

# Explaining Japan's Tortured Course to Surveillance Satellites

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## Abstract

*On December 25, 1998 the Japanese government reinterpreted a long-standing policy prohibiting the use of outer space for military purposes by announcing its intention to develop a network of domestically produced and deployed "information-gathering" satellites to be utilized primarily by the Japan Defense Agency (JDA) and other national security institutions. This decision is important in its own right—for one, Japan is a major player in the space technology arena—but also because of the precedent it sets for other areas of technology and military policy in Japan today. As many observers have noted, Japan appears to be undergoing a broad reexamination both of its view of the appropriate level of interaction between government bureaucracy and industry and of its military security strategy in the first decade of the twenty-first century. The case of surveillance satellites links these two areas together, offering broader lessons for the course of Japanese policy in numerous areas in the future.*

**KEY WORDS:** Japan, satellite, national security, outer space policy, industrial policy

## Introduction

On December 25, 1998 the Japanese government reinterpreted a long-standing policy prohibiting the use of outer space for military purposes by announcing its intention to develop a network of domestically-produced "information-gathering" satellites to be utilized primarily by the Japan Defense Agency (JDA) and other national security institutions. This decision marks a substantial reinterpretation of the peaceful use of outer space policy that the Japanese parliament, the Diet, proclaimed in May 1969 through a Diet resolution, and which greatly influenced Japanese space policy since that time. This decision to develop surveillance satellites is important in its own right—for one, Japan is a major player in the space technology arena—but also because of the precedent it sets for other areas of technology and military policy in Japan today. As many observers have noted, Japan appears to be undergoing a broad reexamination both of its view of the appropriate level of interaction between government bureaucracy and industry and of its military security strategy in the first decade of the twenty-first century. The case of surveillance satellites links these two areas together, offering broader lessons for the course of Japanese policy in numerous areas in the near future.

It remains to be seen how substantial a system ultimately will be developed and deployed—the first two satellites were launched in March 2003 and made operational in September 2003, while the second two satellites were destroyed in a failed joint launch attempt and are planned now to be launched individually in fall 2006 and spring 2007—but the decision itself is worthy of sustained analysis and explanation because it marks a substantial departure from previous policy positions and outcomes. This change is not fully acknowledged by key decision-makers in Japan who insist that because any deployed satellites will be used to support the peaceful, *defensive* posture of Japan's security apparatus, such activities do not contravene the peaceful use of space policy proclaimed in 1969 and restated repeatedly over the years. This is one reason why the government-preferred terminology for these

satellites is “information-gathering” satellites (IGS) rather than surveillance or spy satellites.<sup>1</sup>

The idea of developing and deploying domestically-produced surveillance satellites is not one that emerged only in the post-Cold War period. The issue of surveillance satellites had been a politically-sensitive one both at home and abroad for decades.<sup>2</sup> Although the reality of Japan producing and deploying its own surveillance satellites was far beyond its capabilities during the early years of the Cold War, the possibility of this happening—especially together with the United States—led to the adoption of a Diet resolution in 1969 declaring Japan’s dedication to the use of outer space only for peaceful purposes (*heiwa no mokuteki*).<sup>3</sup> The Peaceful Use of Outer Space resolution was not directed only at potential spy satellites, but this use of space was one of the primary concerns of those opposed to the militarization of space—contrary to what many current politicians and commentators have claimed about the intention of the resolution recently. This resolution, and the political foundation upon which it is based, presented a significant barrier to Japanese corporate and military use of outer space in the decades since it was declared.<sup>4</sup>

The policies surrounding the relaxed limitations on the use of outer space in the post-Cold War period illustrate both the series of new policy developments in the security arena in recent years as well as the continued long-standing constraints on military activities in Japan. There can be no doubt that the tone and content of discussion of Japanese security policies has shifted considerably since the Cold War and early post-Cold War periods. Beginning shortly after the North Korean Taepodong missile overflight of Japanese territory in August 1998, a series of surprising policy outcomes were enacted, including plans to develop missile defense and surveillance satellites as well as legislation enacting some controversial aspects of the 1997 revised U.S.-Japan Defense Guidelines and establishing constitutional research commissions in both houses of the Diet to devise concrete proposals for possible revision of the war-renouncing Article 9 and other limits on Japanese military activities. Further change was apparent even more recently, particularly the increased Self Defense Force (SDF) activities overseas post-September 11, 2001, with the SDF dispatched to participate in an active combat operation (though in non-combat roles) for the first time since their creation (first the Maritime SDF in the Indian Ocean in support of U.S.-led coalition operations in Afghanistan in late-2001 and next all three services in support of U.S. operations in Iraq in mid-2003), the passage of so-called emergency legislation to allow the SDF to operate domestically under a legal framework in times of conflict, and new agreements with the United States which further integrate the capabilities and interoperability of both states’ military forces. Japanese weapons capabilities and development also expanded in this period.<sup>5</sup>

Policy shift surrounding the peaceful use of outer space policy shows the limits of an explanation for Japan’s space, technology, and broader security policy based on long-standing constraints alone. As Japan’s technological capabilities rose, and its sense of external threat and power in the international system increased, a series of decisions were negotiated by key political actors effectively to allow the use of satellite imagery for military purposes, a significant concession to the original intent of Japan’s peaceful use of outer space policy. This gradual relaxation culminated in

a re-interpretation that sharply differed from the original intent of the Diet, while at the same time maintaining some of the intended restrictions on Japan's outer space activities. Attention both to the domestic politics of security in Japan as well as international systemic pressures and pressure from the United States is necessary to explain the specific policy outcome in this case.

Four different schools of thought provide partial explanations of the final policy outcome of Japan developing and deploying surveillance satellites, though none explain the actual policy direction on their own. First, the standard default explanation in security studies, is one based on IR realist theories. Second, and related, is an explanation based on the "foreign pressure" (*gaiatsu*) and power resources of the United States. Third is a domestically-rooted explanation based in traditional power and interest-based analysis, particularly of powerful bureaucratic and industry actors. Finally, prominent culture- and norms-based arguments should be considered. Each of these partial explanations is examined briefly below before a more thorough explanation for both the timing and the scope of Japan's new surveillance satellite program—drawing on Gladwell's (2000) idea of "tipping points" in policy innovation—is developed in the following sections.

### ***International Politics: Realist Theories***

In the policy area of surveillance satellites, realist theories (*eg.*, Kahn, 1970; Waltz, 1979, 1981; Friedberg, 1993/94) accurately predict the general direction of the policy outcome but fail to explain both the timing and the specific nature of the policy.<sup>6</sup> On the first issue, timing, realist theorists have predicted Japan to develop greater military capabilities since at least the 1970s, when Japanese power had risen markedly *vis-à-vis* other actors in the international system. While no general realist theorists mention the issue of surveillance satellites specifically, this policy area can be grouped with predictions that Japan generally would increase its war-fighting capacity. By the early 1980s, Japanese security specialists spoke privately—and at times publicly—about the need to increase Japan's capability in the area of surveillance satellites (Okazaki, 1982; 1986). For example, Prime Minister Yasuhiro Nakasone's support of the U.S.-initiated Strategic Defense Initiative partly was because of technological know-how Japan would receive from such cooperation (Nakasone, 1996; Nishihara, 1983/84). Despite some progress in this area in the mid-1980s under Nakasone, however, realist theory cannot explain why it is not until 1998 that the decision to develop surveillance satellites was made, despite a clear military interest in Japan's possession of such capabilities decades before.

