The FSX Controversy: Is America Selling Out to Japan?

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International competition has eroded the once commanding U.S. advantage in technology. It has caused a shift in government and business relationships in the United States and raised fundamental questions about the conduct of American foreign policy. Both the public and the private sectors are increasingly concerned with a new set of technological issues related to industrial competitiveness. This concern has forced a reassessment of national priorities and caused both industry and government to rethink their traditional roles in the development and application of technology. The implications for foreign policy stem from one overriding fact: when it comes to advanced technology, national security can no longer be viewed in purely military terms (Inman and Burton 116).
CHAPTER 1: Losing Ground

The powers that be in the U.S. government have often ignored the link between economics and national security, between government policy and industry's capacity to compete globally. Many examples of lost capacity exist in the United States' recent history. Televisions, fax machines, liquid crystal displays, the automobile industry, computer chips—all American inventions and/or industries dominated by America at one time. While some of these industries were lost due to the ineptitude of American corporations themselves, some of them were lost because of the involvement, or lack thereof at times, of the United States government.

The television industry, for example, was lost
in part as a result of Japanese dumping (selling below production cost) televisions in the United States. When U.S. television manufacturers asked the U.S. government for protection, only a minimal fine was placed upon Japanese manufacturers. Just a small portion of the fines was ever actually collected—in the name of keeping friendly relations with Japan to contain Soviet expansion into the Pacific (Frontline: Coming From Japan, Videocassette).

Today, that cycle continues, but this time it is with the American aviation industry. Indeed, some believe that today the U.S. government is perhaps handing over the American aviation industry to the Japanese through a jointly-built fighter aircraft. With it, some believe that the U.S. may well be selling itself out to Japan again.

In recent history, many U.S. economic sacrifices directed toward Japan have been in the name of bolstering the strength of Japan vis-a-vis the former Soviet Union's military threat to the
Pacific region. By 1988, these economic sacrifices were contributing to a United States trade deficit of $119.2 billion, $52.1 billion of which was solely with Japan. Even while Japan's portion of the trade deficit continued to rise, however, most foreign policy matters between the U.S. and Japan remained in the hands of the U.S. Department of Defense; this has been the pattern of U.S.-Japan relations since the start of the post-1945 era (Makin and Hellmann 88-90, 120-122).

Since 1945, Japan has been dealt with as a military concern of the U.S., but not as an economic one. While this conduct toward Japan was originally the result of Japan's role in World War II, it would persist with the rise of the Cold War. As a neighbor of the former Soviet Union, Japan occupied a key position on the globe in both strategic and geopolitical terms. The United States was interested in strengthening the U.S.-Japanese military presence in Japan to ward off any Soviet incursions as well as to provide for a
forward base from which the U.S. could monitor or strike the Soviet Union. It was standard procedure for the U.S. to grant concessions to Japan on economic issues in return for military favors; after all, it was the Department of Defense which had primary say in U.S. foreign policy toward Japan (Prestowitz, Trading Places 15).

Today, however, the independent republics of the former Soviet Union are no longer the monolithic military threat that they once were, and the U.S. now faces new global threats. While the U.S. was clearly concerned with the strategic value of Japan, Japan was quickly growing into an economic powerhouse. The new threat to U.S. national security comes not from the military sector so much as from the economic sector. And yet, the U.S. continues to treat Japan specifically as a military ally rather than jointly as an economic competitor (Snow and Brown 248-49).

America's short-term desires are winning out over its long-term interests. The U.S. is actively
pursuing what is "good for today" in its relations with Japan and not accounting for the kind of future it is creating. Case-in-point: the FSX program.
CHAPTER 2: The FSX Project

The FSX (Fighter Support/Experimental, also called FS-X) program began in October of 1985 when the Japanese Air Self-Defense Force (ASDF) concluded that it needed to update its current Mitsubishi-built, F-1 close air support fighter plane. The ASDF looked at three basic alternatives: the current F-1 could be improved on and renovated, foreign planes could be acquired, or an entirely new fighter could be developed and built in Japan (Shinji, "Controversy Revived" 434).

