June 4, 1957

Department of State Office of Intelligence Research, 'OIR Contribution to NIE 100-6-57: Nuclear Weapons Production by Fourth Countries – Likelihood and Consequences'

Citation:

"Department of State Office of Intelligence Research, 'OIR Contribution to NIE 100-6-57: Nuclear Weapons Production by Fourth Countries – Likelihood and Consequences'", June 4, 1957, Wilson Center Digital Archive, Record Group 59, Special Assistant to the Secretary of State for Atomic Energy, Records Relating to Disarmament, 1948-1962, box 57, 2 15d: Armaments Nuclear Fourth Countries, 1956-57. Contributed by William Burr, National Security Archive.
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Summary:

This lengthy report was State Department Bureau of Intelligence and Research's contribution to the first National Intelligence Estimate on the nuclear proliferation, NIE 100-6-57. Written at a time when the United States, the Soviet Union, and the United Kingdom were the only nuclear weapons states, the “Fourth Country” problem referred to the probability that some unspecified country, whether France or China, was likely to be the next nuclear weapons state. Enclosed with letter from Helmut Sonnenfeldt, Division of Research for USSR and Western Europe, to Roger Mateson, 4 June 1957, Secret

Credits:

This document was made possible with support from Carnegie Corporation of New York (CCNY)

Original Language:

English

Contents:

Original Scan

Armaments - Nuclear - 4th Countries

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DEPARTMENT OF STATE

WASHINGTON

SECRET

June 4, 1957

Mr. Robert E. Matteson
USDEL Disarmament
American Embassy
London, England

Dear Bob:

In response to the Embassy's telegram # 6636 of June 6 (Disarmament No. 243) I enclose two Congressional documents which will, I believe, provide you the data you request in paragraph 1. The Department contributed a considerable amount of information to these documents and they represent the most complete study on the subject available at this time.

The Legal Adviser's office (Miss Bolter) is compiling the list you requested in paragraph 3 and will pouch it as soon as it is completed.

I also enclose a weighty OIR contribution to NIE 100-6-57 on the Fourth Country problem. This is a very preliminary draft representing the views of the intelligence area of the Department, but I thought that the Governor as well as other members of the delegation might like to look at it. As you know, the final NIE willbe an agreed document of the entire Intelligence Community and the views expressed in our contribution may undergo considerable modification. In any event, this is the first time that systematic treatment has been given the fourth country problem from an intelligence standpoint and I think the exercise has been well worth it.

In view of the latest developments, there has been much weekend and night work here and I suspect Ray may be able to bring something back with him when he returns later in the week.

Best regards to Governor Stassen and the rest of the Delegation,

Sincerely,

Helmut Sonnenfeldt
Division of Research for USSR
and Eastern Europe

Encl. 3

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OIR CONTRIBUTION TO NIE 100-6-57:

NUCLEAR WEAPONS PRODUCTION IN FOURTH COUNTRIES - LIKELIHOOD AND CONSEQUENCES

May 31, 1957

NOTE: Attached are regional studies of the fourth country problem as it affects Western Europe, the Soviet Bloc, the Middle East, Far East and Latin America. A further paper on general and global implications of the fourth country problem will complete the Department's contribution to this estimate.

DEPARTMENT OF STATE
OFFICE OF INTELLIGENCE RESEARCH

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A-Europe

OIR CONTRIBUTION TO NIE 100-6-57:

NUCLEAR WEAPONS PRODUCTION IN FOURTH COUNTRIES -- LIKELIHOOD AND CONSEQUENCES

PART A

WESTERN EUROPE

May 31, 1957

DEPARTMENT OF STATE
OFFICE OF INTELLIGENCE RESEARCH

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DRW CONTRIBUTION TO NIE 100-6-57

PART A: WESTERN EUROPE

A. Countries Likely to Produce Nuclear Weapons Over Next Decade

1. France. France is the only country on the Continent which has a major nuclear energy program under way at the present time. It has begun to produce plutonium in weapons quantities and has been weighing the decision to proceed with weapons production. There is strong and growing support for an independent weapons program in French military circles, in the Upper House of the French Parliament and among rightist deputies in the Lower House. These groups tend to look upon the acquisition of nuclear capabilities as perhaps the only remaining way of restoring French national prestige and of assuring France of a degree of independence of action in international affairs.

The Mollet government resisted the pressure from the Right for immediate construction of atomic weapons, though not ruling out such construction in principle. It is likely that succeeding governments will have to seek more active support from the conservative parties and that their policies will therefore have to reflect at least some movement toward the Right. It is probable that such a government, in the absence of a satisfactory disarmament agreement in the near future would decide to proceed with the construction of nuclear weapons.

Such a decision would have to take into consideration two possible adverse factors. First, a nuclear weapons program would throw an additional burden on the French economy at a time when there is serious

disagreement over the means of financing present military expenditures. A nuclear program could not be used as a means of effecting an overall defense saving in the absence of a settlement of the Algerian conflict, which necessitates the maintenance of a large force equipped with conventional armaments. The economic problem in the last analysis will probably be subsidiary to political considerations - if France wants the bomb for foreign policy or for prestige purposes, the cost will probably not be a crucial factor. Moreover France has already constructed the plutonium facilities on which to base a modest weapons program.

A second deterrent to the introduction of a nuclear weapons program is the sentiment which now exists among a large segment of the population against such a program. A poll in July 1956 showed 51% of the population opposed to a nuclear weapons program; support on the other side, however, i.e. in favor of nuclear weapons production, has probably increased since the Suez debacle, strengthened by the publicity which has been given to statements of military leaders, a general rise in nationalist sentiment and widespread skepticism with regard to the "reliability" of the US in supporting France in matters affecting her vital interests, and a majority could probably be rallied in favor at the present time.

It seems unlikely in the extreme that any other "fourth country" would be able to produce nuclear weapons in advance of the French. Any move toward such manufacture by a fourth country, particularly another member of NATO, would bring considerable domestic pressure for French manufacture and in the case of a West German move the pressure would undoubtedly be decisive.

There is no indication that France is thinking in terms of thermonuclear weapons at the present time, though it has the theoretical capacity to produce them within the next ten years if it starts shortly on a fission weapons program. The achievement of a thermonuclear weapons capability including delivery systems, would require an enormous additional effort in terms of economic cost and in terms of national determination and unity of purpose. As the only logical conclusion (in military terms) of a decision to produce the A-bomb, however, it should not be ruled out, particularly since much of the necessary plant and research facilities would have been created in connection with the planned power program and possible fission weapons program, these would probably include a gaseous diffusion plant, which has already been placed in the budget, or access to the output of a Euratom gaseous diffusion plant.

2. Sweden. In the absence of general disarmament agreement, it is likely that Sweden will decide to produce nuclear weapons within the next decade. The decision does not have to be taken in the immediate future, since plutonium from its presently planned reactors will not become available in sufficient quantity until 1961. The decision, in view of the time required for weapons planning, would probably have to be taken at the earliest by the end of 1959.

The main factors in favor of domestic production are that in Sweden's geographic position an effective defense is impossible without such weapons, and that, in the light of Sweden's traditional neutrality policy, it would prefer independent production of such weapons rather than

external procurement. The prestige issue is practically absent in Sweden. The question of the possible drain on the economy does not arise to the extent that it does in the case of France, since Sweden would expect to cut back its defense budget for the army and for conventional armaments to compensate for the additional cost of developing nuclear weapons and a competent delivery system. Sweden's use for nuclear weapons would be largely as a deterrent, to make any move against Swedish neutrality too costly to make it worth the while of a potential aggressor. Its proximity to the USSR might make the development of fission bombs a greater deterrent than in the case of other Western European countries located farther from potential target areas, at least during the period before accurate longrange delivery methods have been developed, and might be sufficient to prevent violation of Swedish neutrality.

The majority in Parliament, including the government leadership, recognizes the necessity for equipping the armed forces with nuclear weapons, but a public debate is still going on, led by a vocal minority. The opposition, which consists of a minority of the Social Democratic Party and certain smaller groups, in addition to the Communists, could probably be overridden at any time that the government should decide to press the issue; public opinion in general seems to accept the necessity of possession and production of nuclear weapons in order to build an effective defense. However, the possibility that opposition and inertia may delay government action cannot be overlooked.

3. West Germany. There is at present strong public opposition in West Germany to German acquisition of nuclear weapons capabilities.

Changes in this attitude are quite possible, however, and even likely, considering the general instability of opinion in a field that remains so much a mystery to the public and is so charged with emotional aspects as that of the "atom bomb"; this tendency is illustrated by the decrease in public oppcsition that has taken place in France on the nuclear weapons issue over the past several years. The likelihood of change will be affected by shifting attitudes toward West German defense strategy and foreign policy, and toward national prestige as a primary goal of policy.

With regard to the prestige factor, it is difficult to accept at face value Foreign Minister von Brentano's recent declaration that Germany is not a great power, much less a world power, and should give up ideas of achieving such status. It must further be recognized that both the government and public opinion have exhibited considerable sensitivity toward policies and actions of other countries, especially in NATO, which might appear to be discriminatory against the Federal Republic. Nevertheless, it does not appear likely that there will be a development of nationalism in West Germany during the next few years that would alone be sufficient to bring about efforts towards independent production of nuclear weapons.

The estimated reliability of the US as the defender of Western European interests will probably be an increasingly important question, as it has been in the case of the British decision to develop its own deterrent and may prove to be in the case of the French. If the opinion develops in Germany that the US will become increasingly unlikely to

meet its full commitments to the NATO countries as the US itself becomes more vulnerable to Soviet thermonuclear attack, pressure for independent capability (or for common capability within a European regional organization) will probably develop. In addition, there is already some uneasiness about the protection provided to Germany by NATO, resulting not only from the widespread discussion that followed the making public of the so-called "Radford Plan", but also from the recent military policy decisions of the UK, and from fear as to how far the present search by the US for a disarmament formula might eventually lead to the thinning out of US forces in West Germany.

Another important element in the West German decision will be the estimated effect of such a decision on reunification. The debate on what this effect might be -- whether nuclear arms production would place the Federal Republic in a more favorable negotiating position with the USSR or whether it might only make the Soviets more determined than ever to prevent the reuniting of a Germany armed with nuclear weapons in Central Europe -- might assume considerable proportions.

The economic cost to West Germany would probably not be a significant factor in making a decision on producing fission weapons, particularly since the country will probably develop over the next few years a strong nuclear experimental and power program on which the weapons program could be based. The additional cost involved might also be partially recouped by savings on the increased defense budgets that may be expected within the next several years though this is not so probable as long as the "shield" concept and the East German question would require the maintenance of conventional forces.

The entire discussion of possible West German action will of course be profoundly influenced by any French decision to proceed with the construction of nuclear weapons. This question is discussed further in part III below, in connection with that of joint production.

Entirely aside from the will or economic ability to produce nuclear weapons, Germany might be hampered in such efforts by an inability to secure adequate uncontrolled supplies of nuclear ores and source materials. As noted in Section I, such supplies would have to be obtained abroad unless reactor fuels could be produced economically and in sufficient quantity from very low grade native sources of uranium ore. Under the statute of the IAEA and under present policies of the US, the UK and Canada, no supplies would be obtainable from these sources for overt military purposes. If EURATOM came into existence, it would constitute a potential source of supply. The supplies available through EURATOM, on the other hand, might be limited during its first ten years, due to the priority claim given each member country during that period on its own production of ores and source materials. There would appear to be no barrier in the treaty to the use of EURATOM-supplied materials for military purposes. In the event that the EURATOM Treaty should not be ratified, or should not be able to meet the supply requirements of a German military program, the Germans would have to go onto the open market to obtain supplies for eventual military use. This market is almost nonexistent at the present time but might develop within the next ten years as present contracts expire and exploration is pushed.