A realist response to the 1998 timing of the decision to develop surveillance satellites might be based on increased threat from North Korea that Japan perceived after the Taepodong Incident in August 1998,<sup>7</sup> creating consternation and fear among the Japanese public. This is a plausible argument on the surface, but does not pass muster when considered in greater detail. In order to be a valid explanation for the timing of the policy, one would have to argue that Japanese policymakers had not fully appreciated the threat from North Korea until the 1998 Taepodong over-flight. This strains credibility. Arguably the general public, or even the broader policymaking community such as Diet members, did not appreciate fully the threat from North Korea until the Taepodong over-flight, but Japan

Defense Agency (JDA) and other defense-related officials had been alarmed by North Korean missile development since the 1993 No-dong missile test. Moreover, officials from several agencies and ministries—including the JDA, the Cabinet Intelligence Research Office (CIRO), the Ministry of Foreign Affairs (MOFA), and the Ministry of International Trade and Industry (MITI)<sup>8</sup>—had gone on record to note the need for Japan to develop a greater intelligence capacity to support its expanding diplomatic and military role. Thus, the explanation for the timing of the decision to develop surveillance satellites cannot be explained by realist theories alone. Realist theory predicts—as expressed by the wishes of a variety of Japanese policymakers—that Japan would have developed such capacity much sooner: if not in the 1980s under Nakasone, at least by the early 1990s.

Realist theories also are strained regarding the nature of the final policy outcome to develop and deploy surveillance satellites. First, although the decision to move ahead with surveillance satellites clearly was based in part on the satellites' contribution to national defense, great effort was made in the enabling legislation to obscure the military mission of surveillance satellites. First, the satellites formally are controlled by the CIRO, not the JDA or the SDF. This decision is not based on efficiency but rather is dictated by political considerations. In practice the JDA exerts substantial control over the satellites, but this reality cannot be admitted officially. Still, political considerations require that the location of such activities be based outside of the JDA itself, but the result is a new building—formally owned by the Ministry of Finance (MOF)—constructed directly outside the gates of the new JDA headquarters in Ichigaya. A second way in which the nature of the surveillance satellites conflicts with realist prediction is that the resolution of the surveillance satellites is limited to below what militarily is desirable and a level to which Japan technologically is capable. As discussed below, resolution for the surveillance satellites is limited by dual-use doctrine regularly employed to limit the export of arms and the use of outer space in line with the politically-imposed limits on Japan's military.

### ***Foreign Pressure (gaiatsu): The Role of the United States***

A second type of international politics-level explanation considers more directly the role of the United States *vis-à-vis* Japan's decision to develop surveillance satellites. As Japan's only foreign alliance partner, and as the state that ensures Japanese security through technological cooperation as well as provision of its own troops, one would expect Japan to follow the U.S. lead in security issues. In line with such an expectation, reference to the United States as an important actor in Japanese foreign policy outcomes is common in the foreign policy literature (*eg.*, Green, 1995; Schaller, 1997; Schoppa, 1997). U.S. pressure provides a compelling explanation for a range of Japanese foreign policy decisions from its policy towards China to its votes in the United Nations. The case of surveillance satellites poses a challenge to this theoretical approach, however. The available evidence throughout the period examined shows that the United States consistently opposed Japanese indigenous satellite development for a range of reasons. The first reason the United States objected to Japanese satellite development dates back to the trade-tense 1980s: The United States perceived Japanese government support of satellites as subsidies of commercially-relevant technology. The United States so strongly

objected to the proposed Japanese government assistance to Japanese firms in satellite development that it threatened “Super 301” sanctions against Japan if it went ahead with its plans in this area in the 1980s. As a result, Japan backed down. In this sense, the foreign pressure model provides a good explanation for the lack of previous development of surveillance satellites, but does not, however, explain the 1998 policy outcome.

A second reason the United States objected to Japanese plans to develop satellite technology was military: it was viewed by the Pentagon as potentially one step toward Japan leaving the U.S. alliance framework. This fear was confirmed in the rhetoric of some defense officials in Japan. As one JDA official was quoted: “Japan’s acquiescent mentality toward the U.S. comes primarily from its total reliance on the U.S. in obtaining information and intelligence. Possessing information-gathering satellites will help change such a mentality of Japan” (quoted in Taoka, 1999).

A third reason the United States objected to Japanese plans also was military, though based on the complicated politics of alliance burden-sharing. The United States opposed significant new Japanese expenditure in the area of surveillance satellites for fear that it would take the place of defense spending in other areas, perhaps even Japan’s significant “host nation support” of U.S. troops in Japan. It also was feared that the Japanese development of surveillance satellites might compromise the U.S.-preferred policy of greater cooperation between Japan and the United States in the development of missile defense. All the way until the Japanese government formally announced its intention to develop surveillance satellites, the U.S. expressed its opposition to the possible development of surveillance satellites—including in 1997 to a MOFA budget request for ¥5.24 million to study the issue in the FY1998 budget. Citing the text of the newly-adopted Guidelines for Defense Cooperation, one senior U.S. official stressed that the major objective of the alliance between the two nations is to supplement each other’s respective strengths (Kyodo News Service, 1998). It also was reported that undisclosed U.S. officials called for suspension of U.S. technological assistance to Japan if it began development of surveillance satellites (Kyodo News Service, 1998).

Ultimately the United States did support publicly Japan’s decision to develop surveillance satellites, but not until after Japan announced independently that it would develop such capabilities. At that point, the United States then sought to pressure Japan—also unsuccessfully—to purchase the satellites from the United States rather than developing them domestically. In the end the United States managed to secure an agreement for some U.S. components to be incorporated in the domestically-produced system, but this hardly could be characterized as a successful outcome of U.S. pressure overall.

### ***Domestic Politics: Bureaucratic Power and Industry Pressure***

A third alternative explanation for Japanese surveillance satellite development can be rooted at the domestic level, in particular focusing on the power of Japan’s powerful corporate groups and their supporting organizations, Keidanren and MITI/METI (*eg.*, Johnson, 1982; Uriu, 1996). This level of explanation is an important component of a complete explanation for the new satellite policy. As with

a realist-rooted alternative explanation, however, this explanation falters on the issue of timing and, to a lesser extent, the nature of the final outcome. Japanese industry—particularly NEC, Mitsubishi Electric (MELCO), and their supporting organizations, Keidanren and MITI—pushed for government support of commercial satellite development since the 1980s. At that time, their efforts were thwarted by pressure from the United States. Since the early 1990s, Japanese industry began to pressure the government for support of military-related satellite development. It was not until the overt security threat of the Taepodong missile over-flight captured public attention in the fall of 1998, however, that concrete plans to develop a satellite system were implemented. This delay of at least five years, if not more, begs explanation from those who attribute great influence of industry actors on government policy in general, and on defense policy in particular. Moreover, once the decision to develop surveillance satellites was made, the heated debates over whether to purchase the satellites from the United States or produce them domestically further illustrates the lack of control over policy in this area exercised by domestic industry actors.