In 1985, the F-1 was the only entirely domestically built aircraft in the Japanese aerospace industry. Japanese in the defense sector ostensibly believed that the lack of indigenous
military commodities made Japan a military pawn of the United States, and they did not wish to continue such a relationship. As it stood, Japan already "... bought F-86F, F-104, F-4EJ, and F-15J fighters from the United States, as well as transports, helicopters, and trainers (Shinji, "Battle Over FSX" 140-41). With this fact in mind, a majority of Japanese officials in the Japanese Defense Agency (JDA), officials in Ministry of International Trade and Industry (MITI), and Liberal Democrats from the national Diet all concluded that, in order to bolster and expand Japan's vital aerospace sector, Japan must scrap the F-1 and develop and build a new fighter plane domestically (Vogel, "Weapon Label" 31). International events, however, would make these plans nearly impossible to execute.

Those in charge of assessing and investigating Japan's future aircraft needs had already sent inquiries concerning the possible acquisition of modified aircraft currently being produced in
Europe and the United States. The Japanese looked at three fighter planes: the European (primarily British) Tornado, the U.S.'s McDonnell Douglas F/A-18, and the U.S.'s General Dynamics F-16. The Tornado was quickly eliminated from consideration because it was not as technologically advanced nor as capable as the U.S. fighters. Despite the fact that the F/A-18 better suited Japan's needs, some believe that the F-16 emerged as the top choice, next to building domestically, primarily because it was the most technologically advanced fighter between the two (Chinworth, Interview).

For all practical purposes, most Japanese officials had already decided to build domestically (Vogel, "New Weapon Label" 31). The inquiries about foreign planes were essentially aimed at showing that the decision to build domestically was well-researched and impartial, even though there was little intent to go through with in-depth inquiry. But Japan's foreign inquiries would backfire on Japan, and the intention to build
domestically would have to be reevaluated (Shinji, "Battle Over FSX" 140).

An unexpected uproar, at least insofar as the Japanese were concerned, came from both the U.S. Department of Defense as well as the U.S. defense industry when it became apparent that Japan was planning on pursuing independent development of a new aircraft (Shinji, "Battle Over FSX" 142). The U.S. aerospace industry alone had accounted for an annual trade surplus of approximately $18 billion in recent years, and no one wanted to compromise that bright spot in a troubled U.S. economy (Harbison 33). Japan had already shown signs that it was ready to purchase foreign aircraft, inadvertently luring U.S. military interests into a fight over who would produce the new fighter.

Another event, and by far the most damming to the Japanese position to build the new fighter domestically, was a scandal which surfaced in 1987 (Vogel, "Deal" 16). The United States had uncovered evidence that Toshiba Machine (the industrial
division of Toshiba) had violated restrictions of the Coordinating Committee for Multilateral Controls (COCOM) when it sold machine tools to the former Soviet Union that would allow the Soviets to fabricate quieter submarine propellers (Shinji, "Controversy Revived" 436). To show its outrage, "the U.S. Senate passed, by a vote of 96 to 0, a sense of the Senate resolution calling on Japan to buy its new fighter from the United States" (Snow and Brown 251). As a result of this incident, many policy-makers in the U.S. also began to question whether Japan might finance the enormous expense of an indigenous fighter program by selling fighters to foreign customers (Snow and Brown 2-7).

Japanese officials were put in a position where, in order to quell political furor in the U.S., they would have to make concessions. A key concession was the decision to co-develop a new aircraft based on the General Dynamics F-16C (Shinji, "Controversy Revived" 436). Even this decision, however, did not please many critics.
They believed that Japan's real intentions behind pursuing development of a modified fighter plane, instead of simply buying one "off the shelf," were not all that they would outwardly appear (Dryden and Gross 62).

Despite growing concerns over Japan's motives, talks between Japan and the U.S. concerning the co-development of the FSX got underway in 1987 when Secretary of Defense Caspar Weinberger travelled to Tokyo. In Tokyo, the two countries laid out a Memorandum of Understanding (MOU). This MOU set down the basic groundwork for how technology transfers and division of labor would be split between Japan and the United States. In accordance with the MOU, the U.S. would receive approximately 40% of the division of labor involved in the initial $1.2 billion development phase of the project, including primary responsibility for engine development ("Washington Roundup" 13)--a critical area in which the Japanese lagged far behind the United States (Towell 1417). At the
start of the second $7-10 billion production phase, another MOU would be negotiated (Snow and Brown 253-254). Also discussed were provisions by which the U.S. would receive technology developed by the Japanese as a result of modifications made to U.S. technologies. Any preexisting Japanese technology used would come under normal guidelines should the U.S. want to acquire it (Brown, Interview; "U.S., Japan Resolve Issues on Co-development of FS-X Fighter" 25).

