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THE OUTLOOK FOR NUCLEAR WEAPONS PRODUCTION IN JAPAN

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Abstract

Contrary to the impression conveyed by the overwhelming popular sentiment in Japan against any association with nuclear weapons, there is mounting evidence that the conservative government in Tokyo secretly contemplates the eventual manufacture of such weapons, unless international agreements intervene. The Defense Agency evidently views nuclear weapons as indispensable in modern war, and some conservative leaders value them as an effective counterpoise to the "human sea" tactics of the three Communist military powers adjacent to Japan. Prime Minister Kishi seems to share these views, though his public statements for political reasons have fluctuated between affirming the defensive value of nuclear weapons and reassuring public opinion opposed to their use in any form.

The government evidently feels that little is to be gained by openly contesting this explosive political issue at the present time, inasmuch as the emphasis which Japan is now giving to the training of nuclear scientists and technicians, exploration for uranium ore, research, and development of industrial capacity for producing nuclear reactor equipment constitute useful preliminaries for nuclear weapons production. These preparations have both public approval and economic justification under the banner of peaceful uses for nuclear energy.

The high cost of fuel and the shortage of electric power provide powerful incentives for originating a nuclear power program in Japan, which also possesses the requisite scientific manpower and capital. The current budget contains a three-fold increase in subsidies for such a program, and the newly appointed Chairman of the Atomic Energy Commission is one of its most energetic champions. Although Japan's first reactors and nuclear fuels have been imported, and therefore subject to the restriction against military uses imposed on such exports by the US and the UK, Tokyo has made no secret of its active program to become self-sufficient in this field. If successful in developing its own fuel sources and reactors, as seems probable, Japan could soon accumulate its first uncontrolled supplies of plutonium or other fissionable materials of weapons grade, as a by-product of nuclear power generation. From this stage, which may be reached in as little as five years, to the production of a few nominal weapons of the Hiroshima type would be a relatively brief step.

Public debate over the advisability of nuclear weapons production may therefore be postponed to about 1962 without seriously delaying the nuclear armament of Japan, even if a defense secrets law is not enacted by that time. Meanwhile the government is endeavoring with some success to accustom the public to the notion that Japan should have the most modern weapons. There has been no discernible objection, for example, to the recent announcement of a contract let by the Defense Agency for the construction of a nuclear submarine, or to tests of guided missiles by the armed forces.

NOTE

An earlier version of this paper was the OIR contribution for Japan to NIE 100-6-57, Nuclear Weapons Production in Fourth Countries - Likelihood and Consequences, SECRET.

This report is based on information available through July 26, 1957.

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Competent US Government authorities consider that Japan could produce a nuclear weapon unaided by 1967 if recently reported uranium deposits can be successfully exploited as to provide reactor fuels. The Japanese are making every effort to eliminate this qualifying condition. The government is pressing energetically a broad program, both foreign and domestic, to assure itself a uranium supply sufficient for a large nuclear energy program, without restrictions on utilization of the by-products such as those imposed by the US and the UK on their atomic fuel exports. For example, the government-sponsored Atomic Fuel Corporation announced on April 22 that an expert of the Ministry of International Trade and Industry has made a survey in Thailand preparatory to the collection of refining of uranium-bearing residues from the washing of tin ore. In the course of the next several years, Japan can be expected to seek agreements with other underdeveloped and uncommitted Southeast Asian states, such as Indonesia and Burma, for the exploration and mining of uranium ores.

At home the government since mid-1956 has been subsidizing a broad and systematic uranium exploration program, and reports have been published of discoveries of ores varying in content from 0.02 to 0.16 percent; that is, from very low grade to grades meeting minimum standards for commercial exploitation. The exploration program evidently is far from completed, however, and four of Japan's principal universities (Tokyo, Kyoto, Tohoku, and Okayama) together with two government agencies (the Geological Survey Institute and the Industrial Technology Agency) have formed a committee to coordinate prospecting and related activities. Meanwhile the Chemical Industry Research Institute of Tokyo under government direction has been conducting research on the extraction of uranium from low-grade ores, and claims to have developed an original means for doing so. (The Japanese nevertheless have actively solicited US technical assistance with this problem.) The 1957 budget contains a three-fold increase (to about the equivalent of $17,000,000) in funds for atomic energy research and the extraction of radioactive materials.