### ***Culturalist Arguments: Norms and Political Culture***

A final potential explanation for Japan's surveillance satellite policy is one based on Japan's purportedly pacifist or "anti-militarist" norms or culture (*eg.*, Berger, 1998; Hook, 1988, 1996; Katzenstein, 1996). Such approaches also cannot explain the policy outcome of surveillance satellites used, in part, by Japan's postwar military forces. The fundamental problem with an explanation based on an unchanging norm or culture is that such a model allows for no variation in policy outcome. Thus, while a culturally or norms-rooted explanation for why Japan did not use outer space for military surveillance satellites proved plausible for the many years that Japan refrained from such use, today such an explanation is contradicted by recent policy innovation—unless one accepts the official Japanese government explanation of surveillance satellites as essentially "peaceful" and that this was the interpretation of such satellites from the time of the 1969 Diet resolution on the subject. Documentary evidence from the period shows clearly that the recent interpretation to allow for Japan's IGS contradicts the original intent of the 1969 Diet resolution. A cultural approach to examining the surveillance satellite issue can offer some insights into the *process* by which the decision was made—see Johnson-Freese and Gatling (2004) for a good example—but does not provide an adequate explanation for the substantial shift in policy outcome.

### **The Tipping Point: Why Surveillance Satellites Now?**

What is it that led to the decision to develop surveillance satellites in 1998, and not earlier? This question gets to the core of contending explanations for Japanese foreign policy outcomes. In the case of surveillance satellites, three factors contributed to the decision, two in the security sphere and one economic. First, a specific security threat—the Taepodong missile over-flight of Japan in August 1998—pushed simmering broad security concerns to the forefront of Japanese discussions

of security preparedness. Without this spark, it is unlikely that surveillance satellites would have gained a place on the government's policy agenda. Second, on the broader security front, Japanese defense planners long had lamented Japan's lack of adequate intelligence resources and their dependence on the United States in this area, particularly given Japan's expanded international role in the 1990s. In the post-Cold War period, Japanese defense planners had marked success in filling this intelligence gap on a variety of fronts, though not in the area of domestically-controlled surveillance satellites.<sup>9</sup> Third, and equally important, the sudden desire to guard better against the North Korean threat would not have led to lightening-speed policy outcomes had business actors not been prepared to capitalize on the moment. Thus, the role of economic actors in this security policy decision must be given serious consideration. These three factors are discussed in greater detail in the following three sections. In short, however, arguably a "tipping point" was reached, to borrow a term from Gladwell (2000): a large number of isolated concerns regarding security, intelligence, and crisis management began to congeal around the issue of surveillance satellites; public awareness and discussion of these issues spread; and, finally, a "significant moment" (the Taepodong Incident) occurred to "tip" the policy outcome. Equally, it is notable that no single actor played a determining role in this policy outcome. Rather, consistent with Kingdon's (1984) theories, the policy emerged at the confluence of many, varied actors' interests.<sup>10</sup>

### ***A Response to the Taepodong Incident of 1998***

On August 31, 1998 North Korea launched a Taepodong II missile over the main Japanese island of Honshu that splashed down into the Pacific Ocean. Although the North Korean missile was tracked by a Japanese Aegis destroyer, the attack reinforced the perception that Japan is defenseless to a ballistic missile attack, leading to new prescriptions such as the deployment of domestically-controlled surveillance satellites and the development of a ballistic missile defense system. This was the second incident in which North Korea in effect aimed missiles or their equivalents at Japan, the first being a Nodong missile test in 1993. Such behavior created a perception among many Japanese that Japan was being coerced by North Korea. Japanese politicians were unprepared to react to the Taepodong over-flight. In the aftermath of the launch, Japanese politicians and the public suffered what one report called a "Sputnik flinch" (Handberg & Johnson-Freese, 2001), alluding to the reaction of the United States to the launch of the Soviet satellite in 1957. As a result of the Taepodong incident, some argued, there was a quick reconsideration in Japan about what is acceptable and desirable in the realm of military space activity.<sup>11</sup>

The re-consideration of the limits on Japan's use of outer space did not result in the wholesale abandonment of these policies, however. While the decision to develop and deploy surveillance satellites marks another step beyond the earlier Cold War-era limitations, the final policy still was processed through the long-standing constraints on military policy in Japan (*eg.*, Berger, 1998; Green, 2001). Ultimately, however, this policy progression does signify further movement toward more realist-oriented security policies. Following the Taepodong incident, Japan

announced a variety of sanctions on North Korea, including suspension of food aid and Tokyo's participation in the Korean Peninsula Energy Development Organization (KEDO) project. It also froze talks on normalizing diplomatic ties and cancelled permission for all charter flights to and from North Korea.

Just one week after the North Korean Taepodong missile over-flight of Honshu, on September 7, the Japanese government and the ruling Liberal Democratic Party (LDP) "liaison council" began looking into the option of acquiring "multi-purpose satellites"—adopting a terminology proposed by industry advocates careful to frame a proposal in line with political sensitivities regarding a perceived creeping re-militarization of Japan. On November 6, the Cabinet adopted a plan to launch four information-gathering satellites in fiscal 2002. Further, on December 11, the Diet approved a third supplementary budget for fiscal year (FY) 1998 that included satellite research outlays totaling ¥3.6 billion (Taoka, 1999). Looking forward, on December 22, the Obuchi cabinet approved a draft budget for FY1999 which allocated ¥6.8 billion to the Science and Technology Agency (STA) and ¥1.4 billion to the Cabinet Secretariat to begin implementing the plan (Deutsche Presse-Agentur, 1998).

Although the initial plan to develop satellites came from bureaucrats and businessmen, LDP politicians were keen to be seen as taking the lead in realizing a satellite development plan after the Taepodong incident. Leading figures at this stage were former Foreign Minister Taro Nakayama, former JDA Director-General Tokuichiro Tamazawa, and Dietmember Yoshinori Ono.<sup>12</sup> In early September these three visited the United States and discussed the matter with key U.S. officials, including Defense Secretary Cohen and Secretary of State Albright (Shukan Posuto, 1999). Also at this time LDP Dietmembers from the defense *zoku*<sup>13</sup> formed a project team for the introduction of surveillance satellites chaired by Nakayama and including Tamazawa. In addition, JDA Director-General Hosei Norota and Dietmembers Kazuo Aichi and Seishiro Eto were members. The interaction among these politicians and bureaucrats, and with key industry figures, determined the future course of the surveillance satellite program.

### ***The Broad Security Argument***

Japan has relied on U.S. intelligence derived from aerial reconnaissance since the beginnings of the alliance at the end of the Second World War—progressing from photographs taken from standard planes in the 1940s, into U-2 spy planes launched from Japan in the 1950s and 1960s, and into satellite imagery beginning in the 1970s. Since the 1980s, the JDA supplemented U.S. intelligence with commercial satellite images purchased from American and French companies. Because commercially-available images possess poorer resolution than those available (properly desanitized) from the U.S. government, however, the JDA continues to rely on imagery (and analysis) from U.S. intelligence organizations as well.