As of 1993, the FSX was continuing as scheduled with its second phase having already been put into effect ("Mitsubishi Begins Assembly of FS-X Flight Test Prototype" 41). (Although the project has experienced many difficulties, resulting in a less modified F-16 and uncertainty about the continuation of the program.) If the program does continue as planned, Japan and the U.S. are expected to build somewhere around 130 FSX fighter planes by the year 2001 ("U.S., JapanResolve Issues on Co-development of FS-X Fighter" 25). And
perhaps by sometime early in the next century, a newly developed Japanese industry will be a full-fledged competitor with the U.S. in one of its last surplus export industries—aerospace.
CHAPTER 3: The American Perspective

While the general events that culminated in the FSX project are clear, the differing interests on the parts of both the U.S. and Japan that led to those events are more obscure. Each has a unique interpretation why one another wanted the FSX project, of what the other side's motives were.

One question often raised by Americans is why Japan even wanted to produce a fighter plane domestically. Figures show that the costs of domestically producing a new aircraft would have been double that of buying existing foreign aircraft (Shinji, "Battle Over FSX" 143). Japanese officials were quick to counter this argument by noting that no currently-produced aircraft met Japan's "unique" defense needs. These unique defense needs actually were a matter of semantics.
Although U.S. aircraft are described by a number of nearly synonymous terms, such as "close air support, fighter bomber, attack aircraft, or tactical fighter," the Japanese were looking for what they called a "support fighter." In reality, all of the names are synonymous, but the Japanese were able to use their differing designation to argue that no one else in the world produced a fighter that would meet "unique" Japanese needs. Indeed, no other country or manufacturer uses the designation of "support fighter" to classify one of their aircraft, even though aircraft such as the F-16C and the F/A-18 met Japan's specifications for an aircraft with "anti-ship/limited-ground-support" capabilities (Chinworth 133).

The use of alternative designations has its source in "Japan's peaceful constitution and its restricted definition of its armed forces," which has led Japan to use non-aggressive terms when labeling military-related units, hardware, etc.
The Japanese air force is not called an "air force," for example, but rather the "Japanese Air Self-Defense Force" (Chinworth 133).

To complicate matters, or perhaps make them clearer, the Japanese Defense Agency added to the FSX the role of interceptor as well as support fighter. This was the role for which the Japanese really wanted the FSX, and it was also the primary role of the F-16C and the F/A-18—to intercept enemy aircraft. What the Japanese had done, then, was to say that they wanted a ground support aircraft (hence they used the fighter support designation to back this up), despite the fact that the aircraft's primary role would be as an interceptor (Chinworth, 133-134). In all truth, Japan had little reason, if any, not to buy a preexisting American fighter aircraft (Chinworth, Interview).

The F-16 and the F/A-18 were both developed at approximately the same time. The McDonnell Douglas
F/A-18 was actually "developed from the Northrop YF-17, a failed F-16 competitor. As a result it shares some of the same characteristics as the Falcon [i.e., F-16]..." (Falcon 3.0 Flight Manual 269). In fact, given that the Japanese wanted an aircraft suited for attacking ground as well as air targets, it would have been more appropriate to choose the F/A-18 for the simple fact that it can carry 1,800 lbs. more ordnance than the F-16C (17,000 lbs compared to the F-16C's 15,200 lbs.). Almost ironically, as part of the FSX project, Japan and the United States are going through the effort of increasing the F-16C's ordnance load to approximately 18,000 lbs. (Falcon 3.0 Flight Manual 268-270; Operation: Fighting Tiger 96-97) This argument raises the question of why, then, did the Japanese choose to co-develop the FSX on the F-16C platform when the F/A-18 more closely met the needs that Japan had originally stated in its inquiries to U.S. defense contractors (Harbison 33)?
American critics have pointed out that a likely reason for Japan's choice of the F-16C platform was the manufacturer that built the plane—General Dynamics. The Japanese had already worked with McDonnell Douglas, the manufacturer of the F/A-18, in modifying the McDonnell Douglas F-4E and F-15 to meet Japanese specifications (hence the designations F-4EJ and F-15J for the Japanese versions). Evidence indicates that in developing the new FSX, the Japanese wanted access to technology which they did not already have and which they could not acquire from doing business with McDonnell Douglas again (Harbison 33). An indication to Americans that Japan was after more than just a new fighter became apparent during later negotiations.