The lack of testing space in Germany is a limiting factor which might be overcome by testing on the high seas or by bilateral arrangements with some other country.

Even if Germany decided that it wanted to produce nuclear weapons and were able to locate the necessary materials, some means would still have to be found to amend or to sidestep the Paris accords, which put into treaty form a previous German renunciation of the right to construct ABC weapons on its own territory. There would no doubt be considerable difficulty in finding a solution to this problem, but the pressures generated in Germany by French production of nuclear weapons would probably force some solution to be found. The attitude of the US and the UK would be extremely important in influencing the strong French opposition which could be anticipated. It also appears possible that Germany might be able to get around the accords unilaterally by taking advantage of the clause limiting the prohibition to production on its own territory; admittedly an unsatisfactory solution, an agreement with an outside country, such as for example Brazil, might nevertheless permit the necessary facilities to be set up outside of Germany.

4. Other Western European Countries. It is not believed likely that the other countries of Western Europe which are estimated to have the capacity -- Italy, Belgium, the Netherlands, Switzerland and Norway -- would actually undertake the production of nuclear weapons within the next ten years. All of them would find it politically difficult, if not impossible, to justify the national effort that would be necessary even to achieve production of nominal A-bombs. The

additional effort involved in going on to diversified fission weapons or thermonuclear weapons production is probably out of the question economically, and perhaps also technically, for these countries acting individually. Even French or German production of nuclear weapons is unlikely to create any significant popular demand for similar independent ventures in these countries, would probably lead to pressures on the part of Italy, Belgium and the Netherlands to join in the establishment of some type of common organization, perhaps in connection with Euratom or with the WEU, for the production and control of these weapons. The pressure for such action would probably be quite strong in the absence of offers from the US to provide nuclear weapons in one way or another under NATO.

B. Effect of Certain Contingencies

1. Effect of Allied Offers to Make Nuclear Weapons Available. An offer by the US or the UK to make complete nuclear weapons available for purposes of common defense would greatly strengthen the forces in France which for economic or other reasons oppose a national production program. It is likely, however, that national prestige would require that such weapons be placed under French control before such an offer could have a decisive effect on the decision concerning independent weapons production; however, some type of controlled grant, perhaps through a joint command including French forces, might at least temporarily forestall such a decision. If there were a sufficient French voice in the control of the weapons, and if there were reasonable assurance that such weapons could not be withdrawn unilaterally by the

the furnishing country, the offer might be a scale-tipping element in the decision on national production. One factor in such a decision would of course be the wide range of weapons which could conceivably become available under such an arrangement; to achieve production of a diversified arsenal under its own efforts, would be a costly and time consuming process (though probably not impossible of eventual achievement).

It is doubtful that providing weapons without nuclear components or stationing US or UK nuclear weapons forces in France would furnish an acceptable alternative to independent French production.

As to Germany, nuclear weapons under US control are already stationed in that country and weapons without nuclear warheads for the German forces would probably be acceptable; the important consideration would be equality of treatment with other NATO forces. A considerable shift in German public opinion would have to come about before the government could accept complete nuclear weapons for the German forces. This change, however, could probably be brought about following the September elections if the present government is returned to power; its leaders are ready to accept such armament and are indeed anxious that the West German army be armed as well as any other force in NATO and commensurately with the exposed position which it is expected to defend. In the event that an SPD-dominated government were to come to power, a decision on the question of accepting nuclear weapons from the US or UK would probably be delayed. The decision on nuclear weapons production, however, probably lies several years away in any event, and any government

willing at that time to consider such production would certainly be amenable to considering the idea of acquiring the weapons from its allies. Their availability at the time, or the offer to supply them on a non-discriminatory and reasonably permanent basis would probably weigh heavily in any decision on production.

Sweden would prefer to produce its own atomic weapons and probably will undertake such production; however, in the unlikely event that these weapons should become obtainable by purchase from the West, the government might favor such purchase if it meant significant budgetary savings. Sweden would probably refuse to accept grants of atomic weapons or parts thereof as prejudicing its neutrality.

2. Effect of Restrictive Clauses in International Agreements. The clauses restricting military use which are contained in the statute of the International Atomic Energy Agency and in US and UK bilaterals should have little effect on the decision of either France or Sweden to proceed with the manufacture of nuclear weapons, since both of these countries are already estimated to be able to produce such weapons within the stipulated time limit without foreign assistance. This presumably means that it will not be necessary for them to acquire either reactors or fuel under such agreements for that portion of their nuclear energy program which might be devoted to weapons. The effect of the restrictive clauses will be greater in the case of the German decision since, as has been pointed out above, that country does not have assured domestic supplies of ores, and uncontrolled supplies from other sources may be quite limited.

3. Effect of Possible International Agreements re Restriction of Testing or Production

The position of the French government in the UN subcommittee on disarmament has been that the testing of weapons should be stopped only after an agreement on nuclear disarmament, when France would be ready to renounce the production of nuclear weapons. France, very sensitive to any efforts to exclude it from the "Atomic Club," has insisted that such nuclear disarmament include a complete inspection system, the cessation of all production of weapons, the transfer of existing stocks to peaceful uses, and a concurrent or prior program of reduction in conventional armaments. The French representative on the disarmament subcommittee has stated that France would proceed with a decision in July 1957 to fabricate nuclear weapons unless at least a partial agreement of the above type on disarmament appeared imminent. The unlikely event of an international agreement covering testing alone would probably not influence greatly the ultimate French decision to produce, though it might delay it. Aside from the French negotiating position noted above, it must be considered that limitations on the number or on the total or individual yield of nuclear weapons tests would probably not materially affect initial testing of French weapons, since these would undoubtedly be few in number and of low yield during the first few years.

Sweden would cooperate in any international agreement to restrict testing of nuclear weapons or to stop or limit production of nuclear materials. In view of the strength of the vocal minority, particularly

in the dominant Social Democratic Party, presently opposing manufacture or acquisition of nuclear weapons, and of the general sensitivity of Scandinavian public opinion on the atomic issue, it is felt that no Swedish government could proceed with the manufacture of these weapons if agreement were reached among the USSR, USA and UK to suspend testing. Such agreement would forestall a Swedish decision to produce, at least temporarily and perhaps permanently, depending, in the case of a limitation agreement, on what production were allowed. There would be no question but that Sweden would cooperate wholeheartedly in any type of international control agreement.

West Germany would welcome international agreement restricting the testing of nuclear weapons or the production of fissile materials; the Bundestag debate on nuclear weapons on May 10, 1957, called on the nuclear powers to renounce weapons of mass destruction and to cease testing, at least for a trial period. An agreement on limitation of testing might be a factor in making a decision on weapons production. The imminence of a binding international agreement to stop or limit production would probably hold up such a decision and militate against any German nuclear weapons program.

III. CONSEQUENCES OF POSSESSION OF NUCLEAR WEAPONS BY FOURTH COUNTRIES

A. General Consequences

1. Popular Attitudes Toward Employment of Nuclear Weapons

The production of nuclear weapons by European fourth countries would be likely to make the general public of Western Europe even more intensely aware of the dangers of nuclear warfare than at present and would therefore be likely to have the effect of increasing rather than of decreasing the strong present sentiment against the use of such weapons in any type of war. This would be true in France or in the other potential producing countries fully as much as in the remaining countries of the area. The above reaction might be dulled by the passage of time, and this abhorrence of the thought of nuclear warfare would certainly not extend so far as to prevent the use of nuclear weapons in retaliation against a nuclear attack on the home country. However, it would probably be strong enough to curb the initial use of the weapon in any case but one affecting the most vital interests of the home country. In the French case, this would probably rule out North Africa, not only because of the likelihood of a changed situation as regards French interest in that area over the next few years, but also because nuclear weapons, in limited numbers at any rate, could hardly prove decisive in any guerrilla conflict.

2. Likelihood of General or Local War

Probably the only way in which the production of nuclear weapons by European fourth countries would have any significant effect

on the likelihood of general war would be if the independent capabilities thus achieved should inspire a country to enter on a course of diplomatic action leading to a local conflict which could then not be contained. The question then is, what is the increased likelihood, if any, of local war and what is the increased likelihood, if any, of such a war becoming general. Certain examples present themselves e.g. 1) some type of French action in the Middle East or Africa, and 2) West German action in the reunification issue, possibly in support of an insurrection in East Germany. For reasons noted above, one cannot assume an increased likelihood of French action simply because of French possession of nuclear weapons, not necessarily because these might not be decisive (they would probably be more decisive in Cairo than in the mountains of Algeria) but because of the tremendous dangers of retaliation of enemies and alienation of friends both at home and abroad involved in their use. However, the danger would always exist that, at a given moment, the arguments of logic might not prevail and that simple possession of the bomb, entirely aside from its usefulness or decisiveness, would give a sufficient feeling of strength to undertake diplomatic action which might result in military conflict.

The danger of such a conflict spreading into general war would of course depend on the locale and the circumstances. France, for instance, has been fighting a war in Algeria that could hardly give rise to a general conflict unless it were to spread far to the East. Outside of that area of Africa, however, the chances for the foreseeable future seem to be that the action would occur where, or so close to where, the major interests of the Eastern and Western worlds border

that it could furnish the spark leading to a general conflict.

The danger that European fourth country production of nuclear weapons would lead to such an eventuality is a real one. Possession of the weapon through any other means also presents a problem although the furnishing of nuclear weapons by the US or the UK, instead of through fourth country production, would probably diminish the possibility that the possession of nuclear weapons would furnish psychological support for entry into a local conflict though the chance of irresponsible use is always present. This conclusion does not necessarily assume that any type of restriction has been placed on the use of the weapons furnished in this manner; while it is not likely that such weapons would under any circumstances be placed in the hands of fourth countries without at least a general agreement that they be used only in the common defense of Western Europe, such agreements have not always proven to be binding in the past. [For further discussion of this problem see Part B of this section.]

3. Likelihood of Use of Nuclear Weapons in Case of War

The use of independently-produced nuclear weapons in a local conflict might initially (i.e., during the early, crude-bomb stage of development) be successfully avoided in certain areas although the development of a tactical weapons capability would probably increase the chances of their use. A "local" war in Central Europe, on the other hand, could develop rapidly through all of the stages into a full-fledged thermonuclear war by involving the thermonuclear powers unless the latter -- and there can apparently be no more than three within the

next decade -- act quickly to avoid such a turn of events. There is very widespread fear among the public throughout Western Europe that it will be impossible to limit a war in which nuclear weapons of any kind are employed, though there is still hope that non-nuclear "brush-fire" conflicts might be contained as in Korea and in Indo-China. The subject is too new to have given rise to more than preliminary public reactions so far; some small but influential groups see the possibility that tactical nuclear weapons could be used, with care and in selected situations, without necessarily leading to the use of the strategic weapons.

4. Popular Attitude and Government Positions Toward Disarmament

The development of "fourth country" nuclear capabilities in Western Europe would probably reinforce the strong public desire, shown by a Barometer poll conducted at the end of 1956, to outlaw both the production and testing of nuclear weapons, though it might at the same time make agreement in these area more difficult to achieve. In all countries polled except Austria and the UK, prohibition of production and testing was favored even in advance of agreement on enforcement procedure (in the case of testing) or on general disarmament (in the case of production). This effect on public attitudes would probably be found in all countries, whether "fourth country" producers or not.

The development of such capabilities would probably have a lesser effect on the governmental positions of the "fourth" countries with regard to disarmament. The French government's position, for instance, which stresses the necessity of a prior or concurrent reduction of

conventional armaments (on an absolute rather than a percentage basis), is unlikely to change materially in the event that France initiates a national nuclear weapons program. The disarmament problem would be even further complicated by the spread of nuclear capabilities, each new power having its own military and foreign policy interests; not only would agreement be made more difficult but effective control would become increasingly illusory.