Many in the Japanese political and defense communities question possible bias in U.S. intelligence provided, however. They fear that the United States provides only the type of information and intelligence that it finds convenient to share in order to manipulate Japan.<sup>14</sup> As one MOFA official commented: "The U.S. will not supply Japan with information or intelligence if it deems that Japan's measures

are disagreeable to the U.S. policy direction. Being self-sufficient in information gathering can be translated into having a greater freehand. That's how things work in the post-Cold War period" (quoted in Taoka, 1999). Several important politicians share this view. Tomoharu Yoda, former administrative defense vice-minister, has stated: "Japan has a defense-only security policy, so for that purpose, we have to have intelligence. We can get intelligence from the U.S., but from the points of view of security and crisis management, we need to have our own intelligence-gathering satellites" (*Shukan Posuto*, 1999). Mitsubishi Electric (MELCO)—the firm with the most interest in supporting surveillance satellite development—plays on these fears in its promotional literature, emphasizing "accomplishing independence unsusceptible to manipulation of information by other countries" (quoted in Taoka, 1999).

Such fears are not merely political abstractions, but rather stemmed from specific suspicions. One concrete example of this fear was seen in the incident regarding North Korea's supposed construction of a nuclear processing facility inside deeply-dug holes detected by U.S. spy satellites, which critically was played up in the media long after the satellite photos of the supposed construction site were taken. Regarding this incident, a senior JDA official opined: "The U.S. might have its own political motives. It aims to consolidate the environment for adopting a hard-line policy toward North Korea over its suspected construction of an underground nuclear facility" (*Nihon Keizai Shimbun*, 1998a). Another example is the play in U.S. media and by U.S. officials of supposed North Korean preparations for a second ballistic missile launch soon after the first Taepodong over-flight of Japan in August 1998, a claim that was not supported by any hard evidence and was widely viewed in Japan with suspicion (and fear). JDA Director-General at the time commented regarding this rumor: "We have not obtained any intelligence suggesting the start of refueling for the firing" (*Nihon Keizai Shimbun*, 1998a). In an article appearing in the *Nihon Keizai Shimbun* entitled "Is there truth in the 'missile launch' reports?", one JDA official explained possible U.S. motivation for spreading such fears: "The reason is because compilation of a budget for fiscal 1999 is approaching in Japan." He suggested that the U.S. intention was to ensure outlays in full for joint research on missile defense (*Nihon Keizai Shimbun*, 1998a). If Japan possessed its own ability to monitor North Korea using surveillance satellites, such rumors could be compared to Japan's own imagery analysis. Indeed, the more recent Taepodong scare of June/July 2006 demonstrated a more coordinated U.S.-Japan response to the crisis, which likely was due in part to Japan possessing its own ability to collect and to analyze imagery of the possible launch.<sup>15</sup>

A more concrete yet related issue of Japanese trust of the United States arises with the question of domestically-produced versus imported surveillance satellites, a debate settled in favor of domestic production partly for reasons of information security and reliability. No one expects Japanese domestic satellite development to provide immediate independence for Japanese defense policy. However, exactly because it is understood by Japanese policymakers that the development of such a capacity will take time it is thought that it is necessary to begin sooner rather than later. As one senior MOFA intelligence official has commented: "Costly satellites might be spoken of badly as a waste of money in the first several years, but the staff will acquire necessary skills over time" (quoted in Taoka, 1999).

### ***Pressure from Industry***

Military security issues comprise only a partial explanation for the decision to deploy surveillance satellites. Economic issues also have played an important role in the development of security policy decisions—for example, the FSX/F2 fighter plane or missile defense co-development with the United States, or Japanese defense hardware procurement more generally. The case of surveillance satellites is no exception. The commercial use of outer space is expanding exponentially in the twenty-first century, leading to the entry of a larger number of players from a greater number of countries. While satellite production and operation is only one aspect of this market, it is one of the largest parts. More than one thousand satellites are projected to be launched in the first decade of the twenty-first century (National Defense Panel, 1997, 38). Moreover, for the first time in history, the number of commercial launches exceeded government launches in 1996.

Growth in the commercial satellite market is expected to continue to increase in the twenty-first century (see Table 1 below). Thus, it is not surprising that Japanese firms have continued aggressively to push for relaxed restrictions on their activities at home and abroad in the 1990s. One report estimates that space-related business revenues generated by services, manufacturing, and support of space activities reached \$100 billion in 1998, sixty-four percent of revenue derived from commercial activities and thirty-six percent from government activities. It is expected that the percentage of revenue generated by commercial sources will increase to seventy-five percent in 2002. Moreover, the amount of investment in space-related ventures is expected to double from under \$20 billion in the 1990s to over \$40 billion in the first decade of the twenty-first century (International Space Business Council, 1999).

While ostensibly the decision to deploy surveillance satellites is a national security issue, the enormous cost of an effective system—estimated at over one trillion yen (\$10 billion) over ten years—requires one to consider carefully the potential commercial benefits to the producer of such a system. Japan's major defense producers are keenly aware of this benefit—both for the profits of building such a system by itself as well as for the spin-off benefit of expertise that could be applied to commercial satellite development and production.<sup>16</sup>

Japanese national security policy explicitly rejected the use of outer space for direct military purposes through its “peaceful use of outer space policy” declared in the Diet in May 1969. However, one could argue that Japan has been engaged in developing military space capabilities from the onset of its independent space

**Table 1.** Total Global Market for Commercial, Military, and Science Satellites

Year	Revenue (\$B)	Year	Revenue (\$B)
1995	7.56	2000	11.06
1996	7.29	2001	14.41
1997	8.57	2002	14.92
1998	9.56	2003	16.12
1999	11.05	2004	13.69
		2005	10.89

Source: Frost and Sullivan 1999 (International Market Research).

program because of the common technologies basic to many civil and military space systems—a fact also pertinent to Japan's restrictions on the export of weapons. In the world of twenty-first century technology, the U.S. Global Positioning System (GPS) satellites widely used in Japan, reconnaissance satellites, and satellite communication systems all represent utilization of passive military space systems. The ability to rationalize their justification and legality is far more palpable than explicitly to acknowledge the development of overt space-based weapons systems—even if the weapons are defensive in nature, such as the case of ballistic missile defense which uses satellites for targeting missiles.

In an effort to take advantage of this commercially-promising field, the Space Activities Promotion Council, a special committee of Keidanren (the Japan Federation of Economic Organizations, Japan's most powerful business lobby), issued a report in July 1999 entitled, "Proposal for the Establishment of a Comprehensive Policy on Space Activities and for the Strengthening and Industrialization of Space Industries" and which was distributed widely to leading government officials (Keidanren Space Activities Promotion Council, 1999). Later in the same year, Keidanren's Industrial Affairs Bureau issued an even more forceful opinion on the need to capitalize on the space market, writing:

The Western countries are pushing forward money-making projects to redouble their efforts to commercialize space industries and increasing their competency . . . Now is the time, and it is essential for Japan, to establish a national strategy to strengthen the basis of cutting-edge technology and to promote in a timely manner ongoing space projects so that we can succeed in global competition (Keidanren Industrial Affairs Bureau, 1999, author translation from the Japanese).