... The United States and the Japanese were pursuing very different agendas... The United States continued to stress such aspects as cost effectiveness, rapid introduction of an advanced fighter into Japan's Air Self-Defense Force, and maximum interoperability, all of which would clearly call for minimal modifications of the F-16. Japanese
negotiators, however, were insisting on extensive modifications of the F-16, a move that would entail, among other things, a massive transfer of U.S. technology to Japan, a great deal of work for Japanese firms, and the assistance of the U.S. contractor, General Dynamics, in any problems it might encounter. (Snow and Brown 253)

Let it be known, however, that the FSX project was by no means completely negative for the United States. Many parties, such as the Department of Defense and U.S. defense contractors, still wanted the FSX regardless of any concerns over Japan's motives. Japan's security was at stake as far as the Department of Defense was concerned, great profits were to be made by the defense contractors, and the long-term gains from any technology acquired would please all involved. Those parties still expressing concerns were calmed by the negotiation of the aforementioned memorandum of understanding. Hence, the FSX project was allowed to forge its way past many obstacles in the American camp and move onward toward reality.
CHAPTER 4: The Japanese Perspective

The Japanese view of events which would ultimately lead up to the FSX project is quite different from that of the United States. As mentioned in chapter two, "the F-1 is the ASDF's only domestically designed and produced airplane. The [Japanese] defense establishment, both in and out of government, felt that building the FSX plane in Japan was the next logical step in developing Japan's aircraft production technology, and little U.S. opposition was foreseen." (Shinji, "Controversy Revived" 434) Indeed, the Japanese saw the development of a new indigenous fighter plane to simply be a natural extension of their current capabilities. They believed, for both economic and military reasons, that as a maturing nation with a highly advanced technology sector,
Japan should extend its abilities into the long-neglected area of military fighter aircraft production.

Concurrently, Japan was feeling pressure from the United States to bolster its own defenses. As the Cold War was coming to a close, the United States was looking to lower its defense budget. Because Japan no longer held quite the importance that it once did as a stronghold against Soviet incursion into the Pacific region, and because Japan's economy was showing itself to be among the most robust in the world, Washington was eager to make Japan pay for a larger portion of its own defense needs. (Shinji, "Controversy Revived" 434)

When the uproar in the United States occurred over Japan's desire to produce an aircraft domestically, the Japanese were understandably surprised. The United States had been "incessantly" insisting that Japan begin to pay for more of its own defense costs, and for it to balk at Japan for doing so was illogical (Shinji,
"Controversy Revived" 434). The U.S. started insisting that Japan increase its defense expenditures during the late Carter administration, when the administration "denounced Japanese defense spending hikes of over 7 percent as insufficient" (Chinworth 100). Although the Reagan administration eased its stance somewhat, larger defense budgets were still called for (Chinworth 100). Given the obvious U.S. desire for Japan to carry more of its own defense burden, the Japanese were understandably confused when opposition was raised against domestic production of the FSX.

Japan undoubtedly saw the United States as holding a double standard. On one hand, the United States had for some time wanted Japan to start funding its own defense. On the other hand, it would not allow Japan to fund the production of its own domestic fighter.

Moreover, it looked as though the United States was concerned more with advancing its own short-term financial interests than in providing Japan
with a less expensive alternative to domestic production.

The Japanese were also leery of what had happened in previous co-development programs. With each successive program, Japan had received a smaller workshare. While the Japanese received an 85 percent share of F-104J production and a 90 percent share of F-4J production, they only received a 70 percent share of F-15J production. (Chinworth, 137) The FSX project, given concerns loudly raised in the United States about its share in the production of the FSX, looked as though it would give Japan an even smaller portion of production.

Japan was also apprehensive toward another coproduction project because it did not feel as though it was gaining enough from United States technology transfers. Many components on the F-15J were known as "black box" technologies, and the Japanese were denied access to them. "The black boxes were important for two reasons: they
represented high-value-added and the highest
technology levels embodied in the aircraft."
(Chinworth, 127) The Japanese sentiment was
especially that without access to those
technologies, Japanese industry would only further
decline in the area of aerospace technology.