B. Consequences in NATO Area

1. Susceptibility to Soviet Pressure

The possession of a national source of atomic weapons might at first give rise to a superficial reaction among the general public in France that the country could feel itself to be more immune to Soviet threats or pressures such as those applied at the time of the Suez action. It should be realized already in the government, however, and it would probably soon become generally apparent, that production of a few "nominal-type" A-bombs would not place France in the category of a nuclear power. If, by a large economic and political effort, the country were able to produce thermonuclear weapons within ten years and at the same time to create the necessary long-range delivery system, then there might be in time a decline in French susceptibility to Soviet threats. In the meantime, basic French policy will probably continue to be strong support of and reliance on the NATO alliance.

The same line of reasoning would probably hold for Western Germany.

The development of French or German nuclear capabilities would in itself have little effect on the susceptibility of other NATO

countries to Soviet blackmail. It makes little difference to Italy, for instance, that France has a nuclear weapon; the more basic questions are: 1) is France likely to have a deterrent within the next decade as physically effective as that which is being provided by the US, and 2) would France be more ready to use it in the defense of Italy now or in the future than would the US - or the UK? The answer to the first wouldpprobably be "no"; the answer to the second is intimately related to the question of how firmly the US will adhere to its European commitments as the USSR acquires a more and more effective long-range delivery system. Doubts in this regard reportedly have weighed in the UK decision to develop its independent deterrent power, and are undoubtedly the subject of continuous discussion within the NATO governments.

2. Common Nuclear Weapons Development in Western Europe

The search for a common approach to the problem of nuclear weapons development among the NATO countries of Western Europe would be stimulated by various factors. Those countries with independent production capabilities would be faced with the problem of the heavy economic burden and the lengthy period of time required to achieve autonomous results. Other European NATO countries would be motivated by fears of insecurity if excluded from a common arrangement. Both country groups would be motivated by any doubts they might have regarding future US intentions as to their defense.

The pressure for some such solution to the Western European "fourth country" problem would undoubtedly start as soon as the first

potential producer, probably France, made the break. West Germany in spite of the present strong public antipathy toward the possession of nuclear weapons, would probably not long remain satisfied with the restrictive terms of the Paris accords after an announcement that France was proceeding with the production of such weapons; talk of the manufacture of nuclear weapons by a European arms community is already reported in Germany. Italy and the Benelux countries probably would also press strongly for some type of common effort in Western Europe or alternatively for US supply.

A common approach could be carried out through the WEU by its seven members. Resort to WEU would of course involve support and probably leadership from the UK which might prefer such a development as an alternative to independent French or German production on the Continent. The attitude of the US in regard to this course of action would be an important factor; the intimate defense ties between the UK and the US, particularly in the field of nuclear information, would probably mean that US concurrence would have to be obtained before the UK could proceed with this program with the Continent.

An alternative approach might be through EURATOM or through some related organization limited to the Six. EURATOM was designed to assist in developing peaceful uses of nuclear energy and there appears to have been no discussion, or at least no official discussion, of using it as an agency to develop nuclear weapons. Nevertheless, there is nothing in the treaty itself to preclude EURATOM from producing or coordinating the production of such weapons. The EURATOM solution would

probably be less acceptable politically, particularly to the French, than one which would include the UK. However, France would have the incentive of initial leadership in such a EURATOM organization. This prospect of Continental nuclear leadership, together with French abhorrence of the thought of independent West German production, and the relief that joint action would provide for the French financial effort, might be sufficient to overcome French reluctance to surrender the independence of action in the field of foreign and defense policy that would accrue from autonomous nuclear weapons production.

3. Attitudes Towards Alliance and Neutralism

The above analysis would indicate that the chances are probably against a wholly independent national program developing fully in any of the continental NATO countries, although the French may well start an independent production effort. The pooling of Western scientific and industrial resources would undoubtedly lead to the production of more, larger and more advanced weapons than it would be possible for a single country to produce and would have the potential of achieving a very powerful military position.

It is difficult to predict what turn the thinking of such a nuclear community might take with regard to NATO and world affairs. Although the result would be to enhance the influence and independence of the community, it would probably retain a defense alignment with the US, particularly if the organization were to have the UK either as a member or as an associate. However the community itself would be many years, undoubtedly beyond the time limits of this estimate, not only in

developing a deterrent capability of the magnitude of that of the US and the USSR, but also in developing the degree of political unity which would permit it to set a largely independent course in foreign and defense policy.

4. Force Levels and Composition of Forces

The production of nuclear weapons would make little difference to the French level of forces so long as the country has to tie up large numbers of conventionally-armed troops in Algeria. Even if the Algerian question were settled, it would be a number of years before the adequacy of French nuclear armament would justify a reduction in troop strength. There is some planning in progress now for the creation of modernly armed units, but there would be no question of being able to arm such units with tactical nuclear weapons within the next few years unless such weapons are furnished by the US or possibly the UK.

On the German side, the production of tactical weapons is also a long-term possibility only. The indications are that the possession of such weapons by any means would be used to try to decrease the troop strength of the German armed forces. The entire question is in a considerable state of flux on the Continent, in the wake of the recent British action, and it is difficult at this moment to foresee how far the Continental powers might go in the direction of forces reduction.

C. Consequences of Supplying of Nuclear Weapons by US and UK

The effects of supplying nuclear weapons to European allies by the US and possibly the UK, have been touched on in preceding sections. Since such a course could take several forms having substantially differing effects, further analysis is indicated.

Nuclear weapons could be made available either to selected European allies individually, or to a collective organization, such as NATO. In both cases effects would depend substantially on political conditions prevailing during the period of this estimate, and the terms of the agreement under which weapons are made available. Thus developments in disarmament negotiations, on German unification, and with respect to basic trends in East-West relations will substantially influence the consequences of supplying nuclear weapons under either premise.

Unrestricted bilateral offers of weapons to national authorities would in all likelihood have a strong negative influence on decisions to undertake national production. It is likely, however, that offers of nuclear weapons by either the US or the UK would entail some restriction on the use of such weapons by the recipient country; in this case the negative effect of the offer on the decision to produce would probably be lessened in inverse proportion to the restrictions applied. Such decisions would also be influenced by the type of weapons and weapons-systems made available. Thus, if for example, only certain tactical weapons are supplied, the incentive to produce some strategic models for prestige and negotiating purposes, might continue to be felt. The direct dependence on US good will and US weapons policy

implied in such an arrangement would in any case be likely in due course to stimulate pressures toward reducing this dependence through indigenous production.

The distribution of weapons on a national basis would moreover lead to discrimination between the NATO partners by dividing them into recipient and non-recipient powers; this would not only produce jealousy within the system likely to weaken it, but would maintain certain incentives for individual production. A similar problem may be raised by the possible disparities in the quantities and types of weapons supplied to the various states. Bilateral distribution would also increase the difficulties of NATO planning, making it necessary to negotiate with each recipient as to the extent and circumstances under which US supplied weapons could be counted on for collective efforts. Finally, distribution to individual states would have a centrifugal effect on the alliance system as a whole, by reducing the degree of collective interdependence and increasing the degree of bilateral US dependence, without however assuring any effective long-term US control over the use of these weapons. Such a situation would no doubt offer the USSR divisive opportunities, and would probably increase tensions as a result of its inherent instability.

A collective NATO stockpile supplied by the US, with possible contributions by the UK, would, depending on the terms of the agreement, tend to remove some of the effects of supplying weapons bilaterally, consequently lessen the pressures for individual production, and stimulate certain countervailing pressures. France might, under such

circumstances, continue to feel strong domestic pressures for a national stockpile, depending in part on the restrictions applied to the availability of stockpile weapons to individual countries. However, it is likely that important forces throughout the community would welcome such a resolution to their atomic dilemma, not only as in the case of Germany for international reasons, but also because such an arrangement would lessen national rivalry, increase western cohesiveness, offset UK superiority and provide Europe with a substantial military force. Thus such an arrangement might well produce considerable internal European pressure against further individual country production efforts, although it would not guarantee against them. At the same time it would tend to strengthen the interdependence of the NATO system and militate against individual atomic adventurism.

In the foregoing discussion it has been assumed that nuclear weapons production efforts on the part of the continental NATO powers could not significantly increase the military capability of the West during the period of this estimate. Moreover, it should be observed that a nuclear program devoted to weapons would require the diversion of resources that are vital to the economic progress and well being of these European countries. The problem of meeting growing requirements for industrial energy is of particular concern and of some strategic significance in view of Western Europe's increasing dependence upon middle-Eastern supplies of petroleum.

CANADA

Canada possesses the potential to develop atomic weapons, since she has ample supplies of uranium, experimental reactors that have been in operation many years, technical and scientific personnel trained in atomic research, and a relatively advanced industrial base. Large amounts of capital have already been spent on atomic energy experimental programs, and the additional outlays necessary for weapons production would not have serious reprecussions on the rapidly expanding economy. But because Canadian defense requirements are inextricably interwined with those of the US, there exists no compelling motive for the Canadians to undertake their own weapons program in the foreseeable future.

Canadians warmly support the close defense relationships of the two countries, and in their view an independent atomic weapons program would provide no additional security to Canada. They realize that an attack on Canada could only have the US as the main objective and would automatically call into play the extensive US nuclear weapons arsenal. Canadians are resigned to the fact that an attack on the US would come via Canada.

The possession of atomic weapons would not add to Canadian national prestige. If atomic weapons are not available to Canada while many fourth countries are obtaining them, however, pressures to obtain such weapons for Canada are likely to grow. There is already some resentment that US forces stationed alongside Canadian groups have access to weapons which are denied to the Canadians. Canada may not be satisfied if provided only with weapons stripped of atomic heads. If such arms,

including warheads, were to be provided by the US, there would be no reason for Canada to develop its own program. Defense relationships with the US are already so close that any additional dependence would not have any significant effect.

There are no compelling economic motives to switch to an atomic weapons defensive posture. Canada has relatively small standing armed forces but comparatively high defense expenditures because of the development of specialized units such as the Royal Canadian Air Force. Defense outlays, however, are not unduly burdensome. Since there would be little reduction in manpower, the adoption of atomic weapons is likely to involve only marginal savings; there would merely be a shift in the types of expenditure.

Canadians accept the assumption that a war between the US and USSR would involve the survival of Canada as a nation. The production and possession of atomic weapons are therefore considered a necessary defensive measure, although the concept of all-out nuclear warfare is abhorrent and Canadians would not support the use of such weapons unless initially used by an opponent. Because of these strong feelings, Canadians would warmly support any arms agreement that would curb testing and/or fall-out or that would limit or stop the production of atomic weapons.

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B-USSR

OIR CONTRIBUTION TO NIE 100-6-57:

NUCLEAR WEAPONS PRODUCTION IN FOURTH COUNTRIES -- LIKELIHOOD AND CONSEQUENCES

PART B

SOVIET UNION

May 31, 1957

DEPARTMENT OF STATE
OFFICE OF INTELLIGENCE RESEARCH

SECRET

DRS CONTRIBUTION TO NIE 100-6-57

PART B: SOVIET UNION

II. PROBABLE POLICIES OF FOURTH COUNTRIES

Two countries in the Sino-Soviet bloc, East Germany and Czechoslovakia, have indigenous resources which would permit them to produce a nuclear weapon by 1967 if they assign high priority to a weapons program and if the USSR consents. A third country, Communist China, would require major foreign technological assistance in order to produce nuclear weapons during the next ten years. It is therefore evident that in order to embark upon a nuclear weapons program each of the three Sino-Soviet bloc countries involved would require Soviet consent and, in the case of Communist China, Soviet support and cooperation. It follows that we must estimate whether the USSR is likely to decide to permit these countries to embark upon weapons programs as well as whether these countries are likely to decide to seek Soviet consent.

