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Strategic Planning for the Protection of U.S. Technology and Intellectual Property in the Trade Relationship between the United States and Japan

by Warren G. Shimeall*

Few Americans are aware of the intensity of the Japanese commitment to development of science and technology. Perhaps nothing epitomizes that commitment better than Tsukuba Science City. Completed only recently, it is at least one impressive example of the fact that "Japan, Inc." is indeed alive and well.

The highly publicized "trade war" between Japan and the United States, euphemistically represented to be "simmering down" by the Japanese (who characterize their painfully dilatory dismantling of non-tariff trade barriers as last-straw concessions to an impatient America), now appears to be escalating.

Recently, the American Ambassador to Japan, former Senator Mike Mansfield, the highly popular, if not always effective, top diplomat at the U.S. Embassy in Tokyo, was quoted as opining that 1983 loomed as the year when trade relations will be more critical than at any time previously.²

Americans, when they bother to reflect on the tenuous U.S.-Japan trade relationship, tend to experience mixed, often seemingly contradictory, feelings about Japan in the trade context. They are happy with, even proud of, their Sony TV's, Pioneer Hi-Fi stereos, Honda bikes and Toyota cars—Japanese products which give long-lasting value to value-conscious Americans. Yet, there is no denying that Japanese products have contributed to record unemployment in the United States.³ Japanese products have displaced U.S.-made products because they have un-

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1 Morse & Olsen, Japan's Bureaucratic Edge, 52 FOREIGN POL'Y 167, 170 (Fall 1983).
2 Commencement Address by Ambassador Mike Mansfield, University of Hawaii, Honolulu (May 15, 1983).
3 Japan Times, Sept. 28, 1983, at 14, col. 6. The U.S. trade deficit with Japan will balloon from $16.8 billion in 1982 to an estimated $22 billion in 1983 and $27 billion in 1984, according to C. Fred Bergsten, a former Treasury Department official who now heads the Institute for International Economics. Id.
fettered access to U.S. markets, while at the same time U.S. factory products by the tens of thousands are impeded from similar access and sales to the affluent Japanese domestic market. Well-dressed Japanese spokesmen-apologists have borrowed the phrase “try harder” in an effort to deflect responsibility for non-tariff barriers onto U.S. business, but the story of the “fruit cake fiasco” recently suffered by a Texas fruit cake maker is only too typical of the fate that awaits any U.S. business’ effort to enter the Japanese market.

Instead of considering the problem at a conceptual and policy level, the United States succumbed early to the ploy of item by item “study” and “relaxations of restrictions.” While U.S. factories stand idle from lack of access to Japanese markets, the U.S. government is engrossed in deliberations concerning metal baseball bats or oranges, and seems unperturbed that access for tens of thousands of other manufactured items has yet to be obtained. However, rather than rehash or lament the tactical skirmishes in the U.S.-Japan trade relationship, which shackled U.S. business interests in one era and amounted to a massive giveaway program in another, reevaluation of U.S. policy should be done specifically with

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4 When a Corsicana, Texas, maker of gift fruit cakes filled an order from a Japanese importer who wanted to capitalize on the popularity of this American favorite among Japanese gift givers, no one expected that the Japanese government would bar the shipment of such an innocuous and non-technical item into Japan. Japanese customs blocked the shipment on an obscure technical ground and rather than pay high custom warehouse storage charges, the importer donated the fruit cakes to U.S. Navy personnel who could receive these “dangerous articles” without the need for Japanese customs approval. The Japan Law Letter 58 (March 1983).

5 See infra note 12 and accompanying text.


7 In the early post-World War II period and continuing into the 1970's, the Japanese government arbitrarily cut down royalties on U.S. technology imported by Japanese companies to a 2-3% range in all but exceptional cases even though freely negotiated agreements by U.S. licensors with Japanese licensees were in the 5-10% royalty range. Although the practice was commonly known, the U.S. Embassy declined to intervene with the Japanese government on this practice. U.S. licensors were told to accept the 2% royalty or nothing. The U.S. government declined to collar the Japanese bureaucracy for a practice that literally cost U.S. licensors millions in unrecovered research and development expenditures. American Chamber of Commerce, Japan, Investment and Licensing Reports (1961-1966) reprinted in Bus. Int'l (Jan. 14, 1966, Jan. 21, 1966 and Feb. 4, 1966). See (Japan's) Policy on Investments from Overseas (U.S.), Keidanren Rev. 7 (Apr. 1966).