In this report, there is no explicit mention of military satellite applications, though it is reasonable to expect that Japanese firms actively will seek out military-use applications for their satellite business, especially given the government's recent signal that missile defense research is not seen to violate the Diet resolution on the Peaceful Use of Outer Space.

The enthusiasm of government ministries, agencies, and politicians helped MELCO and NEC actively to promote their products. NEC had been promoting its version of a satellite system, though it was hindered by a JDA procurement scandal in which NEC was implicated. According to the *Asahi Shimbun*, NEC was the first corporation formally to present a surveillance satellite project to the LDP, in 1997 (*Asahi Shimbun*, 1998b). At this time NEC proposed a system consisting of one optical and one radar satellite, with the optical satellite capable of a resolution of 0.4 meters, a level far superior to the system ultimately contracted and one used today only by military satellites (*Nikkan Kogyo Shimbun*, 1998). In part because of the breach-of-trust between JDA and NEC over a procurement scandal involving JDA headquarters in 1997, many observers considered it a near certainty that the contract would be awarded to MELCO over NEC (*Sankei Shimbun*, 1999; *Asahi Shimbun*, 1998b). Moreover, in terms of experience, MELCO had just been awarded a contract to produce a commercial satellite for an Australian telecommunications firm, the first overseas order for a Japanese commercial satellite (*Asahi Shimbun*, 1998b)—a sale that also set a precedent regarding Japan's arms export and space use policies in that half of the satellite's capacity is expected to be utilized by the

Australian military. Partly due to this perceived inevitability, in addition to regular corporate rivalry, major trading houses in Japan have been divided over the issue of domestic-production versus imported satellites. Insufficient Japanese technology in some key areas exacerbated this problem. For example, with the current level of Japan's indigenous technology, a fully domestically-produced satellite would only be able to take pictures of targets when the camera was directly over the object, due to limited technology in the area of attitude control (*Sankei Shimbun*, 1999).

In short, although news reports of the time frequently stated that the idea of Japan owning multi-purpose satellites emerged after the Taepodong incident, this claim patently is false. Major Japanese defense producers—namely MELCO, NEC, and Toshiba—had sought for years to secure government support for national satellite development in a variety of forms. Japan long had been a space participant, but only in the realm of civil and commercial activity. The Taepodong Incident provided the spark to justify taking these activities to the next level, to allow further Japanese corporate cooperation with the JDA in outer space use.

### **The Question of Scope: Continued Limitations on Surveillance Satellites**

By mid-September 1998, it appeared clear that government and industry at last would be able to move ahead with plans to develop Japan's satellite intelligence capabilities. What was not clear was the scope of the system that would be built, and whether it would be produced 100% domestically or whether components would be imported from abroad. From the earliest stages, the government took care to employ the rhetoric that reflected existing constraints on Japan's military activities in any discussion of surveillance satellites, which affected the question of scope and capabilities of the system ultimately approved. Efforts by the United States to block and then to shape the nature of the surveillance satellite system also structured the nature and timing of the final outcome.

### **Public Opinion and Government Spin**

The Taepodong Incident provided an opportunity for the government to justify and implement long-brewing plans for the domestic development of surveillance satellites. Still, LDP and industry leaders proceeded cautiously. Even in the near hysterical domestic environment of the days immediately following the Taepodong Incident, government declarations regarding surveillance satellites provided information on the true nature of the potential new satellites only sparingly. According to one of the first government reports on the decision, Japan would use the satellites for national security purposes, to watch for natural disasters, and to fight smuggling and illegal immigration (*Deutsche Presse-Agentur*, 1998). The government also explicitly stated its view that such satellites would be consistent with the 1969 Diet resolution on the peaceful use of outer space. As such, *Kyodo News* reported that data gathered from the satellites would not be sent to defense authorities for analysis and rather would be based in the Cabinet Information Research Office (CIRO).<sup>17</sup> A *Nihon Keizai Shimbun* editorial on the decision reflects the lack of information provided about an information satellite: "The government has described the purpose of the project broadly as being related to security and crisis

management in cases such as natural disasters, giving little information about the extent of possible military applications” (*Nikkei Weekly*, 1998).

Although largely ignored at the time of the government's announcement to develop multi-purpose satellites, the public and mass media were not entirely convinced that the decision to develop satellite capability adequately responded to the threat of future missile launches on the part of North Korea. Part of this general lack of critical review can be attributed to a general public not accustomed to debating the technical merits of defense policy, and to a lack of independent think tanks to offer critiques of government policy. Mass media outlets often serve as proxies in these cases, and this case is no exception. The *Yomiuri Shimbun*, for example, noted: “some analysts wonder if these probes can really detect missile launching. Although the government is positioning them as multipurpose satellites, there is still no knowing what kind of data to get from these satellites or how to use such satellite-transmitted data” (*Yomiuri Shimbun*, 1998). In fact, the proposed multi-purpose satellites differ fundamentally from so-called early warning satellites used by the United States and Russia to detect missile launches. While early warning satellites are placed into stationary orbit at an altitude of about 36,000 kilometers over the equator, multipurpose satellites are designed to orbit the earth at an altitude of about 500 kilometers (*Yomiuri Shimbun*, 1998). In principle, what a multipurpose satellite can discover is evidence of site preparation in advance of a launch—such as the case of the July 4, 2006 Taepodong missile test which, unlike the August 1998 test, failed less than a minute after launch. Such detection is not foolproof, however, as efforts can be made to camouflage preparations for a launch. Moreover, and importantly, multipurpose satellites cannot detect missiles that have been launched. The simultaneous push for joint research on ballistic missile defense offers a more direct response to the security threat posed by North Korean missiles.<sup>18</sup>

After the public had a little more time to digest the significant change in Japanese policy, the *Nihon Keizai Shimbun* editorialized explicitly against the satellite plan as it was developing under the banner “Focus on intelligence satellites should be placed on natural disasters” (*Nihon Keizai Shimbun*, 1998b). Interestingly, though, its objections did not include reference to the Diet resolution on the peaceful use of outer space, but rather focused on a number of technical difficulties of the plan including the lack of sufficiently-trained imagery analysts, the fact that the proposal would not include early-warning capabilities, and that imagery of equal resolution soon would be available to the JDA from commercial sources. Moreover, concern was expressed regarding the impact of such a program on Japan's international reputation. Opines the *Nihon Keizai Shimbun*: “The project poses an array of questions over the specifics of its implementation, as well as the sensitive issue of winning the understanding of neighboring nations” (*Nikkei Weekly*, 1998).

In sum, although the Diet resolution on the Peaceful Use of Outer Space posed one obstacle to domestic surveillance satellite development, it was by no means the only obstacle. As the plan for developing such a system gained momentum, other issues such as which agency would administer the system, which would pay for it (and in what share), the reaction of the United States, and the reaction of Japan's neighbors all exerted considerable influence on decision-making. As much as anything the reason for Japan building its own satellite capability is to redress the

withholding of intelligence among bureaucracies—*ie.*, JDA sharing of (often U.S.) intelligence outside of its traditional purview. Public concern over the possible military nature of the surveillance satellites proved less important than the perceived security threat from North Korea and need for adequate preparations for future missile development on the part of North Korea.