1. East Germany and Czechoslovakia

While it is true that these two countries possess indigenous capabilities for a nuclear weapons program the required effort would involve drastic inroads into their economies. Even if these countries felt a need to counter, for example, the acquisition of nuclear weapons by West Germany, it seems unlikely that they would wish of their own accord to accept the economic dislocations implicit in a nuclear weapons program. They would probably prefer to counter a West German capability by obtaining finished weapons and delivery systems from the USSR. Failing

this, they would undoubtedly be content with the stationing on their territory of Soviet-manned and controlled nuclear weapons and delivery systems.

The key to satellite production or acquisition of nuclear weapons is the USSR. We estimate that it is extremely unlikely that Moscow would give its consent to the two countries in question to proceed with weapons programs, even if these countries requested permission in the face of the acquisition of nuclear weapons by West Germany, another European country or a group of West European countries. Moscow's negative decision would probably be governed in part by doubt, following the Hungarian and Polish events, of the stability of these regimes; in part by concern that these regimes, once having acquired their own nuclear weapons, would pursue a reckless course vis-a-vis the West; in part by the estimate that, given the USSR's own capability, there is no military necessity for independent capabilities in the satellites; and in part by a desire to have the economies of these countries operate according to plans already established or shortly to be established. These considerations would substantially outweigh any expectation that an independent satellite nuclear weapons capability would tend to intimidate their Western neighbors or bear other political and psychological fruit. For the reasons cited, we also estimate that the USSR would not transfer nuclear weapons from its own stockpile to the satellites.

It is more probable that for reasons of military necessity the USSR may station nuclear-equipped forces of its own in these countries, and it goes without saying that should the USSR decide to launch general war or

an attack against Western Europe, a possibility we consider remote, nuclear weapons would be included in a Soviet build-up.

In view of our estimate that the USSR would not permit the satellite regimes to proceed with a weapons program, we believe that the USSR will take the necessary precautions to prevent diversions for military purposes from the reactors being installed with Soviet assistance in Eastern Europe.

2. Communist China

From the Soviet standpoint the problem of Communist China is considerably more complicated than that of East Germany and Czechoslovakia. Communist China is more likely to aspire to an independent nuclear capability than the two European satellites for prestige reasons and for purposes of political pressure in Asia. Moreover, in the event that fourth countries in the free world, and especially Japan, should acquire nuclear weapons, the Chinese Communists would almost certainly wish to follow suit. They would be in a far stronger position than East Germany and Czechoslovakia to press the USSR to consent to and support a weapons program, and Moscow would find it far more difficult to resist such pressure. The USSR could offer to make weapons and delivery vehicles available from its own stockpile or to station its own weapons on the Chinese mainland, but because of prestige and other considerations, the Chinese Communists would presumably prefer to acquire a manufacturing capability of their own. The USSR can be expected to stall as long as possible before deciding to support a Chinese Communist program because (1) it would be reluctant to add materially and rapidly to Chinese Communist strength within the bloc and (2) it would not want to encourage

Chinese Communist recklessness which might involve the USSR in major military conflict. We estimate that in the end Moscow would probably agree to assist its Chinese allies though not without demanding a considerable price and insisting on some restriction on the use of the weapons. Moscow would calculate that although a weapons program would enhance Peiping's position in the bloc, its inferiority to the USSR in terms of size of stockpile, type of weapons and means of delivery would continue for a long time.

III. CONSEQUENCES OF THE POSSESSION OF NUCLEAR WEAPONS BY FOURTH COUNTRIES

Until recently the USSR has not indicated great concern regarding the possible spread of a nuclear weapons manufacturing capability to fourth countries. In part this apparent indifference may have been due to an estimate that such a possibility lies in the relatively remote future; in part it may have stemmed from a belief that the country most likely to achieve a capability first, France, is so closely allied to the US that the USSR would not be faced with any problems it is not already facing in view of the US capability. Of late, particularly in private US-Soviet consultations during the current session of the UN disarmament subcommittee, Soviet officials have given some indication of an awareness that a spread of nuclear weapons to fourth countries might pose some problems for the USSR. But apparently, Moscow still does not regard these problems as sufficiently severe to require effective preventive measures. Thus, Moscow continues to reject the US proposal for a cessation of production of fissionable materials for military purposes and the beginning of reduction

of existing nuclear stockpiles. For its part, the USSR thus far only seems willing to suspend nuclear weapons tests even though it must realize (1) that this measure would not prevent fourth countries from developing certain types of elementary weapons and (2) that France, for example, has stated categorically that such a suspension would be insufficient to dissuade it from going ahead with a weapons program. Moscow may feel that if a ban on tests were in fact agreed upon as well as some limitation on the use of nuclear weapons, it would become politically extremely difficult for a country like France to proceed with the manufacture of weapons. But whatever the Soviet calculation in this regard, the fact is that thus far, the USSR does not appear ready to accept the freezing and reduction of its own stockpiles and the necessary inspection in order to meet the fourth country problem.

Apart from Soviet unwillingness to pay a substantial price in order to prevent fourth country production of nuclear weapons, the USSR thus far has not seemed to be greatly concerned with the possibility that assistance rendered to countries to further their nuclear power and reactor research programs might contribute to the growth of a weapons capability. Soviet negotiators did not take the initiative in writing the safeguard clauses into the IAEA statute and were inclined to water down US proposals in this regard; Moscow thus far has not taken up US suggestions that the bilateral peaceful uses programs of the US and the USSR adopt IAEA safeguard standards; the two Soviet research reactor bilaterals with non-bloc countries -- Yugoslavia and Egypt -- apparently contain no safeguard provisions resembling those embodied in similar US bilaterals.

Far from being anxious to include safeguard clauses into its bilaterals, Moscow has sought to make political capital out of US practice by charging that US safeguard requirements were merely intended to facilitate domination of foreign nuclear programs and have publicly offered Soviet assistance without "degrading" safeguards. The facts cited tend to justify the conclusion that in Soviet eyes the danger of diversions at this early stage of development in the countries involved, even if they did occur, is small compared with political advantages that can be obtained from openhanded assistance. Similarly, Moscow appears to see little danger in the technological know-how that recipient countries gain from peaceful uses assistance.

It remains to be seen whether Moscow will eventually insist on safeguards against diversion as recipient countries approach a weapons manufacturing capability. The Soviet decision will depend on the country involved, on whether such a country could proceed with a weapons program regardless of any peaceful uses assistance it might obtain from the USSR and on other factors. In general, Moscow would probably not seek deliberately to enhance a country's weapons manufacturing capability; but rather than write extensive control provisions into its bilaterals it would probably be willing to place a particular assistance project under the IAEA safeguard system. It should be noted, however, that for the best part of the period of this estimate, it is unlikely (1) that potential recipients of Soviet aid would be in a position to embark on a weapons program and (2) that Moscow would make available the type and quantity of assistance that could be effectively diverted to weapons purposes.

It seems fair to conclude from the relative equanimity vis-a-vis the fourth country problem hitherto evidenced by the USSR, that the actual acquisition of nuclear weapons through independent production would not basically alter Soviet estimates of Western intentions or the USSR's own plans for the future. Thus, Moscow would probably not regard a French and Canadian weapons program as posing any new problems at least for the several years in which the capabilities of these countries would be naturally extremely limited. The Soviet attitude respecting Sweden would be similar. Moscow would continue with its own weapons and delivery development and would, as it is now doing, rely on its own strength. Coupled with this, it would undoubtedly continue to exploit and fan world political pressures against nuclear weapons and, through a combination of its strength and these pressures, would expect to minimize the benefits which the new nuclear powers would hope to obtain from their new status.

In addition, Moscow may even seek to derive some benefits of its own from the growth of an independent nuclear capability in these countries by attempting to exploit any moves these countries might make to assert their political independence vis-a-vis the US.

The development of an independent nuclear weapons program in Western Germany would cause Moscow greater concern. Since, by definition, the initiation of such a program precludes the existence of an effective international agreement prohibiting new production of nuclear weapons, a German program might increase the pressures on the USSR to move toward such an agreement. On balance, however, Moscow would probably still find the price of agreement too high and it would prefer to rely on its own

capabilities to meet the new situation. Moscow might, on the other hand, be tempted to resort to conquest in order to remove the German threat. But here too, on balance, it is unlikely that it will in the end do so since the price of possible devastation by US counteraction would be prohibitive. Basically, Moscow will rely on its own strength to deter any possible West German incursion into East Germany; it would seek to minimize the benefits that the Germans would expect from their program by visibly demonstrating its own capabilities and by diplomatic and propaganda moves aimed at negating the possible use of the German weapons.

Moscow's reaction to a regional nuclear weapons program by NATO powers in Western Europe would depend on the form such a program took. If the program were undertaken in such a way as to prevent German domination of it, Moscow would probably accommodate itself to it much as it has already done in the case of the British program and would, according to our estimate do in the case of French and Canadian programs. Moscow would seek to exploit any suspicion that the partners of such a regional effort might have of German motives and it would certainly seek to maximize any loosening in the ties between the US and the European group that might develop from an independent European program. If a European regional program left room for eventual German preeminence, Moscow would be uneasier though it would probably calculate that the UK would seek to prevent German domination. While maintaining its own military posture to counter any West European buildup and employing diplomatic and propaganda pressure in order to impede the program, Moscow would at the same time seek to benefit from any strains within the NATO alliance resulting from the

relative increase in the military and economic potential of the European members.

The degree of Soviet concern would be heightened if the US and the UK embarked on a definite program of equipping their allies, particularly in Europe, with nuclear weapons and delivery systems or of substantially supporting production efforts. If such a program were not accompanied by other indications of military preparations, Moscow would probably not conclude that the West under US direction was planning to launch general war, but it would undoubtedly feel obliged to take certain demonstrative counter-measures. This would be even more true if the delivery systems involved would pose a physical threat to Soviet territory. Among the counter-measures Moscow might take would be the publicly-announced stationing of Soviet nuclear forces in Eastern Europe as well as a publicized increase in the military budget. Such measures would be accompanied by diplomatic and propaganda moves designed to drive home the vulnerability of Western Europe to Soviet military action and to stimulate public anxieties and opposition to the Western build-up.

Moscow probably would not regard a Japanese program as materially affecting its own position, but, as already noted, would, albeit reluctantly, support a Chinese Communist program.

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This document consists of 33 pages
Copy No. 14 of 50 Copies, Series A.

OIR CONTRIBUTION TO NIE 100-6-57:

C-FarEast

NUCLEAR WEAPONS PRODUCTION IN FOURTH COUNTRIES -- LIKELIHOOD AND CONSEQUENCES

PART C

THE FAR EAST

May 31, 1957

DEPARTMENT OF STATE
OFFICE OF INTELLIGENCE RESEARCH

SECRET

OIR Contribution to NIE 100-6-57: Nuclear Weapons Production in Fourth Countries - Likelihood and Consequences

PART C: THE FAR EAST

JAPAN

I. CAPABILITIES FOR WEAPONS PRODUCTION

Competent US Government authorities consider that Japan could produce a nuclear weapon unaided by 1967 if recently reported uranium deposits can be successfully exploited so as to provide reactor fuels.

The Japanese 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 exported atomic fuel. 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 and 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 Asia 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 low-grade ores varying in content from 0.02 to 0.06 percent. 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 U.S. 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 subject 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,[1] based on the belief that non-involvement in nuclear warfare -- a prime objective of national policy -- can best be achieved in this manner. Japanese intellectuals as a group have given leadership to this sentiment, and on May 15 many of the nation's leading physicists (including Nobel Prize winner Yukawa 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 disconcerted by the joint statement of the scientists, and on May 18 modified his earlier stand by declaring that even small atomic explosive weapons were banned by the constitution. 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

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1. See IR 7466, The Relationship of Japan to Nuclear Weapons and Warfare, April 22, 1957, for a full discussion of current Japanese attitudes.

fall-out 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 they recognize that Japanese public opinion at present would not tolerate any overt government action to secure such weapons.

