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PROBLEMS OF U. S. DEFENSE POLICY

IN A WORLD OF

NUCLEAR PROLIFERATION

VOLUME II APPENDICIES

FINAL REPORT

BSR 1413

15 SEPTEMBER 1966



THE Bendix CORPORATION

BENDIX SYSTEMS DIVISION • ANN ARBOR, MICHIGAN

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APPENDICES

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APPENDIX A
AREA STUDIES

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AREA STUDIES

Introduction

The purpose of these case studies is to obtain insights into the factors which may induce states which do not now possess nuclear weapons to acquire them, to project the behavior of these states in international affairs if they did acquire nuclear weapons, and to assess the problems which their behavior as nuclear states would pose for United States defense policy. Among the many countries which between now and 1980 will achieve the economic and technical capacity to support an extensive nuclear weapons program, the following were selected for special attention: Argentina, Australia, Brazil, The Peoples Republic of China, West Germany, Japan, India, Indonesia, Israel, Pakistan, South Africa, and the United Arab Republic. They were chosen because the diversity of their geographic locations allows us to examine the effects of nuclear proliferation on a global basis, as well as because the varied natures of their internal political systems and of their national goals afford excellent representation of every type of country which could possibly develop nuclear weapons by 1980.

Because of the special relevance of The People's Republic of China to the immediate concerns of the United States, the paper on the Chinese case was written by Dr. Morton H. Halperin. He has examined in great detail the connections between Chinese nuclear policy and the problems of Chinese economic development, political attitudes, and foreign policy goals. His analysis includes the various implications of a nuclear-armed China for United States foreign policy.

The first drafts of the other studies were prepared for Bendix by the Mershon Center for Education in National Security, of Ohio State

University, under the directorship of Dr. T. A. Williams. The colloquium of regional specialists contributing to the Mershon essays included:

<u>Title</u>	<u>Affiliation</u>	<u>Countries Studied</u>
Dr. David B. Arnold	Ohio State University	<u>India and Pakistan,</u> <u>Australia and</u> <u>Indonesia</u>
Dr. Edgar S. Furniss, Jr.	Ohio State University	Supervisor
Dr. George Liska	John Hopkins University	Theoretical Considerations of Nth Country Status
Dr. Bradley Richardson	Ohio State University	Japan
Dr. C. Neale Ronning	Ohio State University	Argentina and Brazil
Dr. Dankwart A. Rustow	Columbia University	Israel and the United Arab Republic
Dr. T. A. Williams	Ohio State University	West Germany, South Africa

This material was modified by Bendix for the final report of the study. Consequently, the authors of the initial drafts bear no responsibility for the views expressed herein.

CHINA*

The detonation by China of two nuclear devices raises a number of issues related to the spread of nuclear weapons. The Chinese explosions constituted the first detonations by a new country since the French entrance into the nuclear club in 1960. China also became the first non-Western country and the first country with substantial irredentist claims to develop the capability to produce nuclear weapons.

The world was thus confronted not only with the question of how China would act as a nuclear power, but also with the question of what effect China's detonation would have on the prospects for the spread of nuclear weapons to other countries, either in reaction to the Chinese detonation or supported by China. This paper will explore the Chinese attitude toward nuclear proliferation, in particular their view of the dangers and gains of Indian and Japanese nuclear programs. Finally, it will explore the implications for American policy of an Asia with one, two, or three nuclear powers.

THE CHINESE POSITION ON PROLIFERATION

During the early postwar period, prior to their overt conflict with the Soviet Union, the Chinese view on proliferation was a simple one reflecting their dependence on the Soviet Union and their desire ultimately to develop a nuclear capability. The Chinese recognized, right from the start, the danger posed to them by the American monopoly of first atomic and then hydrogen weapons, and greeted with great relief Soviet development of these weapons capabilities. Thus, during this early period, "proliferation" meant to them initially Soviet development of nuclear weapons, and later their development by China and possibly other Socialist countries in order to break the nuclear monopoly of the United States.¹ This basic

¹ On the attitude of China toward nuclear weapons prior to 1954, see William R. Harris, "Chinese Nuclear Doctrine: The Decade Prior to Weapons Development (1945-55)," The China Quarterly, No. 21 (January-March, 1965), 87-95. For their attitude since 1954, see Alice Langley Hsieh, Communist China's Strategy in the Nuclear Age (Englewood, N. Y.: Prentice-Hall, 1962).

* By Morton H. Halperin.

Chinese view, implicit in many of their statements, was made explicit at least occasionally as, for example, in the statement in the People's Daily in 1951 which declared that:

Only the fact that other countries, in the first place the Soviet Union, possess the atomic weapon can bring America to believe that there is not the slightest advantage in atomic militarism, thereby bringing about the possibility of prohibiting the atomic weapon.²

Beginning in 1956-57, the United States and the Soviet Union began to be concerned with the prospect that nuclear weapons would spread beyond three nuclear powers and the subject of nuclear proliferation began to move toward the center of the stage of arms control negotiations and debates. At this time, the Soviet Union appears to have begun to become concerned with the possibility that Germany would ultimately acquire a nuclear capability, perhaps given to it by the United States because of the growing sharing of nuclear weapons with NATO. From this time on, nuclear proliferation to the Russians has meant the danger of German development of nuclear weapons and, in this early period, the Chinese accepted this meaning of the term. However, while the Soviets began to talk publicly about the danger of the spread of nuclear weapons, the Chinese did so only very occasionally and the only in the context of defending Soviet efforts to negotiate a test ban treaty. In turn, the test ban itself was defended only as leading to complete prohibition of the manufacture and use of nuclear weapons. A People's Daily editorial in April, 1958, reflects this position, which the Chinese held, apparently privately as well as publicly, from 1956 to 1959. The editorial expressed support for the Soviet proposals to stop nuclear testing and declared that:

In fact, an agreement can be reached with relative ease on the discontinuance of nuclear tests, as at present only the Soviet Union, the United States and Britain possess atomic weapons.³

² People's Daily, October 7, 1951, in Survey of the China Mainland Press (Hong Kong: U.S. Consulate) No. 190, p. 2 (cited as SCMP).

³ People's Daily, April 7, 1958, translation in NCNA-English (Peking) April 7, 1958, in SCMP, No. 1749, pp. 43-44.

The editorial described the discontinuance of nuclear testing as a first step toward the prohibition of manufacture and use of nuclear weapons.

Beginning in 1959, the Soviet Union apparently withdrew its aid to the Chinese nuclear program and at the same time began to urge China not to become a nuclear power. In addition to indicating that Chinese nuclear development was unnecessary because China had the protection of the Soviet Union, the Russians apparently argued that if they shared their nuclear technology with China, the United States would share its capacity with Germany. During the period 1959-1963, the Chinese in general continued to support Soviet positions on questions which affected proliferation, including the test ban, but avoided any specific references of their own to the desirability of preventing proliferation. At the same time, Chinese determination to develop nuclear weapons was clearly indicated.⁴ Apparently the Chinese began to see the proliferation issue as a reflection of Soviet and American efforts to prevent China from obtaining nuclear weapons. The Chinese description of what happened during this period, while polemical in tone, appears to be a substantially accurate account both of what the Chinese believed and of what in fact occurred.

It is not only at present (1963) that the Soviet leaders have begun to collude with U.S. imperialism and attempt to manacle China.

As far back as June 20, 1959, when there was not yet the slightest sign of a treaty on stopping nuclear tests, the Soviet Government unilaterally tore up the agreement on new technology for national defense concluded between China and the Soviet Union on October 15, 1957, and refused to provide China with a sample of an atomic bomb and technical data concerning its manufacture. This was done as a presentation gift at the time the Soviet leader went to the United States for talks with Eisenhower in September.

⁴ On the evolution of Chinese statements on arms control, see Morton H. Halperin and Dwight Perkins, Communist China and Arms Control, (New York: Praeger, 1965), pp. 98-131.

On August 25, 1962, two days before the United States and Britain put forward their draft treaty on the partial halting of nuclear tests, the Soviet Government notified China that U. S. Secretary of State Rusk had proposed an agreement stipulating that, firstly, the nuclear powers should undertake to refrain from transferring nuclear weapons and technical information concerning their manufacture to non-nuclear countries, and that, secondly, the countries not in possession of nuclear weapons should undertake to refrain from manufacturing them, from seeking them from the nuclear powers or from accepting technical information concerning their manufacture. The Soviet Government gave an affirmative reply to this proposal of Rusk's.

The Chinese Government sent three memoranda to the Soviet Government on September 3, 1962, October 20, 1962, and June 6, 1963, stating that it was a matter for the Soviet Government whether it committed itself to the United States to refrain from transferring nuclear weapons and technical information concerning their manufacture to China; but that the Chinese Government hoped the Soviet Government would not infringe on China's sovereign rights and act for China in assuming an obligation to refrain from manufacturing nuclear weapons.

We solemnly stated that we would not tolerate the conclusion, in disregard of China's opposition, of any sort of treaty between the Soviet Government and the United States which aimed at depriving the Chinese people of their right to take steps to resist the nuclear threats of U. S. imperialism, and that we would issue statements to make our position known.

We hoped after such earnest counsel from us, the Soviet leaders would rein in before reaching the precipice and would not render matters irretrievable. Unfortunately, they did not pay the slightest attention to our counsel. They finally concluded the treaty on the partial halting of nuclear tests with the United States and Britain, thereby attempting to bring pressure to bear on China and force her into commitments.

The whole course of events amounts to this: First the Soviet Government tried to subdue China and curry favour with U.S. imperialism by discontinuing assistance to China. Then it put forward all sorts of untenable arguments in an attempt to induce China to abandon its solemn stand. Failing in all this, it has brazenly ganged up with the imperialists bandits in exerting pressure on China.

In view of all the above, China has long ceased to place any hope in the Soviet leaders in developing its own nuclear strength to resist the U.S. nuclear threats.⁵

In 1963, Peking moved into open opposition to the Soviet position on disarmament, particularly on the test ban issue. At this time, the Chinese began to draw a sharp line of distinction between proliferation by the Soviet Union and proliferation by the United States. They pointed out that the partial test ban treaty in fact will

bind all the socialist countries except the Soviet Union and all countries subjected to aggression, without hindering the United States from proliferating its nuclear weapons among its allies and countries under its control.

The tripartite treaty can in no way prevent the United States from carrying out nuclear proliferation, and it tends to strengthen the aggressive forces of the imperialist camp.

Can this treaty prevent U.S. imperialism from proliferating its nuclear weapons, and the technical data for their manufacture, among the West German revanchists and other allies of the United States and countries under its control?

⁵ "Statement by the Spokesman of the Chinese Government--A Comment on The Soviet Government's Statement of August 3, August 15, 1963," in William E. Griffith, The Sino-Soviet Rift (Cambridge, Mass.: MIT Press, 1964), pp. 351-352.

No, absolutely not. The U.S. Government has constantly stressed that it cannot, and the Soviet leaders are aware of this, too. Please look at the facts.⁶

This same Chinese statement on the test ban treaty went on to call for a treaty which would "compel the nuclear powers to undertake not to use, or test, or proliferate nuclear weapons and undertake to respect the nuclear weapon-free zones."⁷

Thus, the Chinese argued that the test ban was bad because it prevented Soviet aid to countries which should have nuclear weapons, but did not prevent American aid to Germany. At this time, the Chinese began to make explicit the reasons why they considered nuclear proliferation desirable. They argued that the more Socialist countries armed with nuclear weapons, the better.

With regard to preventing nuclear proliferation, the Chinese Government has always maintained that the arguments of the U.S. imperialists must not be echoed, but that a class analysis must be made. Whether or not nuclear weapons help peace depends on who possesses them. It is detrimental to peace if they are in the hands of imperialist countries; it helps peace if they are in the hands of socialist countries. It must not be said indiscriminately that the danger of nuclear war increases along with the increase in the number of nuclear powers. Nuclear weapons were first the monopoly of the United States. Later, the Soviet Union also came to possess them. Did the danger of nuclear war become greater or less when the number of nuclear powers increased from one to two? We say it became less, not greater.⁸

The Chinese went beyond the argument that the spread of nuclear weapons to other Socialist countries was good, to arguing that the development of nuclear capability by any peace-loving state was desirable as it

⁶ Ibid., pp. 343, 345-346.

⁷ Ibid., p. 350. Italics added.

⁸ Ibid., p. 347.

would increase the prospects for deterring American nuclear attack and also would hasten the day when nuclear disarmament could take place. These views on the desirability of proliferation, except to countries in the imperialist camp, were expressed by the Chinese on a number of occasions from 1963, to October 1965.⁹ They were repeated in general form in the Chinese statement which followed their first nuclear detonation.¹⁰

Following their nuclear detonation, the Chinese entered a period in which their polemics tended to be extremely cautious in an effort to present a picture of China as a reasonable country which could be trusted with nuclear weapons and whose nuclear capability should not be preempted. During this period, the Chinese tended to de-emphasize the issue of nuclear proliferation and to avoid explicit statements in support of the spread of nuclear weapons. However, they did in general reassert their belief that the spread of nuclear weapons was inevitable and had to occur before nuclear weapons could be eliminated. Or, as they put it at one point, this was in fact the "dialectic of the development of things."¹¹

In May 1965, the Chinese Communists detonated a second nuclear device. The statement issued at that stated one, and implied a second, difference between the circumstances of the first and second detonations. The explicit difference was the inclusion of the People's Liberation Army among the groups that had carried out the nuclear test. The implied difference was a suggestion that the bomb had been dropped from an airplane.¹² Following this second detonation, the Chinese became less concerned with the danger of a preemptive attack on their nuclear installations and, hence, began to revive their discussion of the nuclear

⁹ Morton H. Halperin and Dwight H. Perkins, Communist China and Arms Control (New York: Praeger, 1965), pp. 123-140.

¹⁰ For an analysis of this statement and the Chinese position at that time, see Morton H. Halperin, "China and the Bomb: Chinese Nuclear Strategy," The China Quarterly, No. 21 (January-March, 1965), pp. 74-86.

¹¹ Jen-min Jih-pao editorial, October 22, 1964, SCMP #3325, October 27, 1965, p. 25. I am indebted to Mr. Oran Young for calling to my attention the relative de-emphasis by the Chinese of nuclear proliferation in the early post-detonation period.

¹² Text in Peking Review, No. 21 (May 21, 1965), p. 6.

proliferation issue, the most dramatic statement coming from Chen Yi in an interview in Peking.¹³

In the most recent period, the Chinese have returned to the theme of the importance of spreading nuclear weapons in order to prevent nuclear blackmail and obtain nuclear disarmament. The current Chinese position on the meaning of anti-proliferation measures is revealed, for example, in a sarcastic Chinese report of a press conference held by Averell Harriman. According to the NCNA text:

After the report he [Harriman] told newsmen that 'My impressions were that Kosygin was anxious to settle some of the world's problems, the foremost of which is control of nuclear weapons'... Turning to the question of "preventing nuclear proliferation" he [Harriman] emphasized that he believes that there is no doubt that the Soviet Union is just as keen as the United States to settle the problem of nuclear weapons. He said that the United States and the Soviet Union have the same objective. He felt that the Soviet Union is "sincere" in agreeing to the resumption of the 17 Nation Geneva Disarmament Conference.¹⁴

The Chinese argue that nuclear weapons can be finally eliminated and total nuclear disarmament achieved only after a number of additional countries obtain nuclear weapons. While the Chinese do not expect the United States to give up nuclear weapons, it is possible for them to argue and to believe that only if the world becomes very dangerous because of the spread of nuclear weapons to a number of countries might the United States finally be willing to give up these weapons, which it has used to enhance its influence in the world. Thus, the Chinese are able to square their opposition to control over the spread of nuclear weapons with their support for general nuclear disarmament.

13

The Chen Yi interview is considered below in discussing the question of whether China is likely to actually aid in the spread of nuclear weapons. The Chinese fear of preemption is also considered in greater detail below.

14

NCNA, Peking, English, International Service, August 5, 1965. See also "U.S. -Soviet Collaboration: 'Preventing' Nuclear Proliferation," Peking Review, November 19, 1965, p. 20.

The general Chinese public position on proliferation is well expressed in the following NCNA report of a statement made by the Indonesian Foreign Minister, Subandrio:

Subandrio, Indonesian First Deputy Premier and Foreign Minister, said that he would welcome the possession of atomic and hydrogen weapons by every progressive nation in the world because in such a situation the imperialists who already possess these weapons could no longer use them to blackmail and threaten other nations which still do not have these weapons. . . Subandrio emphasized that if more progressive countries possess nuclear weapons, then the possibility of their being used would be lessened.¹⁵

Running consistently through Chinese public statements on nuclear proliferation is the notion that attempts to prevent proliferation are part of the Soviet-American effort to dominate the world, and that proliferation is in fact desirable as it will deter American nuclear attack and hasten the day when nuclear weapons can be eliminated. It is, of course, possible that the Chinese would adopt a public posture of this kind and still privately oppose the spread of nuclear weapons either to a particular country or in general. This kind of inconsistency between public statements and private beliefs is conceivable, but it should be noted that it would pose serious problems even for a tightly controlled regime, such as that of Peking. For one thing, any country interested in the Chinese view of this subject, in order to determine whether or not it should acquire nuclear weapons, will be influenced as much by Peking's public statements as by any private words in the opposite direction. Moreover, it would be difficult for Peking to offer private words of caution while publicly suggesting the value of further nuclear proliferation. In addition, there is not, as far as I am aware, any evidence of the Chinese having carried out a policy of this kind on other issues; that is, publicly taking one position on a major general issue and privately urging a quite different one. Nevertheless, one can go beyond this to examine real Chinese interests in preventing or encouraging the spread of nuclear weapons which will lead to the conclusion that, from the Chinese standpoint, taking into account their professed interest and attitudes, nuclear

¹⁵ NCNA (English), Peking International Service, August 25, 1965.

proliferation appears much less dangerous than it does to the West and, in some limited ways, perhaps even desirable. In attempting to come to grips with the real Chinese view of nuclear proliferation, I will deal first with the Chinese perception of the relationship between nuclear war and the spread of nuclear weapons. I will then consider the relationship between proliferation and the objectives of Chinese foreign policy. Finally, the Chinese attitude toward the development of nuclear technology in India and Japan will be considered.

PROLIFERATION AND NUCLEAR WAR¹⁶

In an effort to assess Peking's estimate of the possible impact of nuclear proliferation or nuclear war, Chinese doctrine on the causes and nature of nuclear war will be examined.

The Causes of Nuclear War

Contrary to a view disseminated by the Soviet Union and some public officials in the West, the Chinese do not believe that nuclear war is inevitable. Where their views do differ from those of the Soviet analysts is on the question of how nuclear war might occur and what might be done to prevent it. Specifically, the Chinese are probably not nearly as pre-occupied as are Western and Soviet analysts with the possibility of accidental nuclear war. The emphasis placed by analysts in the two super-powers on accidental war stems at least partly from the belief that deliberate nuclear attack is unlikely. As will be argued below, the Chinese have no such belief and are, therefore, inclined to focus on the possibilities and dangers of a deliberate attack. Moreover, the Chinese have other reasons for rejecting a focus on accidental nuclear war or the belief that accidents are the greatest possible cause of nuclear war.

The Chinese attack the Soviet view that a single spark could start a prairie fire; that is, that a small war of national liberation could grow very rapidly into a nuclear war. The Chinese believe that the Russians present this argument mainly as an excuse for not supporting wars of national liberation. Moreover, their own experience, first in their own civil war with the Chinese Nationalists and then in viewing events in Vietnam, Algeria and elsewhere, leads them to believe that wars of national liberation do not in fact grow into general nuclear wars.

¹⁶ Some of the items discussed in this section have been treated previously by the author in China and the Bomb, (New York: Praeger) 1965. The analysis contained there will only be summarized briefly here.

A second scenario widely accepted in the West and perhaps in the Soviet Union concerns the danger of pre-emptive nuclear war; that is, the possibility that each side, recognizing that the other may be about to launch an attack, may launch one first because of the great importance of a first strike. Hence, it is argued that interaction of expectations of possible surprise attack might lead to a nuclear war.¹⁷ Although there have been from time to time a few references in the Chinese press to the danger of a surprise attack, the Chinese have not been in any position to carry out a strike of their own, nor have they had any reason to fear a pre-emptive attack by the United States. Without actually owning and operating strategic systems, it might be difficult for the Chinese to appreciate the dangers and possibilities of a surprise first strike. In any case, it may seem very unlikely to them that either of the two super-powers would go to war for essentially technical and trivial political reasons.

Western and Russian analysts have given very serious consideration to the frightening possibility that uncontrolled events or actions might lead to nuclear war.¹⁸ The different experiences which the Soviet Union and China have had with the United States may have influenced perception by the two countries of the danger of uncontrolled events. The major confrontation between the United States and the Soviet Union which threatened to lead to a nuclear war was, of course, the Cuban missile crisis. During this crisis, both Khrushchev and the American leaders seem to have been preoccupied with the possibility of events getting out of control. Neither side seems to have had a clear image of how a nuclear war might begin, but both sides apparently believed that somehow things might get out of hand.

In part, this preoccupation with uncontrolled events may stem from the fact that both countries operate very large military forces, which

17 Even in the West, pre-emptive war is considered less likely because of the steps that the United States and, to a lesser extent, the Soviet Union have taken to reduce the incentive to strike first. See Thomas Schelling and Morton H. Halperin, Strategy and Arms Control, (New York: The Twentieth Century Fund, 1961), pp. 9-24.

18 What has been described by Thomas Schelling as the threat that leaves something to chance. See Schelling, The Strategy of Conflict (Cambridge: Harvard University Press, 1960), pp. 187-203.

spread out over a large part of the globe. Moreover, both countries have allies whose actions might in some way influence the course of a crisis. In particular, the nature of the situation in Berlin heightens the possibility of uncontrolled events stemming from the actions of relatively junior officials on the autobahn. In fact, Berlin has been the main center of crisis confrontation between the United States and the Soviet Union in the post-war period. After the Cuban missile crisis, the three crises over Berlin in 1948, 1958-59, and 1961-62, stand as the three major instances in which nuclear war appeared to be a real possibility.

The Chinese experience has been very different. Its major confrontations with the West, in the Taiwan Straits and Korea, have shown both countries very much in control of their own forces and those of their allies, while remaining relatively unconcerned with the danger of uncontrolled action.

Finally, the Chinese have probably been relatively unconcerned with the problems of catalytic war. Most of the catalytic war scenarios have focused on the danger that China might decide to provoke a nuclear war because she did not recognize the damage that it would do to China or because she decided that this was the path to world domination. Since the Chinese have, in fact, no such illusions and have not themselves contemplated trying to start a nuclear war, they probably calculate that other states that might develop independent nuclear capabilities would be equally cautious and, hence, that there is no real danger of catalytic nuclear attack.

If the Chinese have had less fear of accidental nuclear war than have some analysts in the West and the Soviet Union, they have had a much greater fear of a deliberate nuclear attack. One fact which was implicit in the discussion of the possibility of accidental nuclear war needs now to be made explicit: the Chinese image of a nuclear war is not a large-scale nuclear clash between the United States and the Soviet Union, but rather an American nuclear attack on China which would be essentially a one-sided use of nuclear weapons. The Chinese appear to have given very little thought, certainly in their public literature, to what might cause a Soviet-American nuclear war or what course it might take. However, there is no reason to believe that they would expect China to be exempted from such a war, nor in fact that that would be a particularly sensible calculation for them to make.

Focusing on an American nuclear attack on China, Peking has been much more concerned with the possibility of a deliberate attack than with the danger of accidental or inadvertent war. The Chinese have exercised very tight political control over their military forces since the creation of the People's Liberation Army (PLA) and, as was suggested above, their encounters with the United States have led them to believe that the United States is capable of exercising equally tight political control and using military forces for limited political purposes. Thus, Peking fears not that American forces by accident or without authority would launch a nuclear attack on China, but that Washington would come to the conclusion that it wanted to have a nuclear confrontation with the People's Republic of China (PRC). The general hostility of the United States to the PRC and its support for the rival Government of the Republic of China (GRC) on Taiwan give the Peking regime reason to believe that the United States may have political motives which would make a nuclear war with China both desirable and feasible. Moreover, Chinese inability to retaliate, particularly in the last several years when the credibility of the Soviet deterrent has been substantially reduced, has created a situation in which the United States might not only wish to attack, but in which it would be able to do so without having to contemplate the kind of retaliatory attack which would come from striking the Soviet homeland. There are a number of ways in which, in Peking's view, the United States could reach the decision to launch a nuclear attack on China. As will be indicated, each of the triggering mechanisms to be discussed has at least one real historical precedent.¹⁹

¹⁹ Particularly in this section, but more generally in the paper, one has the problem of specifying what is meant by a Chinese doctrine on a particular issue. It is very doubtful, for example, that there is a single paper written by or for the very top leadership which considered these issues in very explicit and analytic terms. Moreover, the amount of published Chinese writing on military strategy is very, very small. The captured secret Work Bulletins do provide some insight into these problems but it must be kept in mind that insights drawn from a document classified only "secret" in the United States might present a very distorted view of American doctrine on nuclear war. For a discussion of Chinese doctrine which can be drawn from the secret military papers, see Alice Langley Hsieh, "China's Secret Military Papers: Military Doctrine and Strategy," China Quarterly, No. 18 (April-June, 1964), pp. 79-99, and Ralph Powell, Politico-Military Relationships in Communist China, U.S. Department of State, Bureau of Intelligence and Research, Policy Research Study (Washington, October 1963).

The political purposes which Peking may believe could lead the United States to launch a nuclear attack on China might include supporting a GRC return to the mainland, destroying Chinese nuclear installations, avoiding local defeat, pressing local victory, or practicing nuclear blackmail.

Supporting a GRC Return to the Mainland

Since June 1950, the United States has been committed to the defense of the GRC regime on Taiwan. However, American willingness to support an attempt by that regime to return to the mainland has been much more ambiguous. Nevertheless, at least since 1953 when the Republic administration announced the "unleashing" of Chiang Kai shek, it is possible that Peking has been concerned that the United States would decide to support a return to the mainland. Such support would presumably include the use of American nuclear weapons since without such action it is extremely doubtful that an effort to return could succeed.

In June 1962, the Chinese appear to have come to the conclusion that the United States was about to support a return to the mainland by the GRC. To counteract this, Peking moved a very large number of well-trained troops to Fukien province opposite Taiwan. It tried to arouse public opinion by calling attention to the possibility of an American attack. It also called for Sino-American ambassadorial talks, during which it questioned the United States about its intentions and received assurances that the United States would not support a Nationalist attack on the Chinese mainland. Nevertheless, despite these assurances and the degree to which they may be taken seriously in Peking, the possibility of a GRC attempt to return to the mainland supported by an American nuclear threat has been a constant concern of Chinese military forces.

Destroying Chinese Nuclear Installations

The Chinese were concerned, at the time of their first nuclear detonation, with the possibility that the United States would launch an attack designed to destroy their nuclear facilities in order to prevent China's becoming a nuclear power.²⁰ The Chinese recognized the widespread

²⁰ See Morton H. Halperin, "Chinese Nuclear Strategy," The China Quarterly, No. 21 (January-March, 1965), pp. 76-78, 82-86. It also appears possible that Peking was concerned with the possibility that the Soviet Union would launch an attack on China's nuclear installations after the first detonation. Whatever fears did exist were presumably lessened by the removal of Nikita Khrushchev.

fears in the West about the consequences of their developing a nuclear capability, particularly fanned by the image created of them as "crazy" people who could not be trusted with nuclear weapons. Therefore, in its propaganda Peking sought to stress its moderation and its capability in dealing responsibly with nuclear weapons. There was undoubtedly some real concern that an American (or a Soviet) attack would follow the October 1965 detonation. The failure of the United States to move right after the first detonation, and the fact that the second detonation raises the possibility that China has at least a very limited operational capability, probably served to reduce substantially Peking's fear that simply its determination to become a nuclear power would trigger an American attack. Nevertheless, Chinese leaders recognize the fact that circumstances may change, that new leaders who might be more determined to prevent China's becoming a nuclear power may come to power in the West, and that a change in the relation between the United States and Peking may lead even the present leadership to decide to destroy Chinese nuclear installations. China's gaseous diffusion plant, reactors and test sites stand as an inviting target for a nuclear attack, and Peking has had to face the fact that the attractiveness and vulnerability of this target may lead to an American decision to launch nuclear war with China.

Avoiding Local Defeat

The actions of Communist China and other Communist parties have, from time to time in the post-war period, confronted the United States with the prospect of substantial local battlefield defeats. This occurred in December 1950, after the Chinese intervention in the Korean War, in Indochina in 1954 and again in 1964. It might have occurred in the Taiwan Straits in 1958, if Peking had launched a determined attack against Quemoy, and finally the Chinese move into India in 1962, raised the prospects of Peking occupying a substantial segment of Indian territory. In each of these situations, faced with possible local defeat, the United States appears to have at least contemplated using nuclear weapons for an attempt to redress the unfavorable local military balance.²¹ In 1958,

²¹ The two clearest cases are Indochina in 1954, and Quemoy in 1958. On Indochina, see Nathan Lyman, "Alliances and the Defense of Southeast Asia, A study in American Policy in Southeast Asia 1950-1960," unpublished doctoral dissertation (Harvard University, May 1961). On Quemoy, see Dwight D. Eisenhower, Waging Peace, (New York: Doubleday), 1965, pp. 292-304, 601-93.

the Chinese might well have refrained from attacking Quemoy because of their belief that the United States was prepared to go to nuclear war in order to hold the island. However, during the crises in Indochina, Peking had less control over the situation and was not in a position to counsel the moderation that it may have desired. Thus, Peking continues to be faced with the prospect of an American nuclear attack triggered by the success of its own forces or by that of other Communist forces which Washington might believe to be under Peking's control.

Pressing Local Victory

Paradoxically, Peking may also have believed itself threatened with nuclear war growing out of American success on the battlefield. The Chinese appear to have feared that the United States would continue beyond the Yalu in Korea and seek to overthrow the new regime on the Chinese mainland. In such a case, the United States may well have used a portion of its limited atomic stockpile. At the present time, the Chinese appear to have some fear that the United States may carry the war in Vietnam into China. They may reason that the United States might launch such an attack in order to avoid local defeat or that, euphoric over its success in Indochina, the United States might decide that now is the time to have a war with China.

Practicing Nuclear Blackmail

Peking may believe that a situation could arise in which the United States would threaten to bomb Peking unless China carried out a particular act or refrained from doing certain things and that Peking, unable or unwilling to comply with the request, would be faced with a punishing American attack. Such blackmail might be the cause of an American attack in the current Vietnam situation. The United States, for example, might order Peking to cease its support to the South or face nuclear retaliation. Either because it felt unable to comply or because it did not control certain supplies moving into the South, Peking might find itself face to face with American nuclear attack. Peking was confronted with such a demand on the part of the Eisenhower administration in 1953. At that time, Peking was warned that unless it consented to a truce at Panmunjon, the United States would reopen the Korean War and carry it into China with American nuclear attacks. In this situation the Chinese, for a variety of reasons, were ready to consent to an armistice and, hence,

could meet Washington's demands in a way that prevented a nuclear attack. Nevertheless, the prospect of nuclear blackmail carried through must be high on Peking's list of possible scenarios and resulting in the outbreak of nuclear war.

These appear to be the principle scenarios which come to the minds of leaders in Peking when they consider how nuclear war might occur. If this is so, then their attention in preventing a nuclear war must be not on ways and means of avoiding accidental or unintended behavior, but rather on the problem of deterring the United States from deliberate attack. Moreover, the range of motives which the United States might have for such an attack and the unwillingness of or inability of Peking to act in ways which make it highly unlikely that such motivations would come to the fore, suggest the importance of developing an indigenous Chinese nuclear capability which could deter an American nuclear attack on China.²³ Even if Peking were willing to alter her behavior to reduce the prospect of a nuclear attack, she might well come to believe that complete withdrawal from the international scene is as dangerous as adventurous participation. The United States, it has been argued, may be prone to attack China if confronted with defeat or great success on the battlefield. American behavior has reinforced Peking's conviction that pushing to the limit, but not beyond, is desirable. The dangers of both capitulation and of adventurism might thus be avoided. For Peking, the problem is deterrence of American deliberate attack, and this focus affects their view of proliferation, which I consider below after reviewing the Chinese image of the nature of nuclear war.

THE NATURE OF NUCLEAR WAR

Leaders in Peking share the view held by anyone who has contemplated nuclear war, that it would be the greatest disaster to confront mankind and, therefore, it so be avoided.²⁴ The Chinese might well believe, as they state from time to time, that in some sense Communism, particularly Communism in China, would survive a nuclear war. As will be indicated

²² See interview with Eisenhower reported in The New York Times, May 17, 1965.

²³ I have argued elsewhere that this, in fact, is the primary Chinese motive for developing a nuclear capability. See China and the Bomb, pp. 44-48.

²⁴ I have presented this which could be taken for granted had not the Russians and others argued otherwise at great length, in China and the Bomb, pp. 27-35.

below, they do not believe that a significant geographic area of China would be affected seriously by the likely form of American nuclear attack and they may believe that Communism, particularly as they practiced it during the Yen-an period, would clearly continue.

It has already been suggested that Peking believes that a nuclear war would begin with an American nuclear attack on China. The attack might be focused on military installations, particularly air bases, if it grew out of a local conflict, for example, in the Taiwan Straits or in Indochina. Alternately, an attack might be directed at Chinese nuclear installations or, more generally, at Chinese industrial, population and communications centers. Until the Chinese develop their own nuclear capability, or unless they get unexpected support from the Soviet Union, the Chinese response will have to be largely one involving active and passive defense measures. The Chinese appear to have shared with the Soviet Union, to some extent, an emphasis on the procurement of active defense forces, including surface-to-air missiles and fighters. If at least part of the American attack is with airplanes rather than missiles, the Chinese can be expected to try to blunt the attack with active defense measures. Beyond that, prior to a nuclear attack or as a nuclear attack began, the Chinese would engage in a number of passive defense measures designed to reduce the number of expected casualties resulting from the attack and, at the same time, to prepare the population to resist later American action against China.

Peking believes itself to be currently in a situation in which there is at least significant probability, if not certainty, of an American attack growing out of events in Vietnam. The Chinese have, at least on paper, organized a militia system encompassing almost the entire population. Moreover, they have apparently engaged recently, at least in South China, in trying to improve the training and readiness of the militia forces, with particular emphasis on training them to act in case of an American nuclear attack. The Chinese also appear to be planning for large-scale civilian evacuation of population centers in South China. Once an attack got under way, the Chinese could be expected to attempt to engage in crash evacuation measures designed to get most of the population out of the range of an American attack centered on military installations and on urban and communication centers. Beyond that, they might be expected to arm the militia and to put it on active status to complement the already existing ground forces. Some of the militia are apparently expected to play a major role in air defense activities.

The Chinese believe that the United States would not be satisfied simply with the result of an initial nuclear strike. The Chinese attitude was stated frequently in the fall of 1965, most dramatically at a press conference held by Chen Yi in which, according to the official Chinese text, he declared:

The Chinese people are ready to make all the necessary sacrifices in the fight against imperialism. It is up to the U.S. President and the Pentagon to decide whether the United States wants a big war with China today. We cherish no illusions about U.S. imperialism. We are fully prepared against U.S. aggression. If the U.S. imperialists are determined to launch a war of aggression against us, they are welcome to come sooner, to come as early as tomorrow. Let the Indian reactionaries, the British imperialists and the Japanese militarists come along with them! Let the modern revisionists act in co-ordination with them from the North! We will still win in the end. The great Soviet people and the Communist Party of the Soviet Union will not allow their leaders to make such a criminal decision. Who will meet with destruction--the U.S. imperialists or the people of the world? It can be said with certainty that the U.S. imperialists will perish, while the people of the whole world will win liberation. As a Chinese saying goes, good will be rewarded with good, and evil with evil; if the reward is not forthcoming, it is because the time has not arrived; and when the time arrives, one will get all the reward he deserves.

For sixteen years we have been waiting for the U.S. imperialists to come in and attack us. My hair has turned grey in waiting. Perhaps I will not have the luck to see the U.S. imperialist invasion of China, but my children may see it, and they will resolutely carry on the fight. Let no correspondent think that I am bellicose. It is the U.S. imperialists who are brutal and vicious and who bully others too much. They are bullying

the Chinese, the Koreans, the Vietnamese, the Khmers, the Laotians, the Indonesians, the Congolese and the Dominicans. Even their ally France is being bullied by them. Those who are bullied by them have risen against them and become friends of China. This is of the United States' own making.

Should the U.S. imperialists invade China's mainland, we will take all necessary measures to defeat them. By then, the war will have no boundaries. It is the United States, and not China, that will have broken down the boundaries. We are willing to respect boundaries, but the United States willfully violates boundaries and drives in wherever it likes. With the defeat of U.S. imperialism, the time will come when imperialism and colonialism will be really liquidated throughout the world. The ideal is bound to come true with the world truly becoming a community of nations with different social systems coexisting peacefully. China is ready to make all the necessary sacrifices for the noble ideal. She will never take the modern revisionist position of betraying Marxism-Leninism and proletarian internationalism.²⁵

There is, no doubt, a certain amount of bravado in the Chen Yi statement. Because the Chinese cannot retaliate effectively against an American nuclear attack, there would be no point in their making preparations to counter an unexpected nuclear assault; the fact that they are making preparations therefore indicates that they probably expect that the United States would follow up a nuclear attack with an invasion of the Chinese mainland. Nevertheless, Peking may really believe that the United States could fully subjugate China simply by nuclear air attack. It may very well be that the leadership expects that it would withdraw quickly from Peking, thereby removing itself from a position where it could be expected to negotiate the surrender and peaceful takeover of China. In the absence of any central leadership, the United States would be forced to either continue the invasion, cease operations, or begin the attempt to destroy every man, woman and child by dropping megaton-yield nuclear weapons. The attitude which the Chinese leadership might adopt in such a situation

²⁵ Peking Review, No. 41 (October 8, 1965), p. 14.

and its willingness to go back to the caves of Yen-an, if necessary, in order to continue the Chinese revolution are reflected by Mao's reported reaction to the possibility of a takeover of the Peking regime by the leaders of the PLA. In describing the Lushan plenum in 1959, an informed observer, writing under the name of David A. Charles, describes the reaction to Marshal P'eng Teh-huai's attack on Mao:

Whether because they had been genuinely taken aback by the boldness of Peng's onslaught or because they wished to allow his associates every opportunity for declaring themselves, the Party leaders allowed a protracted debate which was by no means one-sided. Indeed, at one stage there was an emotional scene when Mao, in reply to a suggestion that the disgrace of Peng might be the signal for a revolt by the armed forces due to his popularity with them and in the country, declared with tears in his eyes that, if this happened, he would go back to the villages and recruit another army. ²⁶

When Peking obtains an operational nuclear capability, it might be expected to try to hold in reserve whatever nuclear forces can survive an American first strike to use against an invasion force. Alternately, these nuclear forces might be committed against expected Chinese Nationalist staging areas, including almost certainly Taiwan, in an effort to destroy the Chinese Nationalist forces which would undoubtedly land with the American troops. The Chinese expect to be confronted in this period with a large-scale invasion of American ground troops, perhaps with tactical nuclear weapons, engaged in an attempt to capture and subjugate the country in the same manner as the Japanese did. The Chinese response would include attempts to arouse the population to engage in people's war or guerrilla warfare against the enemy forces. At the same time, they might well refuse to negotiate until United States forces became sufficiently bogged down for the United States to become willing to negotiate its evacuation from China.

²⁶ David A. Charles, "The Dismissal of P'eng Teh-huai," The China Quarterly, No. 8 (October-December, 1961), p. 68.

It should be emphasized that the Chinese do not conclude from this picture of how a nuclear war might evolve that a nuclear war is desirable. They do believe that the United States would be unable to actually subjugate all of China; however, they recognize the fact that the United States could destroy all of the modernized sector. In this situation, Mao may believe that the Communist Party of China would survive and rebuild the revolution once the American invaders had been thrown out.

What then is the relationship between Chinese nuclear doctrine and the Chinese attitude toward proliferation?

The two superpowers want to halt proliferation because they believe that deliberate nuclear war is unlikely and that accidental nuclear war is likely and may be touched off in a variety of ways, which will become more numerous as the numbers of countries possessing nuclear weapons increases. However, it has been suggested that the Chinese image of the danger of nuclear war is a very different one. The Chinese focus on the possibility of a deliberate American nuclear attack on China. Such an attack would not be rendered any more likely by the spread of nuclear weapons; in fact, in a world in which there are a number of nuclear powers, the United States might be less willing to begin nuclear war against one of them. Hence, insofar as the Chinese connect their image of war with their attitude toward nuclear proliferation, they would be prone to believe that proliferation, rather than imposing any dangers, might in fact aid in deterring an American attack on China or on other countries ultimately leading to an attack on China.

PROLIFERATION AND CHINESE FOREIGN POLICY OBJECTIVES

In considering any specific policy question, particularly one as "technical" as that of a posture toward the spread of nuclear weapons, the Chinese will align the particular decision with their general foreign policy line and the concrete situation in the world. Thus, the question that the Chinese will ask about proliferation is what posture will most enhance the cause of Communist revolution and help most in combatting Soviet-American domination of the world without seriously jeopardizing Chinese security or bankrupting the Chinese economy. It has already been suggested that the Chinese do not see any short-run security danger in proliferation of nuclear weapons, and, unless they engage in large-scale assistance

programs,²⁷ proliferation will not be a major drain on the Chinese economy. Thus, the central question for the Chinese is how does a strategy favoring proliferation support the general line of opposing Soviet-American domination and supporting world revolution.

This perspective is completely different from that of an American or even a Soviet policy-maker, who tends to ask how will proliferation increase the danger of nuclear war or increase instability in the third world. The two superpowers realize that the spread of nuclear weapons reduces their influence in the world, increases the likelihood of nuclear war, and increases the danger that they will come into active conflict with each other in their efforts to dampen local crises. Even if the Chinese estimate of the likely consequences of nuclear spread were the same--and it may well be the same except for the danger of nuclear war--their own perspective and interests will lead them to conclude that these are favorable rather than unfavorable developments.

Leaders in Peking do not share the belief widely held in the West that stability in the third world is possible or even desirable. On the contrary, the Chinese argue that revolution can only come about by violent means and that the object is to oppose stability and work change, eventually revolutionary change, directed by a Communist Party. Thus, if the spread of nuclear weapons will increase instability by sharpening internal conflicts within countries, by increasing the likelihood that military force will be used both within a country and against its neighbors, or by sharpening the disputes between states, such spread will be seen from Peking as desirable.

The most threatening characteristic of the current international situation, from the Chinese perspective, is the American-Soviet attempt to come together and dominate the world. The Chinese see in the efforts of the two superpowers to emphasize their common interest, in their avoiding general nuclear and in their seeking to settle issues where they have overlapping interests, a sellout of the revolution by the Soviet Union. In a blistering attack on the Soviet Union for its desire to cooperate with the United States, the Peking regime in November of 1965, declared that:

²⁷ A subject to be considered below.

The reactionary nature of Khrushchev revisionism is expressed in concentrated form in the line of Soviet-U.S. collaboration for the domination of the world. The Khrushchev clique completely transposed enemies and friends; it regarded U.S. imperialism, the arch enemy of the people of the world, as its closest friend, and the Marxist-Leninists of the world, including those of the Soviet Union, as its principal enemy.²⁸

The efforts of the two superpowers to dominate the world create a situation in which the Chinese argue that everything must be done to oppose this effort:

Some people ask, why is it that the Marxist-Leninists and the revolutionary people cannot take united action with the new leaders of the D. P. S. U., yet can unite with personages from the upper strata in the nationalist countries, and strive for united action with them in the anti-imperialist struggle, and can even exploit the contradictions among the imperialist countries in the struggle against the United States?

The reason is that in the contemporary world opposition to or alliance with U.S. imperialism constitutes the hallmark for deciding whether or not a political force can be included in the united front against the United States.²⁹

Thus, the reduction in Soviet and American influence which might well come from the spread of nuclear weapons would be seen as advantageous from the perspective of Peking. Such spread might also reduce China's influence, particularly if one projects ahead to the time when China will have a substantial nuclear capability. However, the Chinese would appear, at least in the short run, to give precedence to decreasing the influence of the two superpowers, even if at a marginal cost to their own influence.

²⁸ "Refutation of the New Leaders of the C. P. S. U. on 'United Action,'" People's Daily and Red Flag; translation in Peking Review. No. 46 (November 12, 1965), 10-12 at p. 11.

²⁹ Ibid., p. 14.

A major theme in Chinese propaganda, particularly in relationship to the test ban treaty, was the notion that nuclear powers would attempt to dominate and control their allies by virtue of their monopoly over nuclear weapons. The Chinese accuse the Soviet Union of trying to "manacle" China and the Chinese imply that this is a general problem between nuclear powers and small countries.³⁰ Peking may well believe that the development of nuclear weapons by countries such as France and (this will be argued below) Japan will enable these countries to take a stand independent of the United States and move into the "intermediate zone" of nations and groups in the capitalist world willing to oppose American imperialism.

The spread of nuclear weapons may also serve to reduce the likelihood that the Soviet Union and the United States could and would come together in the defense of particular countries or areas. Both the United States and the Soviet Union are likely to refrain from close alliance and close defense cooperation with countries that have their own independent nuclear capability, especially if they obtained this capability in defiance of the superpowers and partly, at least, with the rationale that the superpowers could not be counted on to come to their aid.³¹

Hence, from the Chinese perspective, the spread of nuclear weapons, while it does pose some long-run threat to Chinese leadership of the anti-imperialist bloc, probably appears desirable in that it will reduce Soviet-American influence in the world, reduce the prospects of Soviet-American cooperation, and increase the likelihood of violent change in the third world. The Chinese are likely to oppose proliferation or view it with some consternation only perhaps in relationship to specific countries. The prospect of proliferation by Germany or other European countries is probably not viewed with great alarm by China. The acquisition of nuclear weapons by Indonesia, Australia, or Pakistan is probably viewed by Peking as unlikely, and in any case, not particularly dangerous since none of these countries pose a direct security threat to China or are likely to develop sufficient capabilities to rival China for leadership of the Afro-Asian world. Thus, the major issue for China is the possibility of acquisition of nuclear weapons by the two other major Asian states, namely Japan and India. The

³⁰ See Morton H. Halperin, China and the Bomb, pp. 62-66.

³¹ This argument is of greatest relevance in connection with India and will be discussed in more detail below.

Chinese attitude towards these two countries and their prospects for obtaining nuclear weapons will be considered in turn, but the general conclusion may be anticipated that Chinese fears of Indian or Japanese nuclear programs are small, if indeed they exist at all, and that the Chinese are, in fact, likely to see some benefits from the development of a national nuclear capability by India or Japan.

A JAPANESE NUCLEAR PROGRAM

That Japan is now and will remain for the indefinite future the largest industrial power in the Far East is well understood in Peking. This means, as Peking must also recognize, that Japan would be capable of having a larger and more sophisticated nuclear arsenal than that of China soon after she decided to enter a nuclear race. The Japanese space program already puts them far ahead of where the Chinese appear to be in the development of long-range missiles. This situation could appear to pose a significant threat not only to Chinese leadership of the Asian world, but also to the security of China. However, there is very little evidence to suggest that the Chinese take this threat very seriously. They have consistently overestimated the strength of the forces of pacifism, neutralism, and pro-Chinese sentiment in Japan, as well as that of the forces for revolution. Peking, therefore, shows no sign of being concerned that Japan by herself may pose a threat to Chinese security or other interests. What does concern China is that Japan will continue to provide a base for American nuclear and other military forces and that the United States will be able to harness Japanese industrial capability. Thus, China gives highest priority to expulsion of the United States from Japan and movement of Japan into the intermediate zone of states actively opposed to American and Soviet hegemony.

The Chinese have not commented publicly about the prospects of a Japanese nuclear program. Their basic tactic in dealing with Japan has been to advise Japan to kick out the Americans and adopt a neutral pro-Chinese posture. Beyond that, particularly since their first nuclear detonation, the Chinese have made generalized nuclear blackmail threats against Japan--the only country against which they have directed such threats.³²

³² Morton H. Halperin, "Chinese Nuclear Strategy: The Early Post-Detonation Period," Adelphi Paper, No. 18, London: Institute for Strategic Studies, May 1965, pp. 12-13.

Privately, however, particularly in conversations with left-wing socialists, the Chinese have taken a somewhat different line. They have pointed out to the Japanese that the important thing is to expel America from Japan and that once this is done Japan should proceed to develop her own nuclear capability to look after her own security and to enable her to be truly independent of the United States. This line of argument may have some appeal not only to the left-wing in Japan but also to right-wing nationalist groups who have been taken with the strategic ideas of Pierre Gallois.

Would the Chinese, in fact, like to see the Japanese develop their own nuclear weapons if that is necessary to bring about a decision to break the alliance with the United States? Do they believe that such a turn of events is conceivable?