Lastly, the Japanese had already experienced
problems with the previous development of the
McDonnell Douglas F-15J, and this proved to be an
impetus for the Japanese to consider domestic
development of a new aircraft. During the
development of the F-15J, problems "with lost
parts, duplicate spares, and myriad other problems
from the Japanese viewpoint . . . reinforced
sentiments within industry and many government
circles [to produce domestically] that had been
evident long before." (Chinworth, 133) When the
final decision was made to co-develop the FSX,
Japan's problems with McDonnell Douglas provides an
alternative explanation of why the General Dynamics
F-16C was chosen as the platform for the FSX.

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In making the decision to use the F-16C as the platform for its new fighter aircraft, the Japanese also took into account the importance of keeping a close relationship with the United States. Ironically, just as the U.S. is coming to see Japan as less militarily strategic to its interests in the Pacific Rim, Japan is feeling ever more threatened by the growing Asian powers of China and the Koreas (Brown, Interview). Those involved in selling the FSX to Japan say that the Japanese, although reluctant to give up domestic production of the new aircraft, would not have truly considered co-production with any country other than the United States. Japan had no intentions to jeopardize its close relations with the U.S. in the face of what it perceived as increasingly threatening neighbors (Brown, Interview).

Even if Japan was not feeling so threatened by China and the Koreas, no one would dispute the fact that the Mitsubishi F-1 is in dire need of a replacement. Having made its maiden voyage in
1968, the F-1 is an old aircraft in comparison to the 1980's F-16 series of planes (Fighting Tiger 107). F-1's are simply not capable of winning in any type of confrontation with more modern aircraft, let alone capable of protecting Japan (Chinworth, Interview).

In short, Japan has legitimate reasons for wanting a new fighter aircraft, whether indigenous or co-developed, for the simple reason that it must be able to protect itself in modern warfare.

With the FSX co-development plan, the Japanese were essentially looking to continue their original plans of developing an indigenous fighter plane, but now they would be doing so with the help of the United States. The implications of this cooperation arrangement and the relative gains and losses for the two parties are explored in chapter five.
CHAPTER 5: Perceived Japanese Strategy and Potential American Losses

Gains and losses with the FSX project are difficult to categorize, let alone quantify. Although the figures being produced showed that the U.S. would gain, both technologically and monetarily, from this collaboration with Japan, the realities were a different matter.

Most of the modifications to the FSX would be made with existing Japanese technologies, such as "composite materials, low-observable technologies, advanced avionics and control-configured technologies" (U.S. Technological Lead at Risk" 7). Altogether, approximately 70-80 percent of the F-16 would be modified according to Japanese plans, and
"it appears that the majority of what the Japanese will add to the F-16 will fall under the provision for items that the U.S. must request and for which it must pay" ("U.S. Technological Lead at Risk" 7)

More important than what the U.S. might lose in short-run profits from the FSX project, however, is what it may, in the long-run, lose to Japanese competition in the international aerospace industry.

The biggest fear of most opponents to the FSX project is that Japan will use the technology it gains from General Dynamics to boost its own aerospace industry—military as well as civilian. According to John Harbison, vice president in the aerospace division of the well-respected management consulting firm Booz Allen & Hamilton,

aerospace/defense is an explicit and essential element in Japan's move toward an economy based on sustainable export competitiveness. Today, Japan is overly dependent on "yesterday's industries," and dangerously exposed to cost-based competition from rapidly industrializing countries.... As a Ministry of International Trade and Industry official
stated in May, 1987, "Japan is looking to the new industries--biotechnology, aerospace, and industrial electronics--for its future growth and prosperity."
(Harbison 33)

What the U.S. had to question was whether or not it was actually handing Japan the blueprints on how to build a commercial airline industry.

Already, Japan had expressed much interest in the commercial airline industry. As of today, Japan has involved itself in a number of projects with manufacturers of commercial aircraft and aircraft parts.

. . . The military [has] continued to be the backbone of the [aviation] industry . . . but increasing emphasis was put on commercial projects. MITI organized and subsidized Japanese participation in the International Aero Engine consortium with Rolls Royce to develop a new jet engine and at the same time put up $1 billion to $2 billion to ensure not only that Japanese industry could participate in Boeing's next generation 7J7 . . . but that Japanese would be recognized as a full risk-bearing partner with participation in every aspect of the program from initial design to after service (Prestowitz, Trading Places 10).

