---	---3---	---2---	---1---	---0
4 (5%)	11 (13%)	35 (40%)	15 (17%)	22 (25%)	1 (1%)

Q2 How do you assess this article?

Favors Japan	Neutral		Favors U.S.		N/O
5---	---4---	---3---	---2---	---1---	---0
2 (2%)	6 (7%)	22 (25%)	30 (34%)	25 (28%)	3 (3%)

Q3 Does this article reinforce or challenge your prior beliefs about the FSX?

Reinforces	Neutral		Challenges		N/O
5---	---4---	---3---	---2---	---1---	---0
6 (7%)	16 (18%)	38 (43%)	7 (8%)	3 (3%)	18 (20%)

Q4 Has this article influenced your opinion about the FSX?

High influence	Somewhat		No influence		N/O
5---	---4---	---3---	---2---	---1---	---0
1 (1%)	8 (9%)	28 (32%)	13 (15%)	32 (36%)	6 (7%)

2. Specific Questions

Q1 Do you think Japan is an unfair trading partner?

Strongly agree			Strongly disagree		N/O
5	4	3	2	1	0
12 (14%)	41 (47%)	13 (15%)	10 (11%)	7 (8%)	5 (6%)

a. If your previous selection is either 5, 4, or 3, answer this question.

Otherwise, proceed to question b.	True	False	N/O
(1) Japan has a higher tariff barrier than the U.S.	2	1	0
	46(70)	10(15)	10(15)
(2) Japan has higher quantitative import restrictions than the U.S.	2	1	0
	48(73)	6(9)	12(18)
(3) Japan restricts imports in areas where the U.S. has advantages, such as aerospace, energy, and agriculture.	2	1	0
	47(71)	11(17)	8(12)
(4) The Japanese government has a preferential purchasing policy that favors Japanese manufacturers.	2	1	0
	54(83)	1(2)	10(16)
(5) List two other reasons that you think that Japan is an unfair trading partner.			

(37 Answered) (57.8%)

b. Answer this question only if your answer in question 1 is either 2 or 1:

	True	False	N/O
(1) The U.S. has a higher tariff barrier than Japan.	2	1	0
	5(29)	6(35)	6(35)

(2) The U.S. has higher quantitative import restrictions than Japan.

2 1 0
7(41) 4(24) 6(35)

(3) The U.S. restricts imports in the areas where Japan has advantages, such as automobiles, electronics, and shipbuilding.

2 1 0
9(53) 5(29) 3(18)

(4) The U.S. government has a preferential purchasing policy that favors U.S. manufacturers.

2 1 0
8(50) 4(25) 4(25)

(5) List two other reasons that you think that Japan is a fair trading partner.

(5 Answered) (31.3%)

Q2. Do you think that Japan is an untrustworthy ally?

Strongly agree			Strongly disagree		N/O
5	4	3	2	1	0
1 (1%)	14 (16%)	13 (15%)	27 (31%)	23 (26%)	9 (10%)

a. If your previous selection is either 5, 4, or 3, answer this question.

Otherwise, proceed to question b.

(1) Japan votes more often against U.S. at U.N. than other allies.

True False N/O
2 1 0
8(29) 11(39) 9(32)

(2) Japanese companies allow more shipments of national-security sensitive items to communist countries than other allies.

2 1 0
13(46) 9(32) 6(21)

(3) List two other reasons that you think that Japan is an untrustworthy ally.

(16 Answered) (57.1%)

b. Answer this question only if your answer in question 2 is either 2 or 1:

(1) Japan votes more often against U.S. at U.N. than other allies.

2	1	0
6(12)	34(68)	10(20)

(2) Japanese companies allow more shipments of national-security sensitive items to communist countries than other allies.

2	1	0
15(30)	23(46)	12(24)

(3) List two other reasons that you think that Japan is a reliable ally.

(30 Answered) (60%)

Q3. If the FSX Pact were canceled, who do you think would benefit?