The answer to both of these questions would appear to be yes. While, as was indicated above, the Chinese undoubtedly recognize Japanese industrial potential, they do not appear to perceive any danger from Japan either in the long-run or in the short-run. They perceive Japan mainly as a threat to Soviet security interests and have tried to stir up Soviet-Japanese animosity by calling for the return to Japan of the islands taken from her by the Soviet Union at the end of the Second World War. Moreover, in the short-run a Japanese nuclear program would have advantages for Chinese interests.

Given American hostility to national nuclear programs, a Japanese decision to develop an independent nuclear capability would serve to exacerbate relations between the countries and to stimulate any existing trends toward a Japanese-American split. Such a split is, as was indicated, of the highest priority in China's Japan policy, and anything which might contribute to a break-up of the Japanese-American alliance and to the expulsion of America from Japan would be seen as extremely desirable. Moreover, expulsion of the United States would pave the way for Japanese-Chinese cooperation in general and perhaps specifically in the nuclear field. Such an alliance might be viewed by both countries as an anti-Soviet coalition rather than as an anti-American alliance. Finally, a Japanese decision to develop nuclear weapons would go a long way toward removing the stigma from the Chinese nuclear program and would serve to legitimize the notion that other states, even states in alliance with big powers, need to develop their own nuclear capability. Japan has been a leader of the anti-nuclear movement and her decision to develop nuclear weapons would make it extremely difficult for other states to believe or to argue that China was "wrong" in developing a nuclear force.

While the Japanese reacted with considerable concern and uneasiness to the Chinese nuclear detonations and, in particular, to the fact that China was much further along than had previously been expected, there appears to be little likelihood that Japan will in fact embark on a national nuclear program within the next ten or fifteen years. This is partly because the Japanese recognize that the consequences for their relations with the United States would be along the lines hoped for by the Chinese. Moreover, antipathy to nuclear weapons in Japan is well known and does not need elaboration here. The Japanese are currently engaged in an effort to achieve status as a non-nuclear great power. Over the long run, if Japan is going to be deterred from developing nuclear weapons, some way will have to be found to confer sufficient status on Japan as an advanced technological and even conventional military power. It is unlikely that the Japanese would become the 6th or even perhaps the 7th or 8th country to develop nuclear weapons. Only if a number of countries clearly inferior to Japan in industrial capacity and potential influence in international politics were to develop nuclear weapons would Japan, particularly if it continues to develop greater interest in a role on the international scene, feel compelled to consider seriously the development of a national nuclear force. Thus, it would appear that measures which prevented India, Israel, Sweden and other countries from joining the nuclear club might well be sufficient to prevent the issue from seriously arising on the agenda of Japanese politics.

Nevertheless, the United States should go beyond that and try to deal specifically with Japan's problems. The most useful approach would appear to be one which emphasized the desirability and importance of Japan playing a greater role as an industrial and economic power in the Far East. At the same time, the United States should continue to offer Japan its nuclear protection against an attack from the Soviet Union or China without necessarily pressing Japan for permission to station nuclear weapons on Japanese territory. Such demands, implying as they do the need for such weapons in Japan, can only serve, as they have in the case of Germany, to raise the issues of whether such weapons ought to be under Japanese control and

ultimately whether Japan does not need to develop her own nuclear capability.³³

AN INDIAN NUCLEAR PROGRAM

Indian development of nuclear weapons would pose fewer long-run threats to China and would provide clearer short-run gains than would a Japanese program. The Indian economic situation is, of course, radically different from that of Japan. The Chinese may be extremely confident that the Indian economy will not grow at a rapid rate and that Indian GNP and the available resources for a nuclear program will remain very small. The Chinese, in the process of devoting very substantial resources to their own nuclear program, are unlikely to be misled, as some Westerners appear to have been, by the very low estimates of the cost of a nuclear program presented by Dr. Bhabha, the head of the Indian Atomic Energy Agency. The cost he presents of approximately \$630,000 for a two-megaton explosion refers, as Dr. Bhabha does indicate, to the cost of a single detonation and to that of an entire nuclear program and certainly not to the cost of the associated delivery system.³⁴ The difference between a single detonation and a workable military capability, a difference long stressed in American propaganda directed at the Chinese, may substantially

³³ A possible exception to this might be an American offer to deploy a ballistic missile defense system in Japan. If the United States announces a decision to build a ballistic missile defense which it states is capable of shooting down any Chinese missiles aimed at the United States, then it may be that Japanese officials will raise the question of whether such protection cannot be provided for Japan. If there are strong pressures in this direction, it would be logical for the United States to meet them insofar as it proves technologically feasible. If the technology made it possible to offer such protection from bases outside Japan--perhaps on Okinawa and even Taiwan and Korea--a way might be found to offer Japan protection without needing to press for the stationing of American nuclear weapons on Japanese territory. Resolution of this issue depends upon technical and political factors beyond the scope of this paper.

³⁴ Bhabha's estimate is reported in the New York Times, October 27, 1964, p. 5.

affect the Chinese estimate of the danger posed by an Indian nuclear program. The Chinese would derive many advantages, as will be indicated below, from detonation of one or two devices by India and they may believe that the Indians would not push through to a substantial military capability which could threaten China.³⁵

As in the case of Japan, the Chinese have said nothing publicly about an Indian nuclear program. However, in contrast with their Japanese tactics, they have apparently made no private statements on the subject either. Nevertheless, they have made statements which imply the desirability of an Indian nuclear program. In that statement, the Chinese declared that:

when only they (the United States) and its associates have nuclear weapons and other do not, they can do what they like, but when not only they have nuclear weapons but their opponents also possess nuclear weapons, then they cannot remain so awe inspiring and their policies of nuclear threat and menace will not do. Also this increases the possibility of the complete banning and complete destruction of nuclear weapons, which can also further guarantee world peace.³⁶

The Chinese, in fact, may see very real advantages in an Indian decision to produce nuclear weapons. As in the case of Japan, the Chinese are likely to align their view of this problem with their political strategy vis-a-vis India. Chinese tactics appear to consist of attempts to weaken the central government and encourage centrifugal forces. They apparently look for eventual creation of a number of separate states on the Indian subcontinent, at least some of which would move into close alliance with Peking and perhaps come under local Communist control. Short of that, they hope to weaken the Indian economy, disrupt its political structures, and destroy Indian prestige as a leader of an Afro-Asian bloc. All of these objectives might be advanced by an Indian nuclear weapons program.

³⁵ Because of the geographic asymmetry, with most of the Indian population centers very close to China but all of the major Chinese population centers very far from India, the Indians would have to have a substantially greater capability in order to threaten targets in China.

³⁶ Peking Radio Broadcast to India, 27 June 1965.

The decision to produce nuclear weapons would clearly divide Indian political opinion, as have the debates about whether or not India needs nuclear weapons. Such a decision, particularly when it became clear that it would come at the expense of economic development as well as short-run consumption, could not help but provoke a major political clash among Indian political groups and might well split the country. Moreover, the severe impact on Indian development--probably greater than that on Chinese economic development, since the Indian government has a much smaller percentage of Indian resources at its disposal--would further Chinese objectives in India. Moreover, the development of nuclear weapons would introduce into Indian political-military relations tensions which appears to have been markedly absent over the past decade or more. In addition, Indian development of nuclear weapons might help to cement existing Pakistani-Chinese relations.

As was mentioned above, China's greatest fear currently is development of close Soviet-American relations. The cooperation between the two countries in regard to India is not only looked upon by Peking as dangerous itself, but also as important because of the possibility that it will lead to a broader Soviet-American alliance against China in Asia. Thus, anything that disrupts the prospects for cooperation between the two superpowers in defense of India would be welcomed by Peking. Indian development of an independent nuclear capability cannot help but produce pressures driving both of the superpowers out of India and making their cooperation more difficult. Individually, both countries would be reluctant to commit themselves to the defense of a power which produced nuclear weapons itself, and the question of how to treat an Indian nuclear program, what support to give it, how to try to stop it, could not help but hurt the prospects for superpower cooperation on the Indian subcontinent.

Moreover, as in the case of Japan, Indian development of nuclear weapons would help to reduce the stigma which has been attached to the Chinese nuclear program, since in a different way India serves as well as Japan as a symbol of anti-nuclearism. An Indian nuclear program would also serve to reduce Indian influence in the third world and make it harder for her to lead a "moderate" bloc in opposition to Chinese militancy.

These gains, which the Chinese would derive from an Indian nuclear program, are underscored by the possibility that Peking does not take seriously the prospect of India developing a nuclear capability which would,

in fact, threaten Chinese security interests. The Chinese consider the stationing of Russian or American nuclear weapons in India, as in the case of Japan, to be a much more threatening alternative to an Indian nuclear program. Moreover, India lacks the economic base and perhaps the political will to develop a really substantial nuclear arsenal.

The Chinese nuclear detonations have, in fact, touched off a major debate in India regarding future policy. This debate has brought to the fore at least three sets of arguments, one which stresses the need for an Indian nuclear program, another which stresses the importance of a closer alliance with the United States, and a third which stresses the importance of attempting to increase Soviet-American cooperation in the defense of India. Clearly, the Chinese would prefer the first to the second and third of these alternatives. It appears, however, that the Indians will fail to secure the kind of bilateral guarantees that they are seeking and as the Chinese nuclear program develops, it appears likely that the Indians will decide to produce nuclear weapons and to begin an underground test program. How hard and fast they will push the program toward thermo-nuclear weapons and delivery systems remains an open question.

Not only because of its general opposition to the spread of nuclear weapons, but also because of the real cost, specifically in relation to India, the United States has every reason to try to convince the Indian Government that it should not make nuclear weapons. The question of how to do this is beyond the scope of this paper, but three points might be mentioned here:

- 1) India, like China, would like to find a place in the sun and would like to believe that this does not depend on developing nuclear weapons. The United States should encourage the belief that such a role is possible. It should seek ways to increase Indian prestige and her real influence over American Far Eastern policy. Moreover, the United States should consider proposing that both India and Japan (and perhaps also the Federal Republic of Germany) should be made permanent members of the Security Council as countries of great international importance, despite their decision not to turn their potential nuclear capability into a small nuclear force.

- 2) The Indians, unlike the Japanese, have a real security problem and perceive a threat from China. The United States should explore the prospects of at least parallel declarations by Russia and the United States

guaranteeing Indian territory, but should be willing to make more explicit its own guarantees, should this not prove possible. The United States might also want to consider making available any ballistic missile defense system which was installed in the United States and offered to Japan.

3) Because of their security problem, the Indians face a real conflict between devoting resources to a nuclear weapons program and to a conventional military build-up. In this competition, the United States has an important ally in the Indian Army, which appears to be pressing for conventional forces rather than nuclear weapons.³⁷

The United States should encourage this trend, pointing out to India that her real security problems are likely to involve border incursions and other threats for which only conventional weapons are appropriate. At the same time, the United States should indicate its willingness to underwrite an Indian conventional build-up, provided India does not waste her own resources in a nuclear program. Making this choice as clear as possible while emphasizing and increasing the advantages of choosing the conventional option not only can be important in rallying forces in India serious about security but still opposed to a nuclear program, but would also fit into an appropriate general American strategy which stresses the importance of conventional defense against the real military threats.

NUCLEAR SHARING

If it is true, as has been argued here, that China is likely to see advantages not only from the spread of nuclear weapons in general, but in particular from the spread to India and Japan, it should be asked whether the Chinese might actually engage in nuclear sharing, in assisting other countries to develop nuclear weapons.

In the period prior to their first nuclear detonation, the Chinese talked in a way which implied that they might well be willing to share nuclear weapons. Since their detonation they have toned down these statements, perhaps to forestall requests for transfer of weapons or for other forms of nuclear weapons assistance. The current Chinese position was stated by Chen Yi in a press conference in Peking:

³⁷ Washington News, October 26, 1965; Washington Post, October 22, 1965.

There are two aspects to the question of nuclear cooperation. As for the peaceful use of atomic energy and the building of atomic reactors, China has already been approached by several countries, and China is ready to render them assistance; as for the request for China's help in the manufacture of atom bombs, this question is not realistic.

In my opinion, the most important task for the Afro-Asian countries today is to shake off imperialist control politically, economically and culturally and develop their own independent economy. This task is an acute struggle and its accomplishment will take quite a few years. Any country with a fair basis in industry and agriculture and in science and technology will be able to manufacture atom bombs, with or without China's assistance. China hopes that Afro-Asian countries will be able to make atom bombs themselves, and it would be better for a greater number of countries to come into possession of atom bombs.

In our view, the role of atom bombs should not be overstressed. The United States has been brandishing the atom bomb for atomic blackmail over the past twenty years, but has failed. The just struggle of Afro-Asian countries against imperialism and colonialism is the best atom bomb.

From their own experience with the Russians and from their own nuclear developments, the Chinese undoubtedly recognize that the line between peaceful help and weapons help is a very thin one. In fact, Peking's position seems to be that she is prepared to give very limited kinds of assistance to nuclear programs, but is not prepared to transfer weapons or in other ways commit scarce resources from her own nuclear program. With the United States and the Soviet Union both committed to resisting measures which would have the effect of spreading nuclear weapons, and with both now committed to IAEA safeguards in peaceful programs, the Chinese are likely to find that they have an important comparative advantage in competition with Russia and the United States if they are willing to share nuclear information without controls of any

kind and perhaps include some information specifically useful for weapons programs. Given the fact that there are very few areas in which the Chinese have such a comparative advantage, they are likely to engage in such activity and appear, in fact, already to have done so with Egypt and Indonesia.

How far the Chinese will go in actually sharing nuclear technology or finished nuclear weapons depends upon how quickly their own arsenal increases in size and also on what demands may be made on them by countries such as the UAR. It also may depend on whether or not the Chinese continue with their policy of seeking friendly relations with at least some Afro-Asian nations. If, as I have argued elsewhere, the Chinese largely turn in on themselves and lose interest in friendly relations with other Afro-Asian nations, they are much less likely to engage in any kind of nuclear sharing. Of special interest is the kind of nuclear relations the Chinese may try to establish with other Asian Communist states, namely, North Korea and North Vietnam. These states have recently moved back to a neutral or even pro-Soviet position, and unless this changes again, it is unlikely that the Chinese will be interested in nuclear sharing. However, it can not be ruled out that, at some point, China would be willing to share nuclear weapons control with these countries.

U.S. POLICY IN A NUCLEAR EAST ASIA

The dominant nuclear power in the East Asian area in the 1980's will be the United States. By that time, the United States will have a substantial fleet of submarines with Polaris missiles in the area, its Minuteman will be capable of reaching any point in the area from the United States and there are likely to continue to be a variety of nuclear weapons on American ships and airbases in the area. It is likely that China, by this time, will have a MRBM force numbering perhaps in the low hundreds and targeted presumably against American military installations and Asian cities. It is likely that India will have made the commitment to become a nuclear power and will have exploded a few nuclear devices, but India will probably have a very small stockpile and only very limited delivery capability. Japan is likely to be non-nuclear but perhaps growing increasingly restive in this role.

Chinese behavior in this period is likely to be determined much more by internal economic and political development and by the Chinese perception

of the nature of the world political situation than by the development of the Chinese, the Indian, or even the American nuclear program. However, insofar as their nuclear weapons give them a greater sense of confidence that the United States will not launch a nuclear attack against China, the Chinese leaders may be somewhat bolder in attempting to expand Chinese influence and even hegemony in countries around China's borders. While pushing their own nuclear program, they are likely to public and privately deride the importance of the Indian nuclear capability while continuing to press Japan to kick the United States out and develop its own nuclear weapons. However, in the main, Chinese policy will remain a cautious, probing one, as it has been in the past.

Just as these changes in the nuclear scene are likely to have little effect on Chinese policy, so they need have and should have little effect on American policy. The United States will still be interested in containing China and will still have to do so largely by building up political structures around China's border and by having available a substantial conventional as well as nuclear capability. American forces are likely to appear to be vulnerable to a Chinese preemptive attack, and the United States may choose to take measures so that some of its force, in addition to its Polaris missiles, could survive an attempt by China to attack American military bases in the Far East. Moreover, the United States is likely to want to give increased attention to various kinds of nuclear attacks against China, including a clean counterforce first strike or an attack directed against high priority political and communication targets in China.

In dealing with India, the United States will discover that it has an interest in the shape and form of proliferation once the decision to produce nuclear weapons is made.³⁸ The United States should be concerned with slowing down the pace of Indian nuclear development and perhaps with convincing the Indians that they should cancel their program and return to a concentration on conventional forces. The American effort to persuade countries such as Pakistan, Japan, Indonesia and Australia not to go nuclear will depend on not according India special status because she has exploded a few nuclear devices, and on seeking to deal with the

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On this point, as well as on the general subject of American interest in avoiding proliferation, see Jeremy J. Stone, "Proliferation, Where's the Danger?," Bulletin of the Atomic Scientists, Volume XXI, No. 9 (November 1965), p. 15.

particular political pressures in the countries concerned. In short, an East Asia with three countries, rather than one, capable of delivering nuclear weapons will appear somewhat more dangerous than the current situation and the possibility of large scale destruction in a very short time will have at least statistically increased in probability. However, the real problem of containing China and developing the kinds of societies the United States would like to see in the area may be remarkably little affected by the limited spread of nuclear weapons.

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WEST GERMANY*

The government of the Federal Republic of Germany must necessarily regard all of its problems in the light of two overriding concerns: security against the politico-military threat presented by the Soviet Union, and reunification of the country. The question of possible development of a nuclear weapons capability, more than others, must be considered in the light of these two concerns. Consequently this question has become a major dilemma for German foreign policy. On the one hand, the reunification of Germany must not portend the weakening of the country vis-a-vis the Soviet Union; on the other, the political climate which would produce Soviet cooperation on German reunification could deprive Germany of adequate military means for self defense, since the Soviets have consistently tied reunification to German neutrality and arms limitations. (The Soviet government's attitude on this issue appears to be largely determined by its fear of a revival of German power and influence.)

In Soviet eyes, a captive East Germany represents insurance against the revival of German influence in Eastern Europe, limits the German economy, and allows the integration of a substantial segment of it into the economy of the Communist bloc. It provides a hostage which can be used at any time to restrain West German political initiatives in general, and it makes those East Europeans who want to perpetuate Germany's division dependent upon the political initiatives of the Soviet Union. Finally, the division of Germany provides the Soviet Union with a forward position which can be used both politically and militarily to strike at the very core of Western Europe. Up to the present time, the Soviet price for German reunification has been German neutrality and arms limitations, a price which has been viewed by West Germans as inconsistent with security and hence with national well-being.

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The acquisition of nuclear weapons by West Germany might permit more forceful diplomatic initiatives for the reunification of the country. The existence of a credible German nuclear capability would substantially increase the Federal Republic's bargaining power vis-a-vis the Soviet Union. An adequate nuclear deterrent in German hands--without concerning ourselves with the military problem of adequacy--would, megaton for megaton, be more credible to the Soviet Union than a comparable American guarantee of Germany. (The sole criterion of credibility here is the likelihood of use upon a given provocation.) However, the Soviet Union's perception of the German threat is dependent upon the degree of United States support for the German position. American indifference, or even hostility, toward German pretensions would facilitate the isolation of Germany and undermine its initiative. Germans are fully aware of this and undoubtedly carefully weigh the possible feelings and reactions of the United States when they consider any program of acquisition of nuclear weapons.

When Germany regained its sovereignty in 1954 by signing the Western European Union agreements, it was assured by its western allies that its security and its reunification would be the prime concerns of the alliance as a whole. In return, Germany agreed to certain limitations on its sovereignty among which was Part I, Article 1, and Annex 1 of Protocol No. 111 of the Paris Protocols Amending the Brussels Treaty (of 1948) establishing the Western European Union. This obligates Germany to unilaterally renounce the manufacture of nuclear weapons. (Germany did not renounce the possession or the use of such weapons. The fact that West German units in NATO today are equipped to employ nuclear weapons, subject to United States control, in no way violates this agreement.)

The fact that Germans are even discussing the development of their own nuclear weapons reflects in part the failure of the western allies to meet the expectations of the Germans regarding their basic problems. The United States and France in particular not only have shown a total lack of zeal on the issue of reunification, but have gone so far as to let it be known that they find the division of Germany agreeable for many reasons. What little progress towards German reconciliation has been made, was made despite Germany's allies, not because of them. Many Germans also feel that their allies' commitment to their very security is doubtful. They were deeply distressed by the United States unilateral abandonment of the NATO doctrine of "massive

retaliation" in favor of a strategy which actually envisions meeting a Soviet attack on German battlefields, and actually frightened by US flirtations with the concept of a "pause." There is widespread doubt in Bonn, as there is in Washington, that the United States would expose itself to nuclear attack for the sake of its European allies. Furthermore, the Germans have seen the Western allies retreat from confrontations with the Soviets and with the East German Communists time after time on the issue of Berlin. Thus the Berlin wall stands unchallenged and Soviet planes can buzz West Berlin with impunity. These facts were driven home by Walter Ulbricht himself in a speech on the 5th anniversary of the building of the Wall,¹ wherein the East German leader bade the West Germans to come to terms with the Communists since, he claimed, the BRD has been deserted by its allies while the Soviet Union has given the DDR unstinting support. Thus, not having made much progress towards reunification under the Western Nuclear Umbrella, and growing more uncertain every day as to the reliability of that umbrella, the Germans have begun to feel some pressure towards greater nuclear independence.

It is significant, however, that German demands for nuclear sharing have been put in terms of security against the Soviet threat rather than in terms of reunification. To some extent this may simply reflect political expediency and awareness of anxiety among other states regarding a nuclear Germany. But it is important that the articulated German interest, at least for the present, stems from a concern with maintaining the security of West Germany rather than with the reunification of Germany. Although the political requirements of either policy may appear similar or interrelated, the preservation of the status quo appears to have a much higher priority with the existing German government than any major revision of the political map of Europe based on the increased assertiveness of a nuclear-armed West Germany.²

What discussion there has been in Western Germany about the possible acquisition of nuclear weapons has not been carried on exclusively in terms

¹ The New York Times, 14 August 1966, p. 1.

² See for example, Richard L. Merritt and Helga Voss-Eckermann, French German Elite Responses, 1964: Code Book and Data, Arms Control in the European Political Environment, (Yale University, 1965).

of concerns over security, reunification and foreign policy: The issue of nuclear weapons is also being considered on its own merits and the debate cuts across party lines, as well as across religious and economic groups. The vast majority of those who tend to favor a pro-nuclear policy are of what is mistakenly called "Gaullist" persuasion. These German "Gaullists" are not necessarily, or even usually, admirers of France's President de Gaulle or of France; but, like de Gaulle, they tend to believe that their nation is a great nation, that no nation can be truly great if it is not independent, and that independence in the late Twentieth Century requires the possession of nuclear weapons. Arrayed against the "Gaullists" are those who believe that not only Germany but also the other countries of Europe can no longer be world powers and consequently that the burden of their nuclear defense should be borne by the United States. Sometimes this viewpoint is modified to allow for the possibility of the advent of a truly united Europe which could play a major role in the world. Also opposing the acquisition of nuclears are most of the leftists in both parties. Their argument is that there is no real need for them since the Soviets do not have aggressive designs on Germany. If Germany were to acquire them, they argue, the efforts to achieve an understanding between East and West would be harmed.

Over all, Germany is not at all enthusiastic about obtaining its own nuclear weapons. If it does acquire them it will do so with great reluctance. Germans fully realize that they are feared throughout Europe and that acquisition of a nuclear weapons capability would not make them any more popular than they already are. They are also not eager to take on the manifold responsibilities of a nuclear power; they have thrived during the past fifteen years on non-involvement in world affairs which did not directly concern them, and on low defense budgets. They have been able to exert considerable pressures by threatening to develop nuclear weapons without actually doing so. Germany, more than other nations, is reluctant to give up its pre-nuclear options.

Whether or not West Germany decides to develop nuclear weapons between now and 1980, it will make its choice on the basis of its calculation about the attitudes and possible responses of both the United States and the Western allies, and of the Soviet Union and the Eastern European nations. These attitudes and responses have to be considered for every alternative method of acquisition.

Assuming a decision is made in favor of nuclear armaments, Germany could acquire them in one of the following ways:

- a. by overt indigenous effort
- b. by clandestine indigenous effort
- c. through transfer (either overt or clandestine) of either weapons systems themselves or of technical information to aid an indigenous program.
- d. by the assumption of primary responsibility (overt or clandestine) in a shared capability such as the Multilateral Nuclear Force (MLF).

Since the consequences for United States policy of Germany's acquisition of nuclear weapons would depend to a significant degree on the way in which it acquired them, let us now examine the problems which each of these approaches would pose for Germany and for United States policy towards Germany. The kind of environment which would immediately result from German acquisition of nuclear weapons would depend in great part on two key factors which characterize each alternative path to acquisition: the length of the interval between the time Germany's intentions became known to the Soviet Union and the deployment of the weapons, and the degree of support for the German position by its allies, especially the United States.

In the case of clandestine development or acquisition, the interval between disclosure of intentions and deployment of weapons may be very short, allowing very little time for anyone to try to stop Germany. On the other hand, when faced with a fait presque accompli, the Soviet Union might be panicked into a pre-emptive strike. The key consideration for both Germany and the Soviet Union in this case would be the degree of US support for the German move. If the United States had helped the acquisition in any way, there would be no doubt about its intentions, otherwise it would have to make up its mind very quickly and very decisively whether to support the move, stay aloof, or join the Soviets and attempt to negate the German move.

In case of a decision to proceed directly with indigenous development, the same basic choices would have to be made by the United States and the Soviet Union. But in this instance there would be time for devising and employing diplomatic means to cope with the situation. Ultimately, however, the Soviet Union could still opt for a pre-emptive strike and the United States would still have to decide on its basic attitude.

A West German decision to develop its own nuclear weapons would not automatically nullify US defense commitments. The position and problems of West Germany are too critical to the peace of Europe for the United States to cease having an active interest in them, but by the same token, the restraining hand of American influence upon West German policy would be largely removed because the decision to develop nuclear weapons would reflect, at least in part, the feeling that US nuclear credibility is no longer sufficient to assure German security. To the extent that indigenous nuclear weapons production would relieve the NATO partners of their commitments to West German security, the demands within Germany for even greater self-reliance would focus public attention upon German unity. The Germans might well hope that the justice of their case for reunification would make it difficult for most NATO states to actively oppose it. They might hope that, with the tacit support of the west, a nuclear armed and independent Germany might compel the Soviet Union to settle the reunification issue in return for German political and military concessions.

If the United States did not choose to aid the German nuclear program, it would then be faced with the question of whether or not to support it.

West German acquisition of nuclear weapons by transfer would preserve the defense commitments of its major ally while still increasing its own freedom of action. In the interest of avoiding a serious confrontation with the Soviet Union, it is unlikely that the United States will interpret its interests as being enhanced by nuclear transfers to West Germany. To whom else could West Germany turn for nuclear transfers?

Contemporary France certainly does not envision any nuclear sharing with West Germany. The French suggest instead that Germany de-emphasize its close association with the United States for the promise of a united Europe under the somewhat tenuous protection of the force de frappe. From the German point of view there is nothing unsound about the Gaullist conception of a Franco-German alliance leading and uniting continental Europe into a colossal power, but it is unlikely that Germany will accept French political leadership or hegemony.

The French, for their part, could not seriously consider nuclear sharing with Germany unless their distrust of Germany disappeared, the two economies became more integrated, the credibility of the United States pledge to defend Europe was further reduced and Germany agreed to loosen some of the ties which bind it to the United States.

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The impetus for Franco-German cooperation in this case would come from a resurgent Germany's effort to avoid the isolation created by a US attempt to reach an entente with the Soviet Union. As the perception of an immediate Soviet threat to the United States diminishes and US policy becomes one of fostering an entente, the possibility of greater American cooperation with Germany decreases, thereby increasing the German need for French support. Thus, only in case of agreements between the United States and the Soviet Union at the expense of interests which both the French and the Germans consider vital is France likely to offer, and Germany likely to accept, nuclear weapons or help in their construction. Indeed, only in a political climate which induces the French to feel that they are in the same boat as the Germans vis-a-vis a menacing Soviet Union and an innocuous United States would France do anything but vigorously oppose German acquisition of nuclear weapons.

Any German assumption of the leading role in nuclear capabilities it shared with the United States would not involve either the problem of an interval between declaration of intentions and deployment, or that of uncertainty of US support for the move. It could also be effected without any impairment on the readiness of the weapons systems, and would not necessarily coincide with the removal of American personnel from the sites. This alternative would face the Soviet Union with an organically united bloc of the United States and Germany. In this situation, as well as in one in which the United States would transfer either weapons or information to Germany, the United States would already have made its choice clear and would of course be committed to the support of Germany, over whose actions it would, of course, retain great influence.

IMPLICATIONS FOR UNITED STATES POLICY TOWARD GERMANY

In light of these observations, what are the implications for US policy regarding a nuclear Germany? Basically there are two poles between which US policy towards Germany will range: a strong US-German alliance or a US-USSR entente. We suggest the following analysis of these two options.

I. United States-German Alliance

A. Political Outcomes:

1. Reduces the likelihood of:
 - a. Soviet-US detente
 - b. The use of any German nuclear weapons without US consent
 - c. Voluntary Soviet cooperation on the political reunification of Germany
 - d. Franco-German cooperation on strategic problems
 - e. Change in the American military posture in Germany

2. Increases the likelihood of:
 - a. Franco-Soviet cooperation
 - b. German political initiatives in Central Europe (though not necessarily independent ones)
 - c. Soviet-Communist Chinese cooperation
 - d. The continuation of NATO on an integrated basis with or without France

II. United States-Soviet Union entente

A. Political outcomes

1. Reduces the likelihood of:
 - a. German confidence in US protection
 - b. German acquisition of nuclear weapons by transfer from the US
 - c. Soviet opposition to the reunification of Germany
 - d. Maintenance of American military presence in Germany at the current level
 - e. Continuation of NATO as an integrated military alliance

2. Increases the likelihood of:
 - a. German sense of insecurity and hence either desire for neutrality and accommodation with the Soviet Union, or desire for its own nuclear capability
 - b. Franco-German cooperation on strategic defense and political issues
 - c. Movement with regard to German reunification, possibly as part of broader European changes
 - d. Continued Soviet-Communist Chinese discord

III. Changing Evaluation of Soviet Strategic Threat as an Optimizing Factor of US Policy

- A. Increased perception of Soviet strategic threat produces preference for option I (above), US-German Alliance
- B. Reduced perception of Soviet strategic threat produces preference for option II (above), US-Soviet detente

IV. Optimum American Policy

- A. Option I produces a US-influenced, possibly nuclear Germany and an isolated and apprehensive USSR seeking cooperation elsewhere to minimize the threat posed by a tight US-German alliance. Possible allies: (a) France, (b) Peoples Republic of China.
- B. Option II produces a US-Soviet detente, an apprehensive, relatively isolated and probably nuclear Germany, and creates apprehensions in France and the USSR.

Both basic options will result in apprehensions. Only if the United States and the Soviet Union were to agree on a plan for the reunification of Germany which could be considered by Germans as consistent with their liberty and security would the stimuli for German acquisition of a nuclear capability decrease and the disadvantages of both of these options be avoided. However, since this is not likely to happen, the United States may well be forced to choose.

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ISRAEL AND THE UNITED ARAB REPUBLIC *

ISRAEL

More perhaps than any other country considered in this report, Israel has both the technical potential and the political determination--both the skill and the will--to become a nuclear power.

Economic and Social Prospects

Israel's per capita gross national product today is roughly that of the average western or northern European country. At the time of independence in 1948, it was only about one-third of what it is today. Even though Israel, during this period, has received massive financial support from the outside, this increase reflects the tenacity and ingenuity of her population in building a new national society. There have been three major sources of foreign exchange which have financed the development effort (and, to some extent, current consumption): exports (mainly citrus fruits and a few specialized industrial products, such as polished diamonds); official donations (mainly German reparations during the 1950s and United States grants throughout the period); and private donations and capital (mainly the United Jewish Appeal and sale of State of Israel bonds). It seems likely that, in the future, imports can be maintained at past levels and that the continuing deficits can be covered from such sources as the United Jewish Appeal and bond sales, both representing the support of the American Jewish community for the new state. Furthermore, Israel has roughly tripled her population since independence, so that total GNP has increased about ninefold. Unless there is major new immigration from Soviet Russia and Eastern Europe or the United States, neither of which seems likely, there is little danger of serious population pressure which would drag down the standard of living or, as many Arabs fear, force Israel into territorial expansion.

* By Dankwart A. Rustow as modified by Joseph Churba and James McBride.

This economic picture implies that Israel will be able to afford the expense of nuclear armament better than many other countries--better, specifically, than the UAR. If present sources of income continue and if the population by 1980 does not exceed 3.5 to 4 million, considerable resources could be reallocated from internal development to armaments without impairing the standard of living.

Unlike the immigrants of the early mandate period, who came out of strong Zionist conviction, or those of the late forties, who, displaced by Nazi persecution, came from Europe and brought with them a high level of technical skill and social organization, the majority of immigrants in the last decade have been Middle Easterners--Yemenis, Iraqis, Iranians, North Africans; they have been artisans or small traders from highly traditional, economically underdeveloped countries. The fear, often expressed by older residents of Israel, that these recent Arabic-speaking immigrants will drag the country down to their own social and economic level, that Israel will become "levantinized," does not seem to be justified. The immigrants have found employment in agriculture and industry and their children assimilate readily. The fear of le-variantization seems to have been a "self-non-fulfilling prophecy"; because of that fear, everyone seems to be working harder and with remarkable success to absorb the immigrants.

Israeli science and technology are unmatched anywhere in Asia (except for Japan) or Africa; in fact, they are as good as or better than those of European countries with populations of similar size (Ireland, Norway, Denmark, Finland). Much ingenuity has been applied not only to absorbing the existing technology of advanced industrial countries but also to inventing new technical processes suited to Israel's climatic, geological and social conditions.

This high level of scientific knowledge and technical skill has, of course, important implications for the possibility of a nuclear program for both peaceful and warlike purposes. It means that Israel is far less dependent than most other non-European countries upon outside help. It also means (on the time-honored principle that to those who have, shall be given) that she is more likely to receive such help and receive it without becoming unduly dependent upon the donor--likely, because (1) there is little point in trying to stop the development of a capability which is already incipient; (2) on the contrary, there is

diplomatic advantage in helping a country develop its atomic ambitions faster; and (3) Israel can make a contribution of her own in any cooperative or coordinated research and production program.

Israel's major economic handicap is the implacable hostility of her Arab neighbors; yet the Arab boycott alone (as distinct from military action) will never be enough to weaken Israel decisively. Petroleum, which until 1948 flowed directly from Arab oilfields to the Haifa refinery, must be imported over great distances, mostly from Venezuela, at an added cost of several million dollars a year. The most natural markets for Israeli industry are closed off; Israeli industrial exports, which generally cannot compete with European products in their home markets, must go to more distant Asian and African countries. There are also the secondary effects of the Arab boycott-- American or European firms not doing business with Israel for fear of Arab retaliation--but these effects are minor and can be expected to diminish further as Israel continues to outdistance her Arab neighbors' economic development. All in all, the extent to which Israel has managed to neutralize the Arab economic boycott further testifies to the magnitude of her technical and economic achievement.

Israel's rapid development reflects not only scientific and technical skills--it reflects, above all, skills and a single-minded consciousness of purpose in social organization. Education is extensive and of high quality both for children and adults. Literacy is high and may be expected to become universal once the present generation of immigrants has been fully absorbed. Hebrew, a few decades ago used only for religious purposes, is now fully established as the national language with a modern technical vocabulary of its own. Although Hebrew is spoken as the main language today by only two thirds of the population, that percentage may be expected to rise to about 90 percent in the next generation.

Israel's conscription system, except for Switzerland's, is probably the most efficient and comprehensive in the world. A force of a quarter million can be mobilized within forty-eight hours. In peacetime, military service performs an important function in the training and assimilation of young immigrants. It is in the army that many recruits learn Hebrew, learn to read and write, and acquire basic agricultural and mechanical skills.

Barring any major adverse development on the international scene, such as a destructive attack by Egypt and the like, there is every prospect that economic prosperity and social cohesiveness will increase throughout the period from 1966 to 1980, and that scientific research and technological skills will develop apace.

Domestic Political Prospects

If Israel's governmental system were considered in isolation, it would seem rather clumsy and cumbersome. The governmental system is within a social and political context that allows military decisions, including those on nuclear weapons, to be made largely by the top political leadership in a purely technical, strategic, and scientific context.

There is a multiparty system composed of eight to ten national parties. Although there have been recurrent attempts at merger, these usually have confirmed old splits or produced new ones. The largest party, Mapai, has never obtained more than 35-40 percent of the vote and the Knesset seats, and the trend has been slightly downward; at the moment, Mapai is in the throes of a major crisis as a result of the feud between David Ben Gurion and Levi Eshkol. Cabinets are formed as the result of lengthy and tedious bargaining between Mapai and various smaller parties (usually the various religious parties and some socialist splinter groups). Politics is pervaded by partisanship. Party patronage is widespread in the administrative system. The press is mostly party-affiliated. In the early years of the state, even the educational system was split along lines following the division between secular and religious parties (the latter in two shades of orthodoxy).

In fact, however, the governmental system--parties, Knesset, cabinet, and the rest--is only one part of the total ruling establishment. Its other parts include Histadrut, the various Zionist organizations and the armed forces. Histadrut is not only the all-inclusive national federation of labor but also the largest holding corporation and the largest employer in the country. It has its own proportionally elected parliament, and the recent decision of the right wing Herut party to present a slate in Histadrut elections testifies to the importance of this second parliament. The Zionist organizations (Jewish Agency, National Fund, etc.) exercise substantial control over private funds

raised aboard and have a major share in planning agricultural and industrial development. The defense forces, in a country technically at war with all her neighbors since independence, exercise an important influence on major political and economic decisions. They have resisted political control, at least by any one except the prime minister-- witness the "Lavon affair." To the four principal elements of the ruling establishment might be added independent institutions of lesser importance-- the universities, the judiciary, the larger municipalities, the rabbinate, etc. Because of the large share of public or semipublic ownership, private business plays a very small role. What holds the establishment together is a considerable overlapping and interlocking of personnel, but above all, an intense dedication to a common task: that of creating a viable democratic nation-state out of a miscellaneous population, on inhospitable soil, and among intensely hostile neighbors.

The only group in Israel which is not part of this interlocking system and which does not share in the common sense of purpose is the Arab segment (Muslim, Christian, and some Druze), which remained in Israel after independence. They now constitute about nine percent of the population. They have their own political parties or groups affiliated with national parties, and it is among them that the Communists have found most consistent support. It seems inevitable that this minority will continue as a group of outsiders and, in a sense, second-class citizens. Yet their attitude, since 1948, would appear to have changed from one of sullen hostility to one of somewhat passive acceptance of the political order. Except in the event of an Israeli defeat by neighboring Arab states, they would not seem to hold any subversive potential of consequence. The homogeneity and closely knit quality of Israel's political system mean that there is little conflict or open division of opinion on major issues of foreign and military policy. The general consensus at the same time, of course, reflects the evident potential danger from hostile neighbors. It is reinforced, furthermore, by new censorship, which is far stricter than in other democracies. For example, the abortive secret-agent operation in Egypt that gave rise to the "Lavon affair" still cannot be reported from Israel a decade after the event, even by foreign correspondents. It is for these reasons that decisions about nuclear development can be made by the top political leadership on the advice of military and scientific experts with little fear of publicity or of conflicting group pressures as the decision is made.

Foreign Policy Attitudes

The key roles in the making of foreign policy--the premiership and the foreign and defense portfolios--have, so far, always been filled by Mapai, the largest center party, and are likely to remain in the hands of similarly-oriented persons. Nor have there been any major disagreements among the parties on foreign policy. Mapam, the most leftist non-Communist party, started out with pro-Soviet and pacifist tendencies. Herut, the extreme right wing party, continued the tradition of the terrorist Irgun Zvai Leumi of the late mandate period and was, therefore, inclined toward a more activist policy, e. g., annexation of the Jordanian parts of Palestine. But the Soviet shift toward a pro-Arab policy, in 1953-54, undercut Mapam's original policy while Herut, in the 1960's, has been eager to create a moderate and responsible image and, in any case, has never participated in the government.

There has not, in fact, been much room for maneuver in Israel's relations with foreign powers. Russia, since the mid-fifties, has been cool to hostile; the United States, since about the same time, has been eager to maintain a benevolent neutrality between Israelis and Arabs. There is little prospect of change in either of these attitudes. When France and Britain, in 1955-56, were receptive to joint military action against Egypt, preparations for joint operations were eagerly pursued. Although there must have been widespread misgivings in Israel about the Sinai-Suez attack, patriotic loyalties have kept these from being voiced. Cooperation with France in the military and atomic energy fields continues, but there is little chance that France will wish to repeat the ill-starred 1956 venture. In short, although Israeli governments of whatever complexion are likely to seize eagerly any opportunities for closer relations with any major power, these opportunities are not likely to be much greater in the foreseeable future than they have been in the recent past. Nor is there any prospect in the next decade or two of peaceful relations with any of the Arab countries. The possibility of renewed hostilities with the Arabs will be discussed in greater detail below. All in all, Israeli foreign policy will be affected far more by estimates of Arab intentions and capabilities and by changing relationships among the major powers than by any changes on the domestic political scene.

Civil-Military Relations

There has been some debate among specialists as to the nature of civil-military relations in Israel. Those who argue that the military are subordinate to civilians point to such facts as the absence of military coups and the appointment only of civilian defense ministers. The other school retorts that for most of the period since 1948, the prime minister has doubled as minister of defense, so that the military has in effect been subject to control not by a civilian department but at best by the cabinet as a whole; that the influence of the armed forces is felt throughout public life; and that censorship is at times used not for national security but to promote the organizational interest of the military. The true situation is a basic identity between military and society. Just as the comprehensive conscription and reserve system creates an identity between citizenry and soldiery, so there is an identity, or at least close similarity, between civilian and military leadership. Since both are controlled by the same type of people and the same impulses, the question of which of these controls the other does not logically arise.

Potential for Atomic Armament

Advanced scientific research, technical inventiveness, rapid economic development, purposeful social organization, and political cohesiveness--all the factors just surveyed--add up to a high potential for the development of atomic weaponry. If Israel should decide, or should have decided, to develop an atomic military potential, she can rely on her own scientists and technicians, her own laboratories and industrial installations to do the development. And these scientists and technicians may be expected not only to duplicate techniques developed by other atomic powers but they would also seem to have as good a chance as scientists in the most advanced countries of making any new technical breakthroughs in the production of atomic weapons or delivery systems.

But in addition to her own resources, Israel can also count on help, at least indirect, from abroad. She has, in the past, received important military assistance from France and technical assistance from the United States. The military cooperation with France began in the mid-fifties when France considered Nasser a major antagonist

because of his support of the Algerian nationalists. Fighter planes supplied by France had an important part in the success of the attack on Sinai in 1956. Cooperation between France and Israel has survived the end of the Sinai-Suez and Algerian wars. France continues as Israel's main supplier of advanced military aircraft, and it was France that furnished the largest atomic reactor now in use in Israel. Presumably, cooperation in atomic research benefits both countries by making possible division of labor among a larger pool of scientists and technicians. The current Franco-Israeli relationship, which was started under Guy Mollet's premiership and continued by President deGaulle, may well continue under DeGaulle's successor.

US assistance has been almost exclusively financial and technical; even the purchase of American weapons by Israel has generally been made difficult. But the pioneering aspects of Israel's agricultural and technological development have a strong appeal to Americans far beyond the Zionist or Jewish communities. There have been discussions about joint research on desalination of seawater. If atomic energy is used anywhere in the world for desalination or similar purposes, pressure on the United States to make these techniques available to Israel may be expected to be strong and probably irresistible.

Cost, presumably, is one of the arguments against development of atomic weapons in Israel as in any other country. But there are few countries where there are such obvious peaceful uses for atomic energy--mainly for industrial power and for desalination of seawater. In view of the scarcity of fresh water and the high cost of petroleum, such uses would become economical in Israel sooner than in many other countries. To the extent that atomic weaponry can be produced as a byproduct of development of nuclear energy for peaceful uses, the military cost presumably would be greatly reduced.

Whether, when, and in what form Israel will decide (or has decided) to arm atomically depends ultimately on the prospects of the Arab-Israeli dispute as assessed by Israeli policy-makers. These prospects will be discussed below.

UNITED ARAB REPUBLIC

Economic and Social Prospects

Egypt has a higher rate of industrialization than other Arab countries and higher standards of education than any of them except Lebanon. The High Dam at Aswan, now nearing completion, will increase agricultural output substantially and supply more industrial energy. Yet these and other development efforts have been outdistanced by population growth (2.96 per cent per annum) which is higher than in most parts of the world. In recent years, American assistance, in the form of agricultural surpluses, has prevented a decline in per capita income. It is estimated that by the time the full economic benefits of the Aswan project are felt, population will have increased proportionately. The only development that might improve economic prospects substantially would be some new discovery such as quantities of groundwater in the depression that runs parallel to the Nile valley some 200 miles to the West--or some political development whereby Egypt would be effectively integrated with one of the more affluent, oil-producing Arab economies. But both of these seem somewhat remote. Birth rates are likely to decline ultimately as industrialization and modernization generally proceed, but it is unlikely that the effects of this will be felt in the next decade or two. The probabilities, therefore, are that per capita income will remain roughly at the present level of \$150 per annum in the foreseeable future. The economic policy of the government, in effect, has been directed not at increasing that level but rather at keeping it from declining.

Although there has been no dramatic economic improvements, a genuine social transformation has been under way in the last decade. Economic power has been transferred from private land owners, industrialists, and financiers to the growing bureaucracy. Education has been expanded. There has been greater equality of opportunity, especially for those with technical training. Regardless of the occasional pan-Islamic themes in Nasser's foreign propaganda, there has been a general movement toward secularization. And there has been instilled in Egypt a new sense of pride and self-confidence.

Domestic Political Prospects

It has aptly been said that Egypt has been ruled by soldiers for over two thousand years, and that Mohammed Naguib (1952-54) and Gamal Abdul Nasser (since 1954) have merely been the first indigenous soldiers to succeed a long line of foreigners. Of the many colonels who have seized power in the Arab states in the last generation, Nasser has been the only one who proved able to retain it for more than five years, let alone a decade. This political longevity and his ability to assert for Egypt a vocal and highly visible role in international politics have enormously enhanced his popularity and thereby further contributed to the stability of his regime. But the real tests of that stability have come not at the times of his various foreign policy successes but rather on the occasions of his recurrent failures--in his ability to survive defeat in Sinai in 1956, the secession of Syria in 1961, and stalemate and withdrawal in Yemen in 1965.

Nasser's bid for power in 1952 displaced a lecherous monarch and a corrupt oligarchy and gave the country relief from the near-civil war that had been going on for about four years. He consolidated power with the ouster of Naguib in 1954, and gradually effected a change from military to civilian government. Except for his chief of staff, Abdul Hakim Amer, the members of his junta have been engaged in bureaucratic pursuits such as economic planning and control of the radio and the press. In addition to the continuing loyalty of the army, the regime has relied upon the support of the bureaucracy and, to a lesser extent, that of organized labor; the trade unions came to his aid at a crucial moment in the contest with Naguib. Both bureaucrats and labor have found a widening scope of activity within the increasingly centralized economy. Control of the communications media and of professional societies has helped consolidate the regime. The secret police help keep dissidents in line and also inform the government of shifts of sentiment among the politically relevant strata of the population.

The only independently organized groups that have tried to assert themselves within or against the regime have been the Muslim Brotherhood and the Communists. The Brotherhood, which after 1952 hoped to become the semi-official support of the junta, was effectively suppressed after an attempt on Nasser's life in 1954. The leading Communists have been kept in jail even at the height of Nasser's foreign

cooperation with the Kremlin. Although many of them have been released in the meantime, they do not have any sizable organization. It seems unlikely that, at any early point, they will become a force beyond Nasser's capacity to control--unlikely, therefore, that Egypt will go along the Cuban path toward Communism.

The failure of Nasser's repeated attempts to found some popularly-based party or mass movement may be taken as a sign of political ineptness. But above all, it indicates that the regime has sufficient props of stability even in the absence of any such organization. There is no indication that failure to achieve dramatic economic improvements in terms of per capita income has weakened the regime. No conceivable Egyptian government, given the facts of Egypt's physical geography and human fertility, could achieve such improvements, and the effort to improve economic performance within the limits of the possible is apparent to all. Foreign policy setbacks are also not likely to shake the regime. The expectation of Eden and others in 1956 that invasion would lead to an internal overthrow of Nasser's regime was, on the face of it, unrealistic; like any other people, the Egyptians, in the face of attack, rallied behind their government. In short, Nasser may or may not fulfill his ambition to become the effective leader of Arabs in other countries, but there are no present indications that he will be replaced as ruler of Egypt, short of his death or incapacity. It is quite likely that he will still be in power, at the age of 62, in 1980.

Even in the unlikely event that he should be replaced before that, it seems probable that what would emerge would be a new military-bureaucratic combination, perhaps consolidating itself after several intermediate changes, and that the broad lines of both domestic and foreign policy would not fundamentally change.