### ***Imported Satellites or Domestic Production?***

While most officials within the JDA and SDF understood the critical role that intelligence plays in their defense, many did not agree with the corresponding prescription: significant Japanese defense budget funds devoted to domestic satellite production. Moreover, within the LDP's national defense *zoku* and foreign affairs *zoku* as well there were concerns over whether Japan possessed the capability to develop a satellite system that could serve military purposes in a timely manner and which the government could afford. At this time a dispute arose between the pro-domestic and pro-import groups regarding the future direction of Japanese policy towards surveillance satellites.<sup>19</sup>

Those opposed to domestic production did so for similar reasons to initial U.S. objections to the overall project: cost and final product. Many in the JDA feared that funds devoted to satellite production would come from other, more important budget areas. Moreover, the JDA already was in the process of upgrading its satellite reconnaissance through increased cooperation with the United States. After JDA opposition to domestic production of the satellite system became clear in November 1998, members of the pro-domestic group from industry and the bureaucracy stepped up their pressure on LDP Dietmembers. Reportedly the group focused on Deputy Chief Cabinet Secretary Muneo Suzuki, who previously had served three terms as Parliamentary Vice-Minister of the JDA and had the ear of Chief Cabinet Secretary Hiromu Nonaka, a key figure in the Obuchi administration (*Shukan Posuto*, 1999). In addition, the group visited each member of the national defense *zoku* to push their agenda. As Dietmember Yoneda conveys: "Before the budget outlay was set, STA's Research and Development Bureau's Research and International Affairs Office Director Yoshinori Yoshimura visited me and related in detail that domestic-produced satellites would never be inferior to those manufactured by the U.S.. With data in hand, he one-by-one called on other politicians who had an interest in defense affairs" (*Shukan Posuto*, 1999).

On October 14, MELCO submitted to the LDP satellite project team a blueprint entitled, "A System Pertaining to Multiple-Purpose Information-Gathering Satellites" (Taoka, 1999). The plan called for a swift passage of a budget to start the project in fiscal 1998 (which ends in March 1999) for launching satellites in 2002 as well as for the establishment of a "central control center" to operate and maintain the satellite system and to handle requests from various government agencies (what later would become CIRO's CSICE, the Cabinet Satellite Intelligence Center). NEC Corporation's scandal in JDA contracts worked to MELCO's advantage by allowing the MELCO proposal to be accepted without significant consultation with other potential bidders (there being none), contributing to the government's quick decision on the project.

In November 1998, when the LDP was debating the issue of domestic versus imported satellites in advance of another consultation trip to Washington, JDA Director-General Tamazawa weighed in publicly in favor of imported satellites, questioning publicly: "I wonder if it is a wise approach to decide to introduce only domestic satellites." According to the *Shukan Posuto*, the controversy Tamazawa generated from his statements resulted in the LDP adding to its planned U.S. mission representatives from the LDP's national defense, foreign affairs, and science and technology *zoku* who feared a *fait accompli* in favor of imported satellites given the proposed schedule of the trip to Washington. During this "inspection tour" from November 8–14, the mission members met with key U.S. officials such as Assistant Secretary of State Stanley Roth and Deputy Assistant Secretary of Defense Kurt Campbell and, more importantly, visited such satellite manufacturers as Lockheed Martin, Hughes, and TRW as well as private-sector satellite imaging firms such as Space Imaging (*Shukan Posuto*, 1999). The result of this inspection tour seemed to confirm the fears of the pro-domestic camp, with LDP satellite team leader Taro Nakayama reporting upon his return to Japan: "I don't care whether satellites are domestically-produced or imported, but my worry is whether Japan, by the time of deployment in 2002, can catch up with the United States, which is far ahead of Japan. In addition, we must give thought to the tax-payers' burden. If that is the case, it is only natural that the answer is (in favor of imports)" (*Shukan Posuto*, 1999). JDA director-general Tamazawa concurred, commenting: "Who in the world do you think will take the responsibility if we follow the line of developing satellites at home but at the last phase we find ourselves unable to make it by the deadline or we find the satellites manufactured at home to be flawed? The United States has reached the current level of technology after a history of repeated failures. It is a dangerous notion that we can domestically develop satellites" (*Shukan Posuto*, 1999).

While the pro-import group appeared to get the upper hand after their "inspection tour" to the United States to meet with U.S. satellite manufacturers, the pro-domestic group also achieved success. On November 10, 1998 the Space Activities Commission—an advisory panel set up in the Prime Minister's Office (*sorifu*) and chaired by STA Director-General Yutaka Takeyama—came out in favor of the plan to develop domestically-produced surveillance satellites, leading the government to allocate ¥11.3 billion for R&D expenditures for information-gathering satellites in FY1998 through a third supplemental budget and plan to allocate ¥64 billion in its FY 1999 budget (*Asahi Shimbun*, 1998a; 1999b). This budget appropriation represented over half of the funds needed for a domestically-produced system. These funds were to be shared by the STA, MITI, and MPT. Work on the satellites prior to launch were to be coordinated by the STA (*Nikkei Weekly*, 1998). According to Hiroshi Fujita, director of the Space Use Division of the Research and Development Bureau in the STA: "The budget appropriation in my view means that Japan is moving toward developing such satellites on its own. At the start, we thought that importing satellites from the U.S. would not be feasible." However, he did offer a clue to the compromise solution that was developing, commenting: "However, some parts for such satellites could be imported, so we do not see the pro-import and pro-domestic groups as incompatible" (*Shukan Posuto*, 1999). Moreover, already by November 1998 it often was reported in the mass media that the government intended to produce the satellites domestically, despite some public

LDP support for importing the satellites in order to obtain them more quickly and cheaply.

On April 1, 1999, Chief Cabinet Secretary Hiromu Nonaka announced a plan to develop Japan's new surveillance satellite system domestically, stressing the need to maintain control of the satellite after its launch and the convenience of maintenance and operation of a domestic product (*Asahi Shimbun*, 1999a). In addition, Nonaka announced the establishment of an "intelligence collecting satellite promotion committee" under the Cabinet Secretariat that he would chair (*Asahi Shimbun*, 1999a). Other members of the committee include Deputy Chief Cabinet Secretary Teijiro Furukawa (who serves as Deputy Chairman of the committee), as well as director-general class officials from the Cabinet Secretariat, JDA, STA, MOFA, MITI, and the Ministry of Post and Telecommunications (MPT).

Nonaka gave three reasons for developing and operating a domestic satellite. First, in case trouble occurred in the areas of operation and maintaining control, quick response was possible. Second, the technology of the NASDA and other organizations was sufficient to develop such a system. Third, although Japan was capable only of developing a satellite with up to one-meter resolution, for intelligence collecting that was deemed to be effective enough. However, he explained that Japan would have to rely on overseas purchases of parts and the acquisition of analytical skills to supplement domestic capabilities (*Asahi Shimbun*, 1999a).