	Yes	No	N/O
(1) Japanese aerospace industry	2	1	0
	29(33)	52(59)	7(8)
(2) U.S. aerospace industry	2	1	0
	32(37)	48(55)	7(9)
(3) European aerospace industry	2	1	0
	36(41)	32(37)	19(22)
(4) Japanese tax-payers	2	1	0
	20(23)	48(55)	20(23)
(5) U.S. tax-payers	2	1	0
	22(25)	48(55)	17(20)

B. SECOND ARTICLE

JAPANESE PRESS HARSHLY CRITICAL OF FSX ACCORD WITH UNITED STATES

ASAHI NEWS SERVICE, MAY 4, 1989

1. General Questions

Q1 Do you think this article states,

Mainly fact		Both		Mainly opinion	N/O
5---	---4---	---3---	---2---	---1---	---0
3 (3%)	6 (7%)	26 (30%)	21 (24%)	30 (34%)	2 (2%)

Q2 How do you assess this article?

Favors Japan		Neutral		Favors U.S.	N/O
5---	---4---	---3---	---2---	---1---	---0
24 (27%)	38 (43%)	19 (22%)	3 (3%)	1 (1%)	3 (3%)

Q3 Does this article reinforce or challenge your prior beliefs about
the FSX?

Reinforces		Neutral		Challenges	N/O
5---	---4---	---3---	---2---	---1---	---0
3 (3%)	7 (8%)	47 (53%)	13 (15%)	7 (8%)	11 (13%)

Q4 Has this article influenced your opinion about the FSX?

High influence		Somewhat		No influence	N/O
5---	---4---	---3---	---2---	---1---	---0
0 (0%)	6 (7%)	29 (33%)	19 (22%)	26 (30%)	8 (9%)

2. Specific Questions

Q1. What benefit does Japan receive from the FSX deal?

	High				Low N/O	
a. Access to U.S. engine technology	5	4	3	2	1	0
	21(24)	32(37)	7(8)	7(8)	6(7)	14(16)
b. Access to U.S. airframe technology	5	4	3	2	1	0
	13(15)	25(29)	15(17)	10(11)	10(11)	14(16)
c. Access to U.S. computer software	5	4	3	2	1	0
	19(22)	23(26)	16(18)	9(10)	7(8)	13(15)
d. Access to U.S. aerospace development	5	4	3	2	1	0
and production technology	19(22)	41(47)	12(14)	3(3)	2(2)	10(11)

Q2. What benefit does the U.S. receive from the FSX deal?

a. Access to Japanese production	5	4	3	2	1	0
technology	9(10)	34(39)	21(24)	9(10)	4(5)	10(11)
b. Access to Japanese aerospace	5	4	3	2	1	0
technology	6(7)	15(17)	24(28)	19(22)	13(15)	10(11)
c. Access to Japanese composite	5	4	3	2	1	0
materials technology	22(25)	29(33)	15(17)	8(9)	4(5)	9(10)
d. Employment of U.S. labor	5	4	3	2	1	0
	8(9)	17(20)	29(33)	12(14)	9(10)	12(14)
e. Improved balance of trade with Japan	5	4	3	2	1	0
	7(8)	16(19)	30(35)	9(11)	14(16)	9(11)

Q3. Which country has made the greatest concessions in the FSX program?

Japan	Both	U.S.	N/O
5	4	3	2
1	0		

8(9) 17(19) 30(34) 10(11) 11(13) 12(14)

Q4. Overall, how would you assess the U.S. as a trading partner with Japan?

Good	Poor	N/O
5	4	3
2	1	0

15(17) 31(36) 19(22) 12(14) 4(5) 6(7)

How would you rate the U.S. in each of the following areas?

	Good	Poor	N/O
a. Provides large accessible market	5	4	3
	2	1	0
	37(42)	31(35)	12(14)
	2(2)	2(2)	4(5)
b. Consistent policies	5	4	3
	2	1	0
	7(8)	17(19)	32(36)
	21(24)	7(8)	4(5)
c. Makes reasonable concessions	5	4	3
	2	1	0
	8(9)	26(30)	30(34)
	13(15)	3(3)	8(9)
d. Repays previous concessions	5	4	3
	2	1	0
	12(14)	16(18)	31(35)
	12(14)	3(3)	14(16)

Q5. Overall, how would you assess Japan as a trading partner with the U.S.?

Good	Poor	N/O
5	4	3
2	1	0

3(4) 12(14) 25(29) 23(27) 15(18) 7(8)

How would you rate the Japan in each of the following areas?