Although the Japanese are proceeding with negotiations to obtain initial supplies of nuclear fuels from the Western powers, accepting conventional restrictions for this purpose, they evidently do not intend to remain for long dependent upon external sources to such controls.

II. JAPAN'S PROBABLE POLICIES FOR NUCLEAR WEAPONS DEVELOPMENT

There exists at present in Japan an overwhelming popular sentiment in opposition to any association with nuclear weapons,* based on the

* See IR-7165, The Relationship of Japan to Nuclear Weapons and Warfare, April 22, 1957, SECRET, for a full discussion of current Japanese attitudes.

belief that non-involvement in nuclear warfare -- an objective sought by all Japanese -- can best be achieved in this manner. Japanese intellectuals as a group have led this trend of opinion, and on May 15 many of the nation's leading physicists (including Nobel Prize winner Tukawa Hideki) announced that they would not take part in the manufacturing of, experimentation with, or research on atomic or hydrogen bombs.

This manifesto was issued shortly after a statement by Prime Minister Kishi asserting that the "acquisition" of tactical nuclear weapons by Japan's defense forces would not be unconstitutional, and that he could envisage a future situation in which such weapons would be necessary for effective defense of the nation. Kishi evidently was discomforted by the joint statement of the scientists, and on May 18 obscured his earlier stand (apparently for tactical political considerations) by declaring that even small atomic explosive weapons were banned by the Constitution.[1] He did, however, urge the country to keep up with scientific and technological advances to protect its rights to self-defense, and said that eventually Japan might be entitled to acquire nuclear weapons for self-defense, when the danger of fallout from such weapons had been minimized by improvements. This sequence of statements by the prime minister indicates that government leaders recognize the advantages of nuclear weapons for assuring national security, but believe that Japanese public opinion at present would not tolerate any overt government action to secure such weapons.

A. Factors Favoring Nuclear Development

Nevertheless, the government, private industry, and research groups enjoy public support in pressing ahead vigorously in research and actual development of nuclear energy for peaceful purposes. As Japan faces an electric power shortage in the near future, and unit costs will be high in certain localities, the government is planning to import within the next decade from five to ten power reactors designed for electricity generation. However, the Japanese are looking ahead to an era of self-sufficiency in the nuclear field, and since 1954 the government has been granting annual subsidies at an increasing rate to a number of

1. The Constitution does not mention weapons of any type, except where Article IX states, "...war potential will never maintained." This clause has not prevented the arming of Japan's forces with almost every modern weapon, except nuclear explosives.

corporations for research in various phases of nuclear energy production, including the domestic production of power reactors.

If Japan does succeed in obtaining an uncontrolled nuclear fuel supply and in manufacturing power reactors, their operation would provide the nation with its first supply of fissionable material (plutonium) for use in nuclear weapons. (The supply would be particularly significant if the reactor were of the British "Calder Hall," or natural uranium, type.) Should reactors of Japanese construction be applied to commercial electricity generation, for example, there would probably develop pressure from Japanese business interests for the Defense Agency (the only plausible purchaser) to buy the plutonium-bearing residue, so as to improve the competitive cost position of the nuclear power plant. For this reason, and because Japanese industry would participate profitably in any weapons development program, business leaders generally can be expected to favor progress by Japan in all applications of nuclear energy, including the military aspects.