Prospects of Foreign Policy

Egypt's foreign policy since Nasser's advent has been dominated by two ambitions--the assertion of an independent political role for Egypt on the international stage and the unification of Arab countries under Egyptian leadership. In the pursuit of the first, and primary, of these ambitions, Nasser has been eminently successful. The last traces of British occupation were removed by the Suez evacuation agreement of 1954. Nasser's negotiations for foreign aid from both the United States

and Soviet Russia in 1954-55 led to various attempts by Secretary of State Dulles to isolate Nasser, but some years later, when all the dust had settled, Egypt was indeed receiving substantial sums of aid from Russians and Americans alike. In the fall of 1956, Nasser's forces were beaten on the ground and in the air by the Israelis. But American and Soviet pressure stopped the belated and half-hearted Anglo-French landings and Nasser could claim, not altogether implausibly, to have emerged victorious from the entire episode. The 1955 arms agreement with Czechoslovakia and Russia supplied Nasser with planes, tanks, submarines and other military equipment which, though obsolescent by great power standards, represented a level of military weaponry never before controlled by any Middle Eastern country. In the meantime, the novelty of playing East against West has somewhat worn off, and the tight bipolar international situation of the early and mid-fifties has changed substantially; hence, the leverage inherent in Nasser's earlier policy is greatly diminished. Nonetheless, Nasser has established his country as one of the recognized leaders of the "third world" and one whose claims to assistance neither the United States nor Russia will lightly ignore.

Nasser's second ambition, that of leadership toward pan-Arab unity, on the contrary, has been beset by recurrent failures. The basic dilemma has been inherent in Egypt's resource endowment. Egypt represents about one-third of the total Arab population and it has a sufficiently large pool of educated personnel to have supplied school teachers over the years to many other Arab countries. But in contrast to the oil wealth of Kuwait, Saudi Arabia, Iraq, and Libya, and Libya, and to the reserves of arable land in the Sudan and Syria, Egypt has no lucrative minerals and no major unused economic resources. It is an "underdeveloped" country only by courtesy or by thoughtless jargon; in fact, it is an overdeveloped country--that is, a vastly overpopulated one. This disparity between Egypt's human and economic resources has greatly handicapped its drive for Arab leadership. Significantly, Syria seceded in 1961, at the very time when economic unification was to implement the symbolic and political unification proclaimed three years before.

Inept diplomacy and miscalculation of Egypt's capabilities have been additional handicaps. In the mid-fifties, there had been much talk about "unity of the Nile valley," i. e., a drawing together of Egypt and the Sudan. Yet, plans were made for the Aswan dam--which would

involve flooding out the entire Sudanese city of Wadi Halfa--without even consulting the Sudanese. The Syrian merger of 1958 stemmed most immediately not from Nasser's own effort but from fears on the part of the Syrian Ba'th leaders of a Communist takeover. Three years later, Nasser had sufficiently antagonized his erstwhile Syrian supporters that it was many of these same Ba'th leaders who led the secession. Renewed parleys with the Syrian and Iraqi Ba'th in 1964, revealed that the monolithic structure of Nasser's intervention in Yemen after the 1962 coup turned out to be a major miscalculation; Egyptian soldiers proved singularly ineffective in the unaccustomed mountain terrain, and were considered foreigners by their Yemeni allies.

Support from oil-rich rulers for Nasser's policy has been somewhat opportunistic. In the mid-fifties, relations with Saudi Arabia were close, but by the early sixties Egyptian and Saudi forces were supporting opposite sides in the Yemeni war. Kuwait, which for some years had extended major loans to Egypt, announced a tightening of the purse strings at the very moment when Nasser saw himself forced to retreat from Yemen. It is difficult to estimate Nasser's changing popularity among the urban masses and among the educated classes in other Arab countries, but presumably that popularity, in the 1960's, had also been declining from the peak reached in the 1950's.

Nonetheless, Nasser's resiliency in defeat is well established, and his ingenuity in making use of new opportunities to pursue his program of Arab unity should not be underestimated. The likelier opportunities, as of now, can be foreseen in Libya and in Jordan. Libya's sudden oil development is likely to continue undermining the traditional structure of the Sanusi monarchy, and its oil revenues make it a particularly attractive prize. King Idriss is in his seventies and a succession crisis would be an ideal setting for an attempted Nasserite takeover. Libya, moreover, adjoins Egypt and has only one-fifteenth of Egypt's population; once dominated by Nasser she might, therefore, be more easily incorporated than any other area. In Jordan, the monarchy survived a number of attempted coups in a situation of great unrest in the mid-fifties. For the moment, King Hussein's regime seems as stable as ever; but the country remains an arbitrary geographic creation and the juxtaposition of Transjordanian Bedouins with more advanced-Palestinian Arabs and a large number of refugees creates a basis for continuing internal tension. A coup in Jordan (supported by Nasser before or

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after the event), therefore, remains a serious possibility. It would, however, be almost certain to bring serious complications with Israel, as suggested below. The possibility of a pro-Nasser unity move by some future regime in Syria, Iraq, or Saudi Arabia cannot be ruled out. Unification of Egypt with Libya, or some other Arab country, might once again create the possibility of a snowballing movement such as seemed to exist in the mid-fifties. Any one of these possibilities, while enhancing Nasser's economic resources and political stature, is not likely to fundamentally affect his foreign policy toward the great powers or toward Israel.

Atomic and Missile Potential

A foreign policy aim of great emotional intensity for Nasser, and indeed for all vocal Arab nationalists in Egypt or elsewhere, had been the defeat of Israel. For some time now, this aim has receded from the position of an immediate objective to that of a long-range one, for the simple reason that Israel has twice defeated Egypt: in 1948 along with other Arab armies, and in 1956 in a two-way encounter. Nor has Nasser, since the 1956 defeat, resumed the earlier fedayeen raids into Israel or the harassment of Israeli shipping in the Gulf of Elath. In fact, he has accepted for all these years the presence of United Nations contingents, which are supposed to prevent the resumption of such measures, at the Gaza strip and at Sharm el Sheikh.

There is no reason to assume that a third military encounter between Egypt and Israel, at any time in the next few years, would give any different result from the previous two. Egypt, like Israel, has an army that at full mobilization numbers a quarter million men; but whereas Israel can mobilize her army in two days, Egypt can do so only in two months. And whereas the mobilized Israeli army consists of highly trained soldiers fully able to use the most modern equipment Israel may possess, the Egyptian army is recruited from underfed, illiterate, disease-ridden fellaheen. The ability of the Egyptian soldier to use the World War II type equipment which Egypt has been receiving from Russia has yet to be demonstrated. His recent performance in Yemen does not bespeak his ability to adapt to unaccustomed forms of warfare.

But Egypt's very inferiority in mobilization potential and in the use

of available conventional weapons has been a potent incentive for Nasser to try to acquire nonconventional arms. It may be assumed that Egyptian scientific and technical ability to produce missiles or atomic weapons is very limited. Yet, it should be recalled that Western experts grossly underestimated Egyptian technical ability to run the Suez Canal in 1956; with appropriate training at the start, it is not impossible that a program might be operated by Egyptians in the future. At any rate, Nasser has for some years been able to rely on German technicians. The first products of their labors are the short-range ballistic missiles el-Zafar and el-Kahar, of which there are now an estimated 250. Still, to a much larger extent than Israel, Egypt would appear to have to rely on foreign procurement or, at least, on foreign technicians for any development of atomic weapons or reliable delivery systems. There is little question, however, that Egypt under Nasser, or any similar successor regime, has the will to develop or acquire nuclear weapons. Her willingness in 1955, to barter a large proportion of her cotton crop for several years into the future in order to acquire Soviet arms shows that she would not hesitate to make the necessary economic sacrifices. There can be no doubt, of course, that Israel would be the logical target for any nuclear bombs that Egypt might acquire or develop.

THE ARAB-ISRAELI CONFLICT

The Nature of the Conflict

The Arab-Israeli conflict is one of far greater emotional intensity than that between India and Pakistan, between West and East Germany, or, for that matter, between the United States and the USSR. India and Pakistan are quarreling over small areas that have only a diminutive fraction of their combined populations (Jammu and Kashmir) or no human population at all (the Rann of Kutch). The German conflict is one between governments, not populations, and one overshadowed by Soviet-Western tensions. Americans and Soviets, for all their rivalry and periodic conflict, engage in cultural exchange, carry on intensive diplomatic negotiations, and each protest their own peaceful intentions even while questioning those of the other. Even the United States and Communist China have engaged in diplomatic contacts in Warsaw. In contrast, the Arabs deny the legitimacy of Israel's very existence and proclaim loudly their intention to "drive her into the sea." And for seventeen years now, Arabs and Israelis have not had any diplomatic

contact whatsoever, nor have any of their nationals visited the other's territory--except on military missions.

All that this means is that it would be more difficult for Germans, Eastern or Western, for Indians and Pakistanis, and even for Americans and Soviets to find moral justification for the resort to atomic weapons in their disputes than it would be for Arabs and Israelis to do so. Fear of great power reactions or fear of the impression on the rest of the world might still effectively restrain the use of nuclear weapons: regard for the opponent alone hardly would.

Although Israel and her Arab neighbors have technically been at war since the proclamation of Israeli independence in 1948, there have been only two actual military campaigns--the Palestine War of 1948-49 and the Suez-Sinai campaign of 1956. Frontier incidents and incursions by Egyptian fedayeen, which were frequent in 1955-56, have abated or stopped. The Arabs may continue to vociferate against Israel but, like it or not, they have coexisted with her for seventeen years; it would seem that a "temporary" situation that has endured for seventeen years might well continue indefinitely.

So it might; yet it is important to identify the reasons for the status quo. The Arabs, much as they might like to defeat Israel, have not so far had the strength: the two military encounters ended in major Arab defeats. The Israelis do not wish to destroy the Arab states, and even if they wished to do so, could not. Even a temporary military occupation of, for instance, the Nile delta or of Syrian population centers would disperse their forces among a hostile population so as to convert military strength into utter weakness. Minor revisions of the status quo might be desirable from an Israeli point of view, but even after they were made, Israel still would have to live among her Arab neighbors. Neither Arabs nor Israelis, with the conventional weapons used in the past, have been able to defeat the other decisively and there is little point in provoking indecisive encounters. This strategic stalemate has most effectively supported the status quo since 1949, and secured de facto peace for most of that period. What difference the acquisition of missiles or nuclear weapons by either side would make will be discussed below.

Prospects for Development of the Conflict Aside from
Missiles and Nuclear Weapons

There is no prospect that the Arab-Israeli conflict will be formally settled between now and 1980. The very existence of Israel is unacceptable to the Arabs; it is the only area where Western colonialism has left significant colonization; it is a reminder to them of all the worst humiliations and injustices of the past; the possibility that an industrialized Israel might do a thriving trade with Arabs is one more strong reason against making peace; and Arab disunity (amidst vocal lip-service to unity) means that no politician in any of the countries directly concerned will dare be the first one to propose peace. (President Habib Bourguiba's recent statement does not contradict this generalization. Tunisia is remote and not directly concerned with Israel; Bourguiba has less to fear from pro-Nasserite mobs at home than any other Arab ruler, and besides, the conditions at which he hinted for a settlement would have been totally unacceptable to Israel. The Israelis, wisely from their point of view, kept quiet while waiting for other Arabs to tear down Bourguiba's proposals.)

On the other hand, there is little prospect that the present situation will give rise to renewed hostilities with conventional weapons. The past causes of friction have largely disappeared: border incidents have greatly diminished since 1956, the fedayeen raids have stopped, Israeli shipping passes through the Gulf of Elath, and, because it does, Israel has no acute need to press for passage through the Suez Canal. Israel, of course, is the only country other than Egypt that has natural access to both the Mediterranean Sea and the Red Sea, that is, the only one not really dependent upon the canal.

There is little prospect that the Arab capacity for conventional warfare will dramatically increase in the foreseeable future. The Yemen campaign has both revealed, and presumably aggravated, Egyptian military weakness. A merger with Libya or Syria would enhance Nasser's prestige or add to his revenue, or both; but it would not improve the performance of Egyptian tanks, planes, or infantry battalions. A unified command between Egypt and Syria would pose problems of coordination that have proved extremely difficult for Arab soldiers and statesmen when such a joint command existed on paper in the past. Since another conventional war in the foreseeable future

is likely to end in a third Arab defeat, Nasser has been careful not to provoke it. In short, continuing Arab weakness restrains the Arabs. Meanwhile, the opprobrium that would be attached to the launching of a second attack like the one of 1956, and also the absence of plausible war aims, restrain Israel.

One current matter of serious friction is the headwaters of the Jordan. Ever since the completion of Israel's national water carrier, which brings a large portion of the waters of the upper Jordan system to the Tel Aviv region and (eventually) the Negev, the Arab countries have threatened to divert the Syrian and Lebanese sources of the Jordan. Significantly, the major pressure for this has come from Syria where intense domestic political rivalry gives free rein to demagoguery. Nasser, apparently, has tried to restrain these plans. The Lebanese have clearly been half-hearted about the diversion scheme; they have agreed in principle but named specific conditions that other Arab governments would have difficulty fulfilling.

For several reasons, it seems unlikely that the Jordan waters will lead to a major military clash--let alone a nuclear one. First, even by totally diverting the Lebanese and Syrian sources, the Arabs would not bring about Israel's collapse or even decisively hamper her economic development. About half of the Jordan waters originate in a source just inside Israel; this is more than the Israelis, under the Johnson plan, intend to use. In fact, the Israelis need the waters from Lebanon and Syria not for their own consumption but rather to keep down the salinity of the Sea of Galilee which they use as a natural storage reservoir. Second, Israel has made it perfectly clear that she would consider diversion a hostile act; there could thus be major military reprisals by Israel. Third, even short of such major military action, Israel can stop any diversion at will. Preparations for diversion in Syria have already been stopped by the simple expedient of machine gun bullets across the frontier. Diversion in Lebanon could similarly be stopped by a few well-placed bombs from the air.

There is no early prospect of a resumption of Nasser's fedayeen raids of 1955, for reasons already stated. Talk about a Palestine Liberation Army to be formed in Syria or among Palestinian Arab refugees has remained just talk. Jordan, which has the longest and most open frontier with Israel as well as the largest number of

Palestinian refugees, has enough trouble maintaining her regime against internal pressures and against Arab critics abroad without inviting more trouble with Israel.

The only serious danger of a renewed conflict arises from the possibility of a collapse of the Jordanian monarchy. It is unlikely that Israel would tolerate an Egyptian or even a pro-Syrian or Iraqi takeover of Jordan, or an inter-Arab war for the possession of Jordan, without intervening militarily. Israel's immediate aim would probably be the annexation of the Jordanian parts of Palestine, possibly of the entire Jordan valley, i. e., arable parts of the present Jordanian kingdom. If much of the Arab population fled from these territories during the fighting (as it did under comparable circumstances in 1948), their addition would be a net gain for Israel. In the light of past military encounters, moreover, such an Israeli conquest of most of Jordan might be quite feasible; the Jordanian army, which in 1948 fought best of all the Arab forces, would be out of action. However, it would involve Israel in a major war with Egypt and other Arab countries and presumably would cause diplomatic complications with the United States and Russia. Still, there are enough uncertain factors in such a situation of collapse of the Jordanian regime that there might be an inadvertent escalation into a full-scale military conflict.

Although less likely, the danger of a renewed conflict arises also from any Arab bid to interfere with Israel's shipping rights through the Gulf of Aqabah to East Africa and Southeast Asia. Undoubtedly, the opening of the Gulf of Aqabah by removal, during the Sinai-Suez campaign, of the Egyptian gun positions from the straits of Tiran and Sharm al-Shaykh at the entrance of the Gulf significantly altered Israel's power. Egypt lost its former monopoly on spanning the bridge between Europe and Asia. With the exception of Egypt, Israel became the only country in the Middle East with its own sea outlet to Europe, America, and West Africa through the Mediterranean as well as its own outlet to East Africa and Southeast Asia through the Red Sea. Geographically close to Israel, the East African states stand on the strategic eastern perimeter of the Arab boycott. Israel's new geo-political position has thus permitted it to outflank the Arab blockade and provides the necessary condition for accelerating its widely ramified and highly successful relations with emergent Africa.

There is also a definite interrelationship between ties with Africa

and the development of the Negev (Israel's southern arid region). The population and development of the Negev are the targets toward which Israel's creative energies will be directed during the next decade. Thus, a cardinal principle that has come to characterize Israeli policy since the post-Sinai period is the effort to keep the Straits of Tiran and the Gulf of Aqabah open to international shipping. These shipping lanes are considered vital for Israel's economic future; the outcome of Israel's struggle for economic cooperation with Africa and Asia depends primarily on its ability to keep this waterway open.

Furthermore, Israel offers an alternate route to the Mediterranean Sea through the Gulf of Aqabah and overland. Should the Suez Canal be closed in any future major disturbance, Israel and East Africa would be able to obtain part of their needs if the Gulf of Aqabah route should be left open. For these reasons, any UAR and/or Arab effort to supplant the U. N. E. F. on the Straits of Tiran and Sharm al-Shaykh will be considered a casus belli by Israel.

Prospects for a Nuclear Arms Competition

Since Israel has twice defeated Egypt with conventional weapons, it may be argued that she has no need for atomic arms. This argument would be sound if it were not for the much publicized Egyptian program of missile development. Against conventionally armed Egyptians, with or without other Arab allies, Israel could presumably defend herself effectively or even launch limited aggressive wars as in 1956, without nuclear weapons. Nuclear bombs would not enable her to change the strategic stalemate decisively in her favor; even if Egyptian cities were reduced to rubble, Israeli forces would still not suffice to occupy Cairo, Alexandria, Damascus and Amman, all at once--that is, Israel would still have to live with Arab neighbors. There also is fear of reaction by the major powers; such a reaction stopped the previous attack by Israel and her allies in 1956.

But Nasser's missile program is well under way. His weakness in conventional weapons is precisely his most potent incentive for trying to develop unconventional ones, for converting the quantitative arms race (which he has been losing) into a technological one. Current Israeli estimates appear to be that the Egyptians have enough firepower in their existing missiles to hit Israeli cities, but not an accurate enough guidance system to find their targets. A missile fired into the

sea off Tel Aviv would do serious psychological damage to Nasser, and missiles that hit Jordan or Lebanon would do even greater political damage among other Arabs. The small size of Israel, which makes it potentially very vulnerable to missiles, thus turns out to be a major asset until missile-guidance system are perfected.

If and when the guidance mechanisms of Egyptian missiles are perfected, there would seem to be a real danger to Israel. The logical military responses would be to acquire a countervailing offense, to preempt, or to attempt to procure an active strategic defense.

Nasser, at present, would appear to lack the skill rather than the will to produce nuclear weapons. In a situation of hostility and mutual suspicion, however, the usual reaction of military and political planners is to posit the worst. It must be assumed, therefore, that Israel will try to keep one step ahead of what it estimates Egyptian progress toward nuclear armament to be. The first step clearly would be to continue to develop nuclear technology for dual (peaceful and military) use as fast and on as large a scale as possible. A next step for Israel might be to assemble nuclear bombs but to withhold testing until the first Egyptian atomic test, or at least, until there is open publicity about an Egyptian nuclear weapons program comparable to the publicity over the last several years about Egyptian missiles. Concurrently, Israel might launch a pre-emptive attack by conventional bombers, etc., against any Egyptian nuclear armament centers.

Even short of Egyptian progress toward nuclear arms, Israel might decide to develop atomic arms of her own if she believed that the non-nuclear arms race was going against her. In such a situation, Israel would face a dilemma: is it better to publicize her possession of nuclear weapons, e.g., tactical ones, so as to deter an Egyptian attack; or would it be better to keep them quiet, so as to avoid any hostile reaction from the great powers, but ready for use as soon as Egypt did attack?

How soon the Arab-Israeli arms race would turn to nuclear weapons would depend to some extent on developments elsewhere. If two or three other countries, in addition to the present five, joined the nuclear club, the opprobrium in Egypt or Israel going nuclear presumably would lessen or vanish. Even more directly, a nuclear arms

race between the UAR and Israel would depend on the encouragement or discouragement that these two countries received from outside powers.

Attitude of Outside Powers

It is clear from the preceding analysis that Israel has the greater skills and the UAR the stronger incentive for turning their arms competition into a nuclear one. What is the potential role of outside powers in (1) adding to available skills, especially Egypt's, or even in supplying nuclear arms that cannot be produced locally; and in (2) encouraging or discouraging the channeling by Israel or Egypt of available skills into nuclear weapons?

The possibility that any present atomic power would inject nuclear weapons into the Arab-Israeli arms race by giving them to one of the contestants seems extremely remote indeed. Considering the bad experience that Russia had in giving Communist China a head-start on her nuclear development, it seems extremely unlikely that she would do more for non-Communist Egypt. It seems equally unlikely that France would give atomic bombs to Israel and even more unlikely that the United States would do so.

But, short of procurement of nuclear weapons, cooperative research and peaceful facilities for nuclear energy can be turned to warlike uses. The factors of most immediate importance are probably the German scientists or technicians in Egypt. It is not clear whether they are fully occupied in designing or constructing missiles, or whether there are enough of them with adequate skills to be working on nuclear bombs on the side--now or in the future. Nor is it clear how much control the West German government has over them. When they established diplomatic relations, Israel appears to have insisted that West Germany do its best to have them withdrawn. But is West Germany, in fact, doing its best and is its best good enough to actually get them withdrawn? Could or would Germany effect their withdrawal by curtailing economic aid to Egypt? It seems unlikely that the United States could slow down the pace of the Arab-Israeli arms race, postponing the time that either or both of them went nuclear, by threatening to cut off its aid. Egypt has demonstrated its willingness to make major economic sacrifices for the sake of arms.

Israel, it is true, responded to similar American threats in 1953-54 by dropping plans to tap the Jordan in the demilitarized zone, and instead, at great additional expense and delay, developed the pumping stations at the Sea of Galilee. But today, in view of her remarkable economic progress, Israel is far less vulnerable to such American pressure than she was a dozen years ago; and what is at stake in nuclear warfare is national survival, not just water. Nor is it likely that an American guarantee of Israel's security would be sufficient to delay any Israeli decision to go nuclear; against accurate Egyptian nuclear missiles, even the most rapid American action, short of pre-emptive counterforce strikes, would come too late. A threat more serious to Israel than cancellation of public aid would be US government action to suspend private remittances, that is, the United Jewish Appeal; yet, unless Israel clearly appeared in the role of an aggressor, it would be hard to conceive any American administration taking such a step.

On the other hand, provision of peaceful nuclear reactors and the like by the United States or other outside powers would presumably hasten the time when the Arab-Israeli arms competition would turn nuclear. As long as the present Gaullist course of French policy continues, it seems likely that Franco-Israeli cooperation will also continue-- specifically supplies of advanced French aircraft and French cooperation in the development of nuclear energy for peaceful purposes. If the major powers wished to cooperate in arresting proliferation of nuclear weapons, one of the most effective steps, presumably, would be an agreement by the United States, Russia, and France not to make further atomic technical skills or equipment available to countries, like the UAR and Israel, which are engaged in a major regional arms race. To rely on Israeli or Egyptian inhibitions (even if reinforced by signature or treaties on their part) is likely to prove illusory.

¹ The emphasis of this discussion has been on nuclear weapons rather than on delivery systems. Since the air distance between Cairo and Tel Aviv is less than 300 miles, intercontinental ballistic missiles are not required to connect the two. Accuracy, of course, is essential since the Egyptian population centers are surrounded by desert, and those of Israel, by the sea and other Arabs.

STRATEGIC IMPLICATIONS

The implications of a potential UAR-Israel nuclear race go far beyond the borders of these two nations. If the UAR were to achieve a nuclear weapons capability, one must ask how this would affect the various Arab unity schemes and aspirations. Using both nuclear blackmail and enhanced prestige, Egypt might endeavor to use its nuclear weapons capability as a focal point for Arab federation or confederation under Egyptian leadership. If this were to occur, the power structure of the Middle East would be vastly altered to the disadvantage of the West. Egypt has long sought to eliminate Western bases from Arabic speaking lands. With some version of Arab political unity, backed by a nuclear weapons capability, the Red Sea and the Persian Gulf might become Arab lakes. Western air and naval bases at Aden, Bahrein, and Dhahran would probably be lost. Most of the oil resources and transit rights in the region would then come under the control of one central Arab authority. This would pose serious problems for both Western Europe and the United States. Furthermore, Turkey and Iran would be caught between a vastly strengthened Arab Bloc to the South and the USSR to the North. Considering long-standing Russian ambitions in the Persian Gulf area and unresolved disputes between Turkey and Syria and Iran and Iraq, there could be strong pressures for an alliance among Turkey, Iran and Israel supported by the United States. If the Soviet Union and the Arab Bloc chose to cooperate, both Turkey and Iran would be in a precarious position and Western influence might be greatly diminished in the Middle East. The United States might once again be brought into direct confrontation with the Soviet Union, in order to protect Iran and Turkey. Even if the enlarged Arab Bloc chose to play the West off against the USSR, the Western position in the Middle East would be precarious and the dangers of great power confrontation intensified.

UAR acquisition of a nuclear weapons capability would be highly destabilizing and would not only threaten the existence of Israel, but also the Western presence, influence, and economic interests in the region. If the UAR were to make definite and significant progress towards a nuclear capability, Israel, perhaps again with British and French support, would be tempted to launch a pre-emptive attack if other means could not be found to reduce the threat. On the other hand, if Israel were to develop nuclear weapons before Egypt, the Egyptian

government has stated that it would initiate a pre-emptive attack upon Israel. It seems quite likely that visible asymmetrical progress towards a nuclear weapons capability by either party would increase the likelihood of pre-emption. The strike might or might not be successful; it might or might not escalate into full scale conventional war. It is certain, however, that any large scale violence between Israel and the UAR would threaten US and European interests in the Middle East. The dangers of such a contingency arising would be effectively reduced if the NATO alliance were to make clear that it would not tolerate aggression, nuclear or non-nuclear, on the part of either the UAR or Israel. Such a guarantee could probably be made convincing and, at the same time, kept off the global level through the forward deployment of visible and credible air and naval power. The primary problem will be to deter rather than to defend.

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JAPAN *

INTRODUCTION

Although Japan has sufficient technological and economic resources to permit indigenous development of nuclear weapons in the early 1970's, Japanese domestic political trends currently suggest that Japan will not undertake a nuclear weapons program during the 1966-1980 period. The Japanese Conservative party, which has a tendency to deal with security problems in terms of military arrangements, and which therefore might be expected to consider nuclear weapons as a possible solution to them, is gradually losing its majority at the polls. Between now and 1980, it may be replaced by the Japanese Socialist party, which has assumed a neutralist posture, deemphasizing armaments and strongly opposing acquisition of nuclear weapons. But even if the Socialists do not come to power by 1980, a continuation of the current shift of electoral strength in their favor will make it increasingly difficult for the Conservatives to act independently. Not only will the Conservatives find it difficult to override Socialist opposition to legislation, but they will also find themselves forced to heed public opinion, especially in urban areas where their electoral strength is declining most rapidly, and public opinion, although it is gradually coming to accept the necessity of maintaining conventional "self-defense" forces, is strongly opposed to nuclear armament.

Japan's future defense policies will be influenced as much by the actions of other nations, particularly mainland China and the United States, as by its domestic partisan balance. Of course, Japan's future security policies will also be influenced to a considerable extent by the direction and character of her international economic relationships, as well as by US defense positions and assertions of interest along with Chinese actions and intentions. Changes in the international situation will inevitably have domestic repercussions, and changes in partisan positions as well as shifts in the postures of intraparty leaders may well result from it. The emergence of a coherent military or bureaucratic sub-élite favoring rearmament and nuclearization, although not probable in the foreseeable future, is not impossible by 1980.

* By Bradley Richardson as modified by James M. McBride.

Alternative Future Courses

Japan could conceivably follow any one of six alternative courses in regard to the question of development of a nuclear capability. These courses are "pure types," but mutations, combinations and transitional stages are plausible. In each course, potentially critical variables in both Japan's external relations and domestic politics are identified, but in some cases all of the identified prerequisites may not necessarily be present before a particular policy alternative is adopted. The six alternatives can be summarized as follows, in order of their probability of occurrence during 1966-1980:

I. Cooperation with the United States in regard to mutual security and no development of a nuclear weapons capability (NWC).

II. Independence in security matters, a posture of protest against nuclear armaments development in other countries and no Japanese NWC, or--of roughly equal probability--

III. Japanese development of a NWC within a context of mutual security cooperation with the United States;

IV. Independence in security matters and Japanese development of a NWC;

V. Japanese cooperation in regard to security with a country other than the United States without development of a NWC, or--of roughly equal probability--

VI. Japanese security arrangements with a country other than the United States, with Japanese development of a NWC.

Condition I

Cooperation with the United States in regard to security requirements, including perhaps tacit dependence on the American nuclear shield, possibly accompanied by slow increase in conventional rearmament. Relations with China to remain ambiguous, although trade may increase.

Should neither party be ascendant, a bipartisan solution (resulting from the Socialist party's having acquired sufficient power to exercise a veto on policy) could result in a shift toward the position that the Socialist party would take if it came to power.

f. Absence of a coherent, ambitious and articulate anti-élite which could successfully veto policy decisions in favor of developing NWC. Such an anti-élite could be bureaucratic, military or intraparty. A combination of elements from these three origins may emerge in the future, depending upon the character and timing of external threats to Japanese security, but there is no coherent grouping of this kind now.

Probability

The probability of such a condition's occurring (or continuing, since in several dimensions this is the present status quo) is high during 1966-1971, although changes in China's posture toward a more belligerent or aggressive position could contribute to a change in the direction of Condition III (below).

Continuance of Condition I beyond 1971, the first year in which the mutual security treaty between Japan and the United States may be abrogated, will depend on the existence of the described preconditions, especially those concerned with the internal partisan balance. It is felt that a change will probably not come before 1971, inasmuch as Japan would be unwilling to reject current international obligations because of her desire to maintain a good reputation overseas.

Implications for the United States

United States response during this period, assuming she wants a non-nuclear Japanese ally, should be one of diplomatic and economic cooperation and accommodation. In particular, alterations in existing and future economic relationships between Japan and the United States which are detrimental to Japan must be avoided. The Conservative Party is especially sensitive to economic trends, as the Socialist Party in power might also be. Tolerance of Japanese trade overtures and some increases in trade with mainland China would also be necessary, both to respect Japanese independence and to acknowledge the widely shared desire in Japan for increased mainland trade.

In the area of military policy, the United States must avoid creating incidents which embarrass the present regime, especially those which tend to make the regime look less than independent. In recent years, for example, the United States has forced visits by nuclear powered submarines upon the Japanese government and used Japanese bases as emergency landing fields for aircraft which were in some cases destined for employment in hostile actions outside Japan. Consideration should also be given to the long-run desirability of phasing out American military presence in Japan proper, with emphasis on joint maintenance of naval and air facilities for mutual defense. Current logistical facilities might remain, utilizing as large a civilian component as feasible for management.

Reconsidering America's role in Okinawa may, in long-range terms, also prove desirable. Permitting limited Japanese efforts to develop Okinawa's economy might have the dual result of placing the onus for Okinawan economic conditions on Japan and partly neutralizing stronger advocates of Okinawa's return to Japanese sovereignty.

Demonstrations of United States military flexibility and effectiveness, such as were made in Europe, might be desirable depending on how the Japanese government received such actions.

Condition II

Independence in security matters, limitations on the role of the Japanese Self Defense Forces, neutral diplomacy and an anti-nuclear posture of protest and moral superiority in international relations, possibly accompanied by the establishment of diplomatic relations with mainland China.

External preconditions

- a. No perception of non-negotiable threat to Japanese security.
- b. Redirection of present trade patterns to the point where a more independent posture toward the United States is seen as maintainable, or acceptance of the view that policy can be divorced from other relationships. The latter course might be more acceptable to the Socialist party, should it come to power, than to the present Conservative party which is closely allied with business interests (and therefore especially sensitive to implications of trade relationships).

c. Acceptance of the position that Japan can achieve status by peaceful means, such as technological achievements, economic development, foreign aid, moral leadership, or by acting as a bridge between East and West. (Japan's mediation between the United States and China, for example, is advocated by elements within both parties at present).

d. A feeling that the United States cannot be depended upon to defend Japan, or that American efforts cannot meet a change in power relationships or changes in military techniques, or a concern that continued military relationships with the United States may increase Japan's vulnerability in East-West or other hostilities.

Internal preconditions

e. Socialist party ascendancy without altering its present posture of seeking a neutral, independent Japan opposed to nuclear armaments in general opposed to Japan's having a NWC in particular.

f. Stalemate between the present majority parties, due to shifts in their respective electoral strengths (a trend which has already begun) in which the position outlined in e. (above) is forced upon the Conservative party, which would also be increasingly sensitive to especially urban elements of public opinion which favor such a policy.

g. Absence or relative weakness of an anti-elite desiring increased armaments and development of NWC.

h. A factor which might well be present, although not necessarily critical to final decisions, would be continuation of the present fragmentation of control over nuclear energy and rocketry development.

Probability

Such an eventuality is less probable at present than that outlined in Condition I. But, Condition II is a plausible transitional or terminal phase in terms of a fifteen year projection, depending on the nature of the internal partisan balance, the partisan policy positions, China's future actions and Japan's already expressed desire for greater independence.

Implications for the United States

United States policy in such an event should be anticipatory, assuming she desires maintenance of Japanese "friendship." Although the American economy is not controlled in such a way as to suggest a possibility of an artificially created adaptability to Japanese export needs, and even though the world market structure might encourage gradual redirection of Japan's trade, United States government efforts--especially in the investment field--might minimize or delay a Japanese tendency toward option for a completely neutral posture. Avoiding market contraction in other areas of American influence would be similarly important.

Military policy should also anticipate such an eventuality, which would probably include a Japanese request to abandon current United States bases in Japan. American access to bases in Japan might be sought through means other than a mutual security treaty.

The theoretical value of a neutral Japan also cannot be overlooked, particularly as military technology reduces dependence on overseas bases.

Condition III

Japan adopts a program leading to NWC along with expansion or renovation of conventional forces, with the context of a U.S. -Japanese mutual security arrangement, according to which joint and/or independent action is provided. Relations with China might or might not reach formal diplomatic intercourse.

External preconditions

- a. Increasing recognition of the existence or possibility of a threat to Japan's security for which a NWC appears desirable and/or effective.
- b. Existence of a feeling that Japan must continue to cooperate with the United States for either economic or security interests. American military presence or potential presence would have to be seen as reliable, and effective, and not as contributant to Japan's increased vulnerability.
- c. Condition a. (above) might be accompanied or replaced by the opinion that a NWC was desirable in accordance with Japanese status ambitions or goals of influence or hegemony in foreign areas.

Internal preconditions

d. Alteration of the present policies of the two major parties, including possibly revision of relevant portions of the Japanese Constitution, as the result of (i) domestic reevaluation of the security problem at the time of the "expiration" of the present Mutual Security Treaty in 1970; (ii) growing sense of self-confidence or independence; (iii) the challenge of a sub-élite (military or bureaucratic) which articulates a demand for such a posture as reaction to foreign events; or (iv) a combination of two or more of these conditions.

e. Alteration of attitudes among large sectors of the public, or adoption of the feeling that the public mood should be overridden for practical or other considerations.

Alteration of domestic economic priorities, which at present allot only 1.1 per cent of gross national product to defense,¹ in favor of larger allocations to armaments and development of a NWC.

Probability

The probability of Japan's adopting such a course is low at present, but will rise during the projected fifteen year period. Public opinion is gradually accepting the role of the present self-defense forces; parties opposed to Japan's nuclearization at present are participating (although in a fragmentary fashion) in discussions of the long-range security problem.

Implications for the United States

American response will depend upon the priorities she assigns to preventing nuclear proliferation and maintaining mutual security arrangements with Japan. If nonproliferation ranks higher, anticipatory guarantees of United States intentions and ability to extend its nuclear shield to Japan might have some effect on Japanese decisions as could also (in a different context) American support of a Japanese role as a moral power opposing nuclear weapons. Continuation of mutual economic interdependence would also be desirable, and domestic measures to encourage American investment in Japan may be particularly appropriate.

¹ The Military Balance, 1965-1966, London: The Institute for Strategic Studies, 1965, p. 43.

However, once the Japanese desire for its own program became paramount, other priorities may override United States concern over proliferation, especially since Japanese desire for NWC will probably follow nuclear proliferation in other areas. Continuation of Japanese-American cooperation on security matters, therefore, requires United States agreement to Japanese nuclearization.

Military cooperation with Japan, including supply of military technology and close cooperation with the Japanese military could also preserve the alliance and possibly enhance the domestic role of a Japanese military elite friendly to the United States. Such a posture could be reinforced by examples of American military preparedness, willingness and flexibility which would impress the Japanese government and military with the effectiveness and reliability of American military forces.

As Japan assumes an increasingly independent role in regard to defense capability it will probably be desirable to considerably increase United States intelligence activities concerned with Japanese military and industrial developments.

Condition IV

Japan opts for an independent armaments buildup and NWC, accompanied possibly by a Japanese bid for an independent role vis-à-vis the Eastern and Western blocs and/or Japanese hegemony in some parts of Asia.

External preconditions

- a. Perception of an external threat which is not shared by another power, or in regard to which dependence upon or cooperation with an additional power is not seen as reliable or effective.
- b. Decision to assert Japanese influence in southeast Asia or north-east Asia where NWC has some symbolic value or actual applicability.
- c. Existence of an opinion that NWC is desirable in its own right, due to a desire for status, especially after proliferation in other areas.
- d. Redirection of foreign trade and credit relationships, or existence of a feeling that these are not so important as, or are separable from, security problems or higher international status.

Internal preconditions

e. Capability to divert resources to development of NWC and expansion and modernization of conventional forces. This is not seen as feasible at present, but will be possible particularly in the mid-1970's after present social capital expansion projects are well underway.

f. Changes in public opinion regarding the use of nuclear weapons, or use of practical explanations for overriding public opinion especially if there is a foreign threat.

g. Adaptation of partisan policies toward a foreign threat, or to the demands of a domestic intrapartisan elite or extrapartisan group which favors development of a NWC on its own right or expansion of Japanese overseas influence by such means.

Probability

Probability is low in the short run, but it increases toward the end of the projected period with probable Japanese reactions to proliferation elsewhere in a context of internal demands for status and total independence. Chinese policy may not produce a catalytic threat, however, and economic ties with the United States could remain important enough to influence Japanese decisions in favor of United States wishes.

Implications for the United States

United States action, assuming a paramount desire to prevent proliferation and aggressive uses of NWC, should be anticipatory. An agreement limiting the use of nuclear arms for defense or Japanese cooperation in multilateral control pacts, should be sought.

At the same time, efforts should be made to preserve a maximum area of mutual interest, particularly in the area of economic relationships.

Militarily, the United States should also anticipate logistic and technical consequences of losing bases in Japan or Okinawa and should strengthen intelligence efforts in Japan.

Condition V

Japan decides against developing NWC and concludes a security treaty with a country other than the United States--presumably China.

External preconditions

a. A redirection of trade and economic relations in favor of a country other than the United States, or away from the present high degree of dependence on America, or a feeling that political and security arrangements can be made without regard to economic patterns. This trend is not probable considering the degree of Japanese dependence on the United States, but a more balanced pattern of trade could lead to a shift in the Japanese estimate of the critical quality of trade with the United States or any other area. Moreover, a regime less oriented to business than the present one might assign different priorities.

b. Willingness to accept the military superiority of a power other than the United States, with Japanese claims to status being asserted in the fields of economic development or technology. Perhaps divided spheres of influence would accompany such a security arrangement.

c. Saliency of a point of view that cooperation with the United States was not reliable or effective against a threat to Japan's security, or that a relation with the United States increased such a threat while cooperation elsewhere decreased it.

d. Substantial increase of Chinese (or another power's) strength vis-à-vis the United States, either through acquiring a sphere of influence in continental and insular southeast Asia or northeast Asia, or increasing conventional and nuclear weapons capability.

Internal preconditions

e. Modification of present internal policy positions which see China principally as a potential market and possible future diplomatic partner in favor of one which is favorably disposed to close cooperation with China. This could also be accomplished by intrapartisan processes or the coming to power of a Chinese oriented (or other country oriented) élite. Certain sub-élites are of a disposition which could eventually take this direction but they are isolated and fragmented. Nor is their leadership particularly

distinguished or integrated into the main streams of succession. The result is that such a change is not probable for most of the period under study.

Probability

The overall probability of such a condition is low for the entire period. Although trends in external events may take the required direction, it is not probable that they will shift the required degree without a Japanese desire for independent security arrangements. Moreover, the Chinese economy's future is yet to be determined, and may well preclude an expansion of Sino-Japanese trade of significant proportions.

Implications for the United States

United States response should be anticipatory, as suggested in the cases of Conditions III and IV. Should Condition V occur, diplomatic policy should be exploratory with economic relationships and communications being maintained at a maximum. Demonstrations of a willingness to resume prior arrangements or create new areas of agreement would be appropriate.

Military policy should stress demonstrations of American flexibility and effectiveness and the goals of United States military policy in Asia should explicitly include an interest, friendly or otherwise, in Japan.

Condition VI

Japan develops a NWC and conventional armaments while cooperating with another power, presumably China, in Asian security matters and possibly in spheres of influence.

External preconditions

- a. Perception of a substantial decline of United States interest, influence, effectiveness or dependability in the northeast Asia area or in other areas critical to Japan.
- b. Japanese desire for status or power accompanying independent conventional or nuclear armaments, possibly related to a desire for assertion of Japanese influence or hegemony over a non-Japanese area.

c. Substantial redirection of economic relationships, or belief that this will occur in the future, or existence of the opinion that other priorities are separable or overriding.

d. Perception of a threat to Japanese security, or a potential threat, of such dimension that some form of cooperation is seen as the most effective defense. Or, cooperation is seen desirable in regard to existing or posited economic trends, or in support of agreement regarding spheres of influence of economic or other nature.

Internal preconditions

e. Readjustment of present partisan positions, either through response to external conditions or through emergence of a new intrapartisan or extrapartisan elite disposed to such a policy.

Probability

The probability of such an event's occurring is very low during the first part of the period in question, but its possibility may increase near the end of this period.

Implications for the United States

United States response should be similar to that outlined in Condition V, with the exception that great emphasis should be placed on anticipatory intelligence collection and assigning target areas in Japan proper.

SUMMARY

While Japan has the economic and technological resources needed to develop an independent nuclear weapons capability, it is not considered likely that the Japanese will want one by 1980. In order for them to acquire their own nuclear force, the following preconditions seem necessary:

1. Revision of the relevant portions of the Japanese Constitution;
2. Alteration of the present policies of the two major political parties (a) as a response to an external threat or (b) as a result of Japanese desire for enhanced influence or hegemony in Asia (alternatively the displacement of the two major parties by a new political elite);

3. A change in the Japanese public attitude toward the possession and use of nuclear weapons;

4. An increase in the defense budget (currently only 1.1% of the gross national product and 8.4% of the total central government expenditure).

Should the Japanese choose to develop a nuclear weapons capability, they would handle their security problems during the developmental period in one of three ways:

1. Through expansion or renovation of conventional forces within a US-Japanese mutual security arrangement, which would permit either joint or independent action;

2. Or through an independent armaments buildup, accompanied possibly by a Japanese bid for an independent role vis-a-vis the Eastern and Western blocs and/or Japanese hegemony in some parts of Asia.

3. Or through a conventional armaments buildup while cooperating with another power, presumably China, in Asian security matters and possibly in spheres of influence.

Should Japan decide to join the nuclear club, it is most likely that she would do so while maintaining a mutual security arrangement with the United States and least likely that she would do so while cooperating with China, or another Asian power. The determining factors will be the status of US-Japanese economic ties, future Japanese assessments of the credibility of US guarantees against external threats (nuclear threats in particular), and US flexibility or inflexibility in dealing with the spread of nuclear weapons in Japan.

INDIA-PAKISTAN*

INDIA

The Motivation for Acquiring Nuclear Weapons

It appears likely that India will shortly become a nuclear power.¹ Despite the military threats of varying magnitude posed by Communist China and Pakistan, the primary motive for nuclear development appears to be a concern for national prestige rather than military necessity. The Indian birth rate remains unchecked and the economy languishes under a queer mixture of over bureaucratization and under-direction. In calendar year 1964, the Indian per capita GNP declined one percent.²

In 1962, the Peoples Republic of China shattered the image of India as the leader of the uncommitted world. The Chinese proved their military superiority while exposing the humiliating fact that India was militarily incapable of defending its own territory and then withdrew on their own initiative. A great deal of the national concensus in India was related to its self-image as a great power. Subsequent events, such as the death of

¹Marquis Childs, Washington Post, December 15, 1965. CBS Radio news release, March 10, 1966, in which the Indian government was said to be informing top nuclear scientists to begin work on the scientific development of nuclear weapons, deferring procurement decisions until a later date.

²Indian Department of Census and Statistics, "news release," cited in UPI dispatches, New Delhi, February, 1965.

* By Arthur Shantz.

Nehru and the relatively short administration of Premier Shastri prevented renewal of executive initiative in dynamic or distinctive leadership. Loss of international prestige and the price of a viable defensive force precipitated Indian concentration upon domestic problems and dependence upon US economic and military aid.

The current dependence upon the United States for foodstuffs and military aid is embarrassing to the government of India. Economic, language, and other communal problems of Indian state politics are now buffeting a disillusioned and disorganized national government. India has turned inward. The government of Mrs. Indira Gandhi must reassert a national identity or resort to coercion to control the centrifugal forces within the nation. Before it can speak on behalf of the underdeveloped world, India must rediscover its own voice.

National cohesion could be strengthened either by stimulating awareness of the threat of external enemies, by a political reassertion of Indian views on problems of nation-building and ideology, by rapid and dynamic economic progress, or by the acquisition of nuclear weapons.

The Indian solution for development of the uncommitted world and the Indian solution for combating the threat of Pakistan were both utilized by the Nehru government in order to stimulate national loyalty. Neither approach is applicable at the present time, nor will they be applicable as long as the pressing need for massive amounts of US economic and military aid continues; economic and military dependence upon the United States forces India to be acutely aware of the political sensitivities of the United States and thus limits Indian freedom in dealing with the neutralist countries and Pakistan. Moreover, close association with the United States makes it difficult for India to maintain its neutralist identity and thus tends to isolate India from the uncommitted world. The reassertion of Indian political solutions for pressing world problems affecting the underdeveloped world involves confronting the interests of the United States on highly inflammable and complex issues. Such initiatives are unlikely as long as the imperative need for massive American aid remains.

Rapid economic development requires either private exploitation, public coercion, or foreign aid. The vociferous public commitment of the Indian government to parliamentary democracy and social welfare schemes precludes all but the last source of capital accumulation, barring radical political change.

An Indian decision to emphasize Chinese Communist hostility and to simultaneously embark upon prestigious nuclear weapons development is reasonable within India's apparent international environment and it carries an additional advantage in that it will stimulate national consciousness in the only way left open to the government. Moving from consideration of the motives for acquiring nuclear weapons, which we believe to be crucial in predicting attitudes affecting probably nuclear behavior, it is now possible to assess the probable application of nuclear threat to further the established international interests of the state.

Nuclear Behavior and Indian International Interests

Kashmir remains India's foremost international problem. A nuclear India could continue the present division of Kashmir as long as it could maintain the credibility of its nuclear deterrent. Of course, maintenance of the status quo would also require the ability to clearly establish Pakistani responsibility for indirect aggression, no small feat, as well as the ability to convince the great powers of Indian willingness to utilize available resources to maintain the status quo in Kashmir. If this could be done, the pressure upon Pakistan to accept an Indian fait accompli would be insurmountable, at least until diplomatic or technical efforts could remove the credibility of the Indian deterrent. Relations between India and Pakistan would remain strained but relatively more stable.

In Southeast Asia and Africa, Indian interests are more intangible than those arising out of assuring the security of the state. These lesser interests are related to the past and to the vague future. In the distant past, Indian cultural influences firmly established themselves throughout peninsular Southeast Asia as far east as the borders of present day Vietnam. In the recent colonial era of the 19th century, Indian immigrants followed the European conquerors throughout Southeast Asia and East Africa, supplying coolie labor and engaging in mercantile enterprises.

³For a succinct introduction to the divergent philosophical tenets of nationalism which Kashmir has come to exemplify in the larger contest between India and Pakistan, see Josef Korbel, Danger in Kashmir, (Princeton, New Jersey: Princeton University Press, 1954), pp. 32-44.

Substantial numbers of Indian merchants, money lenders, and unskilled laborers still remain in former British colonial possessions. These people, like the Chinese are significant minority groups in several states. They are economically more aggressive than the indigenous population, distinct in physical appearance and ambivalent in their loyalties. Since Independence, the government of India has expressed great interest in their welfare.

India's possession of nuclear weapons would greatly enhance its prestige and political influence among the countries of Southeast Asia and East Africa but it would not produce any binding political or military commitments within the 1980 time frame. However, if Indian influence in Africa and Southeast Asia can be maintained until the Indian economy becomes more fully developed, these areas would be a valuable economic resource. Although having no direct influence, nuclear weapons might aid in the preservation of Indian prestige until economic influences could exert themselves.