	Good				Poor N/O	
a. Provides large accessible market	5	4	3	2	1	0
	2(2)	9(10)	20(23)	26(30)	25(28)	6(7)
b. Consistent policies	5	4	3	2	1	0
	8(9)	22(25)	29(33)	10(11)	4(5)	15(17)
c. Makes reasonable concessions	5	4	3	2	1	0
	1(1)	6(7)	31(35)	26(30)	13(15)	11(13)
d. Repays previous concessions	5	4	3	2	1	0
	1(1)	9(10)	33(38)	20(23)	7(8)	18(20)

C. THIRD ARTICLE

JAPAN EXPECTS BUSH'S VETO

THE JAPAN TIMES, MAY.20,1989

1. General Questions

Q1 Do you think this article states,

Mainly fact	Both		Mainly opinion		N/O
5---	---4---	---3---	---2---	---1---	---0
11 (13%)	30 (34%)	35 (40%)	4 (5%)	6 (7%)	2 (2%)

Q2 How do you assess this article?

Favors Japan	Neutral		Favors U.S.		N/O
5---	---4---	---3---	---2---	---1---	---0
4 (5%)	23 (26%)	47 (53%)	8 (9%)	2 (2%)	4 (5%)

Q3 Does this article reinforce or challenge your prior beliefs about the FSX?

Reinforces	Neutral		Challenges		N/O
5---	---4---	---3---	---2---	---1---	---0
2 (2%)	13 (15%)	53 (60%)	7 (8%)	1 (1%)	12 (14%)

Q4 Has this article influenced your opinion about the FSX?

High influence	Somewhat		No influence		N/O
5---	---4---	---3---	---2---	---1---	---0
2 (2%)	9 (10%)	29 (33%)	11 (13%)	29 (33%)	8 (9%)

D. SUMMARY QUESTION

Q. I would welcome any comments or suggestions concerning this questionnaire.

(20 Answered)

(22.7%)

Thank you very much again, and please send your answer by Apr. 18 to SMC #1362.

APPENDIX D. SUMMARY OF MAIN QUESTIONNAIRE

The summary of responses on the main questionnaire is listed in a table format in the following four pages. The responses are divided by the groups (group 1 through 3), and their totals are shown at the bottom of the table. Group averages and the standard deviations, and those differences among three groups are also noted in the table.

SUMMARY OF MAIN QUESTIONNAIRE

	BACKGROUND				#1 GENERAL				#1SPECIFIC				
	1	2	3	4	1	2	3	4	1 A	1	2	3	4
GROUP1													
5	0	0	2	0	2	0	2	1	5				
4	2	1	9	1	6	1	2	2	11				
3	6	1	3	3	4	6	12	5	0				
2	5	1	3	4	3	6	0	3	1	10	11	13	13
1	4	1	0	7	3	4	0	6	0	2	1	1	0
N / O	0	13	0	2	0	1	2	1	1	4	4	2	2
AVE	2.35	2.50	3.59	1.87	3.06	2.24	3.38	2.35	4.18	1.83	1.92	1.93	2.00
ST DEV	1.00	1.29	0.94	0.99	1.30	0.90	0.72	1.27	0.73	0.39	0.29	0.27	0.00
GROUP2													
5	1	1	4	2	0	1	4	0	7				
4	4	3	11	10	1	3	10	5	23				
3	9	4	21	6	18	2	15	16	8				
2	8	3	6	11	12	20	2	6	5	27	27	28	31
1	23	1	3	6	15	19	2	17	0	5	4	6	0
N / O	0	34	0	11	0	1	13	2	3	6	7	4	7
AVE	1.93	3.00	3.16	2.74	2.11	1.82	3.36	2.20	3.74	1.84	1.87	1.82	2.00
ST DEV	1.14	1.13	1.00	1.22	0.90	0.96	0.99	1.09	0.88	0.37	0.34	0.39	0.00
GROUP3													
5	3	1	2	0	2	1	0	0	0				
4	5	1	4	3	4	2	4	1	7				
3	11	5	11	8	13	14	11	7	5				
2	1	9	5	8	0	4	5	4	4	9	10	6	9
1	4	4	2	4	4	2	1	9	7	3	1	4	1
N / O	0	4	0	1	1	1	3	3	1	0	1	2	1
AVE	3.08	2.30	2.96	2.43	3.00	2.83	2.86	2.00	2.52	1.75	1.91	1.60	1.90
ST DEV	1.21	1.03	1.04	0.95	1.13	0.89	0.79	1.00	1.24	0.45	0.30	0.52	0.32
TOTAL													
5	4	2	8	2	4	2	6	1	12				
4	11	5	24	14	11	6	16	8	41				
3	26	10	35	17	35	22	38	28	13				
2	14	13	14	23	15	30	7	13	10	46	48	47	53
1	31	6	5	17	22	25	3	32	7	10	6	11	1
N / O	0	51	0	14	1	3	18	6	5	10	12	8	10
AVE	2.33	2.71	3.19	2.48	2.55	2.18	3.23	2.18	3.50	1.82	1.89	1.78	1.97
DIF AVE													
GP1-2	0.42	0.50	0.43	0.87	0.95	0.42	0.02	0.15	0.44	0.01	0.05	0.11	0.00
GP2-3	1.15	0.70	0.20	0.31	0.89	1.00	0.51	0.20	1.22	0.09	0.04	0.22	0.09
GP3-1	0.73	0.20	0.63	0.56	0.06	0.59	0.52	0.35	1.66	0.08	0.01	0.33	0.09
DIF SD													
GP1-2	0.14	0.16	0.06	0.23	0.40	0.06	0.27	0.18	0.15	0.02	0.05	0.12	0.00
GP2-3	0.05	0.12	0.02	0.30	0.20	0.09	0.22	0.11	0.34	0.06	0.05	0.10	0.29
GP3-1	0.19	0.29	0.08	0.07	0.20	0.03	0.05	0.29	0.48	0.04	0.00	0.22	0.29