8 During the Korean War (1950-1954), the U.S. Army Procurement Agency (JPA) in Yokohama engaged in a major effort to introduce U.S. product designs, specifications, and standards of production and quality assurance in procurements from small, ragtag Japanese industries. Thousands of product types were introduced to a still dazed and motionless Japanese industrial community, pumping hundreds of millions of dollars and importing priceless technology, know-how and quality standards all for free (no royalties) to 1930's era Japanese businesses and industries. JPA’s activity was a key factor in Japan’s post-World War II economic recovery—a story that should be written into the history books.
Of all the areas in which Westerners can measure our ignorance of Japan in metric tons, none weighs as heavily as science and technology. Those foreigners attracted to the study of Japan have until now been predominantly interested in Japanese art, architecture, literature, martial arts, religion, and culture, all of which feed upon each other in a *Gestalt* of seductive beauty to the Western scholar. Some (but fewer) others have concentrated upon exploring and explaining Japanese politics and economic organization. The study of Japanese science and technology has inexplicably been a backwater in Western efforts to understand Japan. . . . Americans have grown unaccustomed to searching beyond our borders for technological innovations and scientific discoveries. Not since the early part of the Twentieth Century have American scientists, engineers and managers assumed that foreign language study and overseas research collaboration should be an integral part of technical education. Japan's stunning economic and technological advance has had at least this one positive effect upon our technological elite. We have been shaken by the results of our own complacent parochialism. We have begun to develop avenues and expertise that will make the flow of scientific and technological information between U.S. and Japan more evenly balanced. We have begun to prepare for an era in which much of the world's technological progress will be multinational in origin and supranational in benefit.9

In a recent lecture at the International House in Tokyo, Mr. Ronald P. Dore, who is presently with the Technical Change Centre in London, and author of many books on Japan, said:

Most of us are at least a bit concerned about the position of our country in the world pecking order, and we all, I think, do tend to assume that there is such a thing as a world pecking order. You can have standards of excellence for particular fields, France may be particularly good at oil paintings, the Japanese may have an edge over everybody else in the management of technology, of productivity advance, the Germans may be better educators, and so on and so forth. In particular fields there are individual rankings, but there is also I think a very commonly shared view around the world that the nations of the world can be put into an overall ranking order.

But there are differences between countries, first of all, as to where people place their nation in that rank and order and, secondly, in how concerned they are about it. One is very conscious of this, of course, as an Englishman living in a country which has gradually, over the last half

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9 Letter from Richard J. Samuels to Readers' Forum, 2 Science and Technology in Japan 6 (Apr./June 1983).
century, been very conscious of slipping down the pecking order of nations—especially when one gets involved in troubles like the Falkland troubles when the British people, who are on the whole pretty confident that they are still top dogs, are suddenly confronted with a situation in which whether or not they are top dogs and whether or not they can assert their will is called into question, and one goes through a momentary national trauma.

For most of us I think the question of who should generally learn from whom, who is at the top end of the international pecking order in the position of “teacher” to the world, and who is lower down, is a highly emotionally fraught subject and not one that can be discussed with an easy dispassionateness or lack of emotion. That, I think, is why a book with the title Japan as No. One did so well. To a European, the interesting thing about the enormous popularity of Ezra Vogel’s book is the assumption on the part of the Americans that it is part of the order of nature that America should be No. One, and that if this is not the case, if Japan has become No. One, then, surely, the times are out of joint and something ought to be done about it.10

Much is made of the Japanese propensity for settling disputes or mistakes by consultation and discussion between affected parties. Assuming that this denotes a type of democracy of equals working out a problem together and that this is the only approach dared taken with Japan as a trading partner because to do otherwise would foster an imperious and uncompromising stance literally unknown in Japan, Mr. Dore’s further remarks should also allay that often repeated misunderstanding:

The quality of Japanese products is often bought at the expense of subcontractors. I’m astonished in talking to Japanese businessmen at how frequently one hears the words “guarantee” and “claim”—claim for compensation against late delivery, failure to maintain quality standards and whatever—and henpin—goods sent back because they are not up to standard. The frequency with which these things occur in the Japanese business world seems to me far greater than anywhere else because of the insistence on absolute perfection in quality by the people who give subcontractors orders.

Because subcontractors are dependent, because they are in the weaker position, they have to deliver. This means that you’re rung up at two o’clock in the morning by the main firm, by the parent firm, which says: “Look, we’ve found 0.05 defects in this latest consignment, you must send somebody over by tomorrow morning to go through the whole consignment and take out the defective parts, or we shall have to send the whole order back,” and if you are a dependent subcontractor you say “Very sorry, yes, yes, I’ll be there in an hour.”11

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11 Id. at 16.
The key to understanding this "hard hearted" but common episode in cultural, ethereal Japan is the Japanese "superior-inferior" relationship. The Japanese insensitivity in business relationships with others who are in an inferior position is widely known throughout East Asia, especially Southeast Asia, where the term "economic animal" was coined by some of Japan's less fortunate trading partners.