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, 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 corporations for research in various phases of nuclear energy production, including the domestic production of power reactors. If the Japanese do succeed in producting their own reactors, and are able to obtain fuel from their own sources, its operation could provide Japan with its first available supply of plutonium, a fissionable element of nuclear weapons. (This supply would be particularly significant if the reactor were of the British "Calder Hall", or natural uranium, type.) Should such Japanese reactors be applied to electricity generation, for example, there probably would be pressure from Japanese business interests for purchase by the government of the plutonium-bearing residue, so as to assure a competitive electricity cost. Japanese

industry would also expect to profit from participation in any development by Japan of nuclear weapons and this segment of the society may be regarded in general as a proponent of rapid Japanese progress in this field.

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 and a trial run of the completed ship in 1956. Although this project is present 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 by the close of the estimate period without deciding before 1963 on a priority for a naval as against a commercial vessel. Even if this decision were not taken, however, by the close of the estimate period a successful Japanese research program would bring a nuclear navy within the nation's early potentiality. The horizons thus opened up for Japan's naval experts, making possible an early revival of the nation as one of the world's leading naval powers in a modern sense, would give them a new incentive to press the government for an ambitious nuclear naval program.

Although marine propulsion reactors probably would not be a significant source of plutonium, and during the period of this estimate presumably would be supplied with enriched uranium fuels subject to restrictions against their ultimate application to weapons purposes, 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 ultimately at

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 planning board of the Agency evidently 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 utilization 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 Nomura Kishisaburo and former prime minister Ashida Hitoshi, who appear to have influenced Kishi's most 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. Hoshina's article 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 tha 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.

In particular, the Japanese would hope to secure the withdrawal of US forces from the home islands and the return of Japanese civil authority in territory now under US administration, as a consequence of collaboration with the US as a full military partner.

Among the several segments of public opinion which have opposed the rearmament of Japan, even with conventional weapons, an important theme has been that in the present geopolitical situation in east Asia, Japan could not become a first-class power, and rearmament would therefore tend to perpetuate and confirm Japan's dependence upon the US. It seems likely that when and if spokesmen for the nuclear armament of Japan such as Hoshinafeel that the time is appropriate to launch a public campaign for support of such a program, they would be able to influence many Japanese now affiliated loosely with pacifist or anti-rearmament movements, by painting the prospect of a Japan armed with nuclear weapons becoming again one of the great powers in the world. Thus, while the Japanese probably would not expect to be able to decrease their defense expenditures in the course of producing nuclear weapons, they probably foresee much greater utility for such rearmament in the pursuit of diplomatic objectives than could conceivably result from expanding Japan's conventional armament.

At the present time these views are confined to a small conservative elite. The question of whether Japan is likely to embark upon the production of nuclear weapons in the next decade would be related to the future balance of domestic political power in the nation. The labor movement,

the Socialists, most of the intelligentsia, and much feminine sentiment is likely to remain adamantly opposed to nuclear weapons development by Japan, and this grouping no doubt will be supported directly and indirectly by communist forces within and without Japan. On the other hand, conservative political groups seeking an international place in the sun for Japan, business interests which would profit directly and indirectly from nuclear weapons program, and professional members of the defense establishment eager to possess the most promising modern arms can be relied upon to press for the development by Japan of her own nuclear weapons. At present it is the former group which expresses the consensus of public opinion on the nuclear weapons question, while the latter exerts more influence on government operations.

The proponents of a nuclear weapons program evidently feel that little is to be gained by publicly threshing out this controversy at the present time, since the current heavy emphasis which is being given to the training of nuclear scientists and technicians, the exploration of uranium ore, research in nuclear science and technology, and in tooling up industry for a nuclear energy program constitute useful preliminaries for a nuclear weapons development effort and might just as well be carried out under the non-controversial banner of "peaceful uses." Of course, Japanese on both sides of this controversy are sincerely and intensely interested in genuinely pressing the commercial exploitation of nuclear energy; one side wishes to confine the nation to this sphere, while the other envisages later a collateral expansion into the nuclear weapons

field, possibly as early as 1961 when the reactor developed by Japan for a nuclear vessel is scheduled to begin operation.

The timing would of course depend upon the uncertain course of research and development in Japan (which could be delayed by the refusal on moral grounds of certain key scientists to cooperate), but if the 1961 target date is taken as the best available estimate, the prospective political climate in Japan at that time would appear to favor a governmental decision to undertake a nuclear weapons program over left-wing objections. By 1958 or January 1959 at the latest a general election will have been held in Japan, and current indications are that it will restore the Liberal-Democrats to office with about a two-thirds majority, thereby raising the prospect of tenure by Prime Minister Kishi until 1963. If Japan's economy continues on its prosperous course, and there are no severe international shocks affecting Japan, by 1961 Kishi would probably be in a strong position to lead the nation into nuclear rearmament. This action would be opposed bitterly by the left wing in Japan, but by present indications the majority bloc of domestic sentiment now opposing nuclear weapons for Japan could by that time be sharply reduced through an adroit conservative campaign of public indoctrination.

The prime minister's recent statements about the ultimate desirability of nuclear weapons were carefully hedged and were softened when opposition arose. Kishi may have anticipated the adverse reaction his remarks received, and may be planning to accustom the public to hearing discussion by high officials of the advantages of nuclear weapons for Japan,

as a preliminary to more serious efforts to condition public opinion after the general election.

On the whole, Japan's decision about whether or not to manufacture its own nuclear weapons is not likely to be affected fundamentally by any allied decision to make nuclear weapons available for the common defense. The motives which have been described above for launching a weapons program would scarcely be satisfied by the provision of complete or partial weapons under what presumably would be rigid allied controls. In particular, Kishi has taken a firm public stand against the stationing of nuclear weapons in Japan under US control, and on this point he enjoys general public support. (Both the conservative and the socialist parties seek the withdrawal of allied forces from Japan; the latter at once, and the former when Japan can defend itself.)

Conservative Japanese leaders are suspicious of the Soviet Union and for example have taken a firm stand against Moscow's efforts to combine with Tokyo in an effort to prohibit nuclear tests. However, a no-strings-attached offer by Moscow of a nuclear reactor without the restrictions on by-products use contained in the proposed IAEA convention, would be very attractive to the Japanese. (Japan reportedly has already considered asking the USSR to admit Japanese students to apprenticeship in Soviet nuclear installations.) Although the Japanese feel they must use imported reactors at first for research and training purposes, they aspire to a completely independent and original program on their own resources, and apparently they are reluctant to tie their introductory period too closely to any one foreign state, such as the US.

There is no clear indication that any partial limitation on the testing of nuclear weapons would in one way or the other affect any potential Japanese decision to produce nuclear weapons, although an absolute ban on testing might curtail their program and impose technical obstacles to the development of advanced weapon types.

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 were 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.

On the whole, the question of whether or not Japan will attempt seriously to produce its own nuclear weapons depends 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.

Assuming that public opinion continues to exert a powerful influence over governmental actions, however, it does not seem likely that any resurgent nationalism associated with the adoption of nuclear weapons would be of an aggressive nature, or that Japan would become less attached to the principles of the UN Charter. Public opinion probably would continue to dread the involvement of Japan in nuclear warfare, and come to accept the necessity of nuclear weapons only for

their defensive utility. Even if nuclear weapons were to become an object of pride, as an element of national strength, the Japanese public would in all probability continue to oppose severely any development of a bellicose policy by the government. It is reasonable to assume, moreover, from consideration of the relatively greater vulnerability of Japan to nuclear attack than any of her principal neighbors or potential rivals to world power status, that Tokyo is not likely to be the aggressor or instigator of nuclear warfare during the period of this estimate, particularly as Japan in this period could have little more than a token stockpile of weapons. Hence it does not seem likely that the production of nuclear weapons by Japan would increase appreciably the likelihood of war during the next decade.

Any successful effort by the Tokyo administration to convince the Japanese people of the necessity of adopting nuclear arms would probably be based in large part upon stress that nuclear weapons in the modern era have become conventional, and that they would inevitably be used in any future war. (This assumption appears already fixed in the military planning of the Defense Agency.)

As Japan would continue to be a minor nuclear power at best by the close of the reference period, its relative status might be improved by disarmament schemes which put a ceiling on total stockpiles, or even by a prohibition of further weapons production which left Japan with three or four other states as the only nuclear powers. On the other

hand, the Japanese Government is likely to resist any disarmament proposal which would tend 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, and as no Asian state would gain any relative advantage from such a proposal at this time.

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.

If Japan were to develop its own nuclear weapons research, stockpile and supporting forces, the Japanese probably would shed rapidly the strong conviction of extreme weakness which they have held since 1945 and begin to take a much more assertive role in diplomatic affairs than heretofore, reasserting for example their historical objective of securing Formosa and the Korean peninsula against domination by the Asian mainland. Within the period of this estimate, it is unlikely that Japan would be able, even with the exercise of

greater decisiveness and expenditure of economic effort than it seems reasonable to expect, produce during the period of this estimate more than a nominal nuclear weapons arsenal, possibly confined to a few relatively primitive explosive devices. Japan's possession of such arms per se would not be enough to alter the balance of power in the Far East, but they would be considered by Asian states in general and probably by the Japanese themselves as heralding, in the subsequent decade, the rise of Japan as a principal power in East Asian affairs.

COMMUNIST CHINA

I. FACTORS INFLUENCING CHINESE COMMUNIST NUCLEAR POLICIES

A. "Great Power" Aspirations

In the course of the next decade the most important factor influencing Peiping's nuclear policies will probably be the regime's aspiration to transform Communist China into a recognized world power possessing a modern industrial and military establishment comparable to if not on a par with that of the US and the USSR. An important aspect of this objective is the achievement of a greater degree of independence from Soviet economic and military aid. The Chinese Communists recognize the difficulties inherent in this aim, but point to Soviet achievements to demonstrate the ultimate feasibility of their objective. Peiping has launched a number of "prestige" projects as part of its economic and military development program that are only partially justifiable on economic grounds at this time but that serve to dramatize the regime's long-range goals. An example of such a project is the "production" with great fanfare of Communist China's first jet aircraft, which was actually assembled on a pilot basis from Soviet sub-assemblies. On a similar basis, Peiping may be expected to exert considerable effort to demonstrate a nuclear capability, even if it is purely token. The Chinese Communists undoubtedly believe that nothing would so effectively underscore their claim to great power status as the explosion of a test atomic bomb; they probably believe that even a program limited to a few power reactors would have a powerful impact in convincing Chinese and Asians generally of Communist China's "progress" toward achieving the status of a modern state.

B. Military Factors

The ultimate purpose of any nuclear program in Communist China would be to develop a capability for nuclear warfare. However, for the next decade the primary significance of any nuclear capability Peiping might be able to develop would be psychological. The Chinese Communists would be highly unlikely unilaterally to initiate nuclear hostilities against US forces, since they undoubtedly recognize the impossibility of developing capabilities in weapons and delivery systems that would be a match for those of the US. The Chinese Communists would be almost equally unlikely to launch nuclear war against neighboring Asian countries, in view of Communist China's present military preponderance against Asian countries unassisted by one of the nuclear powers. Nevertheless, Peiping would probably regard a nuclear capability, no matter how small, as an important adjunct to the intimidating effect in Asia of its present military establishment.

C. Industrialization Policy

As noted above, Peiping has included a certain number of "prestige" projects in its long-range economic development program. At the present time, beset by difficulties arising from overambitious planning and other dislocations of the first five-year plan, Peiping has scaled down many of its industrialization targets, deemphasizing certain costly projects in favor of those likely to produce a more immediate economic return. Since there is little economic justification at the present stage of Communist China's development for expenditures devoted to nuclear power, current economic policies would appear to constitute a factor militating against large-scale nuclear power and weapons programs.