SUMMARY OF MAIN QUESTIONNAIRE (CONTINUED)

		# 1 SPECIFIC (CONTINUED)														
		B				2 A		B		3						
		1	2	3	4	1	2	1	2	1	2	3	4	5		
GROUP1	5															
	4															0
	3															4
	2															2
	1	1	1	1	1	7	0	1	0	4	4	7	6	2	3	
N / O	1	0	0	0	0	5	4	3	10	7	13	9	8	13	13	
		0	0	0	0	0	2	2	2	1	1	2	4	3	2	
	AVE	2.00	2.00	2.00	2.00	2.28	1.00	1.25	1.00	1.36	1.24	1.44	1.43	1.13	1.19	
	ST DEV															1.13 0.00 0.50 0.00 0.50 0.44 0.51 0.51 0.35 0.40
GROUP2	5															
	4															1
	3															5
	2															9
	1	1	2	3	4	17	4	8	1	6	7	17	25	9	14	
N / O	1	2	1	1	0	8	5	4	19	11	34	25	9	22	20	
		2	2	1	1	6	6	3	5	8	5	4	12	15	12	
	AVE	1.33	1.67	1.75	2.00	2.35	1.44	1.67	1.05	1.35	1.17	1.40	1.74	1.29	1.41	
	ST DEV	0.58	0.58	0.50	0.00	1.03	0.53	0.49	0.22	0.49	0.38	0.50	0.45	0.46	0.50	
GROUP3	5															
	4															0
	3															5
	2															2
	1	3	4	5	3	3	4	4	5	5	18	8	5	9	5	
N / O	1	4	3	4	4	10	2	2	5	5	5	14	15	13	15	
		4	4	2	3	3	1	1	3	3	1	1	3	2	3	
	AVE	1.43	1.57	1.56	1.43	2.10	1.67	1.67	1.50	1.50	1.78	1.36	1.25	1.41	1.25	
	ST DEV	0.53	0.53	0.53	0.53	1.29	0.52	0.52	0.53	0.53	0.42	0.49	0.44	0.50	0.44	
TOTAL	5															
	4															1
	3															14
	2															13
	1	5	7	9	8	27	8	13	6	15	29	32	36	20	22	
N / O	1	6	4	5	4	23	11	9	34	23	52	48	32	48	48	
		6	6	3	4	9	9	6	10	12	7	7	19	20	17	
	AVE	1.50	1.71	1.75	1.84	2.27	1.41	1.58	1.16	1.39	1.35	1.40	1.54	1.29	1.32	
DIF AVE																
GP1-2		0.67	0.33	0.25	0.00	0.07	0.44	0.42	0.05	0.01	0.07	0.04	0.31	0.16	0.22	
GP2-3		0.10	0.10	0.19	0.57	0.25	0.22	0.00	0.45	0.15	0.61	0.04	0.49	0.12	0.16	
GP3-1		0.57	0.43	0.44	0.57	0.18	0.67	0.42	0.50	0.14	0.54	0.08	0.18	0.28	0.06	
DIF SD																
GP1-2		0.58	0.58	0.50	0.00	0.10	0.53	0.01	0.22	0.01	0.06	0.01	0.06	0.11	0.10	
GP2-3		0.08	0.08	0.00	0.49	0.23	0.06	0.02	0.28	0.01	0.03	0.02	0.01	0.03	0.07	
GP3-1		0.49	0.49	0.50	0.49	0.13	0.47	0.03	0.50	0.00	0.03	0.03	0.08	0.14	0.03	