While Japan's trade position was inferior vis-à-vis the United States for nearly the past four decades, Japan was encouraged to maneuver the United States into using an "equal partner" definition of the U.S.-Japan trade relationship.\textsuperscript{12} Though Japan is quite happy to enjoy this gratuitous "equal partner" status, if it should gain a superior position, the United States would be accorded, and in some trade sectors is now accorded, an inferior position by the Japanese, as Japan's Asian neighbors have been regarded and treated as inferiors.\textsuperscript{13} If the United States fails to recognize this ominous evolution, it will surely fall into an inferior trade position with Japan. The evidence that an ominous evolution is occurring is available to anyone who desires to assemble and study the statistics and reports on Japan's technological advances. The Japanese government made a commitment over 10 years ago to achieve technological supremacy in many critical fields.

Perhaps nothing epitomizes that commitment better than Tsukuba Science City. Japan planned and constructed an entire new city into which the research and development facilities for certain critical fields would be centralized and intensified in an intellectual environment encouraging cross-pollination of disciplines. Situated about 40 miles northeast of Tokyo, the recently completed Tsukuba Science City is a futuristic scientific community of some of the ablest brains in Japan staffing facilities which include the National Laboratory for High Energy Physics, the Building Research Institute, the Nippon Telegraph and Telephone Public Corporation, the Public Works Research Institute, the National Research Centre for Disaster Prevention, the University of Tsukuba, the Geographic Survey Institute, the Tsukuba Botanical Gardens, the National Science Museum, the University of Library and Information Science, the Tsukuba Centre for Institutes, the National Research Institute for Metals, Tsukuba Space Centre (NASDA) and over forty other institutes, research centers and schools.\textsuperscript{14} Clearly, Japan's commitment to technological supremacy is not mere demagoguery by Japanese politicians seeking office or enhancement of a worldly-wise reputation among constituents.

\textsuperscript{12} Yamagata, \textit{Outcome of the 4th Japan-U.S. Businessman's Conference}, KEIDANREN REV. 1 (Apr. 1986).
\textsuperscript{13} \textit{Unequal are Treaties}, THE JAPAN LAWLETTER 1 (Nov./Dec. 1983).
\textsuperscript{14} OFFICE OF THE PRIME MINISTER, TSUKUBA SCIENCE CITY 1981.
Prime Minister Yasuhiro Nakasone, an avowed Japanese ultranationalist, in a statement entitled *Leading the Way into the 21st Century*, wrote:

Looking at the history of civilization, we realize that the needs arising in each new age have the effect of spurring new developments in science and technology which, in turn, lead to yet another new age in an evolution by innovation.

Science and technology development should be pursued with the spirit of challenging the unknown, within a format of comprehensive, long-range research and development plans grounded on new perspectives. It will also be necessary to stress a highly creative science and technology which will contribute to the progress of our international community, while keeping the need for a harmonious balance between science and technology and society.

In view of the spectacular progress that is being achieved in high technology, especially in the fields of life sciences, electronics, new materials, and new sources of energy, I believe that progress in these fields holds the very key to paving the way for a cultural revolution in the 21st century. . . . Only under such a system will it be possible for both advanced and developing countries to make the oncoming 21st century an age adorned with new promise for mankind.16

Mr. Nakasone's comments leave little doubt that he intends for Japan to be leading the world as "top dog" in the "world pecking order" in the 21st Century.

In 1980, the Japanese Patent Office received 191,020 patent applications, of which 86.8% were filed by Japanese and 5.4% were filed by Americans.16 In the same year, the U.S. Patent Office received 104,329 patent applications, of which 40.5% were filed by foreigners, including 12.4% filed by Japanese.17 In a recent year, for every five applications filed by Americans one Japanese application was filed with the U.S. Patent Office,18 whereas in Japan, for every sixteen applications filed by Japanese one American application was filed.19 It is not surprising that Japan's balance of international trade in technology with respect to new contracts in fiscal year 1980 registered a phenomenal ratio of 2.68 to 1 in favor of Japan's technology exports over foreign imported technology.20

16 KEIZAI KOHO CENTER, JAPAN 1982: AN INTERNATIONAL COMPARISON, Table 4-6 at 16 (1982).
17 Id.
18 Id.
19 Id.
20 Import of Foreign Technologies in Japan, 2 SCIENCE AND TECHNOLOGY IN JAPAN 33 (Jan./Mar. 1983).
Japanese are not only filing more patent applications in Japan than Americans are in the United States, but Japanese are also filing more applications in the United States than Americans are filing in Japan. Japan, with approximately half the population of the United States, has inventors filing nearly 2.5 times as many applications in the two countries as the United States has.\(^{21}\)

Though these 1980 figures evidence the vitality of Japan's advances in science and technology, the following comparison manifests that 1980 was not an unusual year.\(^{22}\)

\(^{21}\) Yamagata, supra note 12.