Nonaka's April declaration did not end the controversy, however. In June 1999 Deputy Assistant Secretary of Defense Campbell again visited Tokyo and met with senior officials in the Cabinet Secretariat, JDA, and MOFA calling for Japan to purchase the entire satellite system from U.S. companies. In response Japanese officials once again reiterated their intention that "the main body will be domestically-produced, but that we will purchase parts from the United States" (*Mainichi Shimbun*, 1999). This reiteration has not quelled some Japanese politicians still concerned with the significant cost differential. On July 1, 1999, LDP National Defense research council head Tamazawa noted that the cost for a domestically-produced satellite is estimated at ¥200 billion while the price given by America's Lockheed Martin is ¥120 billion for an imported system. He stressed: "The grounds for convincing the people are needed because taxpayer's money will be used" (*Nihon Keizai Shimbun*, July 2, 1999).

### ***The Ultimate Compromise: Limited Capability, Shared Control***

Under the MELCO-proposed multipurpose satellite system, satellite-collected visual data would be utilized for such purposes as forecasting weather conditions, probing mineral resources, creating maps, and preventing disasters, in addition to less-discussed military applications (*Nikkan Kogyo Shimbun*, 1998). MELCO's plan is for two one-ton optical satellites and two 1.5-ton radar satellites. The optical satellites would be capable of producing images at a one-meter resolution, covering areas up to fourteen kilometers, while the best of the two radar satellites will produce images between one and three meters of resolution. A one-meter resolution standard marks a dramatic improvement over the ten-meter resolution that the JDA had been purchasing previously from private sources,<sup>20</sup> and will allow for differentiation between types of ballistic missiles and fighter aircraft. The satellites

will orbit the Earth over the polar regions in about ninety minutes, allowing for coverage of every location on the Earth in a twenty-four hour period—using the optical satellites during daytime and the radar satellites during night-time and at times of cloud cover in daylight. The satellite system is controlled by a new “operational control center” in the CIRO, which processes requests from the various governmental ministries and agencies for imagery and analysis.

### **Looking Forward: The Continuing Pressure of Broader Security Concerns**

Recent tensions with North Korea, a growing resentment of perceived U.S. “unilateralism”, and a general increase in threat perception among the Japanese public all add stress to the longstanding limits on Japan’s defense policies that have been apparent for so many years. Cold War-era policies largely banning the foreign dispatch of Japan’s Self-Defense Forces, the export of weapons, and the military use of outer space have been pushed far beyond previous limits due to changes in technology, Japan’s international environment, and domestic political change that have led to debate over the development of new military capabilities such as mid-air refueling for military aircraft, surveillance satellites and ballistic missile defense. Careful attention to the shifting politics of external defense on the satellite case offers useful insight into how Japanese security policy is likely to continue to evolve in the first decades of the twenty-first century. As well, it illustrates the new relationship between business and government forming in the decade after the burst of Japan’s “bubble economy” and after five years of reform under Prime Minister Junichiro Koizumi.

Japan’s security policies are changing in notable ways, as indicated by the examples above. However, the surveillance satellite case also is indicative of the continued constraints placed on policymakers seeking to increase Japan’s military capabilities and practices. Long-standing institutional constraints remain in place—including not only Diet resolutions but, more importantly, constitutional prohibitions exemplified by the well-known Article Nine which prohibits Japan from maintaining “war potential”. While constitutional revision itself is on the political horizon, this aspect of the constitution is not envisioned by most political analysts to be revoked. New legislation that seeks to circumvent or modify past Diet resolutions and legislation has been enacted, however—in part due to domestic party realignment and changing voter sentiment that has weakened the pacifist-driven opposition formerly led by the Japan Socialist Party (JSP). Rather than abandoning past principles, however, even constitutional revision is more likely to honor past practices than to depart dramatically from Japan’s past half-century of constraints on military policy making. In sum, Japan’s tortured, thirty-year course to acquire surveillance satellites illustrates both Japan’s unusual government-business linkages in the area of national security as well as offering a glimpse into the new politics of security apparent in Japan today.

### **Notes**

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- 1 The Japanese, *joho shushu eisei*, can be translated both as "information" and "intelligence"-gathering satellites (IGS). The Japanese government uses the translation "information-gathering" as does the major mass media. The satellites are designed to function and possess the capabilities of surveillance, or spy, satellites operated by the militaries of other advanced industrial democracies such as the United States and France, from whom Japan long has purchased satellite imagery. For this reason, this article refers to such "information-gathering" satellites by their more generic term, surveillance satellites.
- 2 An excellent account of both the historical antecedents and the recent decision to develop surveillance satellites is provided, in Japanese, by Sunohara (2005). A shorter, complementary analysis is available in English in Johnson-Freese and Gatling (2004).
- 3 The Resolution Concerning the Fundamentals of Space Development and Exploitation by Japan was adopted at a plenary session of the House of Representatives on May 9, 1969. It reads: "The development and exploitation by Japan of objects to be projected into space above the earth's atmosphere, and of the rockets by which they are launched shall be confined to peaceful purposes only and shall be carried out to contribute to the progress of science, the improvement of the nation's living standards, and the welfare of human society, along with the development of industrial technology and voluntary collaboration and cooperation." Reprinted in JDA, *Defense of Japan* (1987), (trans. The Japan Times), appendix reference no. 22.
- 4 The issue first caught the attention of the Japanese public and mass media in connection with the shoot-down of the U.S. U-2 spy plane over the Soviet Union in the early 1960s, which had been launched from Japan. Oros (2002b), chapter five, examines the Cold War context of Japan's outer space policy in greater depth.
- 5 An overview of such recent developments is available in Oros and Tatsumi (2007).
- 6 As the dominant paradigm in the academic study of international relations, the scope and strands of literature within this paradigm is vast. In general, however, realist theories conceptualize an anarchical international system comprised of unitary, rational states engaged in a struggle for power, and seek to explain a state's security practices by analyzing the distribution of power across the international system.
- 7 As discussed below, on August 31, 1998 North Korea launched a Taepodong II missile over the main Japanese island of Honshu that splashed down into the Pacific Ocean, claiming it was an attempt to launch a satellite into orbit and therefore was unannounced prior to launch.
- 8 MITI was renamed the Ministry of the Economy, Trade, and Industry (METI) as part of broader government administrative reform in January 2001; during the period of analysis of this article, however, MITI was the operative name.
- 9 See Oros (2002a) for further discussion of development of intelligence capability overall. Even the dramatic boosts in intelligence personnel to support the new surveillance satellites still will leave a significant gap between the number of Japanese intelligence personnel and that of other similarly-positioned states.
- 10 I am grateful to two anonymous reviewers for pointing out these broader linkages.
- 11 Sunohara (2005) devotes the first chapter of his comprehensive analysis of Japan's decision to pursue independent surveillance satellites to what he calls the "Taepodong shock".
- 12 All Japanese names in this article will be presented in Western order of surname following given name (ie., "last names" come last).
- 13 *Zoku*, or "policy tribes," are groups of Diet members who specialize in a particular policy area, such as defense, the national budget, or construction.
- 14 This is what Sunohara (2005) refers to in the title of his second chapter, "Two Americas".
- 15 Apart from the difference in Japanese imagery intelligence capability, however, other important differences would include the deepened U.S.-Japan alliance relationship in general and the solid personal relationship between Prime Minister Junichiro Koizumi and President George W. Bush.
- 16 Samuels (1994) develops a sophisticated argument tracing Japan's practice of applying indigenous commercial technology to enhance its defense base, and vice-versa.