Indian relations with the Peoples Republic of China are openly hostile. The possession of nuclear weapons by the government of India would not reduce Chinese hostile intentions but might stabilize the relationship through mutual deterrence. Chinese expansion into Southeast Asia will not be directly affected by Indian nuclear weapons. However, to the extent that these weapons raise Indian national prestige, they will have an indirect impact upon the ability of China to assume sole leadership of the underdeveloped world. An India-Japanese alliance has been mentioned as a possible long range aim of US policy, but such speculation is too long range and contingent to be discussed here.

Soviet-Indian relations would be largely unaffected by the latter's possession of nuclear weapons. The Soviet Union might anticipate that a nuclear India would be less dependent upon the United States for military aid and security vis-a-vis the Peoples Republic of China. To the Soviet Union, a nuclear India might also appear to be a more desirable counterweight to expanding Chinese influence than the United States. Possession of nuclear arms would, of course, make India even more desirable as a partner in a long range alliance. The chaotic nature of Indian internal politics might reinforce Soviet proclivities along lines suggested above because of the possibilities for Communist solutions, a la the Soviet Union, in the not too distant future. There are no outstanding strategic

contests between the two countries. It is doubtful, therefore, that Indian possession of nuclear weapons would be perceived as affecting the strategic security of the Soviet Union.

Implications for the United States Strategic Position

The most obvious and immediate implication of an Indian nuclear capability is that United States influence in the areas of national development and defense among nations of the underdeveloped and uncommitted world would decline. This would not be a result of any increased capacity on the part of the Indian government to assume such responsibilities. Rather, it would reflect a resurgence of Indian self-confidence and a revitalized diplomatic offensive for "Asian" or "neutralist" solutions to political problems. It would represent a conscious Indian effort to maximize their own influence internationally (both within and without the underdeveloped world) by attempting to form and to speak for a coalition of sovereignty-conscious, small developing economies faced with similar problems and fears.

The displacement of a considerable part of United States influence in the underdeveloped world through increased Indian influence is not necessarily to the disadvantage of the United States. If Indian-American relations remain friendly, the ability of India to more efficiently harness indigenous traditional values and anxieties among the less developed world to programs of nation-building would produce stability in these regions and decrease their receptivity to Communist influences. Both of these outcomes are in the long range interests of the United States. The central issue in this approach is whether a conflict of interests between the United States and India can be peacefully resolved in a manner which preserves over-all cooperation and American identification with Indian success.

Indian-American cooperation is fostered primarily by the strategic problem of containing Chinese influence, economic and military. In Indian terms this means the creation and maintenance of a defense establishment and/or alliance commitments capable of defending India against the Peoples Republic of China. The government of India, if unopposed by the United States in its campaign for a position of leadership in the underdeveloped world, will not be inclined to sever its American ties in the strategic security context.

Assuming that India's economy and nuclear technology will not permit her nuclear arsenal and strike capability to surpass those of China by 1980, Indian severing of United States strategic security ties would indicate self-delusion that international influence among nations mutually isolated by underdeveloped economies represents genuine international power. The Chinese might not be as lenient with a slow learner the second time around.

A second factor which would tend to promote over-all cooperation between the United States and India is American sympathy for the tremendous problem faced by the latter in furthering its national development while maintaining democratic values and institutions so ardently advocated by the United States. At least part of the United States concern for and commitment to Indian development stems from India's apparent devotion to parliamentary democracy. The luxury of individual freedom, in spite of the strain produced by programs for economic development, is permitted largely by economic aid and assistance from the United States. As long as the United States remains convinced of the value of this aid, the relationship of mutual dependence will not be altered, even by Indian possession of nuclear weapons and a relatively more powerful international role.

Pakistan represents a special problem in the Indian-American relationship. American policy to avoid pressing India into agreeing to the plebiscite in Kashmir, which Pakistan is demanding, fosters Indian favor and consequently tends to increase American influence in India. On the other hand, American military aid and security commitments to Pakistan, which enable Pakistan to maintain the status quo in the Kashmir hostilities, do not foster Indian favor and consequently tend to decrease American influence in India.

Yet, Pakistan does have a recognizable security problem with India. A close relationship with India would probably prevent the United States from supplying anything but the most formal commitments and rudimentary assistance to Pakistan. Such insecurity would attract Chinese inroads which would not be in the interests of the United States. To avoid a pattern of action-reaction in the formation of international commitments and alliance, the United States could propose a Locarno-type solution to Pakistan's legitimate security problems.

Thus, the acquisition of nuclear weapons will initiate a new series of Indian relationships with the rest of the world, greatly enhancing Indian prestige and domestic stability. Whether or not Indian prestige and stability improve its relationship with the United States depends almost entirely upon the latter's ability to accommodate enlarged Indian interests and not upon any significant strategic threat to this country from the Indian nuclear arsenal.

PAKISTAN

The Motivation for Acquiring Nuclear Weapons

Pakistan has been largely dependent upon American aid for economic development and military security; however, the American intention of making India an Asian bastion of democracy has brought about a noticeable cooling in American-Pakistani relations and increased ties between Pakistan and the Peoples Republic of China. Pakistan has sought ties with China in a search for support of Pakistan's position on Kashmir.

Pakistan has an extremely serious security problem with the countries around it. The most populous portion of this bifurcated state is militarily indefensible and over 1,000 miles by air from the national capital in West Pakistan. Between East and West Pakistan lies India with which Pakistan has been engaged in hostilities over Kashmir. Pakistan also shares borders with Communist China. Sandhurst-educated President Ayub Khan of Pakistan has no illusions about Communist China, but the sequence of events beginning with the Chinese invasion of India in 1962 and concluding with the superpower-imposed Tashkent Agreements in early 1966 has convinced his government of the importance of Chinese ties for maximizing pressure against acceptance of the status quo in Kashmir.

Pakistan was allied with the United States; however, its membership in CENTO and SEATO was designed primarily to maximize US ties as security against India. The unwillingness of the United States to

support the Pakistani position against india was clearly shown in the 1965 Kashmir crises.⁴ Because of this, both CENTO and SEATO are largely dead letters from the standpoint of Pakistan.

It is doubtful whether Pakistan has any great power pretensions. However, a distinctly defensive motive for developing nuclear weapons is suggested by the following comparative data.

Pakistan-India Military Postures 1965⁵

	<u>Pakistan</u>	<u>India</u>
Population	100 million	480 million
Army	230,000 men in 8 divisions	825,000 men in 20 divisions
Navy	7,700 men with 26 fighting ships	16,000 men with 40 fighting ships
Air Force	17,000 men with 200 planes	28,000 men with 500 planes
Defense Budget	\$269 million per year	\$2,000 million per year

Nuclear Behavior and Pakistani International Interests

As the previous material indicates, the strongest motive for Pakistani acquisition of nuclear weapons is national security against India and the maintenance of the Kashmir claims. A nuclear Pakistan and a non-nuclear

⁴On September 15, 1965, President Ayub Khan, in a press conference in Rawalpindi, called upon the United States to exercise its "enormous influence" in settling the Kashmir crises. On September 27, Secretary of State Rusk met with Pakistani Foreign Minister Zulfikar Ali Bhutto at the UN in New York. "A fresh Pakistani attempt to secure specific United States support for a plebiscite in Kashmir has been rejected by . . . Rusk." The United States not only refused to support a withdrawal of both armies and a UN-sponsored plebiscite, it also was reported to have made it clear to Pakistan that it would not resume economic or military aid until there was compliance with the cease-fire, and a return to the August 5 lines, as required by the September 20 Security Council resolution. Manchester Guardian, September 29, 1965. The United States also announced the shipment of 500,000 tons of wheat to India on September 27, 1965.

⁵U. S. News and World Report, September 20, 1965.

India would add substantial weight to Pakistan's demand for a plebiscite to determine the fate of Kashmir. A nuclear India and a nuclear Pakistan would merely keep Pakistan's claims alive while heightening the impetus for a negotiated settlement. A radical shift in the present leadership of Pakistan and a greatly increased sense of isolation from the Western powers would be necessary before Pakistan would actually attempt to harness nuclear weapons to a military program for retaking Kashmir from India. As long as substantial American aid continues to Pakistan, the incentives for such a militant posture will remain disproportionate to its obvious losses.

Nuclear weapons would make Pakistan less dependent upon the diplomatic support of the Peoples Republic of China. The primary value of PRC support is avoidance of international isolation during the acquisition period. China cannot offer Pakistan either sophisticated military armaments or substantial economic aid. Pakistan supports China today because China supports Pakistan's position on Kashmir. A nuclear-armed Pakistan would be inclined to strengthen economic ties with the United States assuming that it has succeeded in remaining free of substantial communist internal influence and providing that American opposition to nuclear proliferation has not blinded us to Pakistan's real security problems and alienated its government to American appeals. An obvious means of obtaining such an outcome would be to continue economic aid to Pakistan during the nuclear acquisition period. In the absence of American economic aid and influence, Pakistan might be forced to adjust its governmental system along lines dictated by the Chinese and made necessary by the cost of nuclear development imposed on top of the cost of national development.

Possessing nuclear weapons Pakistan would no longer find membership in CENTO and SEATO necessary although the former's connections with Islamic nations would provide some justification for its preservation, especially as a means of avoiding international isolation as a result of "unpopular" nuclear decisions.

Soviet relations with a nuclear Pakistan would remain "correct" and basically unchanged, largely due to the latter's continued concentration upon India. In the long run, Soviet relations with Pakistan will be determined by the outcome of Soviet efforts to align with India. An Indian reaction to Soviet subversive potential might force the Soviet Union to turn to Pakistan. For this reason, the Pakistani "option"

will be preserved by the Soviet Union regardless of Pakistan's nuclear policy, just as India will diplomatically preserve both Soviet and American options to prevent excessive reliance upon either state.

Implications for the United States Strategic Position

Because of the American commitment to developing India, American influence in Pakistan during the period of India's nuclear-weapon development will decline in comparison with that of the fifties. As American influence wanes during this period, Pakistan will increase Communist Chinese ties in order to strengthen her position in dealing with nuclear-armed India regarding the Kashmir dispute. However, once Pakistan acquires a nuclear capability, PRC influence would wane providing Pakistan has succeeded in remaining free of substantial communist internal influence. If this should be the case, American influence in nuclear-armed Pakistan may revive, not for security reasons, but rather because of the benefits to be derived from American economic aid for internal development. Of course, the emphasis of United States-Pakistani relations in the post-nuclear environment will depend upon the success of the United States in cultivating Indian ties. Like the Soviet Union, the United States will attempt to preserve future relations with Pakistan as an option in South Asia should it fail in aligning its interests with those of India.

It is obvious that American nuclear security commitments in South Asia will noticeably contract in the wake of nuclear weapons acquisition by both India and Pakistan.

ARGENTINA AND BRAZIL*

Of all the countries on the threshold of nuclear proliferation, Argentina and Brazil seem least likely to develop nuclear weapons within the 1980 time frame. This is largely because of three factors: their ambiguous impact upon domestic politics, the domestic political emphasis upon development, and the dominant economic and political influences represented in Latin America's pax Americana. The next two decades will produce the greatest change in these three factors in Argentina and Brazil because the size of each economy is large enough to permit the two states greater freedom of action in domestic politics vis-à-vis the United States. The question of how each of these countries would behave with nuclear weapons is, therefore, really a function of the kinds of forces, both internal and external, which could produce sufficient political demands for their acquisition.

Perhaps the first observation which one can make about the ambiguous impact of nuclear weapons in Brazilian and Argentinian domestic politics, the domestic political emphasis upon economic development, and the dominant economic and military influence of the United States, is that the three factors are interrelated and imprecise indicators of the same phenomenon; namely, national development. An evolutionary change in one factor over the next two decades would indicate similar changes in the other two concomitant with the direction of change in the first. Finally, the deliberate policies of statesmen are willful expressions of the changing nature of fundamental socio-political demands being made upon them. Bringing these stands together--the three interrelated phenomena of national development, evolutionary change, and fundamentally different political actions in response to this change--suggests a means of analyzing the kinds of evolving conditions necessary for nuclear proliferation, as well as the resultant foreign politics, of Argentina and Brazil.

The economic relationship of Brazil and Argentina to the United States in one factor indicative of national development relevant to probable nuclear policies of the two countries. Nuclear weapons development could not take place in Brazil today because of that country's economic dependence

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upon the United States.¹ Similarly, American direct investment in Argentina totalled 828 million dollars in 1963.² As long as this vulnerability to US economic pressure continues, the United States will have a meaningful lever to constrain nuclear acquisition policies. Thus, nuclear weapons acquisition cannot take place in Argentina or Brazil until both countries become sufficiently developed economically to enable them to reduce US influence upon policy decisions.

The problem is to indicate the types of conditions under which a nuclear weapons capability could be developed, and, therefore, the probable consequences of such a policy. First, both countries would have to undergo a considerable period of self-sustained economic growth in order to diminish the impact of curtailed US economic assistance should their policies provoke the displeasure of the United States. Moreover, at the present time the desire for such a nuclear capability is too diffuse for either government to pursue such a course of action; i. e., indigenous nuclear weapons development.

DOMESTIC POLITICAL CHANGE

Other than economic growth, a factor which would create a reduction in US economic and political influence would be a radical change in the Argentine or Brazilian governments' political posture toward the United States, such as that created by a revolution or coup d'état. Without commenting as to the probabilities of either event, one need note only that the interests of a revolutionary government, or one created by a coup d'état, could be radically different from those currently expressed in the existing government coalitions of Argentina and Brazil.

¹ SOME ECONOMIC INDICATORS OF US INFLUENCE
July 1, 1945 - June 30, 1962

	% of US aid to L.A.	Grants & Credits (millions)	Total Grants (millions)	Military Grants (millions)	(a) Credits (millions)	(b) Am. Direct Invest (millions)
Brazil	25.19%	\$2,081	\$357	\$264	\$1,624	\$1,128

Statistical Abstract of Latin America 1964, Latin American Center (University of California: Los Angeles, 1965), pp. 114-115 and p. 116.

² Ibid.

A revolutionary movement in the process of acquiring political power would polarize both the domestic and international climates of opinion and, therefore, would be largely unresponsive to external economic pressures, which it could characterize as anti-nationalistic expressions of imperialism. By so doing, it would probably become the recipient of economic aid from one or more of the Communist countries. Two such radical anti-status quo movements already exist in the Communist-led agrarian revolt in Northeast Brazil and among former Peronist labor organizations in Argentina. The probability of either group being able to seize power presently is low, but it will increase if their demands cannot be incorporated into the existing political system.

If such a group came into power in either country, its political isolation and fear of the United States might produce strong demands for an independent nuclear deterrent. Such weapons could not be successfully introduced from abroad--if Cuba is any guide to the tolerance levels of the United States in regard to foreign nuclear armaments in Latin America. They would, therefore, have to be developed indigenously. Failure of the United States to militarily intervene in such a situation would probably be a result of the magnitude of such an operation in terms of resources required to successfully carry out the military destruction of the existing regime, not that required to destroy its nuclear deterrent. Such weapons would be ineffective against guerrilla or indigenous anti-government forces. The stability of the regime would depend upon its success in gaining popular support for its programs and in containing counter-revolutionary forces.

One other possibility exists in such a situation. Aside from arming those states surrounding a nuclear Argentina or Brazil in order to counter the expansion of its influence, i. e., create vested political interests in neighboring countries to oppose such expansion, the United States might choose to supply and sponsor a Latin American military effort by the major political rival of the state (Argentina in the case of Brazil or Brazil in the case of Argentina) in conjunction with, or distinct from, the OAS and/or insurgent support. The use of an indigenous nuclear deterrent, in such a case, would presumably have some significance, but the significance would be dependent upon the perceived US willingness to retaliate with nuclear weapons in support of the sponsored force, rather than upon the magnitude or possible success of the intervention.

In short, the acquisition of nuclear weapons by a revolutionary regime in either Argentina or Brazil would not have decisive significance as long as the United States chose to perceive the situation as Communist penetration into this hemisphere. It is here contended that it would be very difficult for the United States to view a revolutionary regime in Argentina or Brazil in any other manner, and as a result, the willingness of the United States to support anti-government operations and the threat of US nuclear retaliation in response to the use of indigenously developed Latin American nuclear weapons would be greatly increased. Under such circumstances, only an extremely irrational government would dare commit its limited nuclear resources against US-backed forces.

A coup d'état offers far greater chance of successful nuclear weapons development in support of an anti-American posture. This is because cold war implications, which largely determine US willingness to intervene, could be more easily minimized. Although the United States would probably still not tolerate nuclear transfers from a Communist government, nuclear transfers from a government like France would be far more difficult to oppose effectively. The momentous implications of such a transfer, in terms of weakening US influence in Latin America, and the American hostility which this would produce minimize the likelihood of such an effort, at least in the foreseeable future.

The active political role of the military in Brazil and Argentina,³ combined with growing nationalism and thwarted political development, makes a coup d'état appear far more likely. The resultant demand for nuclear weapons is weakened, however, less by perception of threat than by nationalistic aspirations for a great power role in Latin America. As a result, the priority attached to such weapons would be considerably less, such weapons being merely one of a mélange of indicators of national well being and international assertiveness. An examination of previous military involvement in the politics of these two countries indicates that they are motivated more by domestic socio-political interests concerned with dividing the state's economic resources (reform-reactionary alignments) than by a desire to pursue international influence or expansion per se. These two factors would further mitigate US desires to intervene by placing Latin nuclear weapons development in a perspective of evolving national growth and diminishing American influence rather than in one of stark choices of being "in" or "out" of influence.

³ For a succinct summary of military influence in the domestic politics of Brazil and Argentina, see Edwin Lieuwen, Arms and Politics in Latin America (Praeger: New York, 1961), pp. 66-78; and John J. Johnson, The Military and Society in Latin America (Stanford University Press: Stanford, 1964), pp. 93-134.

The military of both Argentina and Brazil are acutely sensitive to foreign aid. They are also divided by both intra- and inter-service rivalries. Younger officers are more attuned to demands for social reform, partly as a function of broader recruitment policies and partly as a result of their own perception of the political groups in which they would wield the most influence and prestige. Recruitment practices have created an ideological spectrum for inter-service rivalries as well, lending additional significance to appropriations squabbles.⁴ Selective military aid programs in concert with these ideological implications surrounding military appropriation struggles would greatly reduce a military junta's freedom of action in assigning the creation or deployment of nuclear weapons to any one service. For these reasons, political compromises would be built into the nuclear weapons program with the result that several triggers--not all of them equally reliable--would have to be pulled to create or employ nuclear weapons at any given time.

INTERNATIONAL IMPLICATIONS OF DOMESTIC POLITICAL CHANGE AND NUCLEAR ACQUISITION

On a purely inter-state level of interaction, the acquisition of nuclear weapons by Argentina or Brazil would not automatically trigger a reciprocal demand for such weapons on behalf of the other. This is largely due to the more than 100 years of relatively peaceful coexistence of Argentina and Brazil under the pax Americana. Thus, there is no existing pattern of hostility between Argentina and Brazil which justifies the acquisition of nuclear weapons. Hence, the only rationale for the acquisition of nuclear weapons would be national prestige, or the protection of a regime hostile to the United States. Such a regime might be allied with Communist governments outside of Latin America and might, therefore, be desirous of a limited nuclear threat to the United States in order to be free to conduct subversive activities in neighboring countries. The United States would want to prevent the acquisition of a nuclear weapons capability by such a government, and if it failed in this, it would probably want to remove the government which sponsored it.

⁴ For example, in Argentina, naval officers are primarily sons of the landed or industrial elite and tend to be more conservative than the more broadly recruited army officers. In Brazil, the Navy is more representative of the urban population and hence more progressive than the Army.

In the case of a nationalist regime which came to power by a coup d'état, procurement of a nuclear capability would be extremely difficult to justify in order to acquire international support. The non-nuclear neighbors would first turn to the United States for additional military aid, perhaps including a nuclear guarantee of some sort. Bolstered by additional American commitments and in the absence of overt political interference by its new nuclear neighbor, or the ideologically sensitive United States, the non-nuclear state would perceive no great breakdown of security and would probably launch a nuclear weapons development program of its own for purely prestigious and long range security interests. The likelihood of a nuclear clash before 1980, under these circumstances, seems minimal.

A revolutionary government would not be allowed the same latitude. The polarization of political attitudes created by the revolution in the particular country, and throughout Latin America as well, would create a solid base for counter-revolutionary activity. The existence of a nuclear weapons program would provide additional incentive. This activity might take the form of an indigenous movement, aided and abetted by the United States, in concert with economic sanctions sponsored by the Organization of American States. The collapsing economy and growing civil unrest would probably be sufficient, in most cases, to bring down the government. In the case of a regime which became increasingly dependent upon foreign assistance to counter these pressures, such as Castro's Cuba before the missile crisis, stronger measures would appear justified to its opponents. National armies might be raised among exile groups in sympathetic neighboring states, armed and equipped by the United States, and covertly returned to their homeland to seize territory. Once insurgent groups held territory, they could be rapidly recognized by sympathetic states as the legitimate government and openly aided in their struggle.

The crucial primary phases of these developments would be sufficiently covert to avoid nuclear provocation. In the later phases of overt American support, an indigenous nuclear force would be next to meaningless before the overwhelming American nuclear preponderance. Its use would be suicidal. Thus, a nuclear clash with a government in Latin America before 1980 is also highly unlikely.

AUSTRALIA-INDONESIA *

AUSTRALIA

Political System

Australia has been governed by a Liberal-Country Party coalition since 1949. Defense policies have been closely linked to those of Great Britain and the United States. Neither independent nuclear development nor the acceptance of an American and/or British extended deterrence, if offered, has been openly discussed by the government.

The Labor Party came close to upsetting the Liberal-Country coalition in the 1961 national elections on policies based almost completely upon differing approaches to national economic development. In 1964, the Labor Party challenged the government on defense policy, citing nationalistic expressions of self interest as justifying a lesser need for reliance upon defensive alignments with the United States and the United Kingdom. This campaign was waged against a background of increased governmental concern for and commitment to Malaysia against the Indonesian policy of "confrontation."

Prime Minister Menzies, assured by private polls of popular support for his Indonesian policies, called a national election earlier than was constitutionally required. As part of the campaign he unveiled a "new defense plan" in which the military capacity for a more independent foreign policy was substantially enlarged.¹ Overall defense spending between 1965-68 was to increase twenty per cent, military conscription was to be reintroduced.

¹ Australian defense expenditure increased from £A 200,000,000 in 1962-63 (\$450,000,000) to £A 300,000,000 in 1964-65. For the present fiscal year, beginning July 1965, £A 382,000,000 has been allocated, with allocations over £A 420,000,000 (approx. \$1 billion) projected for fiscal 1966. Shane Partridge, "Australia and the Defense of Southeast Asia." Foreign Affairs, Vol. 44, No. 1, (October 1965), p. 57.

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and military bases in northern Australia and East New Guinea were reopened and strengthened.² The new defense plan was tied significantly to existing commitments regarding Malaysia and was overwhelmingly endorsed by the Australian voters.

The buildup of an indigenous military capability is a politically ambiguous act. Although alliance commitments and commonwealth involvement produced greater military requirements, the long range nature of the military buildup facilitates the evolution of a more independent defense policy as well. There is a latent isolationist sentiment in Australia as a result of two World Wars in which heavy Australian losses were suffered in successive Middle East campaigns. This sentiment produces political receptivity to the claim that "it's somebody else's war" and to advocacy of contraction of Australian foreign commitments.

The lure of fewer international commitments has a persuasive appeal to the strong isolationist sentiment in Australia. In this era of "peaceful coexistence," the sophisticated diplomatic positions of the Menzies government are not popularly appreciated as directly serving

² The construction of airfields has been most noticeable in East New Guinea at Wewak on the northern coast, where a new installation with 12,000 foot runways will be able to handle the largest of US bombers. The former naval station on Manus (Great Admiralty Island) in the Bismarck Archipelago, some 200 miles from Wewak, has also been reactivated. On Australia proper, large air bases are located at Darwin, on the Timor sea, and 200 miles south at Tindal. On the western side of Australia at North Cape, the US Navy is completing a major communications center. Anthony Harrigan, Strategy Staff, Washington Report, Washington, D.C., August 30, 1965.

There appears to be a major effort on the part of Great Britain and the United States to shift their long range strategic bases of operation currently in Southeast Asia (Singapore and Manila respectively) to more secure Australia.

Australian interests.. While Australian troops resist Indonesian expansion in Irian and Sarawak and fight alongside the Americans in far-off Vietnam, Australian aid programs to Indonesia and wheat sales to China continue. The two-sided effort to earn US goodwill for Australia's own defense and to simultaneously engage in short range efforts at improving its international position is characterized by the opposition party as inconsistent or "muddle-headed."

The "new defense plan" acknowledged the potency of these isolationist forces without changing the government's policies. It laid the groundwork for possible optimization of future policies along these lines. It increased only conventional military power. No mention has been made, by either political party, of possible nuclear development to permit greater self-reliance in security matters. Yet, this would appear to be the logical outgrowth of "self reliance" and a strict pursuit of one's own national security without becoming bound by credibility or commitments to foreign powers. A government option for nuclear weapons could be considered in 1968.³ A pro-nuclear decision in 1968 could produce atomic weapons by 1972. Whether or not such a decision will be made will depend upon the political changes and interactions of domestic and international forces upon the Australian attitude.

Political Changes

Direct international threats to Australian national security for the next fifteen years can come only from or through Indonesia unless the Chinese should develop intercontinental delivery systems. Any invasion could be mounted only by substantial maritime and air power. The Peoples Republic of China, even with Japanese assistance, could not develop a navy or air force capable of challenging those of the United

³ Defense, Supply, the AEC, and the armed services have planned and proceeded on the view that by 1968 "nuclear independence" could become a government policy. Arthur Lee Burns, "Nuclear Forces in Australia," Proceedings of the Seminar on Nuclear Dispersal in Asia and the Indo-Pacific Region, Australian Institute of International Affairs, Australian National University, Canberra, September, 1964, p. 39.

⁴ T. B. Millar, Australia's Defense, (Victoria, Australia: Melbourne University Press), 1965, p. 31.

States for control of the sea lanes to Australia. Soviet and Chinese interests in reducing western influence in Southeast Asia would be centered upon supporting existing anti-American governments, which are, incidentally, hostile to Australia. Any other course of action by these powers would be confronted by ANZUS treaty ties and overwhelming US logistic and strategic nuclear capabilities based upon control of the seas. Australia confronts Indonesian expansion on two widely separated fronts, East New Guinea and Sarawak. In the former, guerrilla warfare--utilizing saboteurs and indigenous elements--is already quietly practiced in both Australian and Indonesian portions of the island. Regular Indonesian and Australian forces are committed in Sarawak, the major locus of the "crush Malaysia" campaign.

Most speculative, and also most important, of the international changes are the probable responses of Australia's two major allies to a decision for an indigenous nuclear capability. If sympathetic, they might facilitate transfer of technological information and material conducive to the development of a nuclear capacity as well as a delivery system. A political prerequisite for such facilitation, however, would be a general contraction of US-UK presence and commitments in Southeast Asia. Theorists construe such a contraction as resulting from the failure of nuclear deterrence as a result of proliferation and increased capability among hostile expansive powers.

Recent events in Vietnam and Malaysia have demonstrated that, at least for the foreseeable future, no such contraction is anticipated by either the Labor government in Britain or the Democratic Party in the United States. Steadily rising costs for both the Malaysian and Vietnamese operations, however, may sufficiently disillusion public opinion in Great Britain and the United States so as to make such a contraction a politically attractive package to both opposition parties. If this occurred, Australia would assume a new significance in strategic planning, with possible consequent changes in the nuclear policies of both Britain and the United States.

In the event of such a contraction of western presence in Southeast Asia, the price for utilizing Australia as a new strategic base (see infra, footnote 3) would be a larger Australian voice in the utilization of atomic weapons; either through their transfer or, more likely, their stationing on Australian soil. The latter type of agreement would be unacceptable to Australia without a substantial role in the decision process to commit such weapons systems. In this respect the US position would have to

undergo a significant but not insurmountable change. If such an agreement could not be worked out to the satisfaction of both parties, only then would Australia embark upon a truly indigenous "start to finish" program of nuclear development. In short, until such a contraction takes place or is deemed likely in the near future, an Australian decision to opt for indigenous nuclear development is extremely unlikely.

Domestic political changes in Australia are firmly⁵ centered upon what V. O. Key calls "dualism in a moving consensus." The political viability of issues--their popularity--once demonstrated, will be adopted into the positions of both major party coalitions. In short, domestic political changes in Australia affecting indigenous nuclear development may be determined by the future popularity of "going-it-alone," and severing dependence upon US or British nuclear guarantees.

Possible Responses

Under present international conditions, if Australia were confronted with a serious Indonesian threat, there are three political responses in accord with her domestic politics: (1) the present policies of limited conventional capabilities and strategic treaty ties; (2) a greatly increased conventional military capability program without substantial international commitments or assurances; and (3) a contraction of foreign involvements and strict reliance upon ANZUS for self defense. Only the first of these policies is presently feasible for adequate defense. Australian resources are far too limited to engage Indonesia in anything greater than small scale land operations without external support. As long as Australia is assured of this support, it is unlikely that she will divert scarce resources for indigenous nuclear development. ANZUS provides a firm US commitment to such support.

A Labor Party victory might be determined by purely economic factors, unrelated to defense posture, or a resurgence of an isolationist philosophy and subsequent acceptance of economic deprivations necessary for unilateral defense. At this time, such sentiment has not been articulated by either major party and, barring radical and unforeseen changes in the international complexion of Southeast Asia (e. g., a US withdrawal from the area), probably will not be before 1980. A return to power of

⁵ V. O. Key, Politics, Parties, and Pressure Groups, (New York: Crowell, 1964), pp. 222-227.

the Labor Party on purely domestic economic issues might change the tenor but would not affect the direction of Australian defense policy.

Should Indonesia develop nuclear weapons, the Australian response (short of any unforeseen catastrophe) would be to first rely upon deterrence extended by its allies and then to facilitate transfer agreements. Only if such agreements could not be arranged and if the alliance protection was not sufficiently credible, would the Australians utilize their superior technology and develop their own nuclear weapons. The position of the US government on proliferation would seem to sensitize it to the adequacy of its alliance commitments.

The United States should refrain from any policy which, in Australian eyes, jeopardizes the reliability of its commitments and crystalizes the isolationist issue in terms of self reliance. If the United States desires that Australia become a viable national entity, it must recognize the necessity of maintaining its commitment to Australian security, given its policy of limiting nuclear proliferation. In short, tendencies toward proliferation can easily be curbed by Australian confidence in US strategic commitments for defense, nuclear and conventional. Anything which reduces the Australian dependence upon US forces, such as their credibility or local capability or the Australian longing for non-involvement, would also facilitate the impetus toward indigenous development of nuclear weapons. Such factors do not appear likely to reach significant proportions before 1980. But much depends upon the outcome of the Vietnam war and US success in containing China as opposed to China's success in discrediting the US commitment to Southeast Asia.

INDONESIA

Introduction

Indonesian motivation toward a nuclear weapons capability is quite strong. The leaders of Indonesia are candid in their identification of nuclear weapons as the key to higher international status in Southeast Asia and the world at large. They have made the attainment of such status an integral part of their nationalist program. Many Indonesian leaders, of all political persuasions, believe that the acquisition of such weapons would substantially reduce the effective Anglo-American "presence," with whatever constraints such presence may imply, in Southeast Asia. The implicit assumption is that it would be replaced by a growth in Indonesian influence.

This desire for great power status is a constant throughout the Indonesian political spectrum. The primary reason for this is the domestic political impact of such pretensions upon the tenuous structures of national unity. For this reason, the regimes may change their political coloring and the degree of stability may vary slightly between the present and 1980, but the great power aspirations have become an integral outgrowth of Indonesia's resources and nationalism.

The political structure of Indonesia is fragmented along geographical, ethnic, religious, and political lines. The latter divisions are both doctrinal and bureaucratic. Foreign policy aspirations are simultaneously created and exaggerated by domestic political rivalries. As the general economic livelihood declines, national unity may become increasingly tenuous and the articulation of foreign threats more prevalent in describing the external environment of the state. These statements worsen the international climate for the productive development of Indonesia's resources and further reduce the general livelihood.

Unlike western models, the nationalism of which has been defined after generations of socio-economic development, i. e., from within, Indonesian leadership is trying to define nationalism by external pressures. The crudest social cohesion is generated by differentiating what is beyond the confines of the "state" from what is within it. Thus, the priorities of Indonesian politics are fundamentally different from those which obtained in the west.

Proliferation and Indonesia's National Interest

There are two basic interrelated objectives in Indonesian acquisition of nuclear weapons: the reduction of western influence in Southeast Asia, and the increase of state security.

The reduction of "neocolonial" influences in Indonesia's area of interest has long been a prerequisite if this state is to play a larger role in Southeast Asia. Based upon Indonesia's population and resources, most Indonesian nationalists feel that it is their interests, and not Washington's, which should be consulted before shaping events in Southeast Asia. To Indonesian eyes, external powers (the West) are perpetuating a vicious cycle of extending the influence of inherently weak states and thereby maintaining their own interests. It is "neocolonialism" which prevents the establishment of "natural" influence patterns among the states in accordance with their own resources.

From this perspective, nuclear capability appears to be very advantageous. Nuclear weapons provide a short cut to great power and would permit Indonesia to challenge the influence of the United States in Southeast Asia. Thus, Sukarno and his Foreign Minister, Subandrio, have often stated that they welcome the possession of atomic and hydrogen weapons by "nefos" (newly emerging forces) because the imperialist nations, who already have such weapons, could no longer blackmail and intimidate them. Implicit in such statements is the belief that in the absence of western influences in Southeast Asia, Indonesia would be the arbiter of events.

Indonesia interprets American attempts to prevent proliferation as primarily a means of freezing the status quo. In Southeast Asia, they consider such efforts totally unacceptable. If the United States supported Indonesian aspirations, as it did regarding West Irian in 1962, one might argue that there would be no need for nuclear weapons. However, the expansive forces of Indonesian nationalism conflict with established US interests in maintaining the viability of states in Southeast Asia.

Similarly, one might add that the lessons which the Indonesians learned from the West Irian crisis proved to be the wrong ones, from the standpoint of the United States. After eleven years of Indonesian pressure on the United States for an endorsement of their cause, the West Irian situation remained in 1961 just about where it had been in 1949. In August of 1960, Indonesia began using armed commandos. By early 1961, the Soviet Union announced that it was granting \$450 million in military equipment to Indonesia for the liberation of West Irian.⁶ The Netherlands was incensed when the United States, alone among the members of the South Pacific Commission, declined to be represented at the opening of the first partially-elected Legislature Council of Netherlands New Guinea on April 1, 1961.⁷ Both the Netherlands and Indonesia continued military activities. For nine months following President Sukarno's open military threat against the Dutch on November 10, 1961, the Indonesian

⁶ Herbert Feith, "Indonesia," Government and Politics of Southeast Asia, ed. George McTurnan Kahin (2nd Edition, Ithaca, New York: Cornell University Press, 1964), p. 268.

⁷ Russell H. Fifield, Southeast Asia in United States Policy, (published for The Council on Foreign Relations by Frederick A. Praeger: New York, 1963), p. 354.

government and press characterized the situation in the language of crisis. Troop movements, air raid drills, public rallies, and demonstrations of "volunteers" were highly publicized. In the same time period, the Indonesian economy was permitted to lapse into uncontrolled inflation. As unrest and Communist influence grew in Indonesia, the Kennedy administration was forced to seek a settlement.

Unfortunately, following the West Irian "victory," public agitation and economic decline acquired a momentum of their own. Great dislocations demanded that the government concentrate upon the economy, but political strife dictated other priorities. In December 1962, the Brunei revolt broke out and Indonesia, charged by the Prime Minister of Malaysia, Tengku Abdul Rahman, with complicity, began its "crush Malaysia" campaign; a new cycle had begun.

The increase in state security achieved by the acquisition of nuclear weapons must be analyzed in terms of three factors: the likelihood of war, the threat of pre-emptive attack, and the avoidance of local defeat.

One of the primary assumptions of the adherents of nonproliferation is that the likelihood of nuclear war arising from miscalculation or chance is thereby kept from increasing. Indonesian leadership believes that the United States has a vested interest in the accidental war theory in that this theory justifies the status quo for at least as long as it takes non-nuclear factors to assert a new power relationship. In contrast with the stated US nuclear policy, Sukarno apparently believes that nuclear weapons will be used only by the desperate "neoimperialists" trying to snatch a collapsing empire from non-nuclear defeat. A nuclear deterrent is seen as the necessary defense against this calculated act of desperation. Thus, for Indonesia there can be no "accidental" nuclear war.

The danger of a pre-emptive nuclear attack may be viewed in a similar light. A non-nuclear state cannot attack or provoke a nuclear state without risking a pre-emptive (counterforce) strike or, at worst, wide-spread value destruction. But even an inferior nuclear force would give Indonesia enough persuasive power to deter preemption, if the force were not vulnerable to efficient counterforce strikes. Under such conditions, the attacker would be far more conservative in assessing its interests and in resorting to pre-emptive nuclear attack. Thus, it is only when one of the adversaries has no nuclear weapons that there is a danger of the nuclear power striking first, last, or at any time. This will be recognized

as essentially the policy of stable mutual deterrence based upon a strategy of credible, limited, but "sufficient" countervalue capability.

Finally, Indonesian possession of nuclear weapons would prevent Western powers or their allies from avoiding tactical defeats by threatening nuclear reprisals, (such as former President Eisenhower claimed the United States was able to do in Korea - 1953, and Quemoy - 1958).⁸ This would appear to be a compelling argument for an expansive, non-nuclear power such as Indonesia. The application of this rationale may not be as compelling as it appears, however. Since the value of an inferior nuclear force lies in its deterrent potential, the weaker power cannot initiate the use of nuclear weapons. Thus, should the United States or the UK be willing to match conventional forces with Indonesia in a local war for Sarawak, for example, the Indonesian nuclear deterrent would have no effect on the military conclusion. The only value of Indonesian nuclear weapons in such a case would lie in their forcing the western powers to re-evaluate the strategic importance of Sarawak in view of the more costly conventional campaign. In short, there would no longer be any "cheap" deterrence, and Indonesian aggression would have to be stopped either by superior conventional forces or by efficient counterforce attacks.

Proliferation and Indonesia's Environment

Indonesia's relevant international environment is made up of the United States, the Soviet Union, the Peoples Republic of China, Japan, Australia and India.

Any nuclear power contemplating transfer of nuclear weapons to Indonesia would be influenced by its estimate of US success in containing China. If the United States appears to be successful in containing Chinese influence, one could postulate two contradictory Indonesian responses. First, the influence of the United States would be enhanced in the domestic political struggles among the various elites, and these pro-western elements would become more influential in decision making. Alternatively, it could become increasingly apparent to the Indonesian leadership that their nationalist ambitions are thwarted solely by the dominant position of the United States in Southeast Asia and thus they might become receptive to nuclear transfers or foreign ties to reduce this US influence.

⁸ New York Times, May 17, 1965.

The first alternative implies that, before an overwhelming display of US power, Indonesia will sacrifice, at least temporarily, its nationalistic ambitions because of domestic and international pressures. Assuming this should occur, an offer of nuclear transfers by a power other than the United States--either technological or hardware--would stimulate nationalistic aspirations and encourage greater demands upon the United States for concessions to Indonesian nationalism. If the offer were refused, it could provide a rallying cry for nationalist sentiment. Nationalist attacks upon the US-supported government might not be successful, but they would increase the political problems of the government. If an offer of nuclear transfers from a Communist country were accepted by a regime then in good standing with the United States, one would expect at least a substantial deterioration of relations with the United States.

The second possibility would interpret past flirtations with the Soviet Union or Communist China as the Indonesian desire to enhance their demands vis-à-vis the United States. These demands were generated in the very fragmented nature of Indonesian society and its lack of national identity; in short, from the need for nationalism to reduce the centrifugal forces of ethnic loyalties or insular provincialism. At the same time, these demands sacrifice, in the immediate future, any economic development upon which nationalism becomes viable. Thus, both the Soviet attempts at a "united front from above" strategy and the Chinese efforts at a "united front from below" were helpful in Indonesian eyes because they were responsive to the need for achieving unity.

This second approach assumes that even an authoritarian army regime aided by the United States, such as the one recently created, could not promote sufficient economic development to overcome these centrifugal forces. As the society began to fragment, the leadership would have to become increasingly nationalistic, thereby jeopardizing economic development. (Unfortunately, nationalist movements tend to frighten away potential foreign investment, which is, of course, vital in a developing economy.) Indonesian leadership, upon successful US containment of China, would be most receptive to any leverage which nuclear transfers might offer against order established by the United States.

To those who say that all that is desired by this nationalism is the state of tension which produces unity, one may argue that in the Indonesian case, such tension cannot be indefinitely prolonged without capitulation of the opposing force or violent conflict. In this case, capitulation definitely

does produce further demands as shown by the experience with West Irian, at least, until some basis for unity is established. In the same manner, conflict cannot be limited. Any refusal to escalate by acceptance of stalemate or tactical defeat produces social turmoil and collapse of the regime. One might wonder whether the long range security interests of any power are really facilitated by nuclear transfer in such an environment.

The preceding has assumed US success in containing Communist China. If the United States were unsuccessful, presumably the desire for an independent nuclear power as a counterweight to China would increase. A nuclear-armed Indonesia might serve as such a counterweight.

It is rank speculation to attempt prophecy regarding the international alignments and conflicts among the states of Southeast Asia which would produce a nuclear Indonesia. In an effort to avoid this pitfall, we propose a brief statement of the possible relations of Indonesia with the states previously mentioned as constituting its international environment on the basis of its historical experience and interests, assuming Indonesia has nuclear weapons.

Australian-Indonesian relations are correct, but there is no affinity between the two peoples. Indeed, the two states might be characterized as inherent contradictions of one another. The Australians are deeply concerned about Indonesian expansion and are currently fighting it on two widely separated fronts. If Indonesia had nuclear weapons, Australia would undoubtedly demand a comprehensive, iron-clad guarantee from the United States against an Indonesian attack, including possible stationing of nuclear weapons in Australia. This would probably suffice through 1980; but, in the long run, Australia would initiate its own nuclear development program. Australian nuclear weapons development will not commence, however, until Indonesia acquires nuclear weapons. The focal point of future crises will be Irian, considered vital by both countries.

The Peoples Republic of China became increasingly important to Indonesia's revisionist interests following the US-Soviet Test Ban Treaty (1963). Chinese influence was projected through a popular nationalist party (PKI), the ideology of which is akin to the Communist revolutionary doctrine of China. The Chinese community in Indonesia is quite large. As a minority, they are hard working and deeply resented. Poor relations between China and Indonesia (1960-1961) were caused by the latter's oppressive treatment of this minority in regard to citizenship. The first political

movement in Indonesia (Sarikat Islam) was formed at the turn of the century as a Moslem trade organization to compete with the Chinese. To a large extent, the individual's national identity is rooted in and dependent upon his reaction to the Chinese. It is in this light that the heralded "Peking-Jakarta Axis" appeared to be a marriage of convenience necessitated by mutual benefit from reducing American influence. A nuclear Indonesia would have no affinity with China.

India has a pronounced cultural influence upon Indonesia. As in the case of China, however, this influence is subject to selective interpretation depending upon how Indonesia's international interests are perceived at a particular time. Throughout the Fifties, India and Indonesia maintained very close relations as neutralist powers. The Bandung Conference was a natural outgrowth of this approach to international influence. A nuclear Indonesia would rediscover an affinity for India and for supporting Indian cultural influence in peninsular Southeast Asia. If both had nuclear weapons, they could enjoy a return to the "Bandung spirit," each being dominant in its area while forming a bulwark, though their strategic cooperation, against Chinese and American encroachments.

Japan figures quite prominently in the twentieth century development of Indonesia. It was the Japanese model of Western science-Eastern values which the pre-war nationalists idealized. The Second World War, itself, destroyed the stranglehold of the Dutch on the nationalist movement. While they occupied Indonesia, the Japanese developed mass parties and for the first time placed nationalist leadership in a governmental forum, where it could communicate its ideas directly to the masses. Toward the end of the war, the Japanese also placed in motion the machinery for independence (declared two days after Japan surrendered and two weeks before the allies arrived to receive the surrender of the Japanese force stationed there). A nuclear Indonesia would have no quarrel with Japan in the 1980 time frame. In fact, Japan could play a major role in the industrialization of Indonesia in terms of supplying heavy equipment and technical skills. It might also form the eastern wing of a nuclear Delhi-Djakarta-Tokyo axis opposing Chinese southward expansion. This would be a very long range development, however.

The Soviet Union's primary interest in a nuclear Indonesia would be to diminish US influence in Southeast Asia without risking the unhindered expansion of Communist China. Soviet relations with Indonesia, under these conditions, would probably be quite cordial but their political impact

would be of a diminishing magnitude. Even national Communism in Indonesia would become more cordial to capitalist Japan and Socialist India than to European Russia.

The United States is the primary obstacle to Indonesian expansion, whether nuclear or non-nuclear. Because of this, the United States will continue to incur Indonesian hostility. Short of economic aid, US commitments to its allies in Southeast Asia prevent its making any significant concessions to Indonesian nationalism. The acquisition of nuclear weapons by Indonesia would probably not cause a major re-evaluation of America's Indonesian policies but would merely compel us to reaffirm our commitment to our allies to do whatever is necessary to protect their national integrity. If Indonesia developed nuclear weapons in conjunction with an Indian-Japanese alliance, as suggested above, the United States could reevaluate its commitments throughout Southeast Asia. Within the 1980 time frame, however, both the United States and Indonesia will still perceive the other's national interests to be basically hostile to its own.

Possible Avoidance Measures.

In terms of the expected US response before 1980, there will be no great difference in the type of problems which the United States can expect from a nuclear rather than a non-nuclear Indonesia. An Indonesian nuclear arsenal would make containment of Indonesia more costly. Instead of the increased cost of US commitments in Southeast Asia being called prohibitively expensive, they would probably be justified in terms of the increased seriousness of an Indonesian nuclear threat. In light of this, what measures could be taken by the United States to lessen the probable expenditure?

One option might be to grant Indonesia a "place in the sun," before being faced with Indonesian nuclear weapons. Such measures as compromising Malaysia, obtaining a permanent seat on the Security Council for Indonesia, encouraging an Australian-Indonesian accord, or granting a large aid program to Indonesia could be considered by the United States. Unfortunately, an observer would probably be forced to conclude that, even if these were real political possibilities, there would be some question as to whether any of them approached the root of the problem--that is, the inherently unstable nature of Indonesian society. Still, they would represent useful attempts to develop an Indonesian national consciousness and pride as a great power and would, thereby, lessen their need to create repeated

crises with which to inspire national unity. These measures seem feasible in regard to the Indonesian political context, but not in regard to that of the United States.

Another, more conventional, possibility would be to approach the problem in terms of recognizing an Indonesian security problem. However, the only security problem Indonesia has is that which it creates, and an Indonesian-US agreement to reduce tension would be contrary to Indonesian interests, since tension has such a functional role in creating national unity. Security treaties might make sense in conjunction with one or more of the above measures, however.

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REPUBLIC OF SOUTH AFRICA AND SUB-SAHARAN AFRICA*

NUCLEAR WEAPONS: PERCEPTIONS AND PRECONDITIONS

Nuclear Perspectives

Given the Republic of South Africa's¹ domestic control and political isolation, her nuclear resources appear nearly to justify an arms program for the sake of sheer unspecified power gain. However, significant disincentives emerge from weighing South Africa's nontechnical constraints against her national objectives and against nuclear arms' untested value for fulfilling specific objectives.

For an indefinite future, South Africa's controlling white minority is committed to its political status quo and to subverting, if possible, or repelling, if necessary, cohesive black African movements against herself or against her Portuguese buffer from Angola to Mozambique. The same rigid oligarchy that makes her a racial tinderbox also gives South Africa the domestic control she needs to allocate resources for a limited nuclear weapons capability. Grievances that account for schisms among her white minority do not extend to military programs that protect that minority. Moderate reformist groups that seek a new image for South Africa do not agree that social upheaval is the quickest or even the more effective way to radical change. Short of contingencies as serious as major power intervention or more serious than new Sharpevilles, there is little prospect of fundamental governmental change in South Africa's next decade. From the standpoint of internal stability and nuclear weapons capability allocations, there is comparatively little reason for South Africa to wait for more favorable conditions.

Nuclear "Status"

"Status"--of whatever height or origin--is an uncertain currency in African diplomacy. Effective "status" depends on national identities and responsible adversaries. If central-southern African diplomacy is adopting European procedures, then the continent's Europeanized maverick

¹ Hereafter referred to as South Africa.

* By T. Alden Williams.

would seem prudent to achieve nuclear "status" while its costs are lower and its non-negotiability at least unproven.

But "status" also depends on defined goals and an established relationship between status and achieving those goals. South Africa's regional military objectives imply a clearer regional offense/defense role than, for example, West Germany, India and Japan enjoy. In this context, there are considerably fewer independent variables in South Africa's chances of military success against her more probable targets. As the dominant conventional military power in her region, South Africa has not yet found nuclear "status" to be a critical military variable.