It must be noted, however, that even the present "austerity" phase in Chinese Communist economic planning retains some leeway for "prestige" projects and projects believed by the Communists to be important for psychological or military purposes. A small-scale nuclear program undoubtedly lies within Chinese Communist economic capabilities, given adequate technical assistance by the USSR. It is possible that Peiping planners may, within the period of this estimate, decide that an expanded program is feasible; they may even conclude that in the face of possible inadequate achievements in other spheres of economic development a token nuclear weapons program may be a cheap means of achieving prestige and demonstrating the "success" of the industrialization program.

Peiping will be in no position during the next decade to institute a "crash" nuclear program aiming at large-scale production of weapons and/or power, in view of the demands of other phases of the industrialization program and particularly because of the critical shortage of all categories of scientific and technical personnel. However, in this period Peiping's capabilities with Soviet assistance for a small-scale nuclear program will increase in consequence of expected progress in industrial construction and technical training programs. During the next decade Chinese Communist capabilities for mining and extracting fissionable materials may be expected to increase sharply.

Peiping has announced that a Soviet-granted nuclear research reactor of 7,000 kilowatts will be completed this year in Peiping, where it will presumably be used to train Chinese Communist scientists (and to impress visiting foreigners, particularly those from Asian countries). Peiping

has also announced that it has achieved some results in the refinement on a "laboratory scale" of source materials from Chinese ores. According to the announcement of the Sino-Soviet agreement, the Chinese Communists apparently hope to supply the fissionable raw materials for use in the reactor.

D. World Communist "Peace" Pose

Another major factor in Peiping's nuclear policies is the Chinese Communist participation in the world Communist "peace" pose. Peiping has repeatedly seconded Soviet proposals for outlawing or controlling nuclear weapons and nuclear tests and has consistently exploited in its propaganda the widespread Asian abhorrence of such weapons and tests. It is possible that Peiping may choose to make a virtue of its extremely limited nuclear potentialities in the next decade by confining itself to an ostensibly peaceful nuclear program and by avoiding identifiable tests of nuclear weapons, even if it should succeed in constructing a limited number of weapons for contingent use. If the Chinese Communists can obtain the benefits of Soviet experience and tests, they might obviate the need for tests of their own. Even if it should possess a small number of nuclear weapons, in the event of hostilities involving Chinese Communist forces, Peiping may avoid their use, both to avoid retaliation and to exploit the concept of "self-restraint" in its propaganda.

E. Peiping's View of US Intentions

The Chinese Communists probably believe that the US does not within the foreseeable future intend to launch an aggressive war in Asia. At the same time they are probably very much less certain that war involving US forces may not come about as a consequence of a series of actions by an Asian ally of the US or through some unpredictable series of events. Furthermore, Peiping probably regards US military policies, particularly in the Taiwan Strait and Korea, as presenting a nuclear challenge to its long-range objectives. Nevertheless, the Chinese Communists' view

of US intentions is probably not an important factor in their nuclear policies, as they almost certainly recognize that even considerably beyond the period of this estimate they will be almost totally dependent on the USSR for military support in a major conflict no matter what progress may be registered in their own weapons program.

The Chinese Communists may well look upon specific US moves, such as the stationing of Matador missiles in Taiwan, more as phases in the long-range development of US nuclear delivery capabilities than as moves requiring specific countermeasures. For the latter Peiping will in any case continue to rely primarily on Soviet rather than its own power. Nevertheless, the stationing of nuclear or dual purpose weapons in the Far East, particularly in Taiwan or Korea, does add to Peiping's incentive to produce nuclear weapons of its own, primarily in the hope of being able to counter the psychological impact of the US moves. At the same time these developments will almost certainly lead Peiping to continue to press for more explicit guarantees of Soviet support in the event of nuclear war and may create a greater degree of willingness to permit, or even request, the stationing of Soviet nuclear units on Chinese Communist territory.

II. PROBABLE CHINESE COMMUNIST POLICIES

A. Nuclear Weapons Production

The above factors indicate that Peiping will almost certainly attempt to initiate a weapons phase in the development of its nuclear program during the period of this estimate. The degree of publicity accorded this decision will depend upon the state of international tension in the Far East and upon relative emphasis accorded the "peace" theme in Chinese Communist propaganda at the time the program achieves some results. Although Peiping will be heavily dependent upon Soviet technical assistance, it will attempt to portray the nuclear program, whether described as a weapons or a power program, as an "indigenous" achievement of the Chinese Communist regime, possibly giving only perfunctory acknowledgment to Soviet aid.

The USSR almost certainly wishes to retain its monopoly on nuclear weapons within the bloc. How much assistance it will give Peiping in the actual production of weapons will depend in large part upon progress in achieving international control of nuclear weapons production in fourth countries and particularly upon the prospects that Japan may produce nuclear weapons of its own. The Sino-Soviet agreement under which Peiping was supplied with a research reactor appears to indicate that Communist China, in common with other countries supplying nuclear ores and materials to the USSR, has some bargaining power with Moscow on nuclear matters. In any event, the USSR will probably grant Peiping the necessary technical assistance for a nuclear power program, from which Peiping may well attempt to take off into a weapons program.

B. Soviet-supplied Weapons

Peiping's policy has been to emphasize the solidarity of the bloc against the West and to imply that a Western nuclear attack against Communist China would be met with Soviet retaliation. Peiping would apparently like to obtain explicit public Soviet assurances that the USSR would indeed come to Communist China's assistance if the latter became embroiled in nuclear hostilities. Moscow, possibly wishing to avoid encouraging a reckless military policy in Peiping and desiring to maintain maximum maneuverability has so far at least publicly avoided such assurances.

Peiping's desire for explicit assurances would be met in part if the USSR were to supply Communist China with nuclear weapons and the technical assistance for their utilization. However, Moscow clearly prefers to retain nuclear weapons under its own full control. Peiping and Moscow are probably agreed that under present circumstances of relative stability in the Taiwan area it would be preferable not to station Soviet nuclear units on Chinese Communist territory, particularly since the last Soviet garrison was withdrawn with great publicity only relatively recently from Port Arthur, and because stationing of Soviet troops in China would undermine the Communist theme of US "occupation" of Taiwan.

Should tension and the threat of nuclear war increase sharply in the Taiwan strait or elsewhere in Asia, the above attitudes would probably shift. The USSR would probably yield on its prejudice against explicit public assurances of nuclear support for Peiping. It might go so far as to supply Communist China with nuclear weapons, possibly retaining some

control over their use in the guise of technical advice, as a course implying a lesser degree of involvement than the actual stationing of Soviet nuclear units on Chinese Communist territory. Peiping on the other hand, under conditions of extreme tension would probably yield on its "nationalistic" prejudice against having Soviet nuclear forces stationed on Chinese territory, possibly believing that the presence of Soviet nuclear forces would constitute a deterrent to the use of nuclear weapons by the US. A likely compromise between Soviet and Chinese Communist interests under less extreme conditions would be explicit public assurances of Soviet nuclear support for Communist China, coupled with a suitably publicized military build-up in the Soviet Far East and an acceleration of the Chinese Communist nuclear program with Soviet assistance. The Chinese Communists under conditions of emergency might seek to dramatize their "preparedness" by exploding a test bomb, even if it were largely of Soviet manufacture.

C. Research and Peaceful Uses

As other countries move progressively into the nuclear age, the Chinese Communists can be expected to devote more and more emphasis to nuclear research and to nuclear power and other peaceful uses. Although Communist China's shortage of technical personnel is so critical as to dictate the development of skills primarily in fields promising a more immediate economic return than nuclear physics, Chinese Communist universities during the next decade will probably devote considerable attention to nuclear research, centering on the Soviet-supplied reactor now being built in Peiping. Similarly, although conventional fuels are adequate to present demands in Communist China and nuclear power is not economically justifiable in most of the country, for prestige purposes the Chinese Communists will probably initiate at least token nuclear power projects during the next ten years, in addition to the Peiping research reactor. Under conditions of relative international stability, Peiping may as noted above choose to emphasize in its propaganda only the peaceful aspects of its nuclear program, holding any weapons development in reserve for testing and publicizing at a psychologically opportune moment. Whatever its actual achievements, Peiping will attempt to create the impression that it is more advanced in the nuclear field than India, Japan, or other non-Communist state in Asia that may during the next decade initiate peaceful uses programs.

D. International Control

Peiping has consistently seconded Moscow's proposals in the field of nuclear energy, whether these involved outlawing weapons or tests or

international cooperation in peaceful uses of nuclear energy. Peiping's propaganda has particularly stressed Asian sentiment against nuclear tests, ignoring the fact that the USSR has continued to test weapons. The Chinese Communists can be expected to continue to follow the Soviet lead in regard to international control, and are unlikely to develop a position of their own that would differ significantly from that of the USSR.

If an international agreement on nuclear weapons should be achieved, Peiping would continue to follow Moscow's lead, probably hailing the accomplishment as largely due to Soviet efforts. However, while giving lip service to the agreement, Peiping would not consider itself bound to observe any restrictions on weapons research, production, testing, or use so long as Communist China did not formally join in the agreement. Peiping would probably insist on being recognized in the agreement as the signing authority for "China"; any real or implied limitation to this recognition (such as an effort to obtain the concurrent signature of the GRC) probably would be used by Peiping as a rationalization for avoiding accession to the control agreement. If the agreement should be formulated within a UN framework, Peiping would probably further insist on full membership in the UN and all its organs as the sole representative of China, as a further condition of accession to the control agreement.

Additional problems would be created if an international agreement on nuclear weapons control provided for extensive inspection procedures. Peiping would again give lip service to any inspection system agreed to by the USSR, but would almost certainly close its own territory to inspection if it was not a signatory to the full agreement or if inspection

involved overflights by personnel of a country, such as the US, that had not established diplomatic relations with Peiping. Peiping would permit no impartial inspection of self-imposed restraints in the nuclear field.

III. CONSEQUENCES OF ACQUISITION OF NUCLEAR WEAPONS BY OTHER FOURTH COUNTRIES

The Chinese Communists, aspiring to the status of one of the "big four" powers, would be extremely sensitive to the previous acquisition of nuclear weapons by another fourth country. If the fourth country were one of the NATO powers, for example, France, Peiping would look upon the situation as a setback to its own ambitions but not as a direct challenge. However, should the fourth country be Japan, a country with which Peiping stands in direct competition, the Chinese Communists would probably be highly concerned for they would look upon a Japan armed with nuclear weapons as a potential military as well as political threat. In the case of the Government of the Republic of China (GRC), Peiping would probably be concerned above all at the apparent indication of US support for the military ambitions of the GRC; Peiping would regard the acquisition of nuclear weapons by the GRC as an expression of US support for a Nationalist attack on the mainland.

Peiping's reaction to the initiation of a program or the acquisition of nuclear weapons by any non-Communist fourth country in Asia would probably be to accelerate its own nuclear power and weapons programs. It would attempt, if at all possible, to keep up with Japan in the development and testing of weapons and the acquisition of production facilities. It would use the acquisition of nuclear weapons by the GRC as an additional arguing point with the USSR in attempting to persuade the latter to turn nuclear weapons over to it. If the GRC acquired nuclear weapons, Peiping would in addition take defensive measures, particularly in the Taiwan Strait and

coastal areas because, of all the situations postulated, this would be the one presenting the most immediate military challenge.

IV. EFFECT ON PEIPING POLICIES OF NUCLEAR WEAPONS ACQUISITION

The acquisition by the Chinese Communist regime of nuclear weapons would have relatively little impact on Peiping's international orientation and policies. Peiping would continue to feel dependent on Soviet military support and assistance, even if it should acquire nuclear weapons largely through its own resources, for it would recognize if anything more clearly than before the gap separating its own weapons production and delivery capabilities from those of the US and USSR. Peiping's attitude of hostility to the West, particularly the US, likewise would not be altered significantly, nor would Peiping be more likely than before to assume risks of major hostilities against US forces.