- 17 This organization today is referred to as the Cabinet *Intelligence* Research Office in English, which itself is indication of a shift taking place in what is seen as politically acceptable in the Japanese defense community.
- 18 Japan will have to maintain early warning satellites in orbit (or rely on those of the United States) in order to complete any future missile defense system currently under development. Thus, the drive for the prior development of multi-purpose satellites also may be understood in the context of a longer-term plan to develop expertise for future deployment of a wider missile defense system.
- 19 A more comprehensive analysis of this aspect of Japan's surveillance satellite policy is available, in Japanese, in Sunohara (2005), chapters three and five.
- 20 However, the JDA already was scheduled to begin receiving newly-available improved commercial images at one-meter resolution beginning in FY 1999. This, in fact, is one reason some in the JDA objected to the high cost of developing a satellite system independently.

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## References

- Asahi Shimbun. (November 10, 1998a). p. 12.
- Asahi Shimbun. (December 18, 1998b). p. 12.
- Asahi Shimbun. (April 1, 1999a). Internet edition (<http://www.asahi.com>).
- Asahi Shimbun. (July 23, 1999b). p. 12.
- Berger, T. U. (1998). *Cultures of antimilitarism: National security in Germany and Japan*. Baltimore: Johns Hopkins University Press.
- Deutsche Presse-Agentur. (December 22, 1998).
- Deutsche Presse-Agentur. (November 5, 1998). Japan to build, launch four surveillance satellites.
- Friedberg, A. (1993/94). Ripe for rivalry: Prospects for peace in a multipolar Asia. *International Security*, 18, 5–33.
- Gladwell, M. (2000). *The tipping point: How little things can make a big difference*. New York: Little Brown.
- Green, M. (1995). *Arming Japan: Defense production, alliance politics, and the postwar search for autonomy*. New York: Columbia University Press.
- Green, M. (2001). *Japan's reluctant realism: foreign policy challenges in an era of uncertain power*. New York: Palgrave.
- Handberg & Johnson-Freese. (February 12, 2001).
- Hook, G. D. (1988). The erosion of anti-militaristic principles in contemporary Japan. *Journal of Peace Research* 25: 4 (December): 381–394.
- Hook, G. D. (1990). *Language and politics: The security discourse in Japan and the United States*. Tokyo: Kuroshio Shuppan.
- Hook, G. D. (1996). *Militarization and demilitarization in contemporary Japan*. London: Routledge.
- Japan Defense Agency. Various years-a. *Nihon no Bôei [Defense of Japan]*. Tokyo.
- Johnson, C. (1982). *MITI and the Japanese miracle*. Stanford, CA: Stanford University Press.
- Johnson-Freese, J., & Gatling Lance. (2004). Security implications of Japan's information gathering satellite (IGS) system. *Intelligence and National Security* 19: 3 (Autumn): 538–552.
- Kahn, H. (1970). *Japan: The emerging superstate*. Englewood Cliffs, NJ: Prentice-Hall.
- Katzenstein, P. (1996). *Cultural norms and national security: Police and military in postwar Japan*. Ithaca, NY: Cornell University Press.
- Keidanren Industrial Affairs Bureau. (1999). “Uchû-riyô no kakudai ni muke, ima koso jigatame wo” [It is time to concrete the basis of industries in preparation for enlarging space use] (December 9). Tokyo.
- Keidanren Space Activities Promotion Council. (July 6, 1999a). “Sôgôteki na Uchû-kaihatsu-riyô Seisaku no Kakuritsu to Uchû-sangyô no Kiban-kyôka-sangyôka no Suishin” [Proposal for the Establishment of Comprehensive Policy on Space Activities, and for the Strengthening and Industrization of Space Industry]. Tokyo.
- Kingdon, J. W. (1984). *Agendas, alternatives, and public policies*. New York: Harper Collins.
- Kyodo News Service. (January 7, 1998). Japan Economic Newswire.

- Mainichi Shimbun. (June 16, 1999). p. 1.
- Nakasone, Y. (1996). *Security and peace in the new Asia-Pacific era*. Tokyo: Institute for International Policy Studies.
- National Defense Panel. (1997). *Transforming Defense: National Security in the 21<sup>st</sup> Century*. Washington, DC: Author.
- Nihon Keizai Shimbun. (December 8, 1998a). p. 2.
- Nihon Keizai Shimbun. (December 10, 1998b). p. 2.
- Nihon Keizai Shimbun. (July 2, 1999). p. 2.
- Nikkan Kogyo Shimbun. (October 23, 1998). p. 15.
- Nikkei Weekly. (November 16, 1998). p. 4.
- Nishihara, M. (1983/84). Expanding Japan's credible defense role. *International Security*, 8(3), 180–205.
- Okazaki, H. (1982). Japanese security policy: A time for strategy. *International Security*, 7(2), 188–197.
- Okazaki, H. (1986). *A grand strategy for Japanese defense*. Lanham, MD: University Press of America.
- Oros, A. (2002a). Japan's growing intelligence capability in the post-cold war era. *International Journal of Intelligence and Counterintelligence*, 15, 1–24.
- Oros, A. (2002b). *The politics of antimilitarism: State identity in Japan's arms export and outer space use policies*. Doctoral Dissertation. New York: Columbia University.
- Oros, A., & Tatsumi, Y. (2007). *Japan's new defense establishment: Capabilities, institutions, and implications*. Washington, DC: Stimson Center.
- Samuels, R. J. (1994). *"Rich nation, strong army": National security and the technological transformation of Japan*. Ithaca, NY: Cornell University Press.
- Samuels, R. J., & Heginbotham, E. (1998). Merchantile realism and Japanese foreign policy. *International Security*, 22, 171–203.
- Sankei Shimbun. (June 28, 1999). p. 3.
- Schaller, M. (1997). *Altered states: The United States and Japan since the occupation*. New York: Oxford University Press.
- Schoppa, L. (1997). *Bargaining with Japan: What American pressure can and cannot do*. New York: Columbia University Press.
- Shukan Posuto. (February 5, 1999).
- Sunohara, T. (2005). *Tanjo Kokusan Supai Eisei: Dokuji Johoami to Nichibei Domei [The birth of Japan's first spy satellite: An independent intelligence network and the Japan-U.S. alliance]*. Tokyo: Nihon Keizai Shimbun-sha.
- Taoka, S. (January 11, 1999). *Shukan Posto*.
- Uriu, R. (1996). *Troubled industries: Confronting economic change in Japan*. Ithaca, NY: Cornell University Press.
- Waltz, K. (1981). *The spread of nuclear weapons may be better (No. 171)*. London: International Institute of Strategic Studies.
- Waltz, K. (1979). *Theory of international politics*. New York: McGraw-Hill.
- Yomiuri Shimbun. (1981). *Shōwa Sensō Shi: 'Saigunbi' no Kiseki [Postwar Showa history: A record of 'rearmament']*. Tokyo: Yomiuri Shimbun-sha.
- Yomiuri Shimbun. (November 7, 1998). p. 3.