SUMMARY OF MAIN QUESTIONNAIRE (CONTINUED)

	#2 GENERAL				#2 SPECIFIC										3
	1	2	3	4	1				2						
	A	B	C	D	A	B	C	D	E						
GROUP1															
5	2	7	1	0	3	3	2	4	2	1	3	3	3	0	
4	0	8	1	1	8	3	4	11	7	4	7	4	2	1	
3	2	3	11	7	0	3	7	1	5	4	4	6	6	8	
2	6	0	3	3	1	3	0	0	3	4	1	2	1	5	
1	8	0	0	5	2	1	2	0	0	4	1	1	3	2	
N / O	0	0	2	2	3	4	2	1	1	1	2	2	2	2	
AVE	2.00	4.22	3.00	2.25	3.64	3.31	3.27	4.19	3.47	2.65	3.63	3.38	3.07	2.50	
ST DEV	1.28	0.73	0.73	1.00	1.34	1.32	1.16	0.54	0.94	1.27	1.09	1.15	1.39	0.82	
GROUP2															
5	0	16	2	0	11	7	9	9	4	4	13	2	1	4	
4	2	23	1	1	15	16	12	19	22	7	12	9	12	10	
3	11	4	23	18	4	7	4	7	6	12	9	14	13	17	
2	11	2	7	11	2	3	7	1	1	8	3	6	4	3	
1	22	0	6	13	4	4	4	2	4	6	3	6	9	3	
N / O	0	1	7	3	10	9	10	8	8	8	5	8	5	9	
AVE	1.85	4.18	2.64	2.16	3.75	3.51	3.42	3.84	3.57	2.86	3.73	2.86	2.79	3.24	
ST DEV	0.94	0.78	0.96	0.90	1.27	1.22	1.36	1.00	1.09	1.23	1.22	1.13	1.20	1.04	
GROUP3															
5	1	1	0	0	7	3	8	6	3	1	6	3	3	4	
4	4	7	5	4	9	6	7	11	5	4	10	4	2	6	
3	13	12	13	4	3	5	5	4	10	8	2	9	11	5	
2	4	1	3	5	4	4	2	2	5	7	4	4	4	2	
1	0	1	1	8	0	5	1	0	0	3	0	2	2	6	
N / O	2	2	2	3	1	1	1	1	1	1	2	2	2	1	
AVE	3.09	3.27	3.00	2.19	3.83	2.91	3.83	3.91	3.26	2.70	3.82	3.09	3.00	3.00	
ST DEV	0.75	0.83	0.76	1.17	1.07	1.38	1.15	0.90	0.96	1.06	1.05	1.15	1.11	1.48	
TOTAL															
5	3	24	3	0	21	13	19	19	9	6	22	8	7	8	
4	6	38	7	6	32	25	23	41	34	15	29	17	16	17	
3	26	19	47	29	7	15	16	12	21	24	15	29	30	30	
2	21	3	13	19	7	10	9	3	9	19	8	12	9	10	
1	30	1	7	26	6	10	7	2	4	13	4	9	14	11	
N / O	2	3	11	8	14	14	13	10	10	10	9	12	9	12	
AVE	2.22	3.94	2.81	2.19	3.75	3.31	3.50	3.93	3.46	2.77	3.73	3.03	2.91	3.02	
DIF AVE															
GP1-2	0.15	0.04	0.36	0.09	0.11	0.20	0.15	0.35	0.10	0.21	0.10	0.52	0.28	0.74	
GP2-3	1.24	0.91	0.36	0.03	0.08	0.60	0.41	0.07	0.31	0.13	0.04	0.36	0.21	0.24	
GP3-1	1.09	0.95	0.00	0.06	0.19	0.40	0.56	0.28	0.21	0.09	0.05	0.15	0.07	0.50	
DIF SD															
GP1-2	0.34	0.05	0.23	0.10	0.07	0.10	0.20	0.40	0.15	0.04	0.13	0.02	0.19	0.22	
GP2-3	0.21	0.03	0.22	0.24	0.22	0.13	0.23	0.12	0.15	0.12	0.16	0.03	0.11	0.41	
GP3-1	0.55	0.08	0.01	0.14	0.29	0.03	0.03	0.34	0.00	0.16	0.03	0.02	0.30	0.62	