Peiping would probably estimate that the intimidating effect on neighboring countries of its military strength had been increased measurably. At the same time, Peiping would probably recognize that its possession of nuclear weapons might constitute a serious irritant to relations with Japan and with the Asian neutrals, notably India. Peiping might attempt to maintain approximately the present balance in its policies between threat and intimidation and expressions of "peaceful" intent. To the latter end, Peiping would probably join in Soviet disarmament and weapons control proposals, recognizing that with nuclear weapons at its disposal its views on disarmament and control would have considerably more international impact.

With nuclear weapons of its own Peiping might be able to look with somewhat greater equanimity upon the prospect that another Asian country, such as Japan or the GRC, might acquire nuclear weapons. Peining would feel more secure in its prestige against Asian competition. In the case of the GRC it would probably estimate that its nuclear weapons would constitute something of a deterrent to the use of nuclear weapons by the Nationalists, since Peiping would probably regard Nationalist military positions as vulnerable to nuclear retaliation even on the limited scale of which the Chinese Communists would be capable.

The possession of nuclear weapons would not of itself lead Peiping to resume its expansionist military policies in Korea, the Taiwan Strait, or Indochina, since the deterrent effect of the threat of US counteraction would remain unchanged.

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OIR CONTRIBUTION TO NIE 100-6-57

NUCLEAR WEAPONS PRODUCTION IN FOURTH COUNTRIES - LIKELIHOOD AND CONSEQUENCES

D-NEA

PART B

NEAR AND MIDDLE EAST AND SOUTH ASIA

May 31, 1957

DEPARTMENT OF STATE
OFFICE OF INTELLIGENCE RESEARCH

SECRET

NEAR AND MIDDLE EAST AND SOUTH ASIA

In the area of the Near and Middle East and South Asia, only two nations -- India and Israel -- are considered to have any significant capabilities for developing nuclear weapons, and the chances are that neither of them will do so within the period of this estimate. Accordingly, the production of nuclear weapons by fourth-countries will very significantly increase the military strength of Western Europe relative to the nations of the Near and Middle East and South Asia.

In the pre-nuclear age such a shift in a military balance would probably have had important concrete consequences. The revolt of Asians against their European overlords during the past generation, while doubtless it would have taken place in any case, was unquestionably encouraged and precipitated by the loss of European prestige resulting from Japan's successes against Europeans between 1904 and 1942 and by the unmistakeable weakness of Western Europe after World War II. The nationalist revolts against European rule which have been a commonplace of our times would scarcely have been undertaken had the nationalists not had real hope of success. A Western Europe possessed of outstanding military power in conventional armaments putting it in a class with the two great super-powers would today, even after the resolution of most colonial conflicts, have an intimidating effect and command a larger measure of awe among the African and Asian people than it does at present. Such a difference in its military standing would doubtless have significant political consequences.

That the possession of nuclear weapons will enable the Western European nations to carry a great deal more weight in Asia and Africa is, however, unlikely. The experience of the United States in the war in Korea, where profitable targets for atomic bombs were found lacking, and the more recent adventure of the British in Egypt, in which the possibility of using atomic bombs was not even discussed, suggest that in any encounter between Western and Asian or African forces the issue is likely to be decided by conventional weapons. Even if the French had atomic bombs today, it is doubtful if they could find practical application for them in Algeria. Even if the Algerian war should offer some opportunity to employ atomic artillery shells, another limiting factor is likely to apply. This is the factor of world opinion.

The next nation using an atomic weapon of any kind, except in a dire issue of self-defense, will probably bring such a weight of obloquy upon itself as to achieve its virtual isolation. Even governments disposed to sympathize with it would probably be reluctant to do so openly for fear of the penalties of being associated with it. Such a nation, even if employing only an atomic artillery shell, is likely to be regarded as having opened a fissure in a dyke that could possibly not be closed again and could lead to the inundation of mankind. With the cold war having to a considerable extent become a competition between the West and the Sino-Soviet Bloc for influence in the underdeveloped world, use of atomic weapons by a Western power against Asians or Africans would in particular be a step which a Western nation could not contemplate except in terms of very great political costs.

The chances are, therefore, that Western European capabilities for nuclear war are not likely to be demonstrated in any way that would make an impression upon the Asians and Africans. The Asians and Africans will hence be unlikely to think of these capabilities as augmenting the stature of the Western European countries. There is no evidence that Nasir, for example, has been in the least swayed by his knowledge that the US and the UK have atomic weapons or that he or other Afro-Asians would be much more swayed by the knowledge that other Western powers have them.

By the same token, none of the states of the Near and Middle East and South Asia are likely to consider that their own prestige has suffered as a result of the development of nuclear capabilities by any Western European countries, with the exception perhaps of Greece and Turkey. With three, or possibly four or even five members of NATO having developed nuclear weapons of their own, there may be more of a tendency on the part of other members who have not done so to feel themselves second-class members of the club. It is doubtful, however, if their feelings on this score would have significant political consequences so long as they provide what are regarded as vital links in the NATO chain, even if their contribution comes to consist largely of launching sites for atomic bombers and shorter-range missiles. If and when the point is reached, however, at which war seems likely to be decided by an exchange of long-range missiles between the main antagonists, which would pass over the heads of the intermediate countries, then the Greeks and Turks, having been deprived of their claims upon

the US for large-scale military aid, will be in for a difficult period of readjustment.

While the production of atomic weapons by Western European nations would not add significantly to their influence in the underdeveloped countries, it would add to the alarm over the future which the Indians, Ceylonese, and many Pakistanis have felt ever since the threat of nuclear war arose. They would be greatly concerned over the likelihood that the atmosphere had been further contaminated in the course of experimentation leading to the production of nuclear weapons in Western Europe and by the greater danger of atomic war which would seem to be implicit in the possession of atomic weapons by additional nations. The Indians, in particular, would be likely to agitate the issue even more vociferously in international forums and might make greater efforts to weld together a group of neutralist nations in order to increase the effectiveness of their demands for an absolute ban on the production, use, and possession of atomic weapons. In the pursuit of this purpose, they would doubtless be abetted by the USSR and might be drawn into much closer cooperation with the USSR.

In the area of the Near and Middle East and South Asia the development of nuclear capabilities by additional countries in the Sino-Soviet Bloc would have little effect except that in South Asia the effect would be pronounced if the country developing such capabilities were Communist China. The effect in South Asia in that event would be two-fold. There would be in the first place a general feeling that the danger of nuclear war between the principal antagonists in the global

conflict had been increased along with the geographical scope such a war would have. India would probably redouble its efforts to bring about a diminution of tensions between Communist China and the United States. Chiefly it would probably put pressure upon the United States to back down on issues which could lead to hostilities, such as the status of Taiwan. If the United States refused to yield, anti-Americanism would probably increase in India and other neutralist Asian countries. The second effect would be greatly to increase Chinese Communist prestige in South Asia and perhaps also in the Near and Middle East. The prestige of Communism as a political and economic system promising rapid development for backward countries would also be increased. India would probably feel that its position in Asia generally had suffered and that it was now being more sharply challenged by Communist China. It might also feel more uncertain about the prospects of the Southeast Asian states remaining free of Chinese Communist influence or domination. It might consequently feel impelled to develop nuclear weapons on its own account, which it might otherwise not have done (see Section on India).

The development of atomic weapons by India would have a much greater effect on Asia and Africa than the development of such weapons by European countries. It would be regarded as a more remarkable achievement -- and more remarkable too than that of Communist China if the latter had developed such weapons, since it would be assumed that Communist China had had Soviet assistance. India's case would be that of the local boy who had broken into the Big-Time without help. It would doubtless be held in much greater respect throughout the area and

its position as spokesman for the uncommitted states would probably be strenghtened. The states on India's borders might, however, be uncomfortable. Pakistan would certainly be alarmed. It would seek urgently to obtain atomic weapons from the US or at least unequivocal assurances that the US would in one way or another neutralize the advantage India had obtained. If neither were forthcoming, Pakistan could be expected to turn to Communist China or the USSR for equivalent protection.

Had India meanwhile come under the control of an adventurist government animated by a sense of an Indian "mission" abroad, the alarm among its neighbors would be general and acute. There would probably be a general scrambling for foreign connections. Afghanistan, Nepal, Ceylon, and Burma could be expected to try to obtain commitments from the great-power camps and to keep them in balance. Should they fail to obtain satisfactory assurances from either camp, the weaker neighbors might feel compelled to come to terms with India, however disadvantageous.

Should Israel acquire atomic weapons, the impact upon the Arab world would be shattering. The Arab dream of liquidating Israel would be dispelled and at the same time every Arab capital would have become a hostage in Israel's hands for Arab good behavior. The present psychological difficulties of the Arabs resulting from their humiliation at the hands of Israel, the gnawing sense of inferiority that a thriving Israel in their midst inspires in them, would be greatly intensified. Even more significantly, the Arabs would consider

themselves under an even more dire threat from an expansionist Israel than they do now. Various latent, or already active impulses in the Arab world resulting from the Arabs sense of their weakness would be greatly strengthened. There might be a stronger tendency among them to reject the modern world (apart from the instruments of power it offers) and accept the superstitious irrational leadership of the Moslem Brotherhood or a similar organization. They might also seek to contract closer relations with the Great Powers depending upon the confrontation of the US and the USSR then obtaining in the Middle East. In this connection, they would attempt to obtain atomic weapons for themselves. As an alternative, a body of Arab opinion might seek a collective Great Power guarantee of the security of the area -- in a word, its neutralization.

INDIA

It would appear that neither the Government of India nor the Indian public has given much; if any, consideration to the possibilities of fourth countries possessing nuclear weapons. More specifically, it is doubtful that India has thought through the manifold implications for it if Pakistan or Communist China were to secure nuclear weapons. For Indians generally, a world characterized by increasing production and widespread possession of nuclear weapons is too horrible to contemplate.

The Indians believe that any general war in which nuclear weapons were employed would almost inevitably result in the destruction of India and of civilization generally. It is very unlikely that any considerations of national prestige would lead India to want to possess

nuclear weapons. Present defense expenditures are resented as an infringement on finances needed for development plans warranted only by the need to retain a lead over Pakistan, and the diversion of resources into a nuclear weapons program would necessitate further curtailment of economic development, and a diversion of nuclear materials from energy to weapons production would be rejected. Most importantly, the possession or production of nuclear weapons would be incompatible with many basic aspects of India's foreign policy.

Despite the depth of Indian feeling against nuclear weapons, there is one circumstance which might bring about a change in India's attitude toward the possession of such weapons, i.e., their possession by neighboring states. The possession of nuclear weapons by Pakistan, or India's belief that Pakistan had received or was going to receive nuclear weapons, would very probably cause India to try to secure similar weapons for itself. The possession of nuclear weapons by Communist China would be a cause of uneasiness to India, and might make India desirous of having nuclear weapons, especially if there were increased Chinese activity on India's borders.

A Congress Party government, although possibly without Nehru during the latter part of the period, seems the most likely eventuality for the next ten years. As long as Nehru remains the dominant figure in India, present policies and attitudes are likely to continue. Should he die or beomce incapacitated, he would in all probability be succeeded by either a Congress government or by a Congress-Socialist coalition. A Congress-Socialist coalition would probably pursue policies

not dissimilar to Nehru's and be equally opposed to nuclear weapons. A Congress government, which is the more likely, would follow policies generally similar to those of Nehru, but would be less leftist. The aversion to nuclear weapons would almost certainly continue, but might under certain circumstances be somewhat lessened. The new Congress regime would probably be more strongly anti-Pakistan and might, therefore, be readier to consider the idea of nuclear weapons in order to present a stronger stance against Pakistan. Should the regime find its position being weakened by its inability to deal successfully with domestic economic difficulties, it might seek substitute sources of support by attempting to provide the public with nationalist satisfaction by taking a more militant stand against Pakistan. In such circumstances, a program of nuclear weapons development might be undertaken.