Indices of Comprehensive Power of Science and Technology

Notes:
1) --------in latter half of 1960s:
         _____in latter half of 1970s

2) A: Total added value in manufacturing
    B: Number of patents registered
    C: Number of patents registered overseas
    D: Number of researchers
    E: Research expenditure
    F: Exports of technology
    G: Trade in technology
    H: Exports of technology-intensive products
The United States, in constant terms, shrank in all categories from the 1960's to the 1970's, while Japan expanded in all categories during the same period.

These statistics do not indicate a lack of patent lawyers, but a lack of inventors. While issued patents are usually upheld by courts in Japan, U.S. courts have taken particular delight in emasculating issued patent rights, seeming to ignore the fact that their creation was considered so important to the founding fathers that they recognized patent rights in no less a document than the U.S. Constitution: "The Congress shall have power . . . to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

A book entitled The Coming Patent Wars Between Japan and the United States, just published in Japan, suggests staggering implications for the United States. It discusses a possible trade war blueprint for Japanese economic domination which, to an uncomfortable degree, is no less foreboding than was the "Greater East Asia Co-Prosperity Plan" in the 1930's. In discussing the "bottom-line" commercial aspects of a U.S.-Japan patent war, the book contains various chapters suggesting strategies which Japan must adopt and follow if it is to excel in the high technology industries over the United States and the rest of the world. The author of the book has written of Japan's need to attain patent supremacy in terms unthinkable (or perhaps unprintable) only ten years ago. While a description of the book as a Mein Kampf of "Japan, the Economic Animal" is overdrawn, the intense motivation for a grand strategy nevertheless extends far beyond Japan's fragile borders, not totally unlike a nationalistic plan of a few decades ago.

In 1981 Japan paid $1.71 billion for imported technology while earning $577 million in exported technology licensed and sold abroad. Americans who take smug pride or summarily dismiss the Japanese technological advance should be aware that each year since 1972 Japan has concluded more export technology contracts than import technology agreements. For example, in 1981 Japan's technology exports in new contracts exceeded in dollar volume new import technology contracts on the order of 2.68 to 1. As U.S. patents expire and royalties from Japan cease, the trend established for the past ten years portends a huge reversal in inflow versus outflow of technology. This reversal is indicative of

23 Yamagata, supra note 12.
24 U.S. Const. art. I, § 8, cl. 8.
26 Import of Foreign Technologies in Japan, supra note 20.
27 Id.
the U.S. decline in new and high technology inventions issued and licensed in Japan as compared to only a few years ago.

Recently, considerable research and study has been conducted into Japan's non-tariff trade barriers. Mr. David Guttman, former chairman of the American Chamber of Commerce (ACCJ), in Japan's Patent, License and Trademark Committee, drafted a report which the ACCJ has presented to the U.S. government hoping to prompt discussion with the Japanese government about the unrecognized non-tariff trade barriers which already are present in the early stage of the so-called U.S.-Japan Patent War.28

The Guttman report details a number of Japan Patent Office procedures that tend to make it more difficult for Americans to obtain patents in Japan (average 6 years) than Japanese in the United States (average 23 months).29 Guttman does point out that Japanese also must wait the same average 6 years in Japan for a patent30—so discrimination in that regard is hard to allege. The unfairness is apparent, however, when a Japanese inventor or company can begin selling or licensing its newly patented invention in the United States after only 23 months, while the U.S. inventor must wait for six years to license or sell his Japanese patent in Japan.

A Statistical Study on the Handling of Foreign Applications by the Japanese Patent Office31 provides a current, well-prepared analysis of the treatment accorded U.S. applications in the Japan Patent Office. As the table below reveals, in most instances American applicants fare as well as, if not better than, Japanese applicants in the fields of Semiconductors, Data Recognition, Telephonic Communication, PPO Plastics and Medical Electronics.32

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29 Id.
30 Id.
32 Id. at 12.
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<th>Technology Field</th>
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For January 1980 thru December 1982
Based on Applications filed from 1971-1980
The United States can not defend or excuse its decline by claiming Japanese Patent Office discrimination. The responsibility for decline is solely that of the United States' offering fewer inventions by fewer inventors. The causes of the decrease have been attributed by numerous authorities to several factors, including disincentives to inventors and inventions, an overemphasis on antitrust and antimonopoly laws by U.S. government agencies and the courts, short-sighted, immediate-term profit goals by executives of U.S. business and industry, a shift from emphasis on education and prestige in the engineering fields to "service" occupations and finally the lack of a national policy to ensure American leadership in world trade in the 21st century and beyond.

Hopefully, a greater awareness of the goals of the United States' most formidable trading partner will once again awaken the sleeping giant.