SUMMARY OF MAIN QUESTIONNAIRE (CONTINUED)

												#3 GENERAL			
		4					5					1	2	3	4
		A	B	C	D		A	B	C	D					
GROUP1															
	5	6	14	3	4	5	0	0	4	0	0	2	1	1	0
	4	6	3	4	7	5	2	0	4	0	2	8	8	4	3
	3	2	1	6	4	4	2	3	5	6	6	5	8	9	7
	2	4	0	3	3	3	9	6	1	9	6	2	1	2	1
	1	0	0	2	0	0	4	8	0	2	2	1	0	0	5
N / O		0	0	0	0	1	0	1	4	1	2	0	0	2	2
AVE		3.78	4.72	3.17	3.67	3.71	2.12	1.71	3.79	2.24	2.50	3.44	3.50	3.25	2.50
ST DEV		1.17	0.57	1.25	1.03	1.10	0.93	0.77	0.97	0.66	0.89	1.04	0.71	0.77	1.15
GROUP2															
	5	5	21	4	4	6	2	1	4	1	1	5	2	1	2
	4	20	17	9	15	8	5	1	14	3	3	17	10	5	4
	3	8	2	13	16	15	10	8	13	16	16	17	25	28	14
	2	4	2	13	5	6	13	17	6	12	9	2	5	3	7
	1	4	2	5	2	2	11	16	1	8	5	5	2	1	15
N / O		4	2	2	4	9	3	3	8	6	12	0	2	8	4
AVE		3.44	4.20	2.86	3.33	3.27	2.37	1.93	3.37	2.43	2.59	3.33	3.11	3.05	2.31
ST DEV		1.14	1.05	1.15	0.98	1.10	1.16	0.94	0.97	0.98	0.96	1.10	0.84	0.66	1.20
GROUP3															
	5	4	2	0	0	1	1	1	0	0	0	4	1	0	0
	4	5	11	4	4	3	5	8	4	3	4	5	5	4	2
	3	9	9	13	10	12	13	9	11	9	11	13	14	16	8
	2	4	0	5	5	3	1	3	3	5	5	0	2	2	3
	1	0	0	0	1	1	0	1	3	3	0	0	0	0	9
N / O		2	2	2	4	4	4	2	3	4	4	2	2	2	2
AVE		3.41	3.68	2.95	2.85	3.00	3.30	3.23	2.76	2.60	2.95	3.59	3.23	3.09	2.14
ST DEV		1.01	0.65	0.65	0.81	0.86	0.66	0.92	0.94	0.94	0.69	0.80	0.69	0.53	1.08
TOTAL															
	5	15	37	7	8	12	3	2	8	1	1	11	4	2	2
	4	31	31	17	26	16	12	9	22	6	9	30	23	13	9
	3	19	12	32	30	31	25	20	29	31	33	35	47	53	29
	2	12	2	21	13	12	23	26	10	26	20	4	8	7	11
	1	4	2	7	3	3	15	25	4	13	7	6	2	1	29
N / O		6	4	4	8	14	7	6	15	11	18	2	4	12	8
AVE		3.50	4.17	2.95	3.27	3.29	2.57	2.24	3.29	2.43	2.67	3.42	3.22	3.10	2.30
DIF AVE															
GP1-2		0.34	0.52	0.31	0.34	0.44	0.21	0.28	0.42	0.19	0.09	0.11	0.39	0.20	0.19
GP2-3		0.03	0.52	0.14	0.53	0.27	0.93	1.30	0.61	0.18	0.31	0.26	0.11	0.04	0.22
GP3-1		0.37	1.04	0.17	0.87	0.71	1.14	1.58	1.03	0.36	0.40	0.15	0.27	0.16	0.41
DIF SD															
GP1-2		0.03	0.48	0.10	0.05	0.00	0.20	0.24	0.00	0.32	0.07	0.06	0.13	0.11	0.05
GP2-3		0.16	0.42	0.48	0.23	0.26	0.52	0.03	0.05	0.07	0.33	0.32	0.17	0.14	0.20
GP3-1		0.19	0.06	0.58	0.28	0.26	0.32	0.20	0.05	0.26	0.27	0.26	0.04	0.26	0.15

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