Should the Second Five-Year Plan fall far short of its goals and a widespread feeling develop that Congress leadership had failed and that the future course of developments was likely to be for the worse rather than for the better, the growth of Communism in India would probably be greatly accelerated. This accelerated growth of Communism would probably result in the consolidation of anti-Communist forces with the result that Indian political life would become polarized and a pitched struggle develop between the Communists and anti-Communists. Should the anti-Communists prevail in this struggle they might well seek to render palatable the totalitarian controls which would probably

be required to hold together such a bitterly-divided nation. The regime might well turn to sabre-rattling and foreign adventurism, which would obviously be more impressive if backed up by nuclear capabilities.

ISRAEL

There is some evidence to suggest that Israel and France have an agreement to collaborate on nuclear research and have for some years actually carried on joint research in non-military phases. The scope of this agreement is not known, nor are there sufficient grounds for making any refined estimates on the circumstances, if any, under which France would supply Israel with the equipment, capital, and raw materials required for nuclear weapons production. It is not impossible that France might give such assistance to Israel. The chances are somewhat greater that France, once in possession of nuclear weapons, might turn over a small number of these to Israel, but permit their use only with French approval. If the present French hostility to the Arab bloc and close relationship with Israel continues, the most likely possibility is that France would, with considerable and deliberate ambiguity, threaten to collaborate militarily with Israel by retaliating with nuclear weapons against any Arab capital that ordered an attack on Israeli soil.

If Israel had the opportunity to acquire nuclear weapons, it would do so. Israel came into existence by fighting, and has perpetuated itself by fighting. If it could come into possession of an

irresistible weapon, it would undoubtedly feel more secure in the midst of hostile neighbors not similarly equipped. Unlike the Western Europeans, who feel reasonably sure they can count upon the US to maintain a vigilant attitude toward the USSR, Israel is confronted by an enemy with which the US is endeavoring to maintain friendly relations and even to enlist in mutual defense pacts. This is an enemy, moreover, which openly avows its determination to eradicate Israel. Finally, even if the US could be counted upon to come to Israel's assistance against aggression from the Arab states, Israel could by no means be sure that US assistance would arrive before it had been overrun unless it possesses the means of its own defense.

If Israel had acquired possession of nuclear weapons, the contingencies under which it would be likely to employ the weapons for diplomatic or military purposes can be enumerated as follows:

(1) It would almost certainly seek to exploit as thoroughly as possible any diplomatic advantage that might be gained from the ability, direct or vicarious, to threaten nuclear retaliation for any large-scale Arab invasion. By such threats, Israel would seek to end all possibilities of aggression. It would also, by calling attention to the vastly increased risks of destruction and international involvement as a result of snowballing border incidents, intensify its pressure for international support in negotiating advantageous peace treaties with the Arab states.

(2) An extremist regime in Israel might use nuclear weapons aggressively under two possible conditions:

(a) if Israeli territorial integrity were not assured effectively by an international guarantee and the greatly outnumbered Israelis could no longer hope to strike effectively by conventional arms against the Arabs, but anticipated an early strike by them.

(b) if Israel proved economically unable to absorb the several hundred thousand additional emigrants expected in Israel during the next few years and expansionism at any price became a popular policy. In this event, an extremist Israeli leaderhip might try to use Arab knowledge that it possessed nuclear weapons as a means of demoralizing and winning territorial concession from neighboring countries rather than actually anticipating having to commit such weapons. Such an attempt, however, would undoubtedly isolate Israel diplomatically and bring about powerful and almost universal pressure against it to desist, as well as counter-threats from the USSR.

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OIR CONTRIBUTION TO NIE 100-6-57:

NUCLEAR WEAPONS PRODUCTION IN FOURTH COUNTRIES -- LIKELIHOOD AND CONSEQUENCES

-Latin Am.

PART E

LATIN AMERICA

May 31, 1957

DEPARTMENT OF STATE
OFFICE OF INTELLIGENCE RESEARCH

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DRA CONTRIBUTION TO NIE 100-6-57

PART E: LATIN AMERICA

GENERAL

No Latin American country at present has the combination of raw materials resources, scientific and technological facilities, and competent scientific manpower required to produce nuclear weapons. Nor has any Latin American government expressed interest in developing a nuclear weapons program. However, a number of countries in the area are now launching programs to produce nuclear energy for peaceful purposes and may eventually be in a position to manufacture nuclear weapons. The cost factor is not expected to present an insurmountable obstacle to a weapons production program in the larger countries, such as Brazil, Argentina, and Mexico. Brazil is the only country in the area which appears to have the capability -- given favorable circumstances and ample and continuing outside assistance -- to produce a limited quantity of atomic bombs by 1967. No Latin American country, left entirely to its own resources, will be in a position to produce nuclear weapons within the next decade.

Nowhere in Latin America has thorough exploration of atomic minerals reserves been carried out, but incomplete reconnaissance indicates the likelihood that within ten years a number of Latin

American countries will be at least self sufficient in fissionable ore resources. The area may become an important source of atomic minerals for the free world. Argentina and Brazil have known deposits of fissionable minerals and have begun limited exploitation and stockpiling. Argentina is reportedly able to process twenty tons of metallic uranium per year, while Brazil is mining and stockpiling thorium ores, monazite sands, and sodium sulphate rare earths in excess of ten thousand tons annually. Brazil is not yet working newly discovered uranium deposits.

No Latin American country has the highly developed heavy electrical and chemical industries necessary to support a nuclear weapons program. It is believed that Brazil is the most advanced Latin American nation in this respect, with Argentina and Mexico ranking next in order of importance.

Latin America has a comparatively small number of specialists trained in nuclear physics and allied fields. A few Latin Americans receive training each year in research centers in the US and Europe, and a somewhat larger number is now beginning to study at research centers in Latin America. The limited number of such students and the type of training they receive would appear to preclude the early development of a weapons program in the area.

Most Latin American nuclear research programs are developing within the scope of the US Atoms-for-Peace program. The US has bilateral agreements for cooperation concerning civil uses of atomic energy with Argentina, Brazil, Chile, Colombia, Costa Rica,

Cuba, the Dominican Republic, Guatemala, Peru, Uruguay, and Venezuela. In addition, Argentina, Brazil, Cuba, and Uruguay have expressed interest in negotiating a power reactor agreement with the US. Negotiations are now being conducted with Brazil.

Private and/or government sponsored research in nuclear energy is being carried on in universities and/or national institutes in Argentina, Brazil, Chile, Mexico, and Venezuela. In the remaining countries organized nuclear research programs have not advanced beyond the planning stage.

Within the framework of the OAS, the Committee of Presidential Representatives at their second and third meetings (January and May 1957) proposed the creation of an Inter-American Nuclear Energy Commission that would have jurisdiction over all aspects of inter-American development of nuclear energy and provide for cooperative research and training programs. Proposals for the creation of regional nuclear research centers have also been presented by a number of countries within the OAS. The US has proposed the establishment of a regional research center in Puerto Rico, while Cuba, Venezuela, Argentina, and Brazil have suggested that centers be set up on their national territory. While it is still not certain that such centers will be established under the OAS, there is a strong probability that during the next decade there will be an increasing degree of inter-American cooperation in nuclear research.

BRAZIL

I. CAPABILITIES FOR NUCLEAR WEAPONS PRODUCTION

At present Brazil lacks the facilities and technical skills necessary to produce nuclear weapons. In the absence of substantial and continuing outside assistance it is almost certain that Brazil will be unable to develop nuclear weapons capabilities within the next decade.

II. PROBABLE POLICIES OF FOURTH COUNTRIES

Under certain favorable circumstances, with substantial and continuing outside assistance, Brazil can probably develop facilities for limited production of nuclear weapons within ten years. Brazil appears to have adequate amounts of essential radioactive raw materials, and under the US Atoms-for-Peace program is now beginning to acquire the necessary minimum equipment required for training specialists and conducting nuclear research projects. During the past several years a small number of Brazilian scientists have received graduate training in nuclear fields in the US and Europe. At present the National Nuclear Energy Commission is attempting to place ten students per year in US centers and a smaller number in Europe.

To date Brazil has evidenced no desire to develop an atomic war potential but has emphasized exclusively the importance of producing atomic materials for medical, agricultural, and electric

power purposes. At present there is no strong reason to believe that Brazilian policy in this respect will be seriously modified in the near future.

Brazilian defense considerations are linked closely with US hemispheric defense planning. The production of atomic weapons would increase rather than decrease military costs, since Brazil currently maintains only sufficient armed forces to preserve internal order and to repel invasion by armies equipped with conventional weapons. Nevertheless, the cost factor alone would probably not deter a decision to produce atomic weapons.

If the question of national prestige were involved, the pressure of widespread nationalism, prevalent in virtually all strata of Brazilian society, might well force the government to adopt a program of atomic weapons production within a decade. Brazilian nationalists are extremely sensitive to implications that Brazil does not have all the attributes of a world power. Should another Latin American country, one of the lesser European nations (such as Spain, for example), any African country, or India obtain or produce nuclear weapons, there would almost certainly be strong pressure upon the Brazilian government to acquire similar weapons.

Should the allied powers offer to provide nuclear weapons for common defense, Brazil would probably request the same consideration accorded the smaller NATO powers or India, for example. In the event such an offer were extended to other Latin American countries,

Brazil could be expected to demand preferential treatment within the area.

In the present world situation it seems unlikely that Brazil would agree to the stationing of nuclear weapons under the control of foreign military units on Brazilian territory. However, should nationalistic pressure develop for Brazilian possession of nuclear weapons, foreign troops equipped with such weapons might be acceptable.

Given the present Brazilian desire to exploit the peaceful uses of atomic energy, it is unlikely that Brazil would violate US or IAEA restrictions on the production of atomic weapons, unless such violations had already become widespread and were believed to present a threat to Brazilian security, prestige, or international standing.

It is expected that Brazil will continue to support international efforts to limit production and to restrict testing of nuclear weapons.

III. CONSEQUENCES OF THE POSSESSION OF NUCLEAR WEAPONS BY FOURTH COUNTRIES

The acquisition or production of nuclear weapons by Brazil would probably modify, but not radically alter, popular attitudes toward the employment of such weapons. The Brazilian public is largely uninformed on matters of nuclear warfare, but the military and informed sectors of the civilian population are aware of the

destructive capabilities of atomic arms. In all probability nuclear weapons would be regarded as defensive arms by the Brazilian government to be used only in the event of a general war.

Possession of nuclear weapons by Brazil is not expected to increase the possibility of a local war involving Brazil.

Possession of nuclear weapons by Brazil might well make the Brazilian government somewhat less willing than at present to favor disarmament proposals.

Brazilian production of atomic weapons, with assistance from the US would provide the Communists with an effective propaganda theme, but would probably not create serious Soviet concern over disruption of the balance of power, unless there was a corresponding increase in the size and effectiveness of the Brazilian military establishment.

The prior possession of a nuclear weapons stockpile by Germany amd/or France would probably not affect Brazilian attitudes toward the desirability of nuclear weapons, since neither country is regarded as a potential threat to Brazilian security.

The acquisition or production of nuclear weapons by India would almost certainly lead to pressure on the Brazilian government to obtain or produce nuclear weapons.

The production or acquisition of nuclear weapons by Brazil would almost certainly place great strain on the Western Hemisphere military defense alliance system and generate demands by other

Latin American countries for possession of comparable weapons. The possession of nuclear weapons by Brazil would not add materially to the effectiveness of hemispheric defense arrangement since at present Brazil does not have the necessary military units in force to carry on atomic warfare.