In addition to involving itself in a partnership
with Boeing to develop the 7J7, Japan was also helping to develop the Boeing 767X commercial aircraft (Leader 99), was participating in the development of "... an advanced jet engine with U.S., British, Italian, and West German companies, and ... [was] building a rocket that may launch a two-ton satellite into orbit..." (Greenwald 45). Japan also founded a program similar to the U.S. space shuttle and "a hypersonic plane ... that could fly from Washington, D.C., to Tokyo in two to three hours (Prestowitz, Trading Places 10).

What Japan lacked was in-depth knowledge of systems integration technology, engine technology, and engineering experience with high-performance aircraft. All of these things that Japan needed to enter into the commercial aerospace industry would be acquired from the U.S. through the FSX program (Chinworth, Interview).

Indeed, it was this concern which prompted debate in the United States Senate over whether or not to allow the FSX project to continue without
severe restrictions on the level of technology transfer to Japan. Although the Senate voted against a resolution that would have entirely blocked FSX production, it did pass a modified version of the same resolution (known as S J Resolution 113) that placed restrictions on technology transfer to Japan and put in writing exactly what the U.S. expected to get out of the project in monetary terms. The Resolution required that:

(1) Japan be prohibited from selling technologies resulting from the joint development of the project;

(2) the transfer of certain engine-design technologies "which are critical to the performance of advanced jet engines" be barred;

(3) U.S. firms be assured no less than 40% of the value of work performed during the project;

(4) "the secretary of commerce...review the commercial implications of any proposed FS-X
production agreement;"

(5) and that the General Accounting Office oversee the execution of the FSX program (Towell 1417). Senate Resolution 113 never went into effect because it was vetoed by President George Bush (Towell 2411). Nonetheless, this effort on President Bush's part to stymie Senate anti-FSX sentiments did not mean that he was totally ignoring the Senate's concerns. Indeed, the Bush Administration forged additional agreements with Japan that put into effect most of the suggestions made in Senate Resolution 113, including those concerning technology transfer and U.S. workshare.

Notably absent, though, were any provisions for involvement of the Commerce Department in any aspect of this economically-sensitive program (Shifrin 16-18). That is not to say, however, that the economic implications of the agreement would go unnoticed (Snow and Brown 256).

The C.I.A. recommended against such a [technology] transfer because of the tremendous push along the learning curve
it would give Japanese industry. This report had little effect at the time. . .

. . . the Pentagon wanted the Japanese to have an interoperable up-to-date airplane, and was not concerned about the effects on industrial competition between the United States and Japan (Prestowitz, Trading Places 19).

Organizations such as the C.I.A. and NASA had recognized the threat that Japan could pose and were expressing their opinions to other government agencies as early as 1988. They believed that the FSX deal would give Japan the push that it needed to become a world-class competitor with the U.S. in both the commercial and military aerospace sectors as well as associated sectors. It was maintained that the transfer of technology would be primarily one-sided from the U.S. to Japan and that the U.S. would gain very little from this joint project (Prestowitz, Trading Places 40).

While it might seem unlikely that Japan could so quickly turn the knowledge it gains from the FSX into real results, consider the statement made in
1982 in The Economist: "Japan's rocket program is too little, too late. They should scrap the tin-pot rocket program and use Ariane or the Shuttle instead." Within five years, however, Japan's rockets had advantages over U.S. Titan-3 and Delta rockets as well as over the European Ariane (Harbison 34). There is no reason why Japan could not repeat such a success in the commercial airline industry.

Perhaps one of the most significant factors contributing to Japanese economic success, and to the viability of the FSX project evolving into a commercial airline industry, has been its domestic market structure. While industries in the U.S. have had to face much competition among themselves, Japanese are far more concentrated. "The top three [Japanese] companies compris[e] in excess of 70% of the market" (Harbison 32). More specifically, Japanese aerospace firms are poised to take advantage of gains from the FSX program because: the Japanese aerospace industry is
organized as divisions of diversified heavy industrial companies, which are affiliated with important keiretsu, . . . [or] finance-centered business groups. . . . As a result, aerospace is more closely linked to other industrial sectors, both within the firm and within the keiretsu. These links promote the identification and transfer of technologies that can be used for more than one purpose. (Samuels and Whipple 48)

A fundamental question from the U.S. perspective is whether America, regardless of Japanese intentions, has again "sold itself down the river." With the FSX project, America probably has given up yet another portion of its economic advantage in aerospace technology. Although Pentagon officials claim that no technology will be given to the Japanese that could aid in the production of wide-body commercial aircraft, Japan has already gained some of that insight in its projects with Boeing, over which few questions of technology transfer have been raised (Brown, Interview). Japan may well gain the systems integration and engine technology that it did not
have through the FSX project.