Compared with West Germany, India and Japan, South Africa already enjoys more relative regional "status"; she is a militant, fiercely defensive, economically and administratively viable country which has clarified her objectives and acknowledged consequences of drawing sharp lines around her self-interest. Unlike some other Nth countries, South Africa does not need actually to step into nuclear weapons capability in order to test hypothetical advantages. Whereas only some of the reasons why West Germany, India or Japan would acquire nuclear weapons have been made clear, almost all of South Africa's nuclear incentives are patent. There are no nuclear reservations among her stated requirements for national security. She has framed her security issues in such a way as to put the burden of persuading her to abstain upon her cultural cohorts.

"Status" generally refers to the variety of options the status symbol gives its possessor. South Africa has a finite range of military options: (1) she can defend her home territory (including South West Africa) against land, air, and naval attack or blockade; (2) she can contribute heavily to defending the Angola-Rhodesia-Mozambique buffer; (3) she can intervene, overtly or covertly, in hostilities that serve her interests of neutralization or disunity elsewhere in Africa; (4) she can expand her northern buffer by an outright offensive. In absolute military terms, the nuclear weapons she could reasonably build would improve her ability to exercise these options, but would not open significant new options.

Politically Relevant Objectives, 1966-80

A nuclear arms program would not take South Africa dramatically closer or faster to her primary internal objectives in the next decade. Internally, South Africa seeks (1) to continue institutionalizing apartheid

and dispersing its opposition; (2) to diversify and balance her industrial output without altering labor sources for secondary industry; (3) to encourage cohesive Afrikaan partisan unity; and (4) to contain and subvert non-white opposition pockets. Containing and neutralizing the High Commission territories, which is not a strictly internal objective, also would not be substantially affected by South African nuclear capability.

Externally, South Africa's relevant objectives are as clear and more nihilist: (1) limiting nuclear proliferation both north and south of the Sahara; (2) maintaining conventional arms superiority to any reasonable combination of continental opponents; (3) generally subverting black African unity; (4) generally discouraging conditions for East-West commitment to Sub-Saharan national units; (5) reducing clear incentives for East, West, or broader international measures and sanctions against South Africa; (6) building alliance potentialities with Portugal and the European market; (7) maintaining and strengthening residual Commonwealth ties.

NUCLEAR WEAPONS AND REGIONAL, GLOBAL OBJECTIVES

Since the major nuclear and middle powers are likely to continue to see South Africa in a context of larger African consequences, South Africa must return to the basic question: would South African nuclear weapons capability be a threat that would quicken, block, or significantly delay nuclear arms programs in Sub-Saharan Africa? How would it relate to various forms of acquisition--transfer, indigenous development--in Negro states? What more general correlation is there between South African capability and Sub-Saharan social, national movements?

South Africa must conclude that her own nuclear arms program would not block or delay arms spread to her north--except in the remote case of superpower interdiction at an early stage of South African weapons development. For some of the same reasons that South Africa enjoys conventional "status" in her region almost on a par with nuclear "status" elsewhere, South Africa's overall economic-administrative-technical lead time so dominates the southern continent that the South Africa-Sub-Sahara disparity would alone be enough incentive for Negro states to continue development. Moreover, while a nuclear South Africa would not necessarily cause Communist or Western transfer of weapons, her program might encourage other kinds of transfer--technical or economic--which would in effect speed up Sub-Saharan nuclear weapons acquisition. Zambia, Tanzania or the Congo states can be expected to opt for cruder, less expensive arms and

delivery systems, geared imprecisely for both defense and offense. Sub-Saharan states can also be expected to be less confident than Europe and the Soviet Union, for example, that the United States would not extend South Africa's defenses to nuclear weapons.

Treaty-based detentes between South Africa and Sub-Saharan African states during 1966-80 are not inconceivable if the Negro states need to play for time. Such detentes might or might not come through outside power mediation. In either case, South Africa's chances in such a bargain would not be notably better if she negotiated from nuclear status. Again, she is conventionally strong enough to back up her demands.

On the continent itself, South African land, air, and naval forces both outnumber and outdistance almost any reasonable combination of indigenous African forces that could be launched against the Republic. South African superiority remains even though conventional war between South Africa and Sub-Saharan state(s) would involve unusually heavy casualties, diversion of South African troops to control the Bantu population, and costly perimeter defenses for South Africa in the northern buffer. Operating from strongly fortified command logistics centers, South Africa could make optimal use of advance reconnaissance and aerial observation; her piston-dominated air forces are more fitted to the kind of war she would have to fight than to nuclear warfare.

On the other hand, South Africa is almost totally vulnerable to nuclear attack; her urban concentrations invite catastrophic casualties and her administrative rigidity rules out effective post-attack control of her 80 per cent non-white "hostage" population.

In view of her conventional superiority,² and the reduced need this implies for nuclear arms in the near future, South Africa has a prime stake in not provoking Eastern or Western intervention in African affairs. She recognizes the Sub-Saharan states' market attractions for producers on both sides of the iron curtain; she recognizes and even concedes military strategic advantages of East-West entrees in Sub-Saharan Africa. At the same time, she operates with the knowledge of a growing British economic

² Including, in this case, chemical and bacteriological weapons she is known to have explored and kept in development.

stake in South Africa, and her lion's share of US investment in Africa.

South Africa enjoys an active and not dangerously balanced pattern of trade relationships, largely with Western-allied powers, but also with some uncommitted nations and with East Germany. Free of nuclear considerations, economic prospects in these exchanges are good: South Africa has resources and capital to expand them, her industry has already begun to diversify and the hope for legitimacy through these relationships is a basic premise of her policy toward the world community.

Should she decide to pursue nuclear arms, she would not become a more attractive trade partner. All of the nations with which she trades have vital present or future interests northward in Africa. Should she be the first nation south of the Sahara to acquire nuclear weapons, the threats perceived by Sub-Saharan black states would cause them to try to raise the ante by rejecting trade and investment pending traders' pressure on South Africa to neutralize her nuclear weapons capability. Long range odds would favor Communist major and middle powers, which are less committed to South African exchange and freer to grant guarantor concessions to black African governments. Moreover, Communist guarantors have some edge in minimizing the consequences of concurrent aid to feuding Sub-Saharan states.

NUCLEAR WEAPONS CAPABILITY: CONSEQUENCES

South Africa has clearly stated her objectives, and can be expected to recognize many of the constraints they imply. But her behavior also indicates that she considers survival through concession and compromise with her present political system intolerable.

If she were to pursue a nuclear capability despite constraints, her subsequent diplomatic and military behavior would be largely defensive: she could be expected to (1) extend her control and communication networks and to consolidate political commitments in the Portuguese buffer; (2) expand aerial defense and reconnaissance installations, including antisubmarine devices and weapons, around the southern face of Africa possibly as far as Walvis Bay and Lourenco Marques; (3) establish at least token nuclear weapons in South West Africa for diplomatic bargaining power as much as for military defense; (4) be prepared to abandon trade possibilities with Communist states, such as East Germany, in favor of predominantly Western trade; and at the same time, exploit opportunities to increase US

and UK risks while reducing gains on the continent, in order to compel Anglo-American collaboration in her defense; (5) promote both nuclear and non-nuclear alliance with France.

Changes in Global Power Concentrations

There is little prospect that a nuclear-armed South Africa would directly alter probable power concentrations in 1966-80. South African nuclear arms would give the West little strategic advantage that it does not already have or could supply through other means; there could be some minimal advantage to the West if South Africa emerged as the only Western-aligned nuclear bastion against a loose Communist, or otherwise hostile, central African federation in the triangle from Tanzania to the Sudan to Ghana. However, the following contingencies imply indirect changes in the balance of power: (1) to the extent that a nuclear South Africa improved Chinese opportunities in Africa, there would be greater strain on US guarantor forces in both the Mediterranean Sea and Western Africa; (2) Western solidarity would tend to be weakened by consequent strains on US-British, US-French, and US-Portuguese relations; (3) a possibly disruptive factor would be added to US-Latin American relations, inasmuch as Latin America would find US professions of Communist takeover in Africa less credible and would object strenuously to US concessions to South Africa.

IMPLICATIONS FOR US POLICY

Should she be forced into military assistance to South Africa, the United States would generally intensify her present arrangements with the Republic on technical and economic aid; one cannot foresee an increased need for conventional force commitments in South Africa. However, assuming that the United States was not ready to abandon her Negro African assistance and guarantees, and assuming that the United States could not block a determined nuclear program in South Africa, both the United States and other Western allies might well have to make their Sub-Saharan and West African guarantees more credible by abandoning economic and strategic advantages in South Africa. In general, there appear to be no completely unacceptable economic and strategic losses that the United States might suffer.

Present US strategic installations in South Africa are comparatively innocuous and nonpolitical. Whatever their military potentialities, missile tracking stations there have been exploited as peaceful facilities. US-controlled

South African communication links are vital, but not irreplaceable. If South Africa became a nuclear-armed nation, however, US-South African "cooperation" in the case of these installations and arrangements would become "collaboration." Should the United States withdraw these installations, it would very nearly necessitate parallel British withdrawals to be effective. Alternate US and British communication and defense channels to the Indian Ocean and South Asia would have to be improvised and permanent replacements quickly constructed.

The question of feasibility in rearranging, cutting off, adjusting, or suspending US economic interests in South Africa is almost entirely political. There is no downplaying the probable extent of US-UK losses. Britain would doubtless envisage more critical potential loss in South Africa; economically, she has become more, not less, dependent upon South Africa since she excluded her from the Commonwealth. One of the prices the United States might have to pay would be more tangible support for Britain's interests in the European Common Market, with related American economic concessions.

At the same time, a nuclear-armed South Africa would add to demands on US strategic air and naval forces for possible action--blockades, intervention--against South Africa, South West Africa and the buffer states. Politically, the United States would find it difficult to justify this kind of containment if it took place, as it doubtless would, in a confused black African situation which appeared to work to Communist advantage while the United States held South Africa neutralized. Any such action to contain South Africa would clearly have to be multinational, even though the United States supplied most of the military force required.

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APPENDIX B

**INTERNATIONAL CONFLICT AND THE SPREAD OF
NUCLEAR WEAPONS**

APPENDIX B

INTERNATIONAL CONFLICT AND THE SPREAD OF NUCLEAR WEAPONS *

INTRODUCTION

States acquire nuclear weapons for reasons of security and status, both in principle and in particular concrete situations. This does not mean that any of the potential Nth countries (Australia, Brazil, Israel, United Arab Republic, South Africa, India, Japan, Argentina, Pakistan, Federal Republic of Germany, Indonesia, Italy and Sweden), with the exception of India, have a strong motive for going nuclear in existing and immediately foreseeable situations. The relevant considerations are internal political authority, conditions within individual regions, geography, costs and the relationships of regional conflicts to global stability. Conditions may change and considerations of status may become more significant, relative to those of security, at a later stage, if and when strong powers other than the two superpowers are prepared to challenge or supplant the existing pattern of world politics, which is essentially bipolar in regard to strategic nuclear weaponry.

This paper attempts to examine these suggested determinants of action and decision in a progression from narrower to wider sets of circumstances and conjectures. Specific conclusions and recommendations, summarized at the end of the paper, are in themselves less

* By George Liska as modified by James H. McBride

significant than the major premise. To the extent that the consequences of proliferation can or must be realistically expected to be unprofitable for lesser nuclear powers, to that same extent it becomes less likely that potential nuclear capacities will be converted into effective military capabilities. The range of specific details and considerations to be spelled out, in more or less systematic anticipation of such consequences, is less important than the range and the plausibility of systemic implications which are made explicit. With varying emphasis and concern, both the greater and most of the lesser powers are likely to be sensitive to prospects of possible or probably regional and global environments resulting from alternative courses of action in the next fifteen years.

BASIC MOTIVES: STATUS AND SECURITY

Two different outlooks shape Nth country perception of the problem of nuclear weapons. One is dogmatic, the other pragmatic. In the dogmatic outlook the question whether to acquire nuclear weapons is automatically answered either "yes"--on grounds of the supposed imperatives of sovereign statehood--or "no"--on grounds of the supposed requirements of international order or stability. Actual outcomes may differ less, as the implementation of the affirmative answer is delayed by prudence or costs and as the negative decision is undermined by the gradual realization of risks and liabilities ensuing from continued abstention. The pragmatic outlook, too, involves two approaches, both aimed at the question of the profit to be derived from the possession of nuclear weapons. One approach stresses quantitative aspects; the other is more concerned with intangibles.

The quantitative approach seeks to justify, or else discredit, possession of nuclear weapons by applying the criterion of proportionability. In terms of security, the possession of nuclear weapons by country A is held to be warranted if A is capable of destroying enough assets of adversary B to offset the value to a potential aggressor represented by the defeat or conquest of A. Conversely, possession of nuclear weapons is held to be useless if less than an arbitrarily specified portion of the total nuclear striking force can be expected to penetrate the enemy defenses. The quantitative approach posits, furthermore, that higher status (defined as tangible influence rather than overall standing and prestige) will automatically accrue from various amounts of more or less "independent" nuclear capability. The other approach,

which is taken here, stresses less the quantitative and more the intangible factors, less the presumed certainties and more the possibilities created by the acquisition of nuclear weapons. It is believed that the more "speculative" mode is, in this case, that of "practical" statesmen.

Status Motive

Nuclear weapons will tend to enhance the status of a country or government because accepting implied costs (material or political) convincingly testifies to the seriousness of the country's or government's commitment to independence, however qualified by interdependence. This positive aspect will be reinforced by the negative one of the country's marginal, but real, capacity for destructive utilization, however suicidal. Steps by other states to offset or neutralize the military or political effects of the new nuclear capability are in themselves a tribute to the new nuclear power's heightened standing. A nuclearized country can isolate itself militarily, by gaining a measure of independence from alliances, however partial and problematic. But such a country cannot be isolated politically because at least some governments will keep in touch to assuage or, at least, divert the nuclear threat.

Beyond such general aspects, the effect of nuclear weapons capability on status depends on particular conditions. A superpower might use nuclear weapons militarily so effectively as to attain supreme status. For lesser states, status will rise from adroitly avoiding the necessity or temptation actually to use nuclear weapons--even explicitly bargaining with them. A nuclear bluff which is called by the power to which it is addressed or by its stronger protector, is apt to reduce status of the nuclear power more than external efforts to reduce the status-imparting quality of nuclear weapons by status-denying strategies. On the other hand, prestige can become influence only if nuclear weapons fit and complement active political strategies aimed at increasing influence. Nuclear weapons are not likely to create new options for any one state by and of themselves; but military nuclear capability may be, increasingly, the precondition for a major role in evolving constellations and contingencies. Nuclear weapons complete the spectrum of military means to sustain the political role, however unlikely or hypothetical their use. It may thus prove easier for a superior nuclear power (say, the United States or the Soviet Union) to impute higher status to an

inferior or recent nuclear power (say, Great Britain or France) to implement a particular strategy (such as that of promoting realignment or revision of alliance structure) than to deny status (for the purposes of a different strategy, such as that of impeding nuclear proliferation).¹

The issue of status must, finally, be qualified in two respects. Nuclear weapons affect the standing of powers mainly in their relations with states of roughly equal conventional strength and, secondarily, in relations among states important to one another in geography or politics. Nuclear capability for Communist China raises issues of status for India and Japan, not for Indonesia or Italy; should Indonesia acquire nuclear weapons, the issue of status would be acute for the Philippines, active for the United Arab Republic, and least preoccupying for the Federal Republic of Germany (as both a remote and conventionally clearly superior power). The status incentive for nuclear weapons is thus likely to work itself out in spurts among reciprocally relevant states. Existing discontinuities between groupings of such states are likely to slow down nuclear diffusion. Diffusion may be accelerated in its later stages, however, when the number of nuclear states has increased. The nuclear increment in status will then decrease, in part because tiers of ever lower-ranking powers would probably be caught up in successive proliferation cycles but the not yet nuclear states will face a sharp decline in status and the need to reverse the decline.

Security Motive

This motive is apt to operate concurrently with the status motive and, where the two motives coexist, more compellingly. The concern for security responds to other criteria and entails groupings or sequences in proliferation other than those of the status motive.

¹For her own good reasons, Great Britain chose to follow policies designed to minimize the political opportunities presented by her possession of nuclear weapons in both her Atlantic, European, and world-wide relationships. But, in order to draw general conclusions from this case, it would be necessary to show that no conceivable political strategy could have resulted in higher "status" for a Britain endowed with normal political and economic capacity for independent policy.

Whereas status is apt to motivate conventionally comparable states, nuclear weapons for security make most sense against an antagonist with superior conventional military strength. As first nuclear power, the United States was concerned over relative conventional strengths, initially Japan's and more enduringly the Soviet Union's (apart from apprehension over potential or actual nuclear capability of Nazi Germany and the Soviet Union). Once nuclear capabilities exist, it makes sense to acquire such arms against a threatening power's pre-existing or superior nuclear force. It makes least sense for two conventionally roughly equal states to nuclearize their military conflict relationship. Either state's advantage in a nuclear arms race is apt to be temporary and difficult to exploit; nuclear confrontation is likely to do no more than produce a stalemate on a higher plane of potential or actual destruction than a test of conventional strength would produce.

In principle, nuclear weapons expand a state's range of military options as long as nuclear weapons complement adequate conventional military capabilities. A state at least gains the option of using nuclear weapons while retaining the option of not using them. Nuclear weapons' principal value lies in their possible use to retaliate against a nuclear or massive conventional assault. This value is widely held to be reduced by the prospect that friendly stronger states will be less inclined to back a nuclearized state. And the remaining value may be further offset if a vulnerable, first-strike nuclear capability threatens to provoke the adversary. The just-mentioned two liabilities are problematic. A stronger state may reduce its commitment to the nuclearized state. But the key power may be compelled to reaffirm or even extend its commitment (guarantee) in a nuclear confrontation either because it fears the consequences of the weaker state's using its nuclear weapons or because it fears that the weaker state will not use its nuclear or any other weapons and surrender.

There remains the possibly provocative effect of a relatively more vulnerable nuclear capability. If the adversary has a sophisticated nuclear offense and defense, it will weigh the risk of damage from a first strike by a weak, vulnerable force against the risk of activating much larger forces in an attempt to pre-empt the possible but not certain first strike. The dilemma (whether or not to nuclearize the confrontation with a weaker state) will increase the stronger state's cautious reluctance to precipitate an acute crisis; the weaker state may not have to choose between destruction or capitulation. Or, the dilemma will lead the

stronger state to try to immobilize the nuclear force of the weaker state by conventional military action or political pressure. The weaker state may then act as if it did not possess nuclear weapons--resist with only conventional military means or even surrender in the last resort, if it fails both in deterring the adversary on its own and in gaining support from a stronger state. Between relatively equal states, a preventive or pre-emptive attack may appear to be more tempting because alternative conventional methods of securing one's aims are not available. However, the danger of great-power involvement is still greater than in the first case and so is the vulnerability of the attacker if a first-strike fails to incapacitate the adversary. An inadequate first-strike capacity may be just as stabilizing in relations between states with imperfect, unsophisticated nuclear weapons and delivery systems as an assured second-strike capability is presumed to be between superpowers.

On balance, then, a state has reason to acquire nuclear weapons for security against decisively superior conventional forces and against existent or clearly imminent nuclear foes. The advantage appears more convincing, while becoming more hypothetical and speculative, when the bilateral relationship between potential adversaries extends to potential interventionist third states in the total system of deterrence among several nuclear powers. In such an enlarged setting, stability is the function of (1) a central certainty that assured second-strike capability prevails in the relations between the major powers, and of (2) surrounding uncertainties about the various responses and ultimate configurations that testing the complex deterrence system might set off.

So long as only a few key conflict relations display inequality of conventional forces or existence of prior unilateral nuclear capability, proliferation is apt to be slow. But it is just as likely to accelerate later through intra- and interregional chain reaction once the standoff is broken.

INTERNAL FACTORS: POLITICAL AUTHORITY AND STABILITY

External status and security are not alone in determining the disposition to acquire nuclear weapons. They are, however, the most important external factors which--mediated through relatively crude perceptions and utilizations--become part of the internal political process and internally significant determinants. Other more purely domestic

factors have greater or lesser international significance; they will be briefly mentioned. The following section is primarily concerned with the anticipated effect of nuclear weapons upon internal political authority; it ignores the more frequently considered effect of the state of political authority upon its capacity to command and control the use of nuclear weapons externally, an aspect which is not likely to sway the kind of government which is internally vulnerable and internationally unsatisfactory in this respect. As throughout this paper, individual countries are examined and assessed in a way which seeks to do more than merely illustrate a point but less than affirm the estimate as being based upon thorough and expert investigation of each aspect.

Pertinence of Domestic Aspects

Purely internal factors in the decision on a nuclear program might include side effects on the modernization of the economy, on nation-building, on national morale, and on over-all political stability. It would seem that an economy has to be fairly advanced before a nuclear weapons program has a significant modernizing impact. If this is true, economic modernization would be an incentive more significant for India than Indonesia, for Israel than the UAR, while Sweden would have more reason than any of the four others to go nuclear on these grounds. Quite apart from the modernizing impact, however, a nuclear program might have a role in nation-building, imbuing both specialized elites and people at large with a shared sense of purpose. Sacrifices involved in nuclear development (especially if it is indigenous) would then perform the role conventional war has performed for more than one community. Economically and politically less developed societies, which do not yet constitute coherent nations--such as Pakistan, Indonesia, India--would have more to gain than societies with assured nationhood; but where the economic and technical resources are very limited (Pakistan, Indonesia), the strain might prove disintegrating. Moreover, it is not certain that nuclear weaponry would have a meaningful emotional association for illiterate masses in the absence of concrete hostility and crisis.

For established nations, the pertinent factor may be national morale. For a neutral country like Sweden, nuclear weapons might substantiate the national doctrine of self-dependence and self-defense in matters of security, and reduce objective grounds for feeling like a

parasite on the external balance of power. Other nations, in actual or potential crises, such as South Africa, West Germany, Australia, and Israel, might likewise resort to nuclear weapons to sustain collective morale in the longer run. And finally, commitment to a nuclear program might forestall nationalist or militarist pressures during internal social or external crises. This factor may become significant for most of the surveyed countries, such as Argentina, Brazil, Japan, West Germany, Indonesia and the UAR.

Even governments in exceptionally stable countries like Sweden and Australia are not immune to the nuclear issue's being exploited in the internal struggle over power and authority. Failure to have acquired nuclear weapons prior to a crisis of security, or even status, would hurt responsible incumbents if the omission places the country in grave jeopardy. It would seem that the governments of Israel, the UAR, and India cannot but be sensitive to this aspect when weighing the pros and cons of a nuclear program, and that governments in delicately placed countries like Australia, Japan, West Germany and South Africa will have ever more reason to be so. Other things being equal, pressure from anticipated consequences of non-development is lower in countries such as Israel and South Africa, where a small and coherent political establishment is likely to keep nuclear questions outside controversial public debate.

A government which failed to acquire nuclear weapons in time probably would suffer politically more than the government charged with military nuclear arming for insufficient reasons. The charge of precipitousness would be damaging, especially if a government had to admit it could not sustain the nuclear weapons program it had begun.

The potentially disruptive effect of nuclear weapons upon the structure of internal authority may discourage public debate about such weapons or discourage governments from launching a program. Intense deliberations might expose interservice rivalries in Argentina and Brazil, or incipient divergent views between the civilian and the military establishments in Japan, or differences between parties and groups in Italy. In the absence of compelling reasons for acquiring nuclear weapons, such prospects would suffice to delay even first-step decisions indefinitely. In countries where the political contest is not fully institutionalized and where, for the same underlying reasons, political authority cannot

reliably control nuclear weapons, governments and regimes may well hesitate to risk giving military forces nuclear weapons they could use for internal coups. Symbolic displays of force suffice more frequently in internal contests than in external ones; several potential Nth countries have experienced the truth of this proposition. Moreover, nuclear failures against external enemies might serve as a pretext for their internal political use in countries like the UAR (where a comparable set of circumstances produced the current regime), Pakistan, and Indonesia. The prospect that successes abroad may not compensate for strains on internal material resources (or on national independence, if nuclear weapons are received from abroad), is apt to preoccupy regimes in less developed countries and act as a disincentive. Developed countries with an exceptionally delicate international position, such as West Germany, South Africa, and Japan, face a comparable critical problem. Their nuclear programs would tax their external political credit, which might upset their internal politics despite economic and technological payoffs.

Balance of Domestic Aspects

None of the surveyed countries exhibits a clear positive balance of incentives over disincentives, considering internal and internally relevant external aspects of going nuclear. Among the economically and politically developed countries, the governments of Australia and Israel--in view of their security positions--might be internally safer if they moved toward nuclear weapons; so might be the South African government later. Neither security nor status lends itself to internal political exploitation any time soon in Italy and Sweden. Internal concern over external effects is likely to hold back West Germany and Japan for some time, although contrary pressures are likely to arise in the future.

In less developed countries, internal considerations matter more, but matter more ambiguously, than in stable developed ones. The less stable a government, the more it has to fear from its own nuclear arms, but the more it may be tempted by temporary nuclear prestige. The Nasser, Sukarno, and Ayub Khan regimes stand to raise internal prestige if they move toward nuclear status. However, all three face specific and authentic challenges and, therefore, have reasons to apprehend the long-term internal implications of acquiring nuclear

weapons. Continued indecision on the nuclear question cannot but increase the internal problems of the Indian government as Communist China develops a viable nuclear capability, even though China does not threaten India militarily. Conversely, the potential for nation-building provided by a nuclear weapons program may receive increasing attention in India as Nehru's legacy in foreign affairs fades making a substitute for Nehru's charismatic leadership most necessary. Argentina and Brazil currently have no obvious internal reasons for developing nuclear weapons.

EXTERNAL FACTORS: REGIONAL CONFLICTS

Conflicts between states in the same region raise the issue of security and thus bear directly on the nuclear weapons issue. The decision will be conditioned by the type of region; national physical vulnerability to conventional forces compared with nuclear forces under available military strategies; ability to affect the rate and sequence of regional proliferation and more particularly to retain locally unmatched or superior nuclear capability; and, finally, the existence of goals and interests which can be better served by national nuclear capability than by international alignment (to the extent that the two constitute an alternative). Just as external factors are refracted into the internal politics of nuclear armaments through crude or biased perceptions, global factors affect regional factors whenever parties to bilateral conflicts cannot avoid taking them into account.

Three Types of Regions: Hegemonial, Intermediate, and Autonomous

Most of this report's Nth countries lie in regions which can be described as intermediate, to distinguish them from hegemonial regions and autonomous regions. The three types of regions produce different basic attitudes and concerns among the countries within and without such regions.

The hegemonial region is dominated by one power. The hegemonial power alone possesses nuclear capability. It opposes both indigenous production of nuclear weapons and procurement from

the outside. Among the surveyed states, Argentina and Brazil are located in a hegemonial region. U. S. hegemony in western Europe, which still characterizes the positions of West Germany and Italy, is being challenged from within more effectively than from without. Communist China has initiated a drive for hegemony in Asia, affecting the situations of Japan, India, Pakistan, Indonesia and Australia. To the extent that a country in a hegemonial region has a nuclear choice, it will weigh the advantages of protection by the nuclear forces of the core-power (West Germany, Italy) or even virtual immunity to nuclear strikes (Argentina, Brazil) against the values of independence (status), if the indigenous capability is reliable, and against the advantages of additional or alternative sources of security if the protection becomes problematic.

The politics of states within an autonomous region (the other extreme type) can be oriented primarily toward a balance-of-power contest or toward integration. In an autonomous region, no extra-regional power is typically in a position to affect directly the interaction of the region's greater and lesser states. Extra-regional powers must exercise concern in crises through regional states. There is presently no autonomous region. Sweden belongs to a potentially autonomous Scandinavian system oriented toward integration. West Germany belongs to a likewise potentially autonomous western European (or European) system, which finds itself in an uncertain transition from balance of power to integration. Australia, India, Japan and Indonesia may cross the line into an autonomous Asian system oriented toward balance of power contests within the next fifteen years. Nuclear weapons decisions in an autonomous system are heavily influenced by status considerations among equal or comparable powers, both in a system oriented toward integration (among parties to actual or potential arrangements for joint possession and control) and in a system oriented toward conflicts (as a factor in attracting lesser local powers and girding one's security in the process).

Considerations of security will predominate in the third type of region--the intermediate--oriented toward conflicts over defining component units or their relations. In an intermediate region, two or more world powers compete with or without explicit commitment to and by local states, while they concede to one another the "right" to be concerned. Local states, or other extra-regional greater powers, may

challenge the superpowers but cannot upset the global powers' ultimate control. In principle, the superpowers can manipulate dispersion of nuclear weapons. All the surveyed countries belong to regions which are more or less intermediate, except Argentina and Brazil; the exception would disappear if a non-American power were able to impose its concern in intensified intra-American conflicts. Sweden faces no acute conflicts. Conflicts facing Israel and South Africa are over their existence as regional units, in the last analysis. The other conflicts primarily involve nature of relations, even when focused on territorial issues (Kashmir between India and Pakistan, East New Guinea between Australia and Indonesia, and frontier areas between India and Communist China).

From among conflicts which might pit Nth countries against one another in the next fifteen years,² six conflicts will be examined from the viewpoint of nuclear weapons. They are: Australia vs. Indonesia, Israel vs. the UAR, South Africa vs. Black African state(s), India vs. Pakistan, India vs. Communist China, West Germany vs. East Germany (a remote Nth country more or less identified with the Soviet Union).³

²They comprise the following pairs: Australia-Indonesia; Australia-Communist China; Australia-Japan; Brazil-Argentina; Brazil (Argentina)-"revolutionary" Latin American states; UAR-Israel; South Africa-Black African state(s); India-Pakistan; Japan-Communist China (Soviet Union); India-Communist China; West Germany-East Germany (Soviet Union); Indonesia-Communist China; Sweden-Soviet Union; Italy-Soviet Union (Yugoslavia, Albania).

³Only the last two conflicts would, under present conditions, involve a Communist power directly; the first and third conflict might involve powers which could become Communist-controlled between now and 1980 (Indonesia, Black African state); the extent of indirect involvement by Communist powers in the other conflicts would depend on circumstances.

Conventional and Nuclear Vulnerability

The first set of factors to be considered concerns the reciprocal physical vulnerability of the parties to the selected conflict-situations, under conditions of existing and prospective conventional and nuclear armaments.

Vulnerability to conventional arms raises the issue of conventional equality or inequality. Population is a crude criterion, modified by ability to convert numbers into conventional military strength. Taking the selected pairs of countries in isolation, West Germany and East Germany are most unequal (in a way favorable to one or the other side depending on whether the Soviet Union is involved and how). India would probably be at a disadvantage in relation to Communist China and Pakistan in relation to India in total conventional war, quite apart from the asymmetry of China's nuclear strength. However, these inequalities disappear when one considers clusters of belligerent and supporting capabilities. In this respect, South Africa seems to be in the least advantageous position, since she could count on only limited outside help against a massive conventional or guerrilla assault from Black Africa. The situation might become critical for South Africa in these terms by 1980, while the relative positions of Australia, Israel, and Pakistan might worsen relative to Indonesia, the UAR, and India, in particular, as a result of unequal population and/or economic growths. Whenever any one of these countries can realistically anticipate a radical worsening in the critical balance of conventional capabilities, it acquires a substantial motive for acquiring nuclear weapons,⁴ even if the adversary was thereby induced to match them.

In a nuclearized conflict relationship, reciprocal vulnerability is primarily a function of military strategies. Strategies will in turn be guided by concentrations of population and decision-making centers; size of country or of its vital part, decisive for economic and military potential; distances from the primary adversary as well as from the home base and the advance military base of his principal ally; the vulnerability of offensive forces, and the capability for active defenses.

⁴The distinction between strategic and tactical nuclear weapons, vital in this connection, is dealt with below.

Most of the Nth countries vulnerable to conventional forces of numerically superior adversaries are also more vulnerable to nuclear strikes against urban concentrations (in counter-value or counter-city strategies). Thus, Australia is more vulnerable than Indonesia, Israel more than the UAR, South Africa more than Black Africa, West Germany more than East Germany (backed by the Soviet Union). The relative vulnerability of India, Communist China and Pakistan is moot, involving questions of popular allegiance, civilian discipline, and the like, under stress.

To the extent that their basic posture is defensive, more vulnerable countries would profit from nuclear weapons' deterrent character although some of them, at least, might be disadvantaged in a crisis by displaying greater respect for human life than their adversaries. Threats to use nuclear weapons in a supreme crisis would be most credible from countries concerned with their own existence, e.g., Israel and South Africa. The threat would be least credible in a contest over a marginal area, such as East New Guinea, especially when coming from Australia. In all of the surveyed instances, though perhaps least in a conflict between West Germany and East Germany (Soviet Union), tactical nuclear warfare would be more attractive for the more vulnerable states than strategic nuclear confrontations, insofar as they would face a concentrated conventional force on a suitable terrain (Israel in particular). In the case of guerrilla infiltrations, a strategic nuclear threat to the control centers might be the last resort when the victim has been unable to mount an effective counter-guerrilla campaign. A state exposed to indirect aggression might come to consider such a contingency when deciding the issue of nuclear weapons, regardless of whether it has to face strategic nuclear threats from the adversary.

As long as extreme contingencies remain remote, none of the surveyed states seems to have a good reason to introduce nuclear weapons into its conflict relationship on the grounds of present or imminent conventional vulnerability or hypothetical nuclear vulnerability (or invulnerability). The conclusion is different for India with regard to the incipient nuclear capability of Communist China, although not with regard to Pakistan. The duality of India's conflict relationship is apt to complicate India's decision-making, just as West Germany's dual conflict with non-nuclear East Germany and the nuclear Soviet Union might complicate matters for a future West German government.

Dissemination Potential

A clearly related question is Nth country's dissemination potential, passive or active. The passive potential has to do with the country's ability to attract outside assistance with nuclear weapons; the active potential concerns a country's ability to provoke other states into seeking to offset or match its nuclear capability. A key question here is whether and how long a country can expect to retain whatever advantage it may derive from unilateral nuclear capability.

It would seem that Australia, Israel, South Africa, and India would attract less outside assistance toward being the first state to develop an independent nuclear capability than their respective adversaries (Indonesia, UAR, Black Africa, Pakistan). Principal assistance for the first group would come from the United States; the only conceivable reason for the United States to initiate a nuclear arms race in the Middle East or in Asia would be to make up for a strategy of disengagement from these regions under conditions of great conventional disadvantage for its natural allies and proteges. Great Britain would not assist Australia's nuclear program to gain influence relative to the United States; French assistance to Israel is not as unlikely. On the other hand, Communist China might well help a friendly Indonesia with nuclear weapons in order to draw Indonesia into the Chinese orbit, deflect American attention from China, and generally reduce America's influence in Asia. The Soviet Union or China might aid the UAR for comparable reasons and, at a later stage, aid a Black African country capable of fighting South Africa.⁵

All nuclear great powers may resist helping potential Nth countries to go nuclear. But a country might still try for a situation that attracts such aid if it felt its bargaining position endangered by

⁵The situation is again different when nuclear weapons already exist in a region. One or several Western powers might come to assist India in efforts to match the Communist Chinese nuclear capability, ignoring the effect on the India-Pakistan conflict situation. And one or several Western powers might be less reluctant to assist West Germany than the Soviet Union would be to assist East Germany toward a nuclear capability, if the alternative were to accept West German defection from the Western alliance.

its adversary's becoming the first nuclear power in the area. South Africa's ability to attract aid would not seem to be crucially affected by the distinction of being the first or the second nuclear power in a conflict relationship. The distinction might, however, develop into a vital difference for Indonesia, the UAR and Pakistan. Their abilities to attract assistance as second nuclear powers in their conflict relationships are apt to be lower than if such assistance made them the first nuclear powers. Their abilities would also be relatively lower than those of Australia, Israel, and India respectively. The probability ratings have been reversed on the assumption that the political advantage accruing to the (presumably Communist) donor from nuclear assistance to Indonesia, the UAR or Pakistan would decrease, and the military liability involved in the nuclear assistance increase, once there existed a countervailing local nuclear force. By contrast, the Western powers, particularly the United States, would find it easier to assist their allies or proteges to acquire a matching, equalizing nuclear deterrent force for military security reasons, especially if such a force would be tied into collective alliance arrangements.

This advantage of Australia over Indonesia and Israel over the UAR (consisting of their greater passive dissemination potential as the second nuclear power in a regional conflict relationship) is not sufficient to encourage them to be the first to acquire nuclear weapons (thus nullifying their adversaries' greater passive dissemination potential as the first nuclear power regionally and shifting them to the less advantageous second-power position). Their active dissemination potential, i. e., their ability to impel their adversaries to an all out effort to acquire nuclear weapons (or the support of a nuclear power, regardless of political cost) is still considerable. Moreover, as primarily defensive powers, Australia and Israel would find it difficult to exploit their temporary advantage in the nuclear weapons race to obtain lasting, irreversible gains in security. India might avert an all out Pakistani effort to match her nuclear effort (as directed solely against Communist China) only at the cost of concessions on the Kashmir question. The active dissemination potential of South Africa and West Germany may be quite low; either of the two countries might acquire nuclear weapons without provoking a direct matching effort by their respective counterparts. Soviet threats would be painful to implement in the German case. The UAR, as an African state, would hardly be able to keep its nuclear program out of the Middle Eastern

arms race by pointing to South Africa's threat. An Egyptian, just as an Indonesian, effort to back an over-all military posture with nuclear weapons would trigger countervailing programs (more promptly than in Australia), which could draw on superior technological and scientific resources.

Conflict Limitation and Alliances

In spite of disincentives that vulnerability and dissemination potential imply, a government might decide to acquire nuclear weapons if these appeared uniquely fitted to security or other vital goals. The issue here is how well nuclear weapons can serve to limit parties or conventional forces in a conflict and what degree of success they promise that alignments and related guarantees do not. It is assumed that while having and using nuclear weapons does not necessarily weaken outside commitments and guarantees in a crisis, the tendency is in that direction and the possibility must be taken into account when deciding to rely on national nuclear forces.

Among the parties to the conflicts involving Australia, Indonesia, Israel, and the UAR, only Australia participates in formal alliances and commitments. But even the unaligned countries can expect conventional external support in an emergency. Only in very special circumstances described below might one or another party expect to gain from raising the conventional scope of the conflict by introducing nuclear weapons into it. Using nuclear weapons is least liable to weaken outside commitments and guarantees if one (and especially the offensive, expansionist) side is gaining a manifest advantage. Moreover, it is never possible to rule out the possibility of great-power intervention to control a nuclear conflict before it got properly underway. South Africa might be interested in limiting the number of parties to an African conflict as long as she could not expect Western assistance toward assuring survival and apartheid, as long as superpowers were not likely to intervene to control a nuclearized conflict in a zone which would be still in the Western sphere of interests, and as long as the risks of such intervention were regarded as preferable to a protracted conventional conflict or to Western conventional assistance in only the very last hour. India can count on both conventional and nuclear assistance against an all-out Chinese assault on India as a competitor in Asia.

But India might have an interest in trading external commitments for a national nuclear capability with which to deter or retaliate against partial Chinese inroads in the frontier regions, which she would be unable to check conventionally and which would not elicit reliable or sufficient external aid.

West Germany's case is significant in itself and as a model for possibly analogous situations. West Germany, too, is safeguarded by alignments as surely as she can be against an all-out assault by East Germany backed by the Soviet Union. But independent possession and use of nuclear weapons might enable her to isolate East Germany from the Soviet Union in a special contingency: West German intervention on behalf of an uprising in East Germany. A West German government, acting alone, could hope to deter a Soviet counter-intervention by threatening tactical or strategic nuclear action; the threat, coming from a vitally involved party, might be more credible and be more tolerable to the Soviet Union than if it came from the United States. As a critically placed country, West Germany might, nonetheless, continue to be guaranteed against the worst consequences of a breakdown in her strategy: either massive Soviet conventional counteraction extending to West Germany (and calling the West German nuclear bluff) or an unequal tactical or strategic nuclear exchange. It is just conceivable that an analogous strategy might be employed by Pakistan, the UAR, or Indonesia, to bar counter-intervention by the bested adversary in Kashmir, Jordan or East New Guinea, respectively. Israel and India would have less incentive to employ such strategy as long as they were able to hold the disputed territories indefinitely by conventional means, once in possession; to apply this strategy to Australia would be even more far fetched.

A quite limited range of cases would thus seem to justify using nuclear weapons to limit the scope of a conflict. At one extreme is a country facing a grave conventional threat and able to count on less alliance support than her adversary (South Africa, in the case of the Black African states gaining sufficient force and cohesion to threaten her, and sufficient international importance to gain powerful allies). At the other extreme is a more or less limited offensive goal transformed into a problem of nuclear deterrence and defense by a conventional coup de main, involving too limited a stake to warrant outside intervention (Kashmir, Jordan, New Guinea) or too explosive a stake to warrant testing the nuclear threat (East Germany). Governments considering

nuclear weapons must ask then, in the first case, whether the supreme contingency is sufficiently likely, and, in the second case, whether the hypothetical gain is sufficiently significant (or, when significant, likely) to more than offset liabilities of nuclearizing the basic conflict relationship.

Conclusions

We may now summarize preceding considerations, primarily, those concerning regional conflict situations and, secondarily, those concerning internal factors.

There are, first, countries facing powers which already have a nuclear military capability or are fast developing one (only Communist powers are considered here as potential threats). In this group, India has the greatest incentive to develop nuclear weapons. She has problems of status and can envisage threats to security which might not be adequately met by the nuclear-weapons support of other states alone. Internal considerations reinforce regional ones, as long as economic strains are offset by pay-offs in national morale. The other countries facing Communist China are Japan, Indonesia, Pakistan, and Australia. Among them, Japan is most likely to experience increasing pressure for acquiring nuclear weapons, especially, if she is to become an alternative focus for an increasingly autonomous Asian system and when merely economic and political assets of a pacific posture prove insufficient to support such a role.

The special inhibitions on the key country facing the Soviet Union--West Germany--will militate against testing the possibility that a nuclear Federal Republic might stare down the Soviets in a crisis or that a mere move toward nuclear independence might facilitate national unification or a dynamic policy of Western European integration.⁶ But internal pressures might prevail over diminishing advantages of present commitments and start West Germany on the nuclear path, especially

⁶For example, by removing the rationale from under any disposition of the Soviet Union or the Western states to hold back concessions on the chance that concessions might prove valuable later or induce West Germany not to go nuclear.

if the independent French nuclear and foreign policy gained momentum abroad and a future West German government had to buy time at home by devising one more "necessary preliminary" to fruitful bargaining with the East. Sweden, even if she moves to acquire tactical nuclear weapons for regional security as well as for national self-esteem, is likely to shun strategic capability as menacing to her neutral status as well as to her survival in nuclear war.

The second group consists of countries which face grave threats to their survival without yet facing directly a nuclear power. Neither South Africa nor Israel needs rush into a nuclear weapons program, since ruling elites in both countries can make up whatever headstart their direct adversaries might gain without jeopardizing their hold on power. Indonesia and Pakistan--two countries which face threats to internal cohesion as well as serious conflicts--have an incentive for an elementary nuclear weapons program in order to attract outside help for bigger and better nuclear capability. The fear of seeing their ability to attract such assistance decline might be more important than the hope for meaningful gains in the present. Their regional as well as their domestic dilemmas are such that more than in any other case, decisions are likely to be governed by opportunity rather than forethought.

The third category is that of countries facing a serious conflict but not a threat to national survival. Here belongs the UAR, whose dilemmas (largely shared with Pakistan and Indonesia) are aggravated by the resoluteness and resourcefulness of its adversary. It would be folly for the UAR to initiate a nuclear arms race with Israel, unless it is certain that Israel will proceed with a nuclear weapons program regardless of what the UAR does. The UAR cannot expect to keep up with Israel on its own and it would, therefore, sink into deepening dependence on a Communist donor. Australia's conflict with Indonesia is in too initial a stage for immediate action on nuclear weapons. Only if Australia had good reasons to fear conventional imbalance, an apparently irresistible expansion of Chinese power in Asia (operating in part through Indonesia), and a tendency of the Asian system to escape superpowers' control and turn into an autonomous regional system, would an Australian government have a clear case for crossing the line between development of an ever readier capacity for producing nuclear weapons in the shortest possible time and their actual production. Any Australian government is likely to be able to master the internal

political implications of such a precautionary, but delaying, two-pronged policy.

The fourth and final group is that of countries protected by a hegemonial power. Italy is less likely to be swayed by security against the Soviet Union (and act as a country in the first group) than by status vis-a-vis western European or eastern Mediterranean countries. Argentina and Brazil may react for status' sake, notably if it becomes practical politics (or internal political necessity) to challenge the United States in Latin America. Should Communist-backed power take roots in Latin America, Argentina and Brazil might be less, not more, inclined to go nuclear than if deepening inter-American conflicts and extra-hemispheric involvements were free of connection with the East-West conflict. They might fear, then, to legitimize nuclear grants to the Communist-backed power from the outside, to reduce United States responsibility for Latin American security, and to involve Latin America in a global deterrence-retaliation system.

Quite generally, apart from particular situations, one must keep in mind the limited utility of nuclear capability for offensive purposes. Even the intangible impact of nuclear power--to intimidate--and break the will to resist encroachments--is apt to have tangible results only where nuclear capability is not offset by a third state's countervailing capability; where the possessor is regarded as capable of actually employing nuclear weapons offensively; and where the nuclear capability merely crowns a massive base of conventional military and economic power. Nuclear power's ability to attract new allies and dependents is no greater than its ability to intimidate. Nor would it make much sense to acquire nuclear weapons in order to force one's way into an alliance, since major power alliance policies, in the nuclear context, are more likely to aim at controlling lesser allies than at supporting their independent strategies. The most real advantage flowing from nuclear status may thus be a very intangible one, in the politics of primarily political and economic (as distinct from purely military) alignments and influence-peddling. Such an advantage, however, is likely to accrue only to a power that enjoys many other assets in addition to the nuclear one in the existing or unfolding configuration in any one region or globally.

EXTERNAL FACTORS: SUPERPOWER ROLES IN MAINTAINING
REGIONAL AND GLOBAL STABILITY

In order to examine further the theoretical considerations of Nth country status, we shall assume that proliferation to the selected countries⁷ has already occurred, and we shall add several other assumptions. The global plane will now be stressed relative to regional planes. It will be assumed that the two superpowers, the United States and the Soviet Union, continue to dominate an international system which includes varied nuclear military capabilities, but is polarized by the superpowers' strategic nuclear superiority and by lesser nuclear powers' dependence on the superpowers for trade, economic and technical aid, and ultimate security. While the relationships between a number of lesser powers are expected to become more determinate in function of bilateral conflicts, superpowers' attitudes toward one another and local conflicts will presumably become more ambivalent: requirements of a continuing competition will clash with the need to protect global relationships from uncontrolled local disturbances. Such a situation would reverse the post-1945 situation, when conflict between the United States and the Soviet Union was clear-cut while the lesser countries exhibited diffuse, ambiguous attitudes toward the cold war. Finally, it is assumed that the superpowers will worry more about how their policies affect the competitive position of other great powers, such as Communist China or France. Similarly, all other states will have to take into account more than one third party in considering any one bilateral relationship.⁸ In consequence, it would be more difficult to use nuclear weapons as well as to control their use.

The superpowers' central problem would be to keep regional nuclear conflicts off the global level and out of their own political and deterrence relationships. The minimum task would be shielding or

⁷ Israel, United Arab Republic, Federal Republic of Germany, Argentina, Brazil, Japan, India, Pakistan, Australia, Indonesia, and the Republic of South Africa.

⁸ As described, the international system might be labeled "polarized multi-bipolar" in structure and "pluri-tripartite" in policy calculations.

separating the global balance from the regional balances; the maximum achievement would be stabilizing relations between the superpowers by successfully meeting the minimum task. Superpowers' commitments and capabilities--and their strategies and limitations in this respect--are the major factors to consider.

Unconditional to Conditional Superpower Commitments

Disturbances (instabilities) shift more readily from regional to global level when (1) the superpowers are committed automatically and unconditionally to different parties to local conflicts, and (2) when the superpowers cannot meet their commitments without raising the issue of their strategic deterrence relationship.

There are two main ways to make commitments conditional in the context of nuclear proliferation. The condition may be that the guaranteed power abstain from acquiring nuclear weapons, or that it abstain from using nuclear weapons it already possesses. The guarantor must be able to deter or punish a nuclear strike against the protected country in both instances. In the second instance, the guarantor must also be able to shield its lesser ally's nuclear capability and provide conventional compensations for not using nuclear weapons.