Japanese industries and the Transportation Ministry also are intent upon pressing the development and production of a nuclear-powered ocean vessel. (The merchant marine is Japan's life-line and is a net earner of foreign exchange.) The ministry has secured an initial appropriation of about $600,000 in the current fiscal year for this purpose, and a schedule has been drawn up which calls for construction to begin in 1962, with a trial run of the completed ship in 1965. Although this project is presented as improving Japan's position in maritime commerce, it will be largely financed by the government, and much of the research which is undertaken to this end would be applicable to the problem of constructing nuclear naval vessels. (A press report of May 18 indicates that the Defense Agency has awarded a contract for a nuclear submarine to the Kawasaki Dockyard Company.)

If the Japanese are correctly evaluating their own capabilities for rate of research and development, Japan could have a nuclear naval vessel at sea during the next 10 years. With a nuclear navy thereafter in definite planning range, Japan would have an attractive opportunity to regain its position as a leading naval power, aided by the obsolescence of conventional fleets. The marine propulsion reactors probably would not be a significant source of plutonium, and presumably would be supplied with enriched uranium fuels subject to restrictions against their ultimate application to weapons purposes. Nevertheless, the development by Japan of nuclear-powered naval vessels probably would tend to bridge the psychological gulf presently existing in the mind of the Japanese public between the peaceful uses of nuclear energy (which are accepted) and the military uses (which are abhorred).

The defense establishment itself, and its partisans in the Diet and the ruling Liberal-Democratic Party, apparently aim at ultimately equipping Japan's forces with nuclear weapons. The Defense Techniques Research Institute of the military establishment has engaged a number of qualified nuclear scientists, and the Defense Agency planning board is proceeding under the assumption that nuclear weapons would be a standard condition of future warfare. The chairman of the Liberal Democratic Party's sub-committee on defense problems, former admiral Hoshina Zenshiro, has circulated among Diet members a study of nuclear warfare which asserts that the effective defense of Japan is dependent upon the utilisation of tactical nuclear weapons by forces in the home islands, and indirectly upon the possession by the US of a greater supply than the Soviet Union of strategic nuclear weapons.

Hoshina's views are similar to those of Councilor Nosaka Kichisaburo and former prime minister Ashida Hitoshi, who appear to have influenced Kishi's recent pronouncement implying eventual adoption by Japan of defensive nuclear weapons. This sophisticated group, which seems to think in terms of eventually regaining for Japan some of its prewar status as an important military power, may see in the development of nuclear weapons the means for industrially advanced Japan to become more powerful in military terms than its more populous neighbors. For instance, Hoshina's study mentions the value of nuclear weapons in dealing with the "human sea" tactics of the Communist powers. There are indications that these Japanese leaders may believe that the acquisition of nuclear weapons by Japan would be a particularly efficient means of obtaining for Tokyo a new and more powerful voice in Far Eastern affairs.

B. Public Opinion and Political Factors

Among the several segments of public opinion which have opposed the rearmament of Japan, a key consideration among many non-Marxists has been the belief that Japan could not become a first-class military power, being hopelessly outmanned by its prospective opponents, and that rearmament would tend to perpetuate and confirm Japanese dependance upon the US. However, if presented with the prospect of Japan capitalising upon its industrial leadership in Asia, through the medium of nuclear weapons production, and thereby becoming one of a half-dozen or so nuclear naval and military powers in the world, the more nationalistic minded members of various pacifist or anti-rearmament organizations could very well change their views quite suddenly. There can be little doubt that non-Marxist Japanese in general eventually will see far greater utility for nuclear rearmament in the pursuit of diplomatic objectives and security than could conceivably result from expanding Japan's conventional armament.

If general international agreement, presumably under UN aegis, to stop the production of fissionable material for weapons purposes is reached soon, Japan probably would conform. If agreement is reached only to limit the production of fissionable material for weapons purposes, however, Japan would probably not be deterred from developing a program up to the allowed maximum level.