Japan is an expert at identifying the capabilities of U.S. companies and targeting them, whether for their resources or to compete with them (Chinworth, Interview). In the case of the FSX project, Japan was able to target a manufacturer, General Dynamics, which had technology that it could not acquire elsewhere.

Many of the technological benefits that had been predicted for the U.S. will not be realized (Chinworth, Interview). When the FSX program was initiated, the U.S. was really taking the gamble as to what it would gain. While Japan would be given preexisting U.S. technology that it did not already have, the U.S. was going on the assumption that the Japanese would be able to come through on developing new technologies while in the program (i.e., derivative technologies) that the U.S. would then be able to acquire free of charge.

The most critical of those technologies promised by the Japanese was the development of a
one-piece, composite (i.e., made of synthetic fibers woven in a matrix) wing assembly. The new composite wing assemblies would greatly reduce the weight of the F-16C's wings while also making them stronger and easier to produce. Unfortunately for the U.S., Japan has been unable to produce such wing assemblies and has also had to drop other items such as new canard (frontal) wings which would have also made great increases to the FSX's performance (Chinworth, Interview).

Japan, on the other hand, has gained not only from technology transfers from the U.S., but also from the new overhead that the FSX project has created for companies like Mitsubishi. Japanese companies are using JDA funding for the FSX project to subsidize their commercial endeavors. While the Japanese said that new plants built in Japan for the FSX project were to be used for approximately 75 percent military production, the reality is that nearly 90 percent of their capacity is being directed toward commercial endeavors. Because the
FSX project is subsidizing them, they are allowed to compete commercially far below their actual costs (Chinworth, Interview).

Since there were plenty of voices on the American side raising the potential negative ramifications of the FSX deal, the U.S. has no one to blame but itself should it have to face Japan in coming years as a strong competitor in the commercial aviation industry.
CHAPTER 6: Evaluating the FSX Controversy

One of the most interesting aspects of the FSX controversy was the context in which it took place, and the resulting differing perceptions on both sides. At the start of the controversy, 1986, the American economy was at a low vis-a-vis Japan, and the U.S.-Japanese trade deficit was an easy target upon which to lay blame for American economic troubles. The United States was, perhaps, more apt to see a very negative side to Japanese intentions in the FSX project simply because of the time at which it happened. Americans were quick to point out that the U.S. would be bearing the majority of the burden in the FSX project, and that the Japanese were simply out to acquire U.S. technology at a low cost (Brown, Interview).
Conversely, the Japanese believed that they were doing the U.S. a great favor by pursuing co-development. Not only did the Japanese capitulate to American demands and continue to be militarily dependent on the United States, they also symbolically did their part in reinforcing a strong relationship with the United States. If anyone was acting greedily in the situation, it was the U.S. for demanding that it have a share of Japan's own military project (Brown, Interview).

If both sides had not been so embroiled in a growing economic war, each side might have more readily understood each others' intentions. It is not implausible to think that the FSX would not have been so controversial had the U.S. and Japan not been locked into a state of increasing economic warfare.

But the very fact that the U.S. was having problems with Japan points toward a valid, and rather ominous, reason for the U.S. to have concerns. Many issues involved in the FSX
controversy would have been explosive no matter what their context (Chinworth, Interview); the U.S. was in a situation whereby it was giving vital U.S. technology to Japan without any way to control how Japan would use that knowledge in the future. Given both sides of the FSX controversy, one is confronted with many more questions than answers. The overriding question might be: what is the significance the FSX project/controversy in the larger pictures of U.S.-Japan relations and overall U.S. economic competitiveness? Clyde Prestowitz, a former U.S. trade negotiator, best sums up the FSX's importance when he says:

... The FSX debate subsumed more completely, and demonstrated better than any other single incident, the fundamental inconsistencies, misperceptions, mixed motives, bureaucratic struggles, conflicting objectives and ambitions, fallacies, and evolving dynamics that bedevil the U.S.-Japan relationship. In particular, the debate brilliantly highlighted a major theme... namely, the conflict between U.S. security and economic interests.