Take the conflict situations involving Australia and Indonesia, Israel and the UAR, and India and Communist China. The United States could not convincingly ask its natural allies and proteges in these conflicts not to acquire nuclear weapons as a condition of United States assistance. Australia, Israel, and India constitute vital outposts for the West and vital counterweights to threatening or unreliable local forces. Moreover, their possible local nuclear conflicts are unlikely to trigger a hostile strategic strike against the continental United States. Nuclear conflict between West Germany and East Germany (Soviet Union) would more likely trigger such a strike, but strike potential would be there even if the United States withdrew its commitment to a nuclear West Germany--as long as the Soviet Union could not be certain America would stay out of a nuclear exchange. If nuclear weapons were introduced into the conflict relationships of South Africa with Black Africa and Pakistan with India, however, the United States would be firm in its present policy of non-commitment and might go so far as to cancel its commitment to Pakistan in regard to the Communist powers.

In most of its key relationships, it is altogether more likely that the United States would have to be satisfied with the second condition of help: asking the lesser country not to use nuclear weapons first. The United States would then have to shield its proteges and their nuclear capabilities from devastating enemy attack, and would have to repair conventional inequalities which may have inspired the national nuclear armaments in the first place. The less profit the guaranteed country could expect to derive from employing its nuclear capability, the easier it would be for the United States to secure cooperation. Even more decisive would be the character of the contrary commitments. The Soviet Union is more likely, than Communist China, to make abstention a condition of help to expansionist non-Communist countries such as the UAR and Indonesia; it should be able to do so convincingly. Its position with regard to members of the Soviet camp, such as East Germany, would not differ substantially from that of the United States with regard to its proteges. Before assisting, the Soviet Union is likely to insist as firmly as the United States that it have authority to interdict use of nuclear weapons.

The logic of the situation would seem to push the superpowers from a stance of conditional commitment to different parties in local conflicts toward more or less joint US-Soviet control over the scope of local conflicts. The transition would occur as superpowers had difficulty in shielding nuclear forces of proteges from local pre-emptive first strikes, and in remaining the primary great-power guarantors in the international system. Transition from conditional-commitment to joint-control stance is apt to be easier because both stances may entail externally similar or even identical measures.

Adversary Control and Cooperative Control

Guarantees and controls are most strikingly similar, superficially, in what may be described as "adversary control." The other type is "cooperative control."

Adversary control. For adversary control, the superpowers act on different sides of a local conflict. Their deterrent forces shield local adversaries' less sophisticated, first-strike nuclear forces against pre-emptive strikes and may go so far as to take their place in the

process. The result is concerted escalation of the deterrence relationship, designed to keep instabilities off the global plane. Wherever necessary, the superpowers contribute conventional assistance toward a stalemate. Adversary control depends upon receptive lesser allies and upon relatively symmetrical local military balances.

a. Receptivity. Lesser powers must be willing to trust and respond to their respective superpower allies, because their goals are compatible. Receptivity also depends upon the lesser ally's objective ability to control and graduate his conventional and/or nuclear responses to his local adversary. It would seem that Israel, Australia, and India would be more receptive to the United States' directions than the UAR, Indonesia, and Communist China to the Soviet Union's directions in conditions comparable to the present ones. The more this were the case in a concrete contingency, the more essential it would be that the United States deter strikes against its proteges and tolerate high levels of Soviet control involvement designed to compel and ensure the highest possible degree of receptivity. Faced with the choice, the United States might prefer direct Soviet action in the UAR (or Indonesia) to the UAR's (or Indonesia's) acting along or with support of a less "responsible" Communist or other power, such as China. In return, the Soviet Union would have to tolerate United States action on India's behalf against Communist China, if the Soviet Union would not secure or compel Chinese cooperation in a strategy of adversary control.

b. Local symmetry. More generally, local military imbalances are apt to create undesirable pressures for uneven forms and degrees of superpower military involvement. Such pressures might arise if the nuclear capabilities of Australia and Israel were more sophisticated or extensive than those of Indonesia and the UAR, or the capability of Communist China were quantitatively superior to that of India, and if the initial employment of such forces reflected the inequalities. In such circumstances, if the superpowers tried to equalize the conflict on all levels, their divergent deployments might stimulate competitive escalation. It might, therefore, be preferable for the superpowers to attempt to supersede local capabilities altogether with their own forces at the earliest possible stage, both to neutralize and protect these capabilities pending resolution of the conflict.

Cooperative control. Just as competitive commitments may push superpowers into adversary control, problems of adversary control in conditions of unequal receptivity and asymmetrical local capabilities might draw the superpowers into the more extreme form of control, cooperative control.

When effecting cooperative control, superpowers either act jointly on the same side of a conflict, or agree to act on different parties to limit a local conflict. They may go so far as to suppress local nuclear forces, in the sense of physically controlling or destroying them; they act to prevent other states from enlarging the conflict. For cooperative control to work, the lesser powers must be extremely vulnerable to superpower intervention, that is, be unable to deter or resist it with their own forces; superpowers must have the means to locate and neutralize the inferior nuclear weapons and delivery systems. The difficulty may thus be greatest in the extreme cases, where "lesser" states have large, sophisticated capabilities. In the previously-discussed conflicts, or comparable conflicts, cooperative control might be attempted only against the party less receptive to adversary control, while the ally of the more receptive party would vouch for its self-restraint during the execution. Or cooperative control might take place against both parties. Apart from political aspects, cooperative control will be harder to apply to Communist China as she acquires the capability to deter it; Indonesia might raise problems of detection and of unorthodox delivery systems. This might in turn complicate or rule out joint cooperative intervention against both Australia and Indonesia, in view of the countries' (presumed) unequal capacity and will for concealment compounded by the (likewise presumed) difference between Australia's defensive and Indonesia's offensive postures. Similar considerations would affect the UAR-Israeli conflict relationship.

Despite technological and political difficulties, the superpowers may well cooperate with the tendency for guarantees to merge with control measures and for adversary control to evolve into cooperative control, since failure to act might prove globally most destabilizing. In a regional nuclear conflict, the global strategic balance might not survive protracted uncertainty about what the superpowers were going to do. More concretely, unilateral superpower measures--including defensive ones--adopted in reaction to the regional conflict, might upset the global balance if they looked like the beginning of a first strike against the adversary

superpower. Conversely, both kinds of control measures might not only shield the global balance from regional instabilities, but even stabilize it as the superpowers developed experience and weaponry useful in global confrontations.

Political and Military Implications

The implications of the preceding discussion are of a military kind and of a political nature. The superpowers would have to be able to deploy for both forms of control without seeming to threaten their global strategic relationships. For example, they might use manifestly short-range, non-global delivery systems to intervene between proximate lesser powers. Three major military capabilities, for three different reasons, seem to be required in an environment of nuclear proliferation. One is the ability to erect shields, both nuclear and non-nuclear, around lesser countries. The second is the ability of superpowers to wield nuclear daggers short of thermonuclear swords. And the third is the conventional capability to purchase, reward, or enforce nuclear abstention by local powers.

The ability to keep one's controlling measures clearly off the global strategic plane might be especially crucial when both parties to a regional nuclear conflict are situated within the sphere of interests of one of the superpowers. In a hypothetical situation, the United States might want to exclude the Soviet Union from measures to control a nuclear conflict between Argentina and Brazil; the United States would facilitate Soviet abstention by avoiding military measures which might be in the remotest way globally destabilizing (such as alerts of intercontinental aircraft, etc.). In spite of such precautions, a unilateral control strategy might still run into difficulties if the excluded superpower refused to tolerate the requisite measures in an attempt to lure one of the local rivals out of the sphere of influence. An analogous situation might arise in a confrontation between, say, nuclearized Poland and East Germany, with the Soviet Union in the position of the embarrassed core-power.

The conflict between basic political commitments of the superpowers, and specific pragmatic measures of control may be even more difficult to resolve in the long run than the conflict between joint concern and special spheres of influence. The Soviet Union, in

particular, might find it difficult to combine continued commitment to a revolutionary foreign policy with a conservative attitude toward the employment of nuclear weapons by lesser, including revolutionary, states. This would be true, especially, if the control measures were cooperative and the lesser revolutionary countries rallied to Communist China or another alternative great-power supporter. An unfolding incompatibility between a residual ideological commitment and a prematurely activated pragmatic commitment to the control of the consequences of nuclear proliferation, might prove to be the worst political outcome of proliferation. Rather than surrender to international conservatism altogether, the Soviets might prefer to reaffirm their alliance with Communist China and to establish others with the lesser states which had been alienated from the United States in the preceding period of cooperation between the superpowers. In any event, the tendency for some of the lesser nuclearized states to ally with the latest non-conservative nuclear great power or quasi-great power might produce unpredictable, and thus politically upsetting, alignments. In military terms, however, this might render superpower controls more manageable at some levels: i. e., it would justify their extension to middle powers presumably more responsive than the restless small or undeveloped states and also locally more influential than the superpowers.

GLOBAL ENVIRONMENT: TRENDS AND PROSPECTS

The key feature of the international system in the preceding twenty years has been the predominance of the two superpowers. Consequently, basic changes for the international system, in general, and for nuclear proliferation, in particular, are those changes which erode or supplant that predominance in the world at large or in individual regions. Two major complementary possible changes correspond to observable incipient trends. One trend is the definitive emergence of middle powers disposed to challenge the superpower duopoly. The other trend is the emergence of regions which superpowers cannot directly control, either because the regional powers comprise a relatively self-sufficient balance of power and nuclear deterrence system, or because with or without premature nuclear weapons they fall prey to anarchy.

Middle Power Challenges and Choices

As long as middle powers rise and claim a place in the sun, peacetime alliances centered on the superpowers and oriented toward East-West conflict will lose cohesion, until old alliances reorganize to accommodate new demands or until new alliances supplant them to fulfill fundamental national goals. Even if, as is likely, major realignments are not formalized in the next fifteen years, the standing possibility of realigned middle powers (France, West Germany, and Japan in the Western system and Communist China in the Eastern system) will affect international relations.

Two related but distinguishable contests would produce such realignments. One contest is over the composition of the de facto international hierarchy, notably about membership in the more or less institutionalized global concert of greater powers. The other contest is over the material, political, and economic implications of formal independence for lesser states. The aspect common to the two contests is likely to be the key international issue of the next fifteen years: the extent to which major powers can retain or establish exclusive control (i. e., paramountcy) in their geographic orbits and, consequently, the extent and forms of economic, political, and other access to such areas that extra-regional greater powers can claim and secure with effect. In this contest, each of the greater powers will seek to convert the losses from forfeiting control in its regional orbit into so many assets to gain influence at the expense of great power competitors. The losses the Soviet Union suffered in eastern Europe (such as the Austrian peace treaty, post-Stalin polycentrism) were so many assets in its global strategies of the Khrushchev era; so have been, in the De Gaulle era, France's defeats in her empire. The less Communist China is able to, or disposed to, dominate southeast Asia overtly, the more acceptably can she assist and support revolutionary movements in Asia, Africa, and Latin America--while the emancipatory defeat of Japan's hegemonial bid in southeast Asia is expected to help Japan offset China's bid twenty years later.

Cold war alliances loosened as fears lessened that one or the other superpower might actually use nuclear weapons. The same lessening of fear may encourage emerging middle-power contenders to employ their nuclear weapons technology as a lever in the continuing,

but extended and politicized, global contest. Apart from Communist China, France is apt to be in the first wave of middle powers capable of utilizing more or less safeguarded and controlled nuclear military assistance--or outright transfers of weaponry--for political ends. When nuclear arms proliferate, much lesser countries might follow the second wave of middle powers. As nuclear weapons spread, however, political dividends from nuclear investments abroad are likely to drop off. The critical period for nuclear military assistance strategy is likely to come when France and China pass into the second generation of their nuclear development. By then (early or middle 1970s), the superpowers might well have shown that they can neither check dissemination nor limit their own nuclear establishments. Alternate sources of assistance or transfers might then make the crucial difference for governments pondering the issue of nuclear weapons. -

As they acquire a nuclear capability of respectable magnitude, the middle powers will face a crucial choice. They may turn as conservative about nuclear spread as the United States and the Soviet Union. This conservatism would reduce the middle powers' appeal to the forces of independence, without assuring them of equal treatment by the superpowers. Should nuclear weapons spread, nonetheless, the middle powers' nuclear capability would become a declining asset even if their nuclear technology should approach that of the superpowers. Or, the middle powers may be radical (or revolutionary) about nuclear spread in order to influence lesser states directly and the superpowers and international organization indirectly.

If they follow the radical course, three main regional strategies are available to middle powers. First, the middle-power donor may try to disrupt the sphere of influence of one of the superpowers, perhaps in retaliation for superpower efforts to isolate the middle power in its area. Thus, France might conceivably extend assistance to Argentina or Brazil in retaliation for the United States' isolating France in western Europe with the aid of Great Britain or West Germany. Along the same lines, China would assist a revolutionary Latin American regime (or a Maoist eastern European regime) in retaliation for the United States' or Soviet's seeking to outflank her in Asia. Second, the middle powers may try to gain a share of influence in otherwise hard-to-penetrate areas where indirect postcolonial control and influence are not yet

allocated among the powers (or where the existing patterns of influence crumble). A power with limited material resources is naturally attracted to the immediate payoffs of military assistance, compared with long-term programs of economic assistance. Just as the Soviets dispensed military assistance in the Middle East in the 1950s, the Chinese may disseminate nuclear military assistance in Africa in the 1970s. They may do so to immunize a friendly clique which may have found itself in otherwise vulnerable control of a small country, or to win over the government of a prestigious African state (such as the UAR, Nigeria) concerned over its position vis-a-vis a Western outpost (such as Israel, South Africa, Southern Rhodesia) or vis-a-vis an ascendant Arab or Black African state. And third, the middle power may try to gain any ally within its own geographic orbit and embarrass a local competitor for regional influence. Thus, Communist China might help Indonesia or Pakistan to acquire nuclear weapons, motivated, at least partially, by the desire to push India into offsetting nuclear exertions and resulting dependence on the West. Similarly, France might extend nuclear aid to Italy or Spain in order to make things in Europe even more difficult for West Germany and the United States.

A variety of considerations might make potential recipients into willing or anxious ones. Pakistan, Indonesia, and the UAR face technologically superior adversaries, some of which might be able to secure outside help (Israel from France, India from the United States). If only Chinese nuclear assistance were available, the fear of antagonizing the United States or the Soviet Union would lessen; an alternate source of nuclear assistance would be available. Argentina or Brazil might seek or accept aid from France to demonstrate independence from the United States and, possibly, to deter unsolicited exports of revolution from Cuba. Once the predisposition was there, either of the two countries might wish to be the first to obtain nuclear weapons. To be first, when there is no acute territorial conflict, is to draw maximum political status from going nuclear. Both Argentina and Brazil might hope to limit the political damage by inducing the United States to match French military assistance. American involvement might be necessary to control proliferation, or to offset it with enough economic stability to minimize the danger of irresponsible or revolutionary use of the new nuclear weaponry.

The superpowers might very well not be able to block nuclear transactions or liquidate their results. They would be weakest if the transaction took place in a noncritical context (unlike Cuba in 1962), or if it involved powers ostensibly friendly to the superpower. Thus, French nuclear aid to Argentina or Brazil would not clearly threaten the United States militarily or politically. And aid or transfer, by either middle power, to a non-Communist Nigeria would also be hard to deal with, notably if the country faced a situation which neither superpower could help relieve in view of other commitments.

The more effective, if perhaps self-defeating, sanction would be superpower retaliation in kind. This would mean extending nuclear military assistance to a country which might be, or become, hostile to the middle power, e.g., the United States to Taiwan, the Soviet Union to Thailand. The possibility of such retaliation calls attention to the dilemmas facing the middle powers in a dissemination strategy. France would have trouble stemming West Germany's drift toward nuclear weapons, if she simultaneously promoted nuclear dispersion.⁹ China's expansionist dilemma contrasts with France's defensive questions about Germany. If nuclear weapons were dispersed too rapidly, the psychological and political effect of Chinese nuclear arms in Asia would be reduced, even before China became strong enough to cope with ensuing instabilities and to exploit them against the two superpowers.

As in the case of lesser countries considering the acquisition of nuclear weapons, every disincentive implicit in the dilemmas of the middle powers weakens the reasons why the superpowers should make a special effort to prevent the middle powers from doing what is not in their interest to do in the first place. But there are differences. Most of the lesser countries (if not all of the regimes) can gain by waiting so

⁹On the other hand, French nuclear assistance to other countries, such as Israel, creates precedents for Franco-German cooperation, which France may well prefer to independent West German production or to US-sponsored multilateral schemes. Moreover, French nuclear military assistance outside Europe might move the Soviet Union toward a "European" solution to the German problem before generalized proliferation removed the last restraints from West Germany.

long as the local adversary waits too. By contrast, dissemination may have an optimum period as a political strategy for the middle powers and then waste away--and not only because lesser states acquire nuclear weapons by other means or other middle powers come to the fore. When a politically ambitious middle power can extend nuclear assistance, its tacit bargaining power with the superpowers begins to decline if it fails to assist. After a certain time, all that the middle power can do is dignify its self-restraint by signing anti-dissemination compacts--a superpower's device to hamstring the middle powers in the first place.

In these circumstances, it might be wiser for the superpowers not to make it too difficult for the nuclearized middle powers to act with self-restraint, and to deliberately attribute to them an increase in status rather than to try vainly to deny it. They might usefully go out of their way to enlarge the concert of advanced states with primary responsibility for controlling the nuclear environment, to include major states which proved their technological ability and political maturity. Only a limited number of countries can reasonably aspire to such status in the next fifty (not fifteen) years. They are apt to go nuclear in any event, sooner or later, with politically disturbing effects if they have to proceed in each individual case over the opposition of entrenched prior possessors.

Regional Autonomy

The circle of nuclear greater powers is likely to grow, not only because a global directorate confers status on newcomers, but because of natural evolution in the likely prospects' regions. As more countries strengthen their economies, and as the politics of nuclear stalemate permit more states to be active, regions structurally suited for autonomy will tend to reduce outside control.

Western Europe may become an autonomous region, with Great Britain, France and West Germany in the positions of regional great powers, interacting around unification within western Europe and with eastern Europe. Asia may produce another such region: China, Japan, India, and perhaps Indonesia focusing their competitive politics and economics on the smaller states. Australia may end up in the inner group of local powers or may be edged out to the ring of the

"white" powers: the United States, the Soviet Union and, for some time at least, Great Britain. It is less certain that Africa and Latin America can soon form autonomous systems with hierarchies of greater and lesser states conducting routine politics over specific stakes with commensurate material means.

In an autonomous region, the status incentive for nuclear weapons rises as several major states with comparable or equal conventional strength coexist and the overarching presence of extra-regional superpowers attenuates. In Asia, Japan and Australia would have a status incentive for matching the nuclear weapons which China and, probably, India acquired in the preceding phase, when the superpowers contended over the region (as an intermediate one) and China sought to convert it into a hegemonial one. Likewise, if West Germany has not gone nuclear to buttress her security and enhance her negotiating position with the Soviet Union while western Europe remains for some purposes a hegemonial region, she may well acquire the weapons in order to assert equal status with France, as a temporary alternative to reunification, in an increasingly autonomous western European (or a larger European) system. Similarly, a Latin American and--still later--an Africa evolving toward autonomy may display pairs or cycles in which status-seeking countries will acquire nuclear weapons. The security motive would, of course, continue and even prevail eventually under intra-regional and extra-regional threats. Status and security motives would merge wherever nuclear capability was necessary to attract lesser allies and dependents seeking protection.

The transition would be marked by the local powers' acquiring and handling their nuclear weaponry in ways which neither called for nor warranted superpower intervention. In a completed autonomous system characterized by balance-of-power conflicts, local powers (say China, Japan, India and Australia in Asia) would comprise multilateral deterrence. No single power would be strong enough to incapacitate the nuclear potential of all others or any combination (the capability of any adversary combination) without weakening itself fatally vis-a-vis the uninvolved regional power or powers, or vis-a-vis the extra-regional superpowers. The role of the superpowers (acting as world powers) would tend to decline. They would find it hard to coordinate measures aimed simultaneously at several local powers in either adversary or cooperative-type of control. And the regional powers

powers only at the cost of increasing tensions within and between individual regions. As the superpowers came to realize that the consequences of nuclear proliferation are at bottom manageable, and in some cases even desirable, may well find less incentive to retard the process and more to simply channel the process.

CONCLUSIONS: THE PROCESS OF NUCLEAR PROLIFERATION

Two preceding sets of partial conclusions fit the historically-informed conjecture about nuclear proliferation. In principle, eventual spread is certain, unless the international system is transformed fundamentally. States cannot be expected indefinitely to deny themselves instruments which apparently did not handicap prior possessors. In actual fact, most states will hesitate, unless compelled by circumstances, to step into what is still largely unknown and to thus complicate the already delicate tasks of national statecraft. The spread may, therefore, be managed even if it cannot be prevented by national and international action. It can, moreover, be faced with a certain serenity, which does not depend solely upon more or less ingenious demonstrations of the potentially stabilizing consequences of nuclear proliferation (especially in conditions where the stability between the superpowers would break down, or evolve toward the disadvantage of the more conservative of the two superpowers). In the last analysis, major innovations in the international system have always been assimilated by the process of diffusion: new weapons or new creeds spread, become familiar, incite correctives, and the system achieves a new equilibrium within its enlarged dimensions. The danger is not diffusion, but the process of diffusion. Moreover, to the extent that nuclear weapons are something of an equalizer between otherwise unequal states, nuclear proliferation would return international things back to normal (when technically and financially well-endowed lesser states can face up to the giants), after a period when only states with a massive territorial and demographic base could back influence with real power.

In the remaining part of this paper, we shall state or restate more pointedly the conclusions flowing from the preceding analysis for policy (notably American), mainly with regard to the more immediately relevant period.

Critical Initiative and Critical Sequence

Our principal finding has been as follows: none of the surveyed states has a sufficient reason to be the first to introduce nuclear weapons into a conflict relationship, so long as it can hope to deal with a local aggressor with its own conventional military means or with those of allies, and so long as it has to consider disadvantages implicit in nuclearizing the conflict relationship. The superpowers can act individually and jointly to add to the anticipated disadvantages, as long as they concentrate on developing their real ability for control intervention in a nuclear confrontation rather than concentrating on ideal goals, such as prevention of proliferation by treaty. The conclusion does not apply to countries which already face a nuclear power, and abstinence may not prevail in countries with offensive ends or with special, political reasons for going nuclear. The disincentive has to it an obverse incentive in the remaining cases.

Not wishing to be the first, most governments will be anxious to be able to be the second nuclear power in a conflict relationship as quickly as possible. This merely extends into pre-nuclear relations, the notion that stability between two established nuclear powers rests upon the second-strike capability of the self-restraining party. The extension is not invalidated by the fact that guarantees from third states may be available to prevent the initial advantage of the locally first nuclear power from becoming definitive. In the practice of states, such guarantees cannot be more than safeguards behind which the threatened country can prepare a riposte to the breach of the tacit no-first-acquisition agreement with its rival. Guarantees are the political, and thus imperfect, equivalents of hardened shelters or protective submersion for a second strike capability. The equivalence is imperfect because guarantees do not assure punitive retaliation for a surprise attack, in the short run, and because, when accepted for use against a rival of comparable conventional strength, they are incompatible, in the long run, with national dignity.

It is for technical expertise to determine how far states can go in developing and demonstrating their capacity for a speedy development of a "second capability," without crossing the line between demonstrating and testing, potential and production. It is for the practice of states to evolve the techniques for demonstrating the will to make use of

demonstrated skills, if constrained to do so. It is, moreover, both a technical and a political question as to what extent the development of delivery systems, in the absence of concurrent development of nuclear warheads, can display determination and can actually shorten the time between the decision to go nuclear and attainment of a sophisticated nuclear capability. Widely identified, in the popular mind, with nuclear weaponry, missiles armed with conventional warheads might substitute for nuclear weapons among lesser powers, e.g., the UAR and Israel, and safeguard them against falling too far behind in a latent arms race. The superpowers, and the United States in particular, might consider extending technical assistance to discourage expectations of long-term advantage from local one-sided possession.

The strategy of demonstrating that nuclear capability would be unprofitable is superficially contrary to the strategy of compensations for not acquiring nuclear weapons. There is least contrast when compensation takes the form of guarantees against nuclear blackmail or attack. A difference remains, though. When guarantees are supposed to show that there is no profit in nuclear arms, they ought to be temporary, pending development of a local, second, matching capability, or conditional upon not using or not being the first to use nuclear weapons in the local conflict and, perhaps, upon maintaining a complementary conventional capability once the conflict relationship has been nuclearized on both sides. When guarantees are compensation, on the other hand, they will purport to be permanent and unconditional so long as the guaranteed country remains non-nuclear, but nil if it does nuclear.

Extensive cooperation with the United States to control consequences of proliferation might embarrass the Soviet Union; it would be inconsistent with a revolutionary global strategy. Conversely, the United States is apt to be embarrassed as alliance leader, if it freely guarantees non-aligned states to avert further proliferation. If the United States gives out guarantees unilaterally to non-aligned countries, its commitments to its allies will be regarded as depreciated, in terms of will and capacity to implement them preferentially. If guarantees are given jointly with the Soviet Union, key anti-Soviet allies, such as West Germany and Japan, will be alienated and will acquire nuclear weapons that dilute the basic American commitment. The strategy of controlling the consequences of proliferation is politically safer for the United States, since the requisite measures are manifestly necessary in the face of imminent and universal

danger. By contrast, when the Soviet Union guarantees even non-Communist powers against nuclear attack, it is making, in the present state of nuclear proliferation, a hypothetical commitment which is politically useful against China and politically inoffensive with regard to the other Communist states and allies.

The United States is, likewise, more vulnerable than the Soviet Union when compensation for abstaining from nuclear armament takes the form of special economic, conventional military, or any other material aid. Such a policy would expose the United States--the more likely source of so-motivated assistance--to blackmail, even from states that would not otherwise think of going nuclear. The contrast with the strategy of demonstrating the inutility of nuclear weapons for the lesser state in terms of the nuclear equation, itself, is then complete. The recipient state remains free to develop nuclear weapons when it exhausts the superpower's readiness or ability to compensate abstinence, just as it is free and apt to go nuclear when it loses confidence in the superpower guarantee. The net profit is delayed development of one local nuclear military capability. Delay is gain if it implies politico-economic development of the aid-receiving country, resulting in more rational policy and perfected command and control. Delay means loss when it has intensified internal factional struggle over independent nuclear capability. The longer the delay for one country, moreover, the greater the local imbalance may be if a local rival acquired nuclear weapons in the meantime. The period for developing a counterpoising capability may become too long, obligating an unconditional pledge of assistance, which will be suspected of coming too late. The ultimate consequence of compensation policies may thus be pressure on the United States to violate its proclaimed anti-dissemination policy by granting matching nuclear capability to the delayed country. Much of the pressure will flow from the risk of driving the country to a great-power adversary of the United States. Present American policy toward India may be incurring risks of this kind.

Compensation, Nuclear Control and Superpower Strategy

The policy of compensations for not acquiring nuclear capability, designed to put an end to proliferation, is apt to be pursued from a position of growing weakness as more countries become capable of acquiring, act as if about to acquire, or actually acquire nuclear

weapons technology. Furthermore, the policy is apt to divide the United States and the Soviet Union in the last resort, as its delayed consequences become apparent and create opportunities for unilateral exploitation. Joint compensatory action by the superpowers--including guarantees, special economic-development assistance, as well as self-imposed limitation on the growth and use of superpower nuclear capabilities--would not necessarily avert the division. On the other hand, for the superpowers merely to preside over "unavoidable" proliferation means facing in the near future the need for joint control action; it might exceed their more slowly developing ability to subordinate long-range commitments to the immediate requirement of controlling a secondary nuclear conflict. The sooner a test case arose, and the more spectacularly cooperative such control was, the more the superpowers' "negative community of interests" would be strained.

The dilemma is basic and not easily resolved. The least problematic strategy, designed to slow down proliferation and channel it stably toward politically and economically developed major powers, can now be summarized in eight points.

1. Do not, as a nuclear power, decry nuclear weapons as a priori useless for all other states. Leave the question of whether to develop nuclear capability to the responsibility of individual governments, while clarifying the internal political, regional, and regional-global implications of alternative courses of action as the primary conditioning factors in the decision. The wider the range of analysis, the more it may appear that (a) most countries, and the lesser countries with intense bilateral conflicts as a group, are better off without nuclear weapons than with them, and (b) the superpowers can live with nuclear proliferation and may even derive some benefits from it in their reciprocal relationships, if they identify their interests with the requirements of the international system in acute nuclear emergencies.

2. Depend on the interest of most countries in not being the first to develop nuclear weapons in a regional conflict situation. Make this interest efficacious by not opposing, and even assisting, efforts to reduce to a minimum the period needed to match, as a second local nuclear power, a rival first capability. This may call for assistance toward the acquisition of, and familiarity with, secure delivery capabilities which could serve as a basis for a rapidly developed, second-strike, first-generation, matching nuclear capability.

3. Be manifestly prepared to guarantee countries which refrained from developing nuclear weapons, on the basis of their well-understood self-interest, against the consequences of a violation of a tacit regional or bilateral agreement not to be the first to acquire nuclear weapons. But, treat this guarantee from the beginning as a temporary one (to span the period of local military imbalance or asymmetry), especially, if the guarantee relationship is not to be transformed into a formal alliance with provisions for United States military presence (as long as the cohesion of the Western alliance system is a major interest of the United States).

4. Give high priority to collective interest in neutralizing nuclear capabilities which are first introduced into a regional or bilateral conflict situation, notably by countries of insufficient conventional and industrial base, either forthwith or at the first sign of their use or threatened use. Act in such a way as to increase belief in the determination of the United States to control, unilaterally if necessary and jointly with the Soviet Union (by cooperative or adversary control measures) if possible, the consequences of proliferation, in ways designed to safeguard the global strategic balance from destabilizing pressures from below.

5. Make commitments to nuclear states conditional on their not using, or not being the first to use, nuclear weapons. As far as possible, tie such conditions to reciprocity in other powers' guarantees to the local rival of the-guaranteed power.

6. Supply conventional military assistance, competitively with the Soviet Union or other great powers when necessary, in advance or in the midst of a local crisis, so as to enable a country facing a superior conventional aggressor to abstain from nuclear warfare. But, extend no assistance, military or economic, with the express and declared purpose of thereby rewarding or compensating for abstinence from the development of nuclear capability.

7. Reexamine periodically the military posture of the United States with an eye on the special requirements, if any, of conditional commitments (see 6 above) and measures of unilateral or joint, adversary or cooperative control, to be implemented by superseding or suppressing local nuclear forces in ways designed to avoid straining the global deterrence relationship with the Soviet Union (or Communist China, at a later stage).

8. Consider reducing the incentives for nuclear middle powers to spread nuclear weapons, by treating them as co-responsible for control of the nuclear environment. Treat the spread of nuclear weapons among middle powers with great-power potential (a) as part of a partially desirable evolution toward new order of regionally segmented multilateral deterrence systems (in relatively autonomous multipower regions), and (b) as part of multilateral or unilateral, but mandated, control and police systems (in disintegrating regions), and (c) as an alternative to progressively overstrained nuclear duopoly or to progressively intensified regional hegemonies. Act generally on the assumption that, although even managed nuclear proliferation is beset with dangers, the problems raised by nuclear weaponry are not likely to be enduringly solved until the process, once started, runs its course.

APPENDIX C

THEORETICAL CONCERNS ABOUT NUCLEAR PROLIFERATION

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THEORETICAL CONCERNS ABOUT NUCLEAR PROLIFERATION*

INTRODUCTION

One approach to the explanation of war is to assert that each war has been unique; thus, it is appropriate to treat each as a separate historic unit and to deny the existence of generalizations. However, taking the broader overview that the subject requires, one can discern a number of distinct areas of causation. Usually causes of war have been divided into five basic groups, with different writers placing variable emphasis on each. These general categories are: (1) ideological, (2) psychological, (3) socio-political, (4) economic, and (5) systemic.

(1) The first heading, that of ideological causation, subsumes wars fought over religious disputes, such as the Thirty Years' War from 1618 to 1648 which had its origin in the religious enthusiasm of the Reformation that had left Europe divided into two antagonistic camps. Also under this area of causation are wars begun out of religious fervor for conquest and conversion. Among these may be cited the Islamic Conquests from 622 to 732 and the Crusades of Christianity beginning in the last decade of the eleventh century and continuing for almost two hundred years thereafter.¹

In a similar vein, wars incited by nationalistic sentiments may be included in this category. Such calls to arms as "manifest destiny" or "lebensraum" and their numerous equivalents have been the sparks of more than a few wars in the history of the world. The Napoleonic Wars with their inspiration in the new democratic-nationalism or the twentieth century Allied battle cry of "a world safe for democracy" may further be cited as examples of ideologically causative factors. Certainly most, if not all, wars of independence and struggles to attain or defend "self-determination" are included in this category.

¹ Quincy Wright, *A Study of War*, Second Edition (Chicago: University of Chicago Press, 1965), pp. 720-727.

* By James McBride.

(2) In the realm of psychological causes of war, writers from Thomas Hobbes to Quincy Wright have suggested that one fundamental cause of war is human nature. According to this widely held view, man is naturally aggressive, thus making war a natural, if not a normal, occurrence in the course of human affairs. Another supposed cause of war, closely related to human nature, is the individual personality of a national leader or a dominant elite group. Hitler's megalomania, for example, has been cited by a number of writers as being a fundamental causative factor in the Second World War. Similarly, several historians have suggested that it was the group known as the "War Hawks," who dominated the Congress, that was responsible for involving the United States in the War of 1812.

The basic emotion of fear has been cited as the impetus behind a number of inter-nation conflicts. One country may launch an attack upon its enemy as a reaction to a threat to its own national territory, hoping to gain the advantage of surprise. It is important to note in this connection that the same aggressive reaction based upon fear can be triggered by a perceived, as well as a real threat. Moreover, wars may not only be directly initiated out of fear: the process may also be a more complicated one extending over time. As Lewis Richardson points out, fear may move a nation to invest in additional armaments, which in turn causes a second to purchase more and greater weapons. Hence an arms race commences and may escalate to a point of no control.²

Finally, under the heading of psychological causes of war, one cannot omit revenge. It has been suggested, for example, that the desire to amend past wrongs (i. e., the Treaty of Versailles) was one of the motives behind the actions of Germany leading up to World War II and continued to play a role in unifying that nation's war effort.

(3) There are a number of possible causes of war which can best be categorized under the general heading of socio-political factors. Among these, wars begun to establish or demonstrate a nation's power, to enhance its glory, to bolster its prestige, or to improve its bargaining position in the international area, are

² Lewis Richardson, *Arms and Insecurity: A Mathematical Study of the Causes and Origins of War* (Pittsburgh: Boxwood Press and Chicago: Quadrangle Books, 1960), p. 13

outstanding examples. It has been suggested, illustrative of this point, that the United States fought the Spanish-American War in order to establish itself as a major power in the eyes of the World. Many similar examples can be found.

Wars for material gain also fit into this group. This encompassing subheading may include battles waged for territory, for political control, for sources of raw materials. A number of colonial powers engaged in military struggle to gain both the raw materials for its manufacturing industries and control over foreign markets. Disputes over boundaries, whether they be cement ground markers or invisible limits on a sphere of influence, have served to ignite numerous inter-nation conflicts. Lewis Richardson further suggests that the number of wars in which a state engages tends to be proportional to the number of states with which it shares common frontiers.³

Finally in the realm of socio-political causes of war, several historians and social scientists have suggested that the leader(s) of a nation will involve the country in a foreign war in order to dissipate internal strife and to improve his own political position. Napoleon I is thought to have distracted attention from domestic difficulties in France by placing great emphasis on glorious foreign exploits. Similarly, focus on a foreign enemy or even exaggeration of a potential or an actual external threat has been used to unify fragmented or dissident elements in an emerging state, thus helping to centralize control over the population and the territory. This anti-foreign sentiment has been a common phenomenon in wars for political independence, which may also fall into this category.

(4) Economic factors are high on the list of suggested causes of war. Foremost among those who name the economic impetus to War is, of course Karl Marx and his disciple, N. I. Lenin. Marx claimed that the capitalistic mode of production creates two antagonistic classes in an inevitable and constant state of war with one another until the proletarian masses finally overpower the controlling bourgeoisie. Lenin claimed that imperialism was the last

³ Lewis Richardson, Statistics of Deadly Quarrels (Pittsburgh: Boxwood Press and Chicago: Quadrangle Books, 1960), p. 177

stage of capitalism because the capitalist powers would destroy themselves in wars for economic gain.

Other less dogmatic writers have pointed to such economic causes of war as high taxation of colonials or minority groups and crippling restrictions on the flow of capital or merchandise for trade.⁴ One of the causes of the American Revolution, it has been frequently suggested, was the severe taxes levied on the colonists and limitations placed on New World manufacture and trade.

(5) Finally, many suggested causes of war are factors which seem to be inherent in the international system itself. The very fact the modern world is composed of an ever-increasing number of autonomous sovereign states, each with its own peculiar national interest, is sufficient cause for war in the opinion of many scholars who feel that conflict of different national interest is inevitable. To a certain extent, moreover, when these clashes of interest occur, war may be the expected course of behavior to resolve at least some of them. When other methods of recourse are exhausted, war may not be only the most expedient, but also the sole means of solution in the absence of any controlling international force.

We have not attempted to develop a theory of the causes of war in the nuclear age. Rather, the findings and wisdom of scholars and statesmen have been reviewed here as a basis for assaying the contemporary position on causation as it relates to nuclear weapons.

All of the above causes of war have been derived from the study of war prior to the advent of nuclear weapons. It was assumed that the provocation or initiation of war was a deliberate and calculated, even if irrational or mistaken, act.

⁴Ibid., Editor's Introduction, p. xi.

In the past, only rarely were entire populations involved in or concerned with war, but no longer is it the exclusive game of soldiers, statesmen and rulers; entire populations of continents are as much in the front lines as the soldiers. Because of this possibility of a total war by total populations for survival, the phenomenon of war is receiving sharply increased attention from every segment of society with the focus of attention of the spread of nuclear weapons capabilities. Some argue that the proliferation of nuclear weapons make nuclear war a statistical certainty within a finite period of time. Others say the proliferation will rule out war as an instrument of national policy. Still others argue that with the proliferation of nuclear weapons, some irresponsible national leader will bring nuclear holocaust upon the world. Further, the complexities of the new technologies have also brought on the possibility of inadvertent nuclear war through either accident or what is commonly called "catalytic war."⁵

It is the purpose of this paper to assess the impact of the spread of nuclear weapons upon the incidence of international war and, where appropriate, to suggest military and political means of avoiding or coping with the problems raised by nuclear proliferation. First the "statistical hypotheses" and "nuclear irresponsibility" arguments will be evaluated and then the problems of deliberate war, catalytic war, and accidental war will be analyzed. For heuristic purposes it is assumed that the following nations already possess a nuclear weapons capability: Peoples Republic of China, Federal Republic of Germany, Israel and the United Arab Republic, Japan, India and Pakistan, Argentina and Brazil, Australia and Indonesia and finally, the Republic of South Africa.

⁵The term "catalytic war" refers to a war between major powers, precipitated by the disguised machinations of a third power.

THE STATISTICAL HYPOTHESIS

In recent years it has become common for political leaders to express the danger of nuclear proliferation in mathematical terminology. For example, in 1960, Secretary of State Christian Herter said: "The more nations that have the power to trigger off a nuclear war, the greater the chance that some nation might use the power in haste or folly".⁶ A more recent statement by a government official is that of the Director of the US Arms Control and Disarmament Agency, Mr. William C. Foster, who wrote: "...there is the simple fact that the probability of nuclear weapons being used will almost certainly increase as the number of fingers on the trigger increases".⁷ He also expressed belief that the United States could not avoid involvement in any nuclear war between Nth countries, thus implying that the chances of the United States becoming involved in a nuclear war will increase as the number of nations which acquire a nuclear capability.⁸

Both the United States Senate and the House of Representatives have recently expressed similar views. On January 18, 1966, Senator Pastore and 52 other senators introduced a resolution saying in part: "Whereas the danger of nuclear war becomes greater as additional nations achieve independent nuclear weapons capability...".⁹ The next day Congressman Chet Holifield, Chairman of the Joint Atomic Energy Committee, and Congressman Melvin Price, ranking member of that committee, introduced an identical House Resolution. Presumably, then, the probability of nuclear war today is greater than it was in 1949 by a factor of five, if this reasoning is to be followed.

One prediction goes further and flatly states that nuclear war

⁶ The New York Times, February 18, 1960.

⁷ William C. Foster, "New Directions in Arms Control and Disarmament," Foreign Affairs, Vol. 43, No. 4 (July 1965) p. 591

⁸ Ibid, p. 590

⁹ Congressional Record, January 18, 1966, p. 468.

is a certainty. Sir Charles P. Snow declared:

We know with the certainty of statistical truth that if enough of these weapons are made--by enough different states-- some of them are going to blow up. Through accident, madness, or folly-- but the motives do not matter. What does matter is the nature of the statistical fact....(This) is not a risk but a certainty.... The arms race between the US and the USSR not only continues but accelerates. Other countries join in. Within at the most six years China and several other states will have a stock of nuclear bombs. Within at most ten years some of these bombs are going off.¹⁰

These predictions, despite their authoritative sounding verbage, have not been permitted to stand unchallenged, and a number of respected scholars have pointed out that they are quite empty of content. For example, Amrom Katz has said:

It is naive to assert, without analysis, that probabilities are cumulative, etc. My own analysis suggests that these quasimathematical ideas are more quasi than mathematical. It is a naive formulation of the problem that we don't learn anything from analysis and experience.¹¹

And Albert Wohlstetter has commented:

.... This sort of prophesy has no empirical foundation whatsoever. Sometimes the certainty of nuclear war is presented as a mathematical matter. Given a fixed probability of war, no matter how small it is, so long

¹⁰Sir Charles P. Snow, "The Moral Unneutrality of Science," an address to the American Association for the Advancement of Science, New York City, December 27, 1960, published in the New York Times, December 28, 1960.

¹¹Amrom Katz, "Comments on an Article by Chas. E. Osgood," Air Force Technical Data Center. Document No. 61-12-5512 November 1961.

as it is greater than zero, sooner or later the nuclear holocaust will come. In this form, however, the mathematical prediction is impeccable but trivial. It has no empirical content, offers no index for action. It tells us essentially nothing. An equally impeccable bit of algebra would show that the outbreak of the rule of law and eternal peace is statistically certain--sooner or later. This argument would run: In any given year there is some probability that the total rule of law among nations and the peaceful settlement of disputes will come into being. This probability may be very tiny right now, but it is greater than zero....and so on. The parallel argument about the statistical certainty of nuclear war should be no more terrifying than this argument for the statistical certainty of eternal peace is reassuring.¹²

The idea that nuclear weapons cause nuclear wars and that more nuclear weapons cause more nuclear wars is simply a tautology. If these statements have any meaning at all, it is that some believe that weapons are the cause of wars. Yet war has existed independent of types, kinds or quantities of weapons. To say that weapons, in and of themselves, be they stones or multimegaton warheads on ICBM's cause war is unjustified. Weapons are tools of war; they interact with strategy, tension, communications, and many other variables and can affect the utility of war either positively or negatively, depending upon the circumstances. At bottom, however, the root cause of war seems to be in the nature of man.

¹² Albert Wohlstetter, "Technology, Prediction, Disorder," in Richard Rosecrance, The Dispersion of Nuclear Weapons. (New York: Columbia University Press, 1964), p. 285.

David E. Lilienthal, for example, has argued:

It is not nuclear weapons that are at the center of our problems. It is man. Nuclear weapons in Canada are no threat to us; the same weapons at the same distance in Cuba are a threat and those weapons had to be removed. The difference is not in the presence of weapons, but the purpose of the men behind them--their motives, their grievances, the desperation of their leaders because of internal pressures, the poverty of racial hysteria, or the grievances of their people--in short the whole bundle of human emotional combustibles which cause war.¹³

Can one imagine what a current political map of the world would look like if the United States had not developed a nuclear weapons capability in 1945? Would Europe be like it is today? Many think not. Even if there were no Nth country problems, or if there were no nuclear weapons at all, or if general and complete disarmament were achieved, there would remain the problem of peaceful settlement of interstate conflicts. Indeed, it may be at least as difficult to manage global instabilities under conditions of disarmament as under conditions of nuclear proliferation. Thomas Schelling has warned:

Disarmament would not preclude the eruption of a crisis; war and rearmament could seem imminent. Even without possessing complex weapons, a nation might consider initiating war with whatever resources it had, on grounds that delay would allow an enemy to strike or mobilize first. If a disarmed nation believed its opponent might rush to rearm to achieve military preponderance, it might consider 'preventive war' to forestall its opponent's dominance. Or, if confidence in the maintenance of disarmament were low and if

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David E. Lilienthal, Change, Hope, and the Bomb. (Princeton, N. J. Princeton University Press, 1963), pp. 54-55.

war later under worse conditions seemed at all likely, there could be motives for 'preventive ultimatums', or for winning a short war through coercion with illicitly retained nuclear weapons, or for using force to impose a more durable disarmament arrangement.¹⁴

It has often been argued, in direct contradiction to the doomsday statistical hypothesis, that the existence of nuclear weapons precludes war, and offers mankind an opportunity to live free of war such as has never been known in all history.¹⁵ This argument is probably an oversimplification of the problem of deterrence, for as Albert Wohlstetter warned: "Deterrence in the 1960's is neither assured nor impossible but will be the product of sustained intelligent effort and hard choices, responsibly made."¹⁶ But if the "automatic balance" theory, which stands in juxtaposition to the statistical hypothesis, is an oversimplification, the statistical hypothesis cannot be elevated to even that status since it is utterly devoid of both empirical content and logical analysis. Substantively it is merely an intuitive judgement expressed in mathematical or pseudo-mathematical terminology in order to impart to subjective intuition the authority of the exact sciences. It may well be that advocates of "automatic balance" suffer from euphoria, while advocates of the "statistical theory" suffer from nucleo metaphobia.

¹⁴ Thomas C. Schelling, "The Role of Deterrence in Total Disarmament," in Morton Berkowitz and P. G. Bock, American National Security. (New York: The Free Press, 1965), p. 223.

¹⁵ See, for example, Frederick H. Gareau (ed), The Balance of Power and Nuclear Deterrence. (Boston: Houghton Mifflin Co. 1962), chapter 15.

¹⁶ Albert Wohlstetter, "The Delicate Balance of Terror," Foreign Affairs, Vol. 37 (January 1959), p. 212.

Not only are the statistical hypotheses that have been advanced empty of empirical content and analysis, they are also of doubtful quality from the mathematical point of view. For one thing, the population of "proliferated states," and our experience with war in the nuclear age is too small to provide valid or strong inferences for the future behavior of nuclear states.¹⁷ Further, the hypothesis ignores the fact that war is a political act which occurs in a changing international political environment. Thus, two conditions for an adequate statistical analysis, an adequate population, and accounting for other variables, are absent.

The weakest link in the statistical hypothesis is its lack of empirical foundation. There has been thus far only limited proliferation of nuclear capabilities, from one country (the United States) to five (the United States, the Soviet Union, the United Kingdom, France and Communist China), but there has been no nuclear war in this period of twenty-one years. Conclusive statistical analysis at this stage, then, is impossible since such analysis must be based upon experience which is limited. Statistical analysis is a synthesis of numerical data which may show some trends and the strength of these trends. It is not a system of deductive reasoning, from principle to isolated facts, but rather of inductive reasoning, from a set of relevant data to a general principle. It is thus a means of inferring the future by experience from the past. If this procedure is applied at this stage of the history of the nuclear area, one finds that in the past 21 years five states have obtained a nuclear weapons capability and no nuclear war has broken out. Hence proliferation to ten or twenty or any number of nations will not necessarily result in nuclear war. Of course, as Wohlstetter and many others have shown, this is an oversimplification and not necessarily true. Deterrence is neither assured nor impossible. What it does seem to show is the simple truism that weapons themselves do not cause war. It might be equally valid to argue that international war is caused by states, and that because the number of states has increased from 51 in 1945 to approximately 120, there is over twice the probability of war in 1966 as in 1945 because of increased opportunities. This, too, is an obvious oversimplification¹⁸ that the advocates of the statistical hypothesis would be the first to reject.

¹⁷ See Appendix F "The Spread of Nuclear Weapons and the Incidence of War," 1945-65

¹⁸ See J. M. Mackintosh, Strategy and Tactics of Soviet Foreign Policy (New York: Oxford University Press, 1963), pp. 64-65, 97-98.

The argument that the probability of nuclear war increases as the number of states having nuclear weapons increases should at least take account of the absolute size of the population.

It must be concluded that the statistical hypothesis is based on intuition rather than fact. It is a convenient justification for statesmen, scientists, and even an occasional military man, to justify a position opposed to the spread of nuclear weapons. It is a "single factor" theory which ignores the political ends sought in war, denies the efficacy of deterrence, brushes aside the fact that no data exists upon which to make such a prediction and assumes no significant change in the international system. Hence it cannot be used as a means of predicting the probability of war, given the further spread of nuclear weapons.

In Appendix F we have tried to operationalize this hypothesis by defining proliferation, state system-membership and war. We have then related weapons' spread to numbers of wars and induced appropriate conclusions. Such an empirical approach has its difficulties, e.g., precision of definition, measurement problems, coding rules, etc. We find no strong evidence that the spread of weapons has been accompanied by a regular increase in the incidence of war. Thus, we must conclude that "predictions" of the higher probability of war given spread to the 13 assumed nuclear states, cannot be validated by empirical data in the nuclear age.