The question of whether or not Japan will attempt seriously to produce its own nuclear weapons depends in large part upon the nation's political and economic future. A positive answer would be more likely from a stable conservative regime which possessed the necessary disposable capital, a condition which for Japan would be largely dependent upon the course of the international economy. In the event of protracted political instability in Japan, varying from an insecure conservative hold on power to a definitive swing toward socialist majorities, the government probably would not essay nuclear weapons development, and a similar result might be produced by preoccupation with severe economic strains regardless of the political climate.

III. CONSEQUENCES OF THE POSSESSION BY JAPAN OF NUCLEAR WEAPONS

If the Japanese Government should undertake to produce nuclear weapons for its armed forces, it would doubtless have to do so in the face of serious and perhaps violent objections from the political left, which on this particular issue probably would have broad enough popular support to create a significant degree of political tension. The labor and socialist movements, supported by the Communists and with assistance from Peiping and Moscow through diplomatic, propaganda, and subversive maneuvers, can be expected to make a determined stand against nuclear armament by Japan, even if popular support for this cause dwindles.

Thus the decision to adopt nuclear weapons could be taken and carried out only by a fairly strong and stable conservative government, able to appeal effectively to nationalistic sentiment. In this climate the patriotism of the left-wing opposition might well be called into question, and attempts made to restrict it by legislative or police controls.

In its present state, Japanese public opinion would not countenance an aggressive turn of national policy as a result of nuclear weapons development by Japan. It is true that Japanese public opinion in the past has been susceptible to nationalistic and militaristic appeals, and popular attitudes might once again approve national policies based on the threat of force, possibly with only a brief period of transition. However, the realities of Japan's prospective power position in Northeast Asia during the next decade would not appear to support a bellicose nuclear policy. Japan is more vulnerable to nuclear attack than any of her principal neighbors. For a decade at least, Japan (barring unforeseen scientific developments) is likely to have little more than a token

stockpile of nuclear weapons. Most conclusive of all, the intensity of concern by the great powers over the use or threat of force in Northeast Asia makes it probable that any dispute between Japan and her neighbors would face great power intervention before local hostilities could have a decisive outcome. Therefore, Japan is not at all likely to be an instigator of nuclear warfare during the next ten years. On the other hand, if Japan should become one of the select circle of nuclear powers, Japanese diplomacy could scarcely fail to reflect this new dimension of military power, exhibiting, for example, a notably greater measure of assurance and determination in pressing for recognition of Japanese national interests.

As long as Japan remains at most a minor nuclear power, its relative status might be improved by certain disarmament schemes; for example, a prohibition of further weapons production which would leave Japan with a limited number of other states as the only nuclear powers. On the other hand, the Japanese Government would be likely to resist any disarmament proposal tending to exclude Japan from the production of nuclear weapons just before this were about to become an immediate prospect, unless compensations, such as drastic reductions in the weapons capabilities of the major powers, were included in the bargain. A general prohibition on further production put forward now by the three principal powers, however, probably would have an appeal to the Japanese public which the government would find it hard to ignore, inasmuch as the public has not yet come to accept the desirability of Japan's possessing such weapons.

If another Asian state were to acquire nuclear weapons, however, Japan would have a greater incentive to do the same. This would be particularly true of Communist China, though Japan would not necessarily regard this development as an immediate threat to its security, and Sino-Japanese relations probably would proceed much as before.

Japan is rich in scientific talent and technological resourcefulness, and is capable of developing novel weapons which could have an unanticipated military effectiveness. Within the next decade, however, it is unlikely that Japan, even with the exercise of greater decisiveness and economic effort than seems reasonable to expect, would be able to produce more than a limited number and range of nuclear weapons, possibly rather primitive in design. Japan's possession of such arms per se would not be enough to alter the balance of power in the Far East. However, this development would be considered by Asian states in general and by the Japanese themselves as heralding, in the next subsequent decade, the rise of Japan as a principal military force in East Asian affairs, even reasserting for example the nation's traditional determination to secure Formosa and the Korean peninsula against domination by the Asian mainland.

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