... The debate was [also] important because it suggested a potentially revolutionary change in U.S. attitudes and
policies in the direction of responding directly to the Japanese challenge (Prestowitz, *Trading Places* 3).

In the post-Cold War world, with economic interests waxing, and military interests on the wane, the FSX controversy appears symbolic of a new era in U.S.-Japan relations.
Chapter 7: The Final Analysis

Despite the potential negative impacts of a new competitor in the commercial airline industry, it is nevertheless in accordance with the idea of basic sovereignty that the U.S. has no reason or right to deny the Japanese their own right to defend themselves or to pursue markets as they choose. As mentioned, a growing sentiment in Japan is that the U.S. should not involve itself in dictating economic or military policy to Japan, and there were individuals in Japanese society who pushed for domestic development of the FSX because they believed that Japan was a pawn of the United States. In all honesty, the FSX program was just another item on a long list of U.S.-directed military programs (See Michael W. Chinworth's Inside Japan's Defense). It should be emphasized that in the FSX program the U.S. was the final decision-maker in deciding whether or not to co-
produce a fighter plane with the Japanese, not the Japanese. It appears that short-run interests overcame long-run interests at the time.

What is perhaps most disturbing to Americans about the entrance of the Japanese into the commercial aerospace sector, then, is not that they wish to enter the marketplace, but rather the manner in which the Japanese are perceived, correctly or incorrectly, to approach the marketplace (and the fact that the U.S. is aiding this particular approach). Chalmers Johnson, a University of California, San Diego, professor and an expert on Asian affairs, describes the Japanese as pursuing policies of "predatory capitalism." They enter into a market, often taking initial heavy losses, with a long-term goal not of parity with competition but of total elimination of competition (Harbison 33). As previously noted, one need only look at the U.S. automobile, television/consumer electronics, steel, shipbuilding, and semiconductor industries to see
the havoc that the Japanese have wreaked on U.S. businesses. Having been presented with Japan's motives for entering into the aerospace industry, the only question left to ask by some is "What next?"

The U.S. may have willingly given up its firm grip on the global aerospace industry through its handling of the FSX project; it has attempted to satisfy its short-run economic and strategic interest at the expense of long-run well-being. To use a nation's military apparatus, such as the Department of Defense and the associated defense contractors in this case, as a means of foreign policy is normal and often expedient. To use that same apparatus to the exclusion of all other means is short-sighted and foolish. Japan still constitutes an important, sovereign military partner and should be treated as such (Greenwald 35). But it is also time to recognize that people look to a healthy economy for their well-being and protection just as they look to a strong defense
for the same. "'Trade is defense,' says Clyde
Prestowitz. . . . 'We must recognize the nature of
the game!' "("Friend or Foe?" 45).

Nevertheless, the U.S. short-term gain was a
welcome one in the face of military spending
cutbacks by the U.S. government. Companies such as
General Dynamics have profited greatly as a result
of the joint work between the U.S. and Japan. What
remains to be seen, of course, are the long-term
effects of the FSX project.

Taking all factors into account, it is
difficult not to reach the conclusion that Japan
has ulterior motives with the FSX project.
Although Japan has definite needs for a new
military aircraft to replace the aging F-1, it also
has shown definite interests to enter into the
aerospace industry.

The evidence, though circumstantial, points to
an unofficial Japanese strategy to capture another
lucrative market for U.S. products. General
Japanese industrial success, the keiretsu
structure, the fit between the FSX and Japan's specific needs, and stated Japanese industrial growth directions all point to a very high possibility that the U.S. aerospace industry may be at stake. To ignore the possibility that Japan may well find ways to use FSX technology applications in a commercial application would be unrealistic and foolish.

It seems ironic that at the same time that the Japanese are clamoring to "just say no" to the United States (Vogel 34), the United States must also learn to say no to Japan. Japan is no longer the economically decrepit nation that it once was following World War II, and the U.S. cannot continue to treat it as though it is.

With the FSX project, the U.S. government and the involved corporations are contributing to the loss of what may be another industry in which America has a distinct advantage and therefore hegemony. The Japanese, however, are not to blame for America's own naivety. When America faces
long-term economic ruin, it can look back and explain how endeavors such as the FSX project created short-term profits at the expense of long-term competitiveness. Indeed, if the FSX project has shown anything, it is that in America, today is always more important than tomorrow.


_______. Telephone interview by author, 25 March
1994.


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