With respect to the Nth country problem, then, it is clear that the surveyors of the statistical hypothesis have nothing constructive to contribute to the problems of national defense and security and, in fact, may detract from a reasoned consideration of these problems through the spread of fear and alarm.

NUCLEAR IRRESPONSIBILITY

While the diffusion of nuclear weapons will not necessarily bring in its wake irresponsible state behavior or even unlimited opportunities for such action, it does present the possibility of reckless nuclear adventures. Opportunities for reckless or irresponsible use of nuclear weapons will vary with the state of the international environment. A nation in one of the major alliance systems has one set of options while a non-aligned state has another.

Alliance-bound Nth powers may be able to engage in separate nuclear planning and even separate nuclear maneuvers, but there will be certain clearly undesirable consequences of and constraints upon such action. This would be especially true in the case of Germany. The protective umbrella of the core power alliance may be withdrawn in favor of dissociation in a moment of extreme crisis brought on by the independent action of the Nth power. The Nth power must follow a fine line if it wishes to retain both its freedom of action and the protection of the core power. It must evade the mentorship of the core power in its foreign and military policies, but in a manner so as not to jeopardize his ultimate nuclear support. Its freedom of action must be used for the purpose of tying the core power more closely to its particular national interests, not of loosening the ties that bind. Intrinsically, then, direction and dissociation are linked on a continuum. Irresponsible action to avert the former may lead to the latter. Hence, provocative independent nuclear action runs great risks and jeopardizes the alliance which the Nth power may need for its own security and general well-being. A higher integration of nuclear forces and military planning might be the ultimate solution, and if attained would prevent irresponsible independent action. If interdependence is needed for security, then independence in the pursuit of particular national interests will be inhibited unless such independence has the prior approval of the core power. This will be a powerful check on nuclear irresponsibility that would apply to Germany, Australia, Argentina, Brazil, and probably Japan.

In non-aligned countries such as Israel, the United Arab Republic, India, Pakistan, Indonesia, and the Republic of South Africa, operating in non-bloc areas, irresponsible action might be less disruptive to the global system as a whole and hence be more acceptable. Even in these areas, however, constraints apply since there is no such thing as a completely autonomous area in the world. India and China both discovered in 1962 that lack of defensive preparations on the part of a non-aligned state may force that state into a de facto alliance with the core power of a bloc in time of crisis. President Nasser relied upon such de facto connections in 1956 and came out of the Suez crisis unscathed, whereas France and Great Britain were severely shaken. The Suez crisis and the 1965 Kashmir war suggest that not even allies are likely to support an aggressive or ill-considered nuclear strike on a weaker victim. It is impossible to have one's cake and eat it too: either states have great power support (when they behave the way the protecting power desires), or else they are free to impose and accept risks on their own.

If the major powers are involved at all, they will probably affect the outcome of a nuclear conflict decisively. The Nth power will not have his way unless it be at the pleasure of the great powers. Even non-aligned powers may hazard their well being, or even existence, in an act of nuclear aggression. In 1963, President Kennedy said that as nuclear weapons spread there would be "an increased necessity for the great powers to involve themselves in otherwise local conflicts."¹⁹ And in July, 1965, Mr. William C. Foster, Director of the US Arms Control and Disarmament Agency wrote:

In the short run we might successfully avoid involvement in, say, an Asian conflict in which nuclear weapons had a role. But any success would, I believe, be short-lived and bought at a price that would prove unacceptable in the long run. That price would be a renunciation of our commitments and involvements all over the world--an attempt to return to isolationism at a time when the world is shrinking so rapidly as to make any such policy at best wishful thinking and quite possibly a blueprint for disaster.²⁰

These statements, barring a radical shift in US policy, should serve as a warning that nuclear aggression will be of interest to the major powers. The action of the two superpowers in the Kashmir war of 1965 serves to underscore the warning and show that under certain conditions the²¹ opponent superpowers may cooperate to avoid systemic disruptions.

The ability of the United States to control or manage nuclear crises will depend on the timing, intensity and stakes involved. It is conceivable that more nuclear crises could arise than the United States, even in cooperation with other powers, could handle if, for example, crises involving Israel-UAR, Federal Republic of Germany-German Democratic Republic, Latin America, India-Pakistan, Australia-Indonesia, and

¹⁹ The New York Times, July 27, 1963, p. 2.

²⁰ William C. Foster, "New Directions in Arms Control and Disarmament," Foreign Affairs, Vol. 43, No. 4 (July 1965), p. 590.

²¹ See Appendix B, "Theoretical Considerations of Nth Country Status in Selected Nations," pp. 34-43.

African states all arose at once. This contingency is not at all likely, however, even though the nuclear proliferation assumed in this study does come about and existing tensions do persist. Not all new nuclear states are going to be eager to try out their new military capability for political gains. Some are going to be intimidated by their new status and hence behave quite conservatively. Many will take Beaufre's point of view that the usefulness of nuclear weapons lies not in their military but in their political employment. Others will have learned restraint and responsibility in the employment of nuclear weapons from the examples provided by the United States and the Soviet Union. Further, Samuel Huntington has pointed out that a slow rate of diffusion "will permit both the governments acquiring the weapons and other governments affected by the acquisition time to adjust their politics and diplomacy to the new situation."²² Perhaps the cultural lag described by Kissinger²³ will no longer apply to new nuclear powers, though there is evidence that at least the beginning of this process was experienced by China (See Appendix A).

It is not at all likely, then, that many Nth powers, even those seeking a revision of the status quo, will behave recklessly. Even if some do

²² Cited in R. N. Rosencrance, The Dispersion of Nuclear Weapons (New York: Columbia University Press, 1964), p. 311.

²³ Kissinger speculates that there are three distinct stages through which nuclear powers proceed in the application of their military doctrine. The first, or immediately post-development phase, is one of marked lack of awareness of the revolutionary impact of nuclear weapons. In this stage, nuclear weapons are likely to be regarded as new forms of artillery or strategic bombardment and are assimilated to World War II conceptions. In the second stage, the revolutionary consequences of nuclear strategy are exaggerated. Nuclear weapons are now programmed for employment in a wide range of conflicts and are viewed as a substitute for conventional forces. Even minor conflicts are presumed to lead to nuclear involvement and a nuclear strategy is deemed adequate for all major military tasks. To some degree it is held that such a strategy actually makes best use of limited economic resources. The third stage emerges when the disadvantage of primary reliance upon nuclear weapons becomes clear. At this stage, the nuclear threat becomes too great to be tolerable, and the credibility of its use against conventional attack declines. The employment of nuclear weapons is reserved for threats against only the most vital of interests. See Henry A. Kissinger, Nuclear Weapons and Foreign Policy (New York: Harper and Brothers, 1957), pp. 388 ff.

desire to engage in nuclear adventures, they will face stern constraints. Nth powers that are members of major alliances may hesitate to push radical policies too far for fear of losing their strategic protection. Non-aligned nations may jeopardize expected de facto support from a major power and/or become the object of powerful sanctions. A policy of nuclear aggression on the part of any Nth power cannot be lightly undertaken even against a neighbor which cannot defend itself. In a world in which incidents so minor and non-violent, as, for example, the Rhodesian declaration of independence, precipitate large scale international sanctions, any military employment or threat of employment of nuclear weapons will immediately receive international attention.

DELIBERATE WAR

Conflict²⁴ has been the normal relationship between nation states from their beginning. In fact, the absence of conflict is the exception rather than the rule in relations between states. Political stability or peace obtains either when all states in a system are satisfied with the status quo or else the forces supporting the status quo are so powerful that it is obviously useless as well as dangerous to challenge them. This is not the case today; political, racial, economic, and ideological conflict is rife in the world, and the trends almost guarantee that no amelioration of the situation is in sight. Of the eleven nations assumed to possess an independent nuclear weapons capability in this study, only three (Japan, Argentina, and Brazil) are not now involved in serious international conflict. Of the remainder, Israel, India, the Republic of South Africa, and Australia seek to preserve some aspect of the status quo which is threatened by the national goals and foreign policy of the United Arab Republic, Pakistan, China, the various sub-Saharan African states, and Indonesia. Six serious confrontations--some of them marred by recurrent conflicts, are in existence at the present time: Israel-UAR; India-Pakistan; India-China; Black Africa-The Republic of South Africa; Indonesia-Australia; and Indonesia-Malaysia (supported by Australia).²⁵ All of these represent

²⁴ Conflict has been defined as a situation of competition in which the parties are aware of the incompatibility of potential future positions and in which each party wishes to occupy a position that is incompatible with the other. See Kenneth E. Boulding, Conflict and Defense, A General Theory (New York: Harper and Row, 1963), p. 5.

²⁵ The Indonesian-Malaysian conflict has subsided with the Indonesian Revolution and the downgrading of President Sukarno. Basic differences between the two countries remain, however, and it is questionable whether Indonesia's nationalistic and expansionist tendencies have permanently subsided.

clashes of important national interests and it would take tremendous international pressure to impose peaceful solutions so long as the revisionist states can hope to resolve the issues in their favor through the threat of violence or its use. Violent conflict can be expected to break out if and when the revisionist states believe that they have the power to overturn that status quo at an acceptable cost; i. e. ; one whose perceived value is not greater than the perceived value of the objective sought.

Conflict, then, seems destined to remain the normal relationship between states. In the broad sense, it may exist and progress through four levels: (1) awareness of a conflict of interests; (2) intensification of tension, brought on by the pursuit of conflicting foreign policies and goals; (3) pressures, coercion, or sanctions short of the application of military force to resolve the conflict (this may be termed "cold war"); and (4) the application of the ultimate sanction, military force, to resolve the conflict. The application of military force in turn can be divided into four levels: (a) very limited (unconventional) war, (b) large-scale conventional war, (c) limited nuclear war, and finally (4) general nuclear war.

The Arms Race Theory

The first three levels of conflict are sometimes characterized by an arms competition which tends to accelerate by a process of action and reaction as each side strives for the superior position. The anxiety, and hence hostility, of each party to the conflict rises with its perception of the increasing capability of the other. The intensification of hostility may result in open war, or it may result in equilibrium or balance because of the moderating influence of increasing costs, problems of resource allocation, a downgrading of national interests involved in the conflict, or the obvious lack of utility of a military solution to the conflict.

The course of arms races has been subjected to mathematical analysis, based upon empirical data, by Lewis F. Richardson.²⁶ Richardson developed the formula:

$$\frac{dx}{dy} = ky - ax + g$$

$$\frac{dy}{dt} = lx - by + h$$

²⁶ See Lewis F. Richardson, Arms and Insecurity, p. 282.

This means that the military forces of state x will increase because of what Richardson called "the grievances" (g) of x against y, and that this increase will tend to accelerate as x's anxiety over y's military program increases, but will be moderated by rising costs and internal political pressures (ax). The same applies to state y. Richardson argues that the action-reaction pattern drives the arms competition either to infinity²⁷ or to the outbreak of war unless rising costs ("fatigue"), diminution of grievances, or fear of war establish an equilibrium. C.R. Joynt has suggested that other factors, especially limits on the resources available to the parties, and the size and character of the armaments involved, may bring about an equilibrium or stalemate.²⁸

What neither of these two scholars have clearly brought out, however, is that even if there is an arms race, and problems of cost and resource allocation are manageable, war will not necessarily break out if the foreseen disutility of war is greater to the aggressor than the prize he seeks to win through the application of military sanctions. For example, how much cost in terms of military preparations, loss of life, and destruction from Australian retaliation is Indonesia prepared to bear in an effort to seize Papua? Likewise, how much is Australia willing to bear in an effort to retain Papua? It is quite conceivable, for example, that Indonesia would be willing to send two divisions to conquer Papua if her intelligence estimates indicated that such a level of force could do the job and that Australia would not retaliate. It is quite inconceivable, however, that Indonesia would attempt to seize Papua if she felt that Australia would retaliate with a nuclear strike against Indonesia's three largest cities. Obviously there must be some perceived utility to the application of military sanctions. Military action is neither an end in itself nor a self-sustaining, self-perpetuating kind of mechanism; rather it represents a step toward violent, coercive bargaining to resolve conflict. Military force is, therefore, the handmaiden of national policies and goals and not the other way around, as is sometimes argued.

27 This is obviously impossible because of finite limits to resources, facilities and skills, as well as the competition of other national interests for these same resources, facilities, and skills.

28 C. R. Joynt, "Arms Races and Problems of Equilibrium," Yearbook of World Affairs (London: London Institute of World Affairs, 1964), p. 23 ff.

This being the case, it is quite conceivable that an arms race, especially a nuclear arms race, can progress to the point where there can be no possible utility in all-out war between the two sides. While this situation creates a balance of terror, it at least places a very severe restraint upon open warfare, and one that should not be removed before the basic causes of conflict are removed. If the level of armaments were reduced without providing means for the peaceful settlement of conflict, it is quite conceivable that the level of anticipated destruction might be reduced to the point where war again appeared to have a certain utility. In this case, war would be brought on by disarmament rather than by an arms race.

The point is that arms races in the nuclear age do not necessarily lead to war; they may lead to stability by removing the utility of war. Conversely, even symmetrical and inspected disarmament does not necessarily lead to stability; it may upset a position of nervous stability by reducing the destructiveness of war to a level thought to be acceptable. If stability can be maintained through the lower stages of an arms race, then the careful management of an arms race offers a possible route to stability and the reduction of conflict.

Theoretical Framework

Conflict between states rarely starts with armed conflict (i. e., level four above) but with level one (i. e., awareness of a conflict of interests). It may or may not escalate to level four, armed conflict. If armed conflict does break out, it may or may not escalate to a higher level, depending upon how the states involved perceive the relative utility of escalation, disengagement, negotiation or stalemate. What course of action is taken by the original parties to the conflict is greatly influenced and sometimes determined by the attitudes and actions of allies, other states, and international institutions, depending on the organization and distribution of power.

Professor Quincy Wright has developed a theory based upon a study of past wars to predict the probability of escalation,²⁹ stalemate, or settlement of a conflict situation. He tested the theory in 45 conflicts (with and without war) beginning with World War I and found it predictive in the case of all of these non-nuclear conflicts. Since the model produced

²⁹ Quincy Wright, "The Escalation of International Conflicts," The Journal of Conflict Resolution, Vol. IX, No. 4 (December 1965).

reliable results for past conflicts, it should be useful for future calculations provided the variables can be quantified. Even if they cannot be, it should prove helpful in analyzing the impact of further nuclear proliferation on the incidence of war if and when such proliferation comes about. Intuition, deductive analysis, or unconstructed logic may provide similar answers, but the application of a tested theory to the problem will increase confidence that we have identified and isolated the pertinent variables and hence are thinking about the right things.

Profssor Wright's study produced the following theory:

$$\frac{dx}{dt} = (Nx + Fy) - (Cx + Wx) + (Px - Py) - (Vx - Vy)$$

$$\frac{dy}{dt} = (Ny + Fx) - (Cy + Wy) + (Py - Px) - (Vy - Vx)$$

where x and y represent the two nations involved in the conflict. $\frac{dx}{dt}$ and $\frac{dy}{dt}$ represent the growth rate of hostility at any given moment and thus the willingness of x and y to escalate or to cease hostilities. N represents the perception by x and y of the intensity of their national interests involved in the conflict. F represents the armed forces immediately available for use in the conflict. C represents the cost of military preparations and anticipated destruction resulting from hostilities. W represents national and international pressures to refrain from escalation. P represents potential military force thought to be available, including the assistance of friends, allies, or other parties that may intervene. V represents vulnerability to destruction. If $\frac{dx}{dt}$ is positive at a given point in time, x will be inclined to escalate the conflict; if $\frac{dx}{dt}$ is negative, x will be inclined to de-escalate the conflict. In effect, then, this formula can be used as a method of estimating the utility of war in a particular situation at a particular time. The factors which would increase the utility of war would be the involvement of vital as opposed to peripheral national interests, acceptable costs in both military preparations and anticipated damage from the conflict, favorable climate of opinion at home and abroad, greater total power expected to be available (including foreign support) than that available to the opponent, and a lesser relative vulnerability than the opponent. Factors decreasing the utility of war would be low or peripheral national interest involved, unacceptable costs,

unfavorable climate of world opinion, weaker total power position and greater relative vulnerability than the opponent.

The application of the formula to concrete situations can be quite difficult because none of the variables lend themselves to precise quantification. Wright himself admits that the values he assigned to the variables are "subjective estimates on the scale of 100" and that they are only "educated guesses."³⁰ Further, it was far easier for Wright to make his "educated guesses" in the relatively clear light of history than it is for nations involved to quantify the variables in the present or the future. In effect, providing information upon which to base "educated guesses" for the present and future of the variables F, W, P, V, and to a degree C, is the *raison d'être* of the intelligence community. The point is that there is great danger of a potential aggressor miscalculating and coming up with a positive $\frac{dx}{dt}$ when in reality it is negative. The classic example of this occurring in recent history is that of the North Korean attack on South Korea. The Communists assumed, with good reason, that the United States would not come to the defense of South Korea and hence miscalculated the variable P. Miscalculating P also threw off their calculation of V and C. In the Suez crisis of 1956, it is apparent that Great Britain and France miscalculated the variables P and W. When the United States, the Soviet Union, and the United Nations made their positions clear, a recalculation clearly put $\frac{dx}{dt}$ in the negative, and the British and French withdrew. Miscalculation has been a problem in the past and probably will continue to cause trouble; however, since the United States and the Soviet Union have acquired large nuclear stockpiles, they have both been very conservative in their calculations and the related provocations. It is quite likely that, as nuclear weapons spread and an increasing number of nations become a legitimate target for an opponent's nuclear weapons, they, too, will become very careful about their calculations and provocations. Even China has exhibited this pattern of behavior.³¹

The Impact of Nuclear Weapons

In approaching the problem of analyzing the effects of nuclear proliferation upon a conflict situation, one must ask what impact nuclear technology has had on the strategic environment. At the outset, it must be recognized that nuclear technology and aerospace technology go hand in glove. The development of nuclear weapons, on the one hand, has increased

³⁰ Ibid.

³¹ See Appendix A, "China and Nuclear Proliferation," pp. A-3 to A-39.

the effectiveness of the airplane and brought forth the advent of the missile. On the other hand, rapid, long range delivery capabilities are essential to achieve the full potential of nuclear weapons. Nuclear weapons without appropriate delivery vehicles are largely useless. This obvious fact is often overlooked in considering the Nth country problem.

These twin developments have had three major effects on strategic problems. First, they have made aerospace power the predominant strategic force. Secondly, they have greatly increased the vulnerability of all nations to attack. Thirdly, they have greatly increased the pace of warfare and placed on even greater emphasis on surprise and first attack. The possibility of an effective coup de main has been increased.

These immediate effects have, in turn, produced several corollary effects. They have placed a new and revolutionary premium on forces in being and have downgraded the importance of mobilization potential. In World War II it was fashionable to say that wars were won on the production line rather than on the battlefield. The pace of a nuclear war would probably be so rapid that there would be no time to bring significant industrial strength to bear on the situation after a war has started.

This time compression has brought two more corollary effects in its wake. First, quality of weaponry has taken on added importance. This has placed a premium on technological skills and probably replaced the importance of industrial mobilization capacity with research and development capacity. Secondly, the adequacy of every phase of pre-war planning becomes crucial. Whereas in the past the pace of war has often permitted the making or changing of war plans after the onset of hostilities, in a nuclear war there is a very real possibility that the decisive phase of a war would be completed before any major changes could be made in war plans or mobilization plans could be put into effect.

This increased emphasis on war planning must also include planning and coordination among allies or the protectors and the protected. Once nuclear war has been started, it may be too late to initiate planning for mutual cooperation and coordination. The abstract promise that "we will help you in the event of nuclear attack" is of little value since what any nation must be primarily concerned with is deferring nuclear attack rather than defending against it or conducting reprisals. Deterrence in specific situations will require specific plans and specific forces in order to be effective. Further, in order to effectively

deter a potential nuclear aggressor, the forces to be arrayed against him, together with the skill and the will to employ them, must be clearly visible. If there is reasonable doubt that the necessary forces can and will be employed, aggression may not be deterred and active defense or reprisal will then have to be brought to bear on the situation. In a nuclear situation, it is obvious that both defense and reprisal are poor substitutes for deterrence since the very survival of cities, nations, and political institutions are at stake.

A failure of deterrence is not only disastrous for the nations immediately involved, but also may create a crisis of major proportions for the regional and global systems. Once a nation, or two nations, parties to a conflict are destroyed because of a failure of deterrence, a political vacuum may exist that will precipitate unprecedented problems for the regional system and in some cases for the global system as well. One has only to imagine a situation in which either Israel or Egypt or both suffered crippling nuclear attacks to realize the magnitude of the political, economic, and military problems involved in filling the vacuum. The several vitally concerned major powers may hold quite different views as to how the vacuum should be filled and the scavengers of chaos would be hard at work to enhance their own position. The reconstruction and vacuum-filling process, then, would be a source of acute conflict between regional powers, and in all probability, global powers. The decision as to how to handle the vacuum would be made at the highest political level, but the chaos and competition would almost certainly demand that foreign conventional forces, preferably under international control, be moved quickly to the area to restore and maintain order until the vital questions of a political settlement could be decided and effective national control of territory and population restored. In the event that international agreement could not be reached on the political aspects of reconstructing the area, one can imagine very serious conflicts among the nations interested in shaping the new order.

All of these considerations serve to illustrate that, while nations not a party to a nuclear conflict may be extremely reluctant to become involved, the aftermath of such a conflict would involve serious international competition on both a regional and a global plane. No doubt an effort to reach a settlement by an international conference such as the Geneva Conferences of 1954 and 1962 would be made, but again General Smith's dictum applies: "It will be well to remember that diplomacy has rarely been able to gain at the conference table what cannot be held

or gained on the battlefield." The point is that at such an international conference the ability of diplomats to influence the political settlement is proportional to the ability of armed forces to do the same job through the application of military force at the local level. In this case, strategic deterrence may play a role, but forces capable of seizing and holding ground will be essential. They will lend weight to the arguments of the diplomats.

Having discussed the change in the strategic environment that the nuclearization of a conflict relationship might bring on, let us turn to the Wright theory and examine the impact that an independent nuclear capability would have upon the variables involved. N, the magnitude of the national interest involved, is unaffected since it is the sine qua non of both the conflict and the arms race. F, the enemy's perception of the effectiveness of immediately available force, would be considerably enlarged and also rendered more calculable. All nations make a continuing estimate of the military capabilities of nations that could pose a threat to them, and this estimate is both more accurate and easier to make in the case of nuclear warheads and delivery vehicles than in the case of divisions and support troops. C, the cost of hostilities (including budgetary expenditures, losses of military personnel and materiel, destruction of civilian life and property, and deterioration of national morale) would increase vastly. In fact, the destruction involved in a nuclear war would be so great that precision in the calculation loses its importance unless an effective defense against the enemy's delivery system is available. (An effective air defense system is so costly that it seems unlikely that any of the nations considered in this study except Germany and Japan will be able to afford it without considerable foreign aid.) A missile defense system seems completely out of the question for these Nth powers until long after 1980, except by transfer from a superpower.

W, the degree of pressure by world and national opinion demanding preservation of peace or cessation of hostilities, would no doubt be far more powerful in a nuclear conflict than in conventional war. How effective this would be depends upon what sanctions or pressures can be brought to bear. At present, this is not clear because the only organized sanctions against nuclear aggression currently in force are in the form of alliances.³² A case of overt nuclear aggression may precipitate

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The loosening of alliance ties are both a cause and effect of the spread of nuclear weapons.

some stronger reaction from the United Nations than a resolution, but just what is by no means certain, since much would depend upon the attitude of the Soviet Union and the United States. It is true that the use of nuclear weapons in war marks a clear threshold of violence and there is universal revulsion against the use of nuclear weapons. In carrying this, General André Beaufre opined: "The moral impossibility of carrying out certain actions constitutes a deterrent at least as powerful as all material threats."³³ He may be right, but thus far there is no collective security machinery in existence to ensure that revulsion on the part of world opinion would be surely and swiftly converted into organized, universally accepted sanctions. The UN sanctions against North Korea and Communist China in 1950 thus far mark the high point for the factor W, but this was a special case and is not likely to recur. The history of international sanctions does not suggest that it is an effective force against a determined aggressor. The factor W, then, is very difficult to project and in all probability will be very small unless some workable form of collective security against nuclear attack emerges. This does not seem likely. It would be a mistake to assign any significant weight to W at this time.

The factor P refers to the total military power likely to become available, including mobilization potential and the ability to acquire allies with arms-in-being and productive capacity. In a nuclear war, mobilization capacity loses much of its importance, and allies are of significance only if they have readily available nuclear power or the ability and clear intention to assist in preempting enemy power. It is most likely that Nth countries either formally allied with the United States or enjoying a less formal US nuclear guarantee would be just as nervous under an American strategy of delayed and/or graduated response as France and Germany have been. They will insist upon controlling the strategy of their own defense, and the primary concern of those enjoying some form of US guarantee will be to commit the United States to their own interests and strategic concepts. There will be little support or sympathy for the United States' concept of "the pause" except possibly in the case of India, which can afford to lose a little territory to the Chinese before retaliating with nuclear weapons.

³³ André Beaufre, Deterrence and Strategy (New York: Praeger, 1966), p. 13.

On the other hand, the United States will certainly not be willing to employ its nuclear forces against any Nth power in accordance solely with the interests or strategic concepts of an allied or protected Nth power and thus risk escalation of a local war to the global level. As Joseph I. Coffey has pointed out, "to relinquish to the allies control over decisions on nuclear war is... unpalatable since the President would in effect be giving to DeGaulle, Erhard, or Moro the same 'blank check' which Kaiser Wilhelm II gave to the Emperor Franz-Joseph-- whose cashing of it after Sarajevo bankrupted both the Austrian and the German empires."³⁴ Except in very special cases, therefore, that part of the factor P attributable to allied support is quite likely to be regarded as approaching zero by the participants, much as France regards the factor P as being quite low today. Only if (1) the major nuclear power were convinced that its direct intervention would not escalate the conflict out of control, or (2) its vital national interests were directly involved, would it be willing to enter the fray. In a conflict between two relatively equal Nth powers, therefore, $P_x - P_y$ tends to approach zero once the conflict has escalated to open hostilities.

The factor V refers to the vulnerability foreseen by a party to the conflict of its military forces, industry, cities, population, etc. The introduction of deliverable nuclear weapons obviously raises vulnerability by a quantum jump unless an effective defense is found against the delivery vehicles. This quantum jump is so great that it is often difficult to appreciate the magnitude of the difference between the destructive power of older conventional weapons and nuclear weapons. To illustrate the point, a few facts from history may prove useful. The highlight of Napoleon's 1812 campaign against Russia was the battle of Borodino, and in the course of it Napoleon's armies expended the equivalent of about 40 tons of TNT. The last classic fleet action of history was the Battle of Leyte Gulf, in which American forces expended 700 tons of TNT. The British fired off some 50,000 tons in the bombardment that preceded their Somme offensive of 1916, but it took them three weeks to do so. But a total nuclear war today might involve the release of the equivalent of 100,000,000,000 tons of TNT.³⁵ Even a relatively weak Nth country with, say, 100 nominal weapons could fire off the equivalent of 2,000,000 tons of TNT. It is quite apparent, then, that nuclear powers,

³⁴ J. I. Coffey, Strategy, Alliance Policy, and Nuclear Proliferation, Study Paper No. 11, Office of National Security Studies, Bendix Systems Division, March 1966, p. 14.

³⁵ Neville Brown, Nuclear War (New York: Praeger, 1965), p. 1.

even small ones, present their enemies with a severe problem of defense, and at the present state-of-the-art, especially for the Nth countries considered in this paper, deterrence is a more reasonable goal than defense. A situation of deterrence will be reached when C is very high for both x and y and both $V_x - V_y$ and $V_y - V_x$ approach zero.

In summary then, the outstanding impact of the nuclearization of a conflict situation on the formula:

$$\frac{dx}{dt} = (N_x + F_y) - (C_x + W_x) + (P_x - P_y) - (V_x - V_y)$$

$$\frac{dy}{dt} = (N_y + F_x) - (C_y + W_y) + (P_y - P_x) - (V_y - V_x)$$

is that the negative factors C_x and C_y will be very large, and that V_y and V_x will be very large but also vary in direct proportion to F_x and F_y . The factor P will probably be very small since mobilization potential is of little, if any value, in a nuclear conflict and allies are of little value unless their forces, skill, and will are both visible and credible. Since it may be extremely dangerous for a major nuclear power to unconditionally tie himself to the interests of an Nth power, the phase $(P_y - P_x)$ and $(P_x - P_y)$ may tend to approach zero if both of the parties to the conflict have significant nuclear capabilities.

This being the case, one can imagine model situations, depending on force structures, the cost of damage and relative vulnerability, that are quite stable as well as situations that are very unstable.

First a stable model will be described and then an unstable one. In both cases $(P_x - P_y)$ and $(F_y - P_x)$ are assumed to be zero and W is assumed to be so low as to be of little consequence. It is further assumed that the key targets within each of the Nth powers are within the range of the opponent's delivery vehicles.

STABLE MODEL

X and Y are Nth powers involved in a conflict in which N is very high, such as in the Israel-UAR conflict. Each has a relatively invulnerable nuclear force of approximately the same number of weapons.

The weapons on both sides are protected to such a degree that it would require more than one weapon, say two, to destroy one enemy weapon. Both sides have enough forces to cause unacceptable damage to the other; in other words, it is clear that C_x and C_y are larger than $(N_x + P)$ and $(N_y + F_x)$. (This is not unreasonable since the greatest interest of any nation is survival.) If x attacked y with a countercity strategy, y could retaliate and destroy x . The same situation would result if y attacked x . If x attacked y with a counterforce strategy, x , even using all its force, could destroy only half of y 's weapons, and y would be free to retaliate against x 's cities with his remaining weapons. It is clear that the second strike would be more effective than the first strike, and hence neither nation would deliberately and rationally initiate war.

A similarly stable situation may come into being in the following alternate model. Of the two conflicting N th powers, one is purely defensive, nuclear-armed, and wants only to defend its sovereignty and territorial integrity, while the goal of its opponent is to intervene in its internal affairs or violate its territorial integrity. So long as the defensive oriented power has an assured second strike force capable of defending against or absorbing any first strike its opponent may launch and retaliating with a crippling blow, the aggressor cannot launch a successful attack and hence will not be tempted to attack. Since the goal of the defender is security, it will not attack so long as its deterrence is effective. Military stability will then prevail unless or until the aggressor achieves a means of defense against the defender's retaliation. For N th countries, this prospect is not yet on the horizon. The point is that if the motives for aggression lie only on one side, then the deterrent capability need be only on one side.

If either of these models of military stability obtained, the world might enter an era reminiscent of the 18th century, in which the outbreak of war is so dangerous that victories are won or lost by the maneuvering of forces up to the point of battle. The various crises over Berlin, Quemoy and Matsu, Lebanon, and the Cuban missile crisis might become characteristic of the "nuclear maneuver." In such an age we would expect opponents to reach tacit agreements on the rules of the game. Among other things, opponents would not threaten each other with annihilation; objectives would be real and important but something less than vital. Each crisis would have to be managed so as to permit the loser to retreat without undue loss of face. This is obviously an artificial situation and could not emerge without the assistance of the superpowers. Of

the five nuclear powers today, only the United States and the Soviet Union enjoy large numbers of secure offense weapons systems. It seems unlikely that (1) unassisted aspirant Nth powers could achieve such a capability by 1980, or (2) that if they are involved in a serious conflict their enemy would permit them to achieve such a capability if the opportunity for preemption presented itself in the long and slow process of building up to such a level of sophistication. Even if an Nth power had the technical and economic capability to construct such a force, it probably could not do so unless (1) it was involved in no serious conflict, or (2) its enemy had no capability for preemption or (3) its enemy was deterred from preemption by the extended deterrence of one of the superpowers. The United Arab Republic, for example, has already threatened to destroy Israeli nuclear installations if Israel begins to develop a nuclear weapons capability. Clearly, the process of developing such a capability on the part of an Nth power involved in a serious conflict could be fraught with peril.

It does seem possible, however, that the major nuclear powers, and especially the United States, could assist Nth powers in developing a safe, secure and adequate nuclear deterrent and thus help bring into being a situation approaching the stable model. Such a policy would not be new or novel, but would simply adapt existing policy to the needs of a nuclear world. All of the major powers have long followed a policy of military assistance to friendly lesser powers. The United States provides many nations with a wide variety of assistance and equipment to offset or balance the equipment provided their regional adversaries by the Soviet bloc. In some cases, India and Indonesia for example, both the United States and the Soviet Union have provided substantial military assistance, thus setting a precedent for tacit cooperation in maintaining regional stability. In at least one region, the Middle East, the United States has provided weapons systems to several nations in the interest of maintaining stability. Usually this military assistance is justified in terms of "defensive capabilities," but in mid-February the United States agreed to sell Israel a number of A-4 Skyhawk light bombers as a deterrent force. The rationale behind this move reportedly was that because of short time-distance factors and the large number of supersonic aircraft provided the UAR by the Soviet Union, anti-aircraft defense was unfeasible. Israel, therefore, needed an offensive bomber capability as a means of retaliation.³⁶ In the event of a nuclear arms race between two hostile

³⁶ The New York Times, May 20, 1966.

powers, Israel and the UAR for example, a parallel argument can be made for assisting one or both sides in acquiring a credible deterrent. Of course, in considering some form of assistance to developing Nth powers great care should be taken to limit the range of their weapons systems to the minimum necessary to deter the hostile threat. This would be required to geographically limit possible confrontations and threats. To extend the range of the weapons beyond the geographic limits of the conflict would be to extend the potential geographic limits of the conflict and thus vastly complicate the situation.

THE UNSTABLE MODEL

A model situation of instability would result in case there were a clear and present danger for both x and y if each did not strike first. Restraint in this case could be foolhardy for both sides. This situation would obtain if both x and y (1) had approximately the same number of weapons and (2) all of the weapons were of such a nature that more than one could be taken out by a single attacking weapon. This would be the case if the delivery vehicles were vulnerable, such as aircraft concentrated on relatively few airfields or unprotected fixed-site missiles deployed in such a manner that one burst would destroy several weapons. It should be noted that in this case a large number of weapons would not be required--in fact the quantity is quite irrelevant so long as more than two exist on each side.

In this situation, the side which struck first could remove the enemy threat and still have enough weapons remaining to blackmail, damage, or annihilate the opponent. Further, except for sanctions brought to bear by outside powers, the party that struck first would emerge from the fray unscathed, the winner by a successful coup de main. Once this occurred, the ambitions of the victor could be frustrated only (1) if international forces or the forces of interested powers intervened militarily, or (2) if the credible threat of organized and overwhelming political and economic sanctions were brought to bear. In either case the conflict would be widened and complicated, thus opening up opportunities for further conflict.

If such a dangerous model developed, the United States could hardly avoid intervening in an attempt to avoid nuclear war and the chaos which would result. This intervention could take any one of the following forms:

- (1) In cooperation with the Soviet Union implement a policy of either adversary control or cooperative control as outlined in Appendix B, "Theoretical Considerations of Nth Country Status." If the necessary degree of cooperation with the Soviet Union could be achieved, this clearly would be the most desirable choice.
- (2) Extend deterrence to cover the threatened status quo power or ally (Israel, India, Australia, Federal Republic of Germany, and possibly Japan). This policy could be safely implemented only if the United States enjoyed a clear and high degree of both local and global nuclear superiority over any combination of opposing powers. "Nuclear parity" would not suffice for a policy of extended deterrence on a large scale.
- (3) Make available to the defensive or status quo power a force capable of deterring enemy attack. Depending upon available technology and the characteristics of the two opposing forces, the weapons systems supplied could be defensive, offensive, or both. This policy would no doubt require the temporary use of extended deterrence to preclude the preemption of the improved defense posture. Reinforcement by defensive weapons would be less provocative than by offensive weapons, but technologically infeasible in some cases because of short time-distance factors (e. g., Israel-UAR).
- (4) In the event that none of the above coping techniques were workable, as a tactic of last resort and in a case where an Nth power seemed about to wage an aggressive nuclear war it may be necessary to implement a policy of coercive disarmament. If this proved necessary, it should be implemented with the least possible force, and preferably with non-nuclear weapons. In many cases a show of overwhelming force, such as a massive fly-over, accompanied by stern warnings and an appeal to the people might suffice. Missiles, and especially long-range missiles, would not be well suited to this task, since the force employed should be visible, flexible, and recallable. It frequently has been suggested that one can make a show of force with long range missiles by exploding

a nuclear weapon at a very high altitude over the offending nation. This technique, however, could well be interpreted as an initiation of war rather than a show of force and thus set off the war it was intended to deter.

SYMMETRICAL DISTRIBUTION

Both of the above models include a symmetrical distribution of nuclear weapons but, for analytical and heuristic purposes, jumped over the process of proliferation and posited more or less completed nuclear postures. Unfortunately, the posture outlined in the unstable model is more likely to obtain in most potential Nth countries than that outlined in the stable model. Henry Kissinger has succinctly stated why this is so: "None of the smaller countries will have the resources to create much more than a rudimentary first strike force. The elaborate combination of warning, hardening, and mobility needed to survive a surprise attack seems beyond their capability. . . In order to safeguard their hard-won nuclear capabilities, Nth countries will find themselves under nearly irresistible pressure to launch a surprise attack."³⁷

Both Kissinger and our second model are too pessimistic for the real world, however; whereas the first model is obviously too optimistic. Some Nth countries may be able to create relatively invulnerable forces in relation to the kind of attack that could be made by another Nth power; others will be able to construct active defenses that will at least dilute the attack. Further, it seems certain that while in the process of building a nuclear force the nation contemplating a surprise attack will have to choose between a counterforce strategy and a countercity strategy because it may not have the capability for both and probably does not have the capability to completely destroy its enemy at one blow. The former alternative (counterforce) might require all its forces just to ensure destruction of enemy forces. If this were the case, the result would be simply nuclear disarmament of both states, and the conflict would remain at a lower level of violence. A "broken back" war would probably then ensue if both sides were not exhausted or intimidated. (Fear does not necessarily result in hostility; it often results in paralysis.) The latter alternative (countercity) would obviously leave the attacker open to retaliation in kind. In other case there would be no utility to a nuclear attack and the lack of capability may result in a mutual deterrence.

³⁷ Henry Kissinger, The Necessity for Choice (Garden City: Doubleday and Company, 1962), pp. 244-45.

I

These observations are not intended to deny that a symmetrical proliferation process between hostile Nth powers would increase hostility and hence increase the chances of war or that this instability would result from fear of a surprise attack. The point is that the instability will probably not be as great as is generally presumed. Further, where there is symmetry in the distribution of nuclear capabilities, war planners will be very careful and conservative in estimating costs, vulnerability, and capabilities. These calculations will be very difficult to make with any degree of confidence if the intended victim shows initiative and imagination in creating and deploying its forces.

It may also be difficult for potential Nth power aggressors to judge just when, how, and where one or the other of the superpowers will intervene. Nations will probably insist upon a higher degree of confidence that their war plans and intelligence estimates are correct before initiating a nuclear war than they would in a less destructive war. A conventional war, such as that between India and Pakistan in 1965, is one thing; but if both sides had nuclear weapons it would be a different matter entirely.

ASYMMETRICAL DISTRIBUTION

Nuclear proliferation has thus far proceeded in quite an asymmetrical pattern. The Soviet Union started its nuclear weapons program far behind the United States and from 1945 to the early 1960's was clearly inferior to the United States both qualitatively and quantitatively. The United States, being a defensive-oriented power, often sensitive to both domestic and world opinion, did not employ its superior position except for purely defensive purposes, but the United States superiority deterred overt Soviet aggression and forced her to turn to lesser, more ambiguous provocations such as war by proxy, a strategy of "peaceful coexistence," and "wars of national liberation." The British were able to develop their nuclear capability safely under the American nuclear umbrella, while the French force de frappe is safe from preemption because it is welcomed by the Soviet Union as a divisive force in NATO and, at any rate, is no serious threat to the Soviet Union, especially in light of their recent antiballistic missile developments. The Chinese nuclear development, while clearly open to preemption by the United States, has not been threatened because of (1) domestic and international opinion which would preclude such a move, (2) lack of sufficient Chinese provocation, and (3) the possibility that the Soviet Union may come to China's defense.

It would seem that the lessons to be learned from this experience are rather obvious; first, that in the absence of a very serious quarrel involving vital national interests, the acquisition of a nuclear weapons capability by an unfriendly power is not a sufficient provocation for a preventive or preemptive attack, and secondly, that overt war will not break out so long as the asymmetry is weighted in favor of the defensive oriented or status quo power. If, however, the asymmetry is weighted in favor of the aggressor in a conflict situation, the chances of war are raised unless (1) the victim is immediately and unambiguously covered by the extended deterrence of a major power, or (2) it is obvious that the regional and/or global system would not permit the aggressor to consolidate his victory, or (3) the victim acquiesces in the demands of the aggressor rather than fight a losing battle, or (4) despite the asymmetry, the potential consequences of a retaliatory strike are such as to deter an aggressor from initiating nuclear war.

On balance, then, it would seem that a markedly asymmetrical distribution of nuclear weapons need not in itself be dangerous because (1) the threat of war will be used only if the aggressor is clearly superior, (2) where the aggressor is clearly stronger the victim may follow a policy of preemptive surrender, (3) the "victim" may seek the protection of allies, even at the expense of some independence of action, (4) the superpowers will be reluctant to give direct military assistance to the aggressor, whereas they are more likely to come to the aid of the innocent underdog.³⁸

In light of the above discussion and the area studies contained in Appendix A, we may now turn to a brief discussion of the implications of proliferation for the likelihood of war:

1. Germany

The acquisition of an independent nuclear weapons capability is an option available to the Federal Republic of Germany. If the Federal Republic begins to acquire a nuclear capability, however, both the Soviet Union and France can be expected to react vigorously and possibly in cooperation. In fact, Helmut Schmidt, a leader of the Social Democrat party, recently stated that an independent German nuclear weapons capability would be "unbearable" for the Soviet Union. Obviously, the

³⁸ See Appendix D, "The Strategic Power Relationship Between Nth Powers, the Soviet Union and the United States." See also Appendix E, "Nuclear Proliferation and the Balance of Power."

chances of war in the form of a preventive attack upon Germany would be enhanced. If it were inevitable that the Federal Republic acquire a nuclear capability, perhaps the most stabilizing policy for the United States to follow would be to retain very close ties with the Federal Republic and maintain a strong military presence in that country. This would serve two purposes: first, it would make clear that an attack on Germany would bring an American response and thus effectively deter both the Soviet Union and France, and secondly, the strong American presence would be visible proof to those frightened by the German nuclear capability of a powerful US restraint upon Germany.

2. Israel-UAR

In this pair of adversaries Israel is the defensive-oriented power, while the UAR is clearly a potential aggressor. The level of national interest involved is of the highest order--the very existence of the state of Israel. Were the UAR militarily superior to Israel the situation would be very dangerous. It is important, therefore, that Israel continue to be capable of deterring UAR attack. If both states are nuclear, then it is highly desirable that Israel possess a secure second strike deterrent force since defense appears impractical. Fortunately, Israel appears to be capable of maintaining a clear lead over the UAR in nuclear technology; however, if something approximating the unstable model began to develop, appropriate assistance to Israel should be considered. In order to avoid alienating the Arab states, it would be desirable if such assistance came from France, as is currently the case; however, if this proves impossible, the United States may have to offer assistance to Israel, following the precedent set in February 1966 with the sale of A-4 Skyhawk aircraft to Israel as a deterrent. Of course, the United States should continuously apply economic and diplomatic pressures to the UAR in an effort to keep its nuclear capability as limited as possible until such time as a situation of stable mutual deterrence seems reasonable.

3. Japan

Japan is in the enviable position of being involved in no serious international conflicts at present, and it is likely that she will be able to avoid serious conflict for the foreseeable future while expanding her political and economic role in the Far East. According to Morton Halperin, China is not alarmed about the prospect of a Japanese nuclear capability. The highest priority for China is to see United States military forces and bases out of Japan; if a Japanese nuclear capability

would serve this end, the Chinese would welcome it. It seems reasonable to predict that the Japanese could develop a secure and effective deterrent force without significantly increasing the fear or hostility of either China or the Soviet Union, if it were accomplished independently of the United States. This course, however, would arouse considerable concern in the United States.

4. India-Pakistan

India, the defensive oriented state in this conflict, is confronted by both Pakistan and China. This complicates the situation; however, unless India disintegrates politically or economically it would be able to gain and maintain a clear nuclear superiority over Pakistan both quantitatively and qualitatively. This should prove stabilizing. Further, the Indian-Pakistani quarrel is clearly a limited conflict for limited objectives. It is unlikely that either side would risk the destruction of a nuclear war over a territorial dispute. Another moderating force is the fact that both India and Pakistan are so dependent upon foreign aid that neither can afford to alienate their primary benefactors. The superpowers, through their aid programs, can do much to control the Indian-Pakistani conflict.

The prospect of an Indian nuclear capability does not alarm China; on the contrary, the Chinese may welcome such a force.³⁹ Chinese strategy against India is not primarily military; rather, it appears to be an effort to weaken the central government, to encourage centrifugal forces, and to look for eventual creation of a number of separate states. Short of that, they hope to weaken the Indian economy, disrupt its political structures, and degrade Indian influence in Africa and Asia. All of these objectives might be enhanced by an Indian nuclear weapons program.

Unless the nuclear force structure of India and Pakistan approximated the unstable model described above (and this seems unlikely), the nuclearization of the Indian-Pakistani conflict relationship will not increase the probability of war and may serve to decrease it.

5. Argentina-Brazil

No important conflict exists between Argentina and Brazil, nor can one be reasonably projected; therefore, one cannot speculate on the probability of war between these two nations. Neither could easily develop

³⁹ See Appendix A, "China"

or procure a nuclear weapons capability so long as they remain within the United States' sphere of influence. It is assumed, therefore, that a prior condition of either nation's achieving Nth power status involves (1) economic independence from the United States, and (2) the installation of an anti-American government. An anti-American government could be either strongly nationalist and independent, or pro-Communist and dependent upon aid from a major Communist power. It cannot be foreseen that a strongly nationalist Nth power in Latin America would present any serious crisis; however, a pro-Communist Nth power would probably be a second center for further Communist penetration into the hemisphere. The nuclear weapons capability would be used to deter efforts to overthrow the regime, to increase prestige, and to support subversion in the hemisphere. The United States and the Organization of American States would be presented with a problem on the order of Cuba but of greater magnitude. It would be necessary to first isolate the state and then seek ways to hasten the displacement of the regime with one more compatible with hemispheric solidarity. The nuclear weapons capability of the Nth power may have to be removed by force in order to preclude the Nth power holding its neighbors hostage. Alternatively, the pattern of the Cuban crisis of 1962 might be followed; that is, the nuclear weapons capability might be removed in return for the guaranteed security of the regime.

6. Australia-Indonesia

Conflict between Australia and Indonesia centers around Sarawak and Papua, with Australia clearly on the defensive and Indonesia the potential aggressor. With limited objectives such as these, neither side would be likely to risk nuclear destruction over the issue. Australia does not have the manpower resources to match Indonesia, but this is of limited importance since Indonesia has a very limited sea and airlift capability and is unlikely to invest heavily in the needed equipment in the foreseeable future. In the unlikely event that Indonesia should achieve nuclear superiority over Australia by 1980, Australia would have to rely upon American alliance commitments to deter Indonesian nuclear blackmail. Neither nuclear war nor its threat seem a reasonable option for Indonesia so long as Australia either (1) maintains nuclear superiority over Indonesia or (2) can rely upon United States sea and air support.

7. The Republic of South Africa

Since the Republic of South Africa is a defensively oriented power and has the technological and economic ability to maintain clear nuclear superiority over its black African adversaries, the acquisition of a nuclear capability by the Republic of South Africa would not increase the chances of war. On the contrary, it may well help to deter black African efforts to intervene, even indirectly, in South African affairs.

CATALYTIC WAR

There are four ways in which an Nth power could conceivably initiate a general, or at least a widespread nuclear war involving the United States and/or the Soviet Union. These are (1) by making an attack appear to come from another source, (2) through the dynamics of alliance systems, (3) a passive triggering capability, and (4) an active triggering capability. Each of these possible consequences of proliferation will be discussed and evaluated in turn.

SIMULATED ATTACK

One Nth power may precipitate general nuclear war by simulating an attack on one superpower by another. The first superpower, believing that it was under attack by the second, would retaliate; and the second, receiving a real attack from the first, would strike back at the first. The two superpowers would thus destroy one another and the catalyzing power would emerge unscathed as the leading world power.

This scenario is not persuasive in the context of current technology. It would require considerable technological sophistication to simulate the attack of a superpower on another superpower. For example, it would be quite difficult even by 1980 for Communist China or France to attack the United States and make it appear that it was the Soviet Union that had launched the attack. Further, political conditions would have to be just right; there would have to be a severe crisis and the United States would have to believe that the Soviet Union was contemplating an attack. It would probably be necessary that communication between Soviet and US decision makers during the crisis be distorted or eliminated, and this does not seem likely. Even if this were the case, the Nth power could not deliver a crippling attack and it is highly unlikely that the United States, if it pursues its strategy of controlled application of force, would retaliate until it knew exactly the source of the attack. Thus, a small strike would not trigger a massive retaliation, and the larger the attack the easier it would be to identify its source. Further, as nuclear weapons spread, the technology of the superpowers will not be standing still, and it is quite likely that the superpowers will have the warning, surveillance, and reconnaissance capability to identify the source of any nuclear strike, with the possible exception of a surprise submarine-launched attack. Even by 1980 there will be very few powers that could launch a nuclear attack from submarines, and this fact will limit the problem considerably.

Further, in the near future the superpowers may have both anti-aircraft and anti-missile defenses that are difficult to penetrate except with the most sophisticated techniques. Hopefully, even CONUS ASW defense will improve.

Even in the unlikely event that an Nth power did succeed in deceiving a superpower and precipitating a massive nuclear exchange, the disadvantages of such action would seem to outweigh the advantages because:

1. The catalyst may not survive the general war it hoped to precipitate because of: (a) the effects of worldwide radioactive fallout; (b) the catalyst may be on the target list of one or both superpowers or their allies; (c) the manifest uncertainty of the physical, biological and political environment following general nuclear war.
2. If one of the superpowers emerged "victorious" and strong, the catalytic power could hope to gain little at best, and probably lose much.
3. The war probably would not completely destroy the nuclear arsenals of the superpowers and the trick may be discovered even after an initial exchange. The Nth power would have to face the remaining forces of the superpowers as well as those of a frightened and outraged world. Severe sanctions would undoubtedly follow.
4. Eliminating the superpowers would remove the major sources of technology, production, food, wealth, markets, foreign aid and assistance.

In summary, initiation of catalytic war seems neither technologically feasible or politically and economically profitable. What seems more reasonable is that, with a wide dispersion of nuclear weapons to lesser nations, a catalytic war among the lesser powers, but not involving the superpowers, may come about. For example, Indonesia may attack Australia; Australia thinks China is the attacker and retaliates; China believes that India has attacked her and retaliates; India suspects Pakistan and launches an attack on Pakistan. This scenario is more likely if the lesser nuclear powers lack sophisticated technology or intelligence systems. Should this be held a clear and present danger, there are three

courses of action which could be taken:

- a. Do nothing, and if this type of chain reaction takes place, at least it will be a solution to the particular Nth country problem. The world would have learned a lesson on the limits of the use of nuclear weapons.
- b. Establish an international surveillance, warning, and detection system reporting to the Security Council of the United Nations. This system would be workable only if the superpowers would contribute the required technology. Such a system may well preclude all nuclear aggression except that promoted by the superpowers. It would further have the effect of enhancing the peacekeeping role of the United Nations.
- c. The United States and the Soviet Union could cooperate with their allies in providing the necessary intelligence and surveillance. Nonaligned nuclear powers would have to shift for themselves. This would tend to tighten the superpower alliance system and isolate Nth powers trying to enhance their power position in the world.

THE DYNAMICS OF THE ALLIANCE SYSTEM

Fear has often been expressed that a small nuclear power, allied with a superpower, may be able to drag the superpowers into a war because pacta sunt servanda. There is certainly some truth in the proposition that the alliance systems have played a role in expanding conflict, through the concept of borrowed power (See Appendix E). There are signs, however, that neither the Soviet Union nor the United States will permit its allies to drag it into an unwanted war. While the Soviet Union certainly assisted China in the Korean conflict, it stopped short of actual participation in the fray. Again, the Soviet Union did not support China in her aggression against India, even though the United States delivered aid to India. The US action during the Suez crisis of 1956 and the exchange of letters between President Johnson and Prime Minister Inonu of Turkey in June, 1965, clearly show that the United States will not be pushed into war by its allies' initiatives, even though the cohesiveness of the alliance suffers as a result. On the contrary, it is more likely that the superpowers will restrain their allies as the United States

restrained France and Great Britain in 1956 and Turkey in 1965. It is well remembered that Germany's great mistake in 1914 was in failing to restrain her ally Austria from attacking Serbia, and the mistake is not likely to be repeated. Both the United States and the Soviet Union have avoided direct confrontations, and when these have occurred (the Berlin crisis and the Cuban missile crisis, for example) both sides have exhibited a tolerance of provocations which, prior to the nuclear age, would probably have led to war. Both sides recognize that, at the current state of the art in both offensive and defensive military technology, there are few issues worth a nuclear exchange. It should be noted, however, that there is no guarantee that this restraint will persist as technology progresses. A technological breakthrough, e. g., a highly effective damage-limiting capability, could drastically alter the picture. It should also be noted that such a breakthrough on the part of an Nth power by 1980 seems utter fantasy.

PASSIVE TRIGGERING CAPABILITY

A passive triggering capability would result from an Nth power having enough nuclear forces of very low vulnerability that a superpower could not conduct an efficient counterforce strike against this state without expending so much of its capability that its second strike capability could be largely eliminated by a first strike from the other superpower. In the case of an Nth power possessing such a capability against the United States, it would require that the Nth power have a large number of well dispersed and protected strategic targets which would call for a large number of US missiles or aircraft to destroy. If such a situation came into being, the US strategy would have to be changed from that of counterforce to mixed targeting in order to conserve forces, and the various advantages of a counterforce strategy would be lost. If the United States wished to have the capability to singlehandedly deter nuclear aggression throughout the world, it would be necessary to have enough strategic vehicles and warheads to have an assured second strike capability against all nuclear potential aggressors simultaneously. If, for example, the United States found it necessary to deter Communist China to protect Japan, Egypt to protect Israel, and Indonesia to protect Australia, these missions would have to be accomplished with sufficient forces remaining to deter the Soviet Union and any other Nth powers which had the capability to strike the United States or its forces. The alternative to this need for greater strategic forces would be for Japan, Israel, Australia and any other potential victims of nuclear aggression

to have available to themselves a credible (survivable) nuclear deterrent against their antagonist without involving the United States. Even in this situation, however, the United States may desire a posture capable of deterring simultaneously all nuclear powers able to strike the United States. In this situation defense against air and missile attack may be of greater significance than at present, not only as a means of defense, but as a means to discourage a nuclear arms race. If potential Nth countries knew that they could penetrate US defenses only with great difficulty and could not threaten the US homeland for bargaining purposes, they would be discouraged from attempting to procure the needed capability and or inhibited from using what they may have.

ACTIVE TRIGGERING CAPABILITY

An active triggering capability would result from an Nth power's acquiring enough nuclear forces so that it had the capacity, on a first strike, of sufficiently reducing the offensive capability of a superpower so that the first superpower could not efficiently strike the second. For example, China would have an active triggering capability if it could by a first strike reduce the US retaliatory capability to a point which would enable the Soviet Union to finish off the US second strike capability with a counterforce attack. In order to avoid this type of catalytic war, the United States must have forces clearly capable of withstanding a first strike by China and then one by the Soviet Union and still be able to deliver unacceptable damage to both. One antidote to this possibility would be for the United States to be allied with a nuclear armed power or powers in the Far East capable of, and willing to, deter China and to retaliate against China if the United States were attacked. China's ability to actively trigger a Soviet attack on the United States would be further reduced if the United States could count on a nuclear-armed Germany, France, Great Britain or European coalition to assist in deterring the Soviet Union. In the latter case, the United States would find itself in the position of Europe today--that is, it would be dependent upon the reliability and credibility of the deterrent power of allies. In this case the United States may experience some of the same nervousness that the French and German have manifested. This would raise a number of problems, including the sharing of technology, the coordination of strategy, and a common targeting policy. Such an alliance would be very useful, but to be effective it would require a tighter coordination of policies and more intimate relations with more subordination of individual national interests to the common good than most nations in any

of the US alliance systems have thus far been willing to accord.

Thus, if the United States were either unable or unwilling to construct forces capable of simultaneously deterring all nuclear potential enemies, it would be forced to rely upon allies. This situation could result in a classic 19th century type of balance of power system. In the nuclear age this type of system would be highly unstable since a war fought to restore the balance would most likely destroy the entire system.

One other way of coping with an active triggering capability is collaboration between the superpowers. This would involve sharing of information on the status of Nth country forces, coordinated, rapid and perhaps reciprocal command and control. The capacity of an Nth power to do mischief could be greatly reduced through means such as the use of reciprocal strategic force observers by the Soviet Union and the United States. If nuclear proliferation leads to polycentrism and states hostile to both the United States and Soviet Union, then superpower collaboration to reduce the probability of catalytic war would be indicated.

THE PROBLEM OF ACCIDENTAL WAR

There has been a widespread discussion of the problem of accidental war in arms control literature for over a decade. The term has been used in many ways, often to mean anything other than deliberate calculated war and even including political or military miscalculations. For the purpose of this discussion, however, accidental war will be construed to mean mechanical accidents in the defense systems and psychological and personnel hazards.

It is interesting to note that neither the French nor the Chinese have expressed fear of accidental war, and that the Soviet Union has discussed the problem only in terms of propaganda designed to discredit the United States. Most of the genuine fear of nuclear accidents has been expressed by British and American writers and much of this has borne no relation to the technical facts. In spite of much unfounded alarmism, though, accidental war is a possibility, however remote, and the proliferation of nuclear weapons may enhance the danger.

HISTORICAL PERSPECTIVES

The history of wars in the prenuclear age affords us little insight into the problem of nuclear accidents because the technological environment has changed so radically in the past 20 years. Time factors have been drastically reduced, destructive power vastly expanded, and communications and transportation have greatly reduced both time and space. Nevertheless, there are still some insights to be had from history. Many past wars have been accidental to some degree, but just how and to what degree is a matter of considerable disagreement among historians. Further, it is difficult in these past wars to distinguish accidents, as defined here, from the many mistakes in political and military judgement which seem so clear from the vantage point of hindsight. But the lessons of history clearly show that international tensions which existed before the outbreak of open hostilities have played the major role in igniting most wars. The existing tension has provided the raison d'etre for war once an accident, incident, or provocation has provided the casus belli. But accidents out of the blue, that is, in the absence of acute tension, have not caused wars. For example, an accident

involving the United States and Canada would hardly result in a war. On the other hand, an accident at the time of the 1961 Berlin crisis would be more likely to trigger a hostile response that could escalate via the provocation--counter-provocation route to war. (This, too, is not certain; it is only more likely.) The importance of tension is underlined in cases where the apparent casus belli was removed before the outbreak of war yet pressures for war were overwhelming: Austria's attack upon Serbia in 1914 after Serbia delivered a conciliatory reply to the Austrian ultimatum is a case in point. Another example is the Spanish-American War of 1898. Spain essentially conformed to US demands regarding Cuba, yet pressure in this country for war was raised to fever pitch by the sinking of the battleship Maine. This may well have been an accident, just as the Serbian government did not plan the murder of the Archduke Ferdinand.

Conversely, there are numerous cases where adequate provocation for war has existed, but war was avoided because tension was relatively low or for one reason or another the provoked nation or nations did not want to go to war. The sinking of the Lusitania, for example, did not bring the US into World War I. Neither did the sinking of the gunboat Panay in 1937 precipitate war between the US and Japan. Further, there have been numerous examples of treaty violations and overt aggressions which have failed to precipitate war--the Japanese take over of Manchuria, Hitler's occupation of the Rhineland, and Mussolini's invasion of Ethiopia, to mention a few well-known cases. Nations simply have not gone off to war willy-nilly when they have not wanted to do so. The Munich agreement of 1938 shows that not even treaty obligations will force a nation to war against its will. National interest, not pacta sunt servanda, seems to reign supreme.

It is clear, however, that nuclear weapons and related technology bring on a new and unpleasant dimension to the problem of accidental war, and that the more widespread these weapons are, the greater the danger of a serious nuclear accident which may lead to war under proper conditions. History gives us no insights into what happens if a missile accidentally is fired and explodes on foreign territory, but it does show that such incidents do not necessarily or automatically lead to war. They lead to war only when tensions are extremely acute or when one side is looking for an excuse to go to war. Further, the history of the past 20 years show that nuclear powers are well aware of the consequences of nuclear war and have markedly raised their tolerance of provocations.

the capability of launching a weapon, the easier it is to solve the problem.

NUCLEAR ACCIDENTS AND ACCIDENTAL WAR

Even if accidents do occur, however, they will not necessarily precipitate war. If the nations involved do not wish to go to war; if communications are such that immediate discussions, explanations, and negotiations can get under way; and if their weapons systems are of such a nature that instantaneous response is not essential to survival, then war need not occur. Further, even if an accident does precipitate unintended war between Nth countries, there is no reason why the conflict cannot be quickly isolated and brought under control by either international organization or the action of the major powers. Only in case one or both of the superpowers immediately joined the fray would be a local nuclear conflict escalate to general nuclear war. Considering existing means of communication between the United States and the Soviet Union, and given the attitude of both superpowers that no issue is worth a global nuclear exchange, the chances of accidental nuclear war between Nth countries escalating to global nuclear war seems extremely remote. If such an accident did occur, for example between Israel and Egypt, the results would be unfortunate for those two nations, but it would not involve large areas of the globe and no serious power vacuum need be permitted to develop. The experience would be sobering and instructive for the rest of the world. Thus, the problem of accidental war, while disturbing from the moral and humanitarian point of view, need not be disastrous to the United States provided that a stray nuclear warhead did not land on US soil. This could not happen so long as Nth powers do not have delivery vehicles of sufficient range to reach the United States. This possibility seems unlikely to obtain prior to 1980 except in the cases of France and China.

CONCLUSIONS

By conclusion, it appears that, if proper precautions are taken by Nth powers, there is some unquantifiable but slight chance that an accidental nuclear explosion involving two nations might occur and that the proliferation of nuclear weapons will increase the chances of such an accident occurring. What is more important than the number of Nth countries, however, is what kind of nuclear forces and command and control systems come into existence. Quality, in this case, is more important than quantity.

If an accident does occur, there is only a slight chance that it would precipitate war. The level of existing tension and the communications that exist between nations would be relevant factors. The efficacy of international peacekeeping capabilities would also have a bearing on the situation.

Finally, even if nuclear war does break out between two Nth countries as a result of an accident, the chances of the United States becoming involved in a global nuclear exchange seems infinitesimal. Before the United States became involved there would, first, have to be an accident; second, the accident would have to lead to war; and third, the war would have to escalate to global dimensions. In the context of today's military and technological environment, this is an extremely unlikely contingency.

The record of the past 20 years with regard to accidents is comforting, but it will be important that Nth countries be aware of the possibility of accidents and take measures to prevent them as the United States and, presumably, the Soviet Union have done. Nth powers, possibly with the aid and encouragement of the older nuclear powers can effectively reduce the likelihood of accidental war by:

1. reducing the urgency of quick reaction by reducing vulnerability of offensive forces.
2. measures to reduce the incidence of false alarms in warning systems.
3. improve intelligence.
4. establishing effective command and control systems.
5. direct and rapid communications between governments to clear up misunderstandings.
6. exchange of accident preventing technology.
7. recognition in practice as well as in principle that the traditional military principle of keeping one's adversaries guessing with respect to his intentions is dangerously out

out of date in the nuclear-missile age.

8. . improving the speed and effectiveness of the peace-keeping machinery of international organizations

It would seem that in the future accidents may happen, but if the nuclear powers think this through, they need not lead to a nuclear war.

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APPENDIX D

THE STRATEGIC POWER RELATIONSHIP OF Nth POWERS,
THE SOVIET UNION, AND THE UNITED STATES

APPENDIX D

THE STRATEGIC RELATIONSHIP OF Nth POWERS TO THE UNITED STATES AND THE SOVIET UNION*

It is often argued that nuclear proliferation is dangerous because it allows the Nth power to pursue policies and goals effectively and independently of the superpowers, thus reducing the power and influence of the superpowers, but at the same time involving them in the disputes and crises generated by Nth power initiatives.¹ According to this argument, nuclear proliferation would have a general loosening effect upon major power alliance systems, would make for an increased number of serious international crises, and could thus bring the superpowers into direct confrontation over issues which are only marginal to their interests. General d'Armée André Beaufre, in fact, argues that "interests which are vital for the weaker allies but marginal for the stronger then become vital for the latter as well and so solidarity becomes more complete (from the French point of view)."² In terms of the international system as a whole, the process would militate against bi-polarity and reduce the moderating influence and control of the superpowers. Some Nth powers may deliberately strive to reduce the influence of the superpowers. This is clear from General Beaufre's statement that:

Another consequence of nuclear deterrence is that mutual danger and the effort entailed in the nuclear arms race creates a sense of solidarity between the nuclear powers. This solidarity has produced a new type of relationship between the Americans and the Russians; it is characterized by a permanent dialogue, open haggling, mutual mistrust and undercover complicity. When the risks to both of them are clearly greater than the issue

¹ See William C. Foster, "New Directions in Arms Control and Disarmament," Foreign Affairs, Vol. 43, No. 4, pp. 597-601. For a French view, see André Beaufre, Deterrence and Strategy (New York: Praeger, 1966), pp. 78-90.

² Beaufre, op. cit., p. 89.

* By Dr. James McBride.

at stake (e.g., Suez) it might well be that their de facto solidarity would be translated into concerted action or even a temporary alliance. The prospect of a world controlled by a de facto Russo-American "condominium" is one of the possible--and menacing--results of nuclear evolution.

Looked at from this point of view, the existence of independent nuclear forces should constitute a guarantee that the interests of the other nuclear powers will not be sacrificed through some agreement between the two superpowers-----³ [emphasis supplied]

If the nuclear "magic wand" makes General Beaufre's wish come true, nuclear proliferation would clearly not be in the best interests of the United States. But this line of thinking is often refuted by demonstrating that Nth powers can develop no more than a modest and unsophisticated nuclear weapons capability and will not, in fact, be less dependent upon the protection of a superpower ally. Even if the latter argument is true, however, proliferation may still prove destabilizing if Nth powers insist upon believing that nuclear weapons give them a more independent position. Polycentrism and instability will be all the more acute if one or both superpowers, as well as the Nth power, behave as though the Nth power were more independent. Both China and France are cases in point. It should be noted that what is true is not so important as what seems to be true. If China, for example, is treated as though she is a great power, then indeed she is a great power. The same reasoning applies to France. Power is at least as much a matter of subjective judgements as objective realities.

Among those who reject the argument that a nuclear capability will serve as a means to greater independence in international politics, Henry Kissinger wrote:

Nor is a nuclear arsenal under national control a means for becoming independent of big power tutelage. A major nuclear power, confronted by an Nth country not backed by

³ Beaufre, op. cit., p. 140.

another major nuclear power, could always strike pre-emptively. Thus Nth countries would continue to be dependent on the support of a major nuclear power.⁴

It follows that if a lesser power is dependent upon a greater power for its security, it is beholden to the greater power and subject to its influence, especially in matters of foreign policy.

Kissinger argued that in view of the quantity and quality of nuclear force any Nth country can be reasonably expected to develop or procure in the foreseeable future, it could not expect to degrade significantly the retaliatory forces of a superpower by a preventive or pre-emptive attack. On the contrary, for an Nth power to threaten the use of nuclear weapons against a superpower would be at best useless, and at worst, suicidal. In view of this, Kissinger concludes that nuclear weapons will not improve the strategic position of Nth countries vis-à-vis the superpowers, be they allies or opponents.

It is readily apparent that the validity of this position depends upon the nature of the weapons system that the Nth country possesses and upon the active defensive capability of the superpowers. If the weapons of the Nth power can be taken out by a first strike, then it would be the most dangerous nonsense for the Nth power to behave as though it owned its own deterrent force and did not need the support of a friendly superpower.⁵ If the Nth power had a relatively invulnerable force, the same would be true. (It seems completely impossible for an Nth power to have an adequate active defense against a superpower for the foreseeable future.)

On the other hand, an Nth power may well be less secure vis-à-vis a hostile superpower than before it made its first nuclear test or acquired its first weapons. The very fact that it possesses some nuclear weapons

⁴ Henry Kissinger, The Necessity for Choice (Garden City: Doubleday & Co., 1962), pp. 251-252.

⁵ On the other hand, it would be equally nonsensical for a superpower to behave as though the Nth power did have a secure second strike capability. Humbleness and humility, while virtuous characteristics in individuals, are not so virtuous in nations engaged in the power politics of the international system. Here, a spade, by any other name, is still a spade.

tends to render it a more legitimate target for nuclear blackmail than a non-nuclear nation.⁶

Further, if the Nth power were either allied with or closely associated with the other superpower, the fact that it has a nuclear weapons capability will certainly not render the latter more willing to pull the chestnuts of the former out of the fire. The very fact that the lesser power procured or developed a nuclear capability probably reflects a desire on the part of the lesser power to be more independent of the superpower, and this will include a desire on the part of the superpower to be less closely tied to the lesser power. If the lesser power indicates in any way that it is unreliable and may act irresponsibly (from the point of view of the superpower), the superpower can be expected to either disassociate itself from such conduct or force the Nth power to heel by virtue of its superior power position. The maverick Nth power is most likely to be isolated from friends and allies alike--witness the Suez affair. As long ago as 1949, Christian Herter, then Secretary of State, said: "I can not conceive of the President [of the United States] involving us in a nuclear war unless it became certain that we were in danger of devastation ourselves." And General Maxwell D. Taylor wrote in his book, The Uncertain Trumpet:

We should recognize and accept the limitations of our nuclear retaliatory forces. Under the conditions that we must anticipate in the coming years, it is incredible to ourselves, to our allies, and to our enemies that we should use our forces for any purpose other than to assure our national survival.⁷

Further, if an Nth power's nuclear force can be negated by either a first strike or an active defense system, there is no reason to believe that a rational major power, either friend or foe, would be deterred from applying political, economic, or other pressures on the Nth power for fear of such a force. Neither does it seem reasonable that such a force could deter subversion, agitation, internal terror, and other political warfare techniques. Neither would such a force deter a conventional attack.

⁶ The Soviet Union has proposed that nuclear nations collectively pledge that they will not employ nuclear weapons against non-nuclear nations. The ethical notion appealed to is similar to the schoolyard code that a boy wearing glasses should not be hit in the face. Once he takes off his glasses, however, he is fair game.

⁷ General Maxwell D. Taylor, The Uncertain Trumpet (New York: Harper & Row, 1960), p. 145.

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⁷ General Maxwell D. Taylor, The Uncertain Trumpet (New York: Harper & Row, 1960), p. 145.

In fact, if the Nth power reduced its conventional forces in order to build an unsophisticated nuclear force, the danger of falling victim to a conventional attack may increase significantly, both because of a reduced military capability and because of a reduced ability to attract foreign assistance and allies.

There does remain, of course, the possibility that a superpower desirous of applying military pressure on a minor nuclear power allied to the other superpower may be very cautious for fear of a desperate nuclear response on the part of the minor power that may cause damage or may lead to escalation. Some believe that the mere fact that nuclear weapons had been used would be enough to precipitate global nuclear war. What seems more likely, however, is that the superpower allied to the Nth country would be aware of the danger and would be ready to disassociate itself from the initial threat or use of nuclear weapons by its lesser ally. Unless the Nth power clearly had either an active or a passive triggering capability,⁸ its superpower ally would be likely to exert every possible pressure on the Nth power to refrain from using its nuclear weapons. The degree of vigor with which a superpower exerts pressure on its ally will depend, to some extent, upon its estimate of whether a nuclear war could be kept limited in both scope and intensity. This, in turn, would depend upon the ability of the adversary superpower to execute a strategy of controlled and flexible response. The greater the capacity for controlled and flexible response, the more likely that a nuclear war could be limited in both scope and intensity, and the less likelihood of unintended and undesired escalation to global war. Of course, if a superpower had an effective active defense against the Nth power, the Nth power would be utterly helpless and would have no choice but to accept the protection (and hence mentorship) of its superpower ally. Thus, if the Soviet Union developed an adequate active defense against the French force de frappe, not only would France be forced to rely totally upon the United States to deter the Soviet Union, but also France's offer to protect Germany and the rest of Europe would be clearly an empty gesture as well as a rather ridiculous pretense to power.⁹

⁸ See "Catalytic War," in International War and the Spread of Nuclear Weapons, Appendix C.

⁹ This conclusion is based upon the assumption that the force de frappe was designed to deter the Soviet Union. It is recognized, however, that this may not be its raison d'être at all. France has indicated that it considers the Soviet threat to Europe past.

The same reasoning applies to China. The greater the US capability for controlled and flexible response, the more likely it is that the Soviet Union can dissociate itself from any Chinese nuclear adventures. But, if the United States develops an effective active defense against the Chinese capabilities, it will tend to force the Chinese back under the Soviet wing and away from unilateral adventures.

The above discussion suggests that, in relation to the superpowers, the degree of security, and hence strategic independence, that an Nth country could achieve would depend upon its ability to inflict damage upon a major adversary. Of course, as Kissinger noted: "A major nuclear power confronted by an Nth power not backed by another major power, could always strike preemptively." But against an Nth power capable of launching a small but successful second strike, the efficacy of a strategy of pre-emption would be reduced by the cost of whatever damage the Nth power could inflict. But, somewhat paradoxically, the greater the ability of an Nth power to inflict damage upon a superpower adversary, the greater the reluctance of a superpower ally to extend nuclear deterrence to that Nth power. Further, Nth power capability to inflict damage is in direct proportion to its offensive capability and inverse proportion to the superpower's defensive capability. It should be noted that herein lies a source of danger to the superpowers. If superpower X decides to downgrade its anti-bomber defenses because superpower Y has largely given up a bomber attack capability in preference to a missile attack capability, superpower X may then be vulnerable to attack by Nth power aircraft. It does little good to carry a high power rifle to defend against tigers if one forgets the flit gun needed to defend against malaria-bearing mosquitos.

What is important in judging the strategic relationship of superpowers to lesser powers is not the abstract concept of "nuclear capability," but rather "what kind of nuclear capability." If nuclear capability is viewed as a variable in the calculus of national power, then there may be a point below which a nuclear weapons capability in and of itself¹⁰ would not enhance an Nth country's strategic security and independence vis-à-vis the superpowers. On the contrary, a nuclear capability below this point would be a liability to the Nth power. To trade conventional forces for

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As noted above, this can be a matter of perceptions rather than realities. If both the Nth power and the superpowers act as though they believe the Nth power has security and independence, then in fact it does, even though its real power does not justify such a position.

nuclear forces, in the event that both could not be had, would be to compound the liability. Above a certain point on the sliding scale, however, nuclear weapons may earn for the Nth power greater independence and security, as General Gallois has argued.¹¹ While the critical point on the scale cannot be precisely defined, it is suggested that this point is reached when the Nth power has forces capable of surviving a first strike and retaliating with enough strength to destroy several important cities of the superpower. The cost of such a capability, however, would be considerable; and furthermore, the Nth power would then have climbed aboard the treadmill of modern technology and would have to keep pace with the superpowers in research and development or else see its nuclear capability slide down the scale to where it becomes a liability. In terms of contemporary language, they would be caught up in vertical proliferation. The British seem to have learned this lesson; the French are learning it; and it remains to be seen whether more students will apply for admission to the school. The tuition seems very high with little prospects for a reduction. To make the matter worse from the Nth country's point of view, no nation has found, as yet, a way to become an "Nth nation dropout," although the British have been struggling manfully to get off the treadmill. The price of security and independence in the nuclear age comes very high, and the

¹¹ General Pierre Gallois argues that thermonuclear war will be unlikely when nuclear forces are widespread in the world. This thesis rests upon the idea that a lesser power can deter a superpower, such as the Soviet Union or the United States. This, in turn, rests upon the hypothesis that a desired objective must be worth the cost of achieving it. For example, what would the Soviet Union gain in launching nuclear war against France if it should lose Moscow, Leningrad and possibly other great cities? In order to work, this form of finite deterrence must be credible. The superpower must be convinced that the lesser power would accept national suicide rather than follow a course of pre-emptive surrender. General Gallois argues: "Analysis shows that in the matter of destruction all depends on the nature of the objectives chosen by the retaliatory power. It is plausible to think that a dozen or so warheads with thermonuclear charges might be enough to 'crack' the political and social structure of a large, centralized modern nation... Therefore a retaliatory strike directed at the demographic systems of the opponent acquires a real deterrent meaning." Pierre Gallois, The Balance of Terror (New York: Houghton Mifflin, 1961).

cost will continue to rise in direct proportion to the research and development programs of the two superpowers. For the foreseeable future, therefore, there is no real or potential Nth power that can seriously degrade the military position of the superpowers, provided the superpowers (1) choose to utilize their vastly superior total power position, and (2) deploy active defenses to defend against Nth power threats before they arise. If Nth powers desire a lever against the superpowers, military capability does not provide a satisfactory fulcrum for that lever. The lack of a military fulcrum does not, however, preclude the lesser powers from seeking a fulcrum in other areas. Further, one should heed Thomas Schelling's warning that too often Americans display a propensity "... for warning rather than doing, for postponing a decision, for anesthetizing the victim before striking the blow, for risking wealth rather than people, and for doing grand things that do not hurt rather than small things that do."¹² If Nth powers acquire the strategic lever that General Beaufre outlines, it will not be because of their military might, but rather because of superior skill in a psycho-strategic contest vis-a-vis the superpowers.

¹² Klaus Knorr and Thornton Read, (eds.), Limited Strategic War (New York: Praeger, 1962), p. 254.

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APPENDIX E

NUCLEAR PROLIFERATION AND THE BALANCE OF POWER

APPENDIX E

NUCLEAR PROLIFERATION AND THE BALANCE OF POWER*

NUCLEAR WEAPONS AND NATIONAL POWER

Introduction

The purpose of this essay is to survey the impact of nuclear weapons on the concept of national power and the balance of power, to assess the influence of nuclear proliferation on polarity and the choesiveness of alliances, and to suggest the impact of specific cases of nuclear proliferation on military stability and US policies and power.

In discussing national power, it is essential to differentiate between the measurement of national power at any given time, and the prediction of power at some future time. The former is a description of factors relevent to power relationships existing in the international system and factors associated with these relationships. The second involves the identification of trends in these, and perhaps other factors, which predict power in the future.

In the international system, power has long been considered by scholars and statesmen as a key ingredient in the interactions among states, and as a necessary possession of a nation that is successful in international politics. Traditional interpretations have portrayed national power as a state's ability to subject others to its control or to limit their freedom of action.¹ Either by the threat or actual infliction of deprivations, national power has been seen as valuable to enforce demands in situations of international competition.

¹ Felix E. Oppenheim, Dimensions of Freedom: An Analysis (New York: St. Martin's Press, 1961), p. 100.

* By Eendix staff.

In situations short of full-scale international warfare, power in the "political" context might be viewed as the ability of a nation to influence, in various degrees and forms, the policies and actions of other nations.² Implicit in this notion is the distinction between the control of a competitor's fate--as the United States might have over Cuba--and some form of influence over various aspects of a competitor's behavior.³ The United States could surely seal the fate of Cuba in a matter of minutes with our weapons, but it is somewhat less successful in controlling several salient aspects of Cuba's political behavior in the international system.

In an aggregate sense, national power could be termed "the totality of a state's effectiveness in world politics."⁴ As states possess differing degrees and forms of national goals, and as varying forms and degrees of national resources may be called upon to back up respective goals, the nature and degree of their respective aggregate power positions will vary accordingly.

The Measurement of Power

Political analysts have frequently added up relatively hard economic data concerning other nations, in order to assign some power classification label to each state.⁵ Other observers have suggested such "indicators" of aggregate national power as geographic position, natural resources, industrial capacity, military preparedness, and so on,⁶

² Normal D. Palmer and Howard C. Perkins, International Relations: The World Community in Transition (New York: Houghton Mifflin Company, 1953), p. 74.

³ See John W. Thibaut and Harold H. Kelly, The Social Psychology of Groups (New York: John Wiley, 1957).

⁴ Palmer and Perkins, op. cit., p. 76.

⁵ Stephen B. Jones, "The Power Inventory and National Security," in James N. Rosenau (ed.), International Politics and Foreign Policy: A Reader in Research and Theory (New York: Free Press of Glencoe, 1961), p. 255, (Rosenau edition hereafter cited as Rosenau Reader).

⁶ Hans J. Morgenthau, In Defense of the National Interest: A Critical Examination of American Foreign Policy (New York: Alfred A. Knopf, 1952), p. 175.

while others urge that relative national power is also determined by ethnic homogeneity, effective social integration, and political stability.⁷ The difficulty in measuring an opponent's relative power became greater when nations began the process of industrialization:

The emphasis shifted from manpower and size of territory to industrial and scientific ability--and--the possibilities of using power and making power effective were greatly enlarged for those states which possessed these abilities.⁸

At times, students of power in international relations have viewed national power as basically coercive, and as resting in large part upon the size of the nation's military "arsenal." Some have even concluded that a nation's goal are not likely to carry great influence in the international system without possession of some instruments of coercion.⁹ However, the theory that weapons alone are the key to success in international politics falls short of explaining the extended range of causes, effects, and processes characterizing international actions and reactions.

More useful in describing the relative strength of a nation's voice in international forums and exchanges would be to view national power as the degree of effectiveness that a nation enjoys in making its interest known to those whose actions it may seek to influence. In the nuclear era, nations must be able to call upon a wide range of resources to back up attempts to influence behavior, since the effective use of military weapons is often not feasible. The interrelation and peculiar organization of elements of power to specified national goals characterizes national behavior and this characteristic of organization is difficult to measure.

⁷ Nicholas John Spykman, America's Strategy in World Politics: The United States and the Balance of Power (New York: Harcourt, Brace & Co., 1942), p. 19.

⁸ Francis Harry Hinsley, Power and the Pursuit of Peace (Cambridge, England: Cambridge University Press, 1963), p. 281.

⁹ Arnold Wolfers, Discord and Collaboration: Essays on International Politics (Baltimore: John Hopkins Press, 1962), p. 106.

Power is not an absolute, but a relative measure, and a nation's power has meaning only in relation to other nations. It is the subjectively assessed condition of a nation's relationships with other nations and groups, which is the ultimate "measurement" of the national power. Within this frame of reference, armaments are "objective" in the sense that they are objects of "subjective" perceptions and estimates by competitors.¹⁰ Like other aspects of the national base of power resources, armaments must be perceived and measured by a competitor both as to current strength and implications for the future.

To base one's measurement of a nation's power on its gross national product or population is often misleading, for the essence of national power lies in the effectiveness with which national resources are utilized to accomplish national goals.¹¹ The problem of measurement is not merely one of quantifying the resource variables of a nation, but of comparing these results with similar calculations for other nations. With the advance of technology, the difference between actual and potential power has gained in importance.

The Prediction of Power

Discussion of potential power suggests that we are interested not only in measuring what is but also in predicting what will be. This problem in the 20th century is a dynamic one, for the pace of cultural change and the spread of technology and communications makes prediction based only upon measurement of static power factors subject to quick obsolescence. The spread of nuclear weapons must be viewed as the latest event in the expansion of technology, and it is, in these terms, that its impact upon national power must be considered.

The prediction of the power potential of a given nation must be specific as to a defined purpose and a potential antagonist. A nation's relative power to influence the policies and actions of other political actors is particular to various functional areas, and a nation's power in one area--such as influencing a bloc of states to adopt a certain policy regarding an apartheid maverick state--may be substantially different from its power in another area, such as an attempt to muster world opinion against its opponent in an essentially bilateral, localized conflict situation.

¹⁰ Maurice A. Ash, "An Analysis of Power, with Special Reference to International Politics," in Rosenau Reader, p. 335.

¹¹ Wolfers, op. cit. p. 106.

Whereas a nation's power will vary from one functional area to another, so will the effectiveness of utilization of different aspects of the national power vary from one situation to another according to the perceived need, feasibility, and advisability of bringing to bear various combinations of power resources to support different goals.

The manner in which a nation's resources are used is, of course, influenced by the conditions, motives, objects, relationships, and events perceived to be important by the decision group. This raises a question as to the possible non-universality of power; for if states act in response to particular stimuli in particular contexts and perceive those stimuli in a great variety of ways, the specificity of power inherent in reaction to a particular situational stimuli may negate the concept of a general quantity of "power" among nations. Thus, in asking how powerful a state is today, one must also ask how powerful to do what, vis-a-vis whom, and when. Here we return to the notion that power is the product of relationships, not the sum of resources.

Let us compound the problem of measuring national power still further by considering multiple power bases. Today, nations of the world can seldom act with relative freedom from desires of the super-powers. Whether in formal alliance with powerful states or merely in one of several forms of informal coalition or cooperative relationship, most nations can call upon the help of strong friends in many situations. India might be able to invoke certain forms of "borrowed power" from the United States were her northern border areas invaded by Chinese troops, while quite different forms of American reaction would predictably be forthcoming if India became embroiled in a full-scale conflict with America's nominal ally, Pakistan.

Thus, in estimating India's power now, and in these two potential situations, one would presumably arrive at three substantially different estimates of the degree of "influence" that India would have when interacting with Peking, Karachi, the Afro-Asian Conference, or other parties and groups. As can be seen, even in seemingly dyadic relationships, interactions and tradeoffs in the modern international arena implicitly involve all friends and allies of each participant when a nation and its competitors calculate which "resources" may be called upon to enforce demands and maneuvers in particular situations.¹²

¹² For a discussion of alliances and the measurement of power see, Hans J. Morgenthau, Politics Among Nations: The Struggle for Power and Peace (New York: Alfred A. Knopf, 1st Ed., 1948), pp. 184-194.

It becomes apparent that there is probably no meaningful abstract definition of power which would allow us to predict for any and all contingencies the success or failure of a nation with "n" units of power. There are, however, some indices of power. Such indices might allow us to predict the relative advantage of nation A over nation B given certain goals for A and within a specific means for influencing B.

Perhaps, of the utmost importance in today's world is the ability of A to attract other parties to her cause--to obtain borrowed power.

Second, is the projected capability of A (compared to B) to sustain a long military effort. In terms of middle powers, this is represented by increasing development of heavy industry, maintenance facilities and special weapons production. For developing powers, increasing per capita income may be a better predictor.

Third, and least susceptible to measurement, is A's increasing acceptance of the risks involved in order to achieve its state objectives.

Nuclear Technology and National Power

In the 1960's, nuclear weapons may be considered the prestige element of power. It is, however, doubtful whether the increment of national power which results from their deployment is anywhere near the increment in destructive power which would derive from their use.

There are two major reasons for this difference; first, nuclear weapons are credible elements of power to protect a country against total annihilation. Few countries in the world today have as a single element of their foreign policy the total annexation or annihilation of another power, UAR threats to Israel notwithstanding. Nuclear weapons and the inherent accompanying danger of escalation may act as a limit upon the degree to which one commits his power in support of limited objectives. It would be hard to argue that in a world of nuclear proliferation, nuclear weapons give the US more power to wage limited conflicts.

Nuclear weapons do not appear to substantially increase ability to obtain borrowed power. France's argument for an independent nuclear force has been that it serves as a trigger, e.g., that it increases her ability to borrow power. But this is true only in those

particular situations where her self-interest coincides with that of her nuclear allies. In cases where her self-interest diverges from that of her allies, it probably decreases her borrowed power.

In the more-difficult-to-quantify area of "prestige," and independence (for these too are characteristics of power), there is little doubt that they have given her more independence, but the desire for independent action probably came first. Her capability to influence her neighbors does not seem to have increased because of her nuclear weapons. But this, in turn, is because she is in no position to threaten or reward her neighbors with them.

It is more complicated to assess the impact of a nuclear arsenal on the degree of commitment to influence a neighbor. Again a high degree of tension and commitment to a long range hostile policy are usually forerunners of the desire to obtain nuclear weapons. All of the cases of "probable" proliferation involve countries that, with the exception of Germany and Japan, have less capability to produce weapons than Canada and Sweden. However, the probable nuclear powers share a commitment to a hostile posture toward a neighbor (or a desire to defend themselves against such neighbors).

In that nuclear weapons increase the military prestige of the middle power vis-a-vis its neighbors, they will probably solidify the population behind the policy for which they have been obtained. This will be particularly true if the hostile power also obtains these weapons. However, if only one nation of a pair of hostile powers obtains these weapons and there is a lack of national consensus, the commitment may weaken. The possible loss of borrowed power, as discussed in the previous section, may also serve to lessen the commitment of the new nuclear power to a continuing hostile policy.

There are additional internal implications to be considered. If both nations of a hostile pair have nuclear weapons, the ability to sustain a non-nuclear conflict must also be maintained. For some middle powers like Israel, South Africa and Japan, (and certainly Germany) obtaining or constructing nuclear weapons and their delivery systems would not impair their growing or extant heavy industry capability nor would it markedly affect their per capita income. For others, however, such as the UAR, Indonesia, or India, indigenous development of nuclear weapons and delivery systems would have a marked impact on

their economic and industrial strength. The impact of an indigenously-produced nuclear force upon the other elements of power will thus tend to increase overall national power for some countries and reduce it for others.

Only when nuclear weapons use is credible does the threat of their use produce an increment in the power of a nuclear state in a military confrontation. The prestige generated from having nuclear weapons may disappear among the non-aligned states as the number of nuclear powers becomes larger.

Will the new nuclear state decrease the risks inherent in a commitment to influence another nation simply by adding nuclear weapons to its arsenal? The answer to this question depends on the nature of its desired influence, the actual and borrowed power (e. g., a nuclear guarantee) of the other state, and the status of the other state's nuclear deterrent. If (1) it considers its vital interests involved in the commitment, (2) the other state has no borrowed power, and (3) the other state has either no nuclear weapons or a vulnerable nuclear deterrent, the nuclear weapons would probably constitute a significant contribution to this state's national power.

However, if (1) its goals and commitment are limited (vital interests are not at stake), or (2) the other state has either considerable and credible borrowed power or an invulnerable nuclear deterrent, then nuclear weapons do not constitute a significant increment to this nation's national power.

The measurement and prediction of national power have been differentiated and crucial elements in the calculation of the latter suggested. The impact of nuclear weapons upon these elements has been estimated. Although each case must ultimately be considered as separate and distinct, the following tentative conclusions are suggested as hypotheses:

Nuclear weapons may be an increment to national power when: (1) the policy of the state obtaining weapons is consistent with the policies of more powerful states from whom she receives borrowed power; (2) if a long-standing policy is reinforced in the eyes of the population by the added prestige of a credible nuclear force; (3) when this force can be obtained without sacrificing national goals of development and industri-

alization; (4) when the party to be influenced has not borrowed power and no invulnerable nuclear deterrent, and this state's vital interests are at stake.

Nuclear weapons, on the other hand, may decrease a state's national power, or be of little influence except in terms of prestige, when: (1) the nuclear capability of the state decreases its borrowed power; (2) if the state's hostile policy is not increasing in intensity and does not command respect and adherence among major elites in the population; (3) when significant sacrifices in economic development and industrialization must be made to obtain a nuclear force; and (4) when no vital interests are served by the influence intended, or when the party to be influenced has significant borrowed power or an invulnerable nuclear deterrent.

THE BALANCE OF POWER

We have suggested that power is best understood in its comparative sense, when two or more nations are being evaluated vis-a-vis each other. The balance of power has been used as a justification for alliance between nations for several centuries. Its applicability in the nuclear age must be examined before proceeding with an investigation of the impact of nuclear proliferation on polarity, coalitions and US power.

Introduction

It has long been a popular notion that the nation which can successfully "balance" the power of his opponent will be able to prevent aggressive behavior by that opponent and will, thereby, be successful in the grand game of competitive inter-nation politics. Indeed, the deliberate pursuit of this "balancing" of power distribution among nations has been a declared part of the official foreign policy of numerous European states for several centuries. The policy became a means to increase one's own national power and influence by offering it selectively to support one or another coalition. Whereas, today, virtually all foreign policy is justified, by almost every statesman, in terms of aiding "world peace," in times past the justification for the foreign policy of occidental states was generally couched in terms of the maintenance and, if need be, the defense and restoration of a "balance of power" in the region.¹³

¹³ John H. Herz, Political Realism and Political Idealism: A Study in Theories and Realities (Chicago: University of Chicago Press, 1951), p. 207.

David Hume has suggested that nations and states acted as if they were pursuing a balance of power policy long before the word came into common usage in the Europe of the 18th and 19th centuries. This balance has been conceived both as an automatic principle of nation-state behavior and as a conscious policy for maintaining national power.

In much of the literature on the "balance of power," one finds an underlying notion that somehow the balance-producing process is semi-automatic. That is, out of the laissez-faire competition for power and influence in any arena, there will evolve some form of equilibrium, regional stability, or mutually neutralized power.¹⁴ Some students of the "international balance of power" over the years have viewed international equilibrium as evolving when "one power proves too weak to destroy the next strongest one without provoking the successful resistance of all the other units, which combined are capable of resisting its might."¹⁵ In this view, when a nation's ability to make its will felt upon its competitors is "balanced," it is effectively neutralized, thereby nurturing systemic equilibrium.

Diplomats have long viewed the balance of power process among states as being essentially a situation wherein independent entities operate with relative autonomy in the manipulation of power relationships among themselves. There has been the notion in policy circles that balanced power is somehow neutralized and, hence, immobilized power. The roots of this lingering concept are found in the political writings of the diplomats and political analysts of England over the last several centuries.¹⁶ If the goal of the system, and hence its members, is, therefore, the neutralization of the hegemony-seeker's power by means of a countervailing power build-up or rearrangement,

¹⁴ Spykman, *op. cit.*, p. 21.

¹⁵ Herz, *op. cit.*, p. 206

¹⁶ See for example, Sir Eyre Crowe, "Memorandum on the Present State of British Relations with France and Germany," in G. P. Gooch and Harold Temperley, (eds.), British Documents on the Origins of the War, 1898-1914 (London: Her Majesty's Stationery Office, 1928), Vol. 3.

logically the state fancying itself the balancer, as did England, would have to treat with complete equanimity the relative merits of the arguments of the disputants in various conflicts, real or potential, and unswervingly come to the aid of the underdog.¹⁷

In the foreseeable future, one may envision the continuing existence of numerous officially sovereign states who will, with the aid of various international or supranational organizations, manipulate the distribution of power among themselves via the shared management of the international system.¹⁸ However, at the same time that the national actors in the international arena are engaged in sharing the management of that system, among other goals each nation will predictably seek, individually and via the aid of coalitions, is the enhancement of his respective power position.

The main ideas in the theory of balance of power might be summarized as follows: nations in the international arena, of varying degrees and forms of power, share the same basic goal of desiring to maximize their respective power positions vis-a-vis all others, as a means of satisfying that supreme instinct of all human beings and groups, self-survival. Somehow, from this competitive process of the mutual search for power maximization will evolve a fairly equal distribution of power among the entities; that is, a "balanced" power distribution. Theoretically, this end will evolve from the competitive process as nations will tend to group themselves together in such a way that no single nation or group of nations can become strong enough to swallow up the others. The underlying hope and supposition is, of course, that as long as this "balance" can be maintained, there will be relative peace over the system, while simultaneously the independence of small nations will be assured. Unfortunately, such a theory has not been without its myths, ambiguities, and contradictions, most of which are the result of the use of balance of power ideas as rationalizations for national behavior.

The Uses of the Balance of Power

The ambiguous concepts of "balancing power," the "international

¹⁷ See, Ernest B. Haas, "The Balance of Power as a Guide to Policy-Making," Journal of Politics, XV (August, 1953), pp. 373-379ff.

¹⁸ Inis L. Claude, Jr., Power and International Relations (New York: Random House, 1962), p. 93.

balance of power," and the "balancer" of power, perhaps in spite of and perhaps by virtue of their collective vagueness, have become a "basic principle" of international relations. One student has cogently summarized the ambiguities of the balance of power by suggesting that:

To say that a balance of power exists usually means that there is at least a rough equilibrium. To say that one side or another has the balance of power usually means that it has a superiority of power. To say that one group has the balance of power between two others usually means that the latter are so near equality that the first, though perhaps weaker¹⁹ than either of them, can decide the course for all three.

It is apparent that the "balance of power" can be all things to all statesmen; perhaps explaining in part why so much foreign policy has, over the last several centuries, been justified by and explained in terms of the balancing of hostile power. As we noted earlier, the essential ambiguity in the term "balance" has thus far been able, and shows promise of continuing, to encourage statesmen and students alike to utilize in almost the same breath the term in reference to an approximately equal distribution of power, a preponderance of power, and even to an existing distribution of power regardless of whether it is "balanced" or not.²⁰

The concept of the "balancer state" is integral to the entire traditional theory of the balance of power, for in instances where the actors cannot redistribute power among themselves effectively to counteract the impending hegemony of one member of a subgroup, someone has to be there to call upon to "rebalance" a system that is perceived as out of "equilibrium." When applying this notion of reshuffling power to the current world, some observers would suggest that in terms of the aggregate international system the balance of power process is not feasible, for the rigidly bi-polar alliances of today make impracticable

¹⁹ Percy Ellwood Corbett, Morals, Law and Power in International Relations (Pasadena, California: Castle Press, 1956), p. 39.

²⁰ A. F. K. Organski, World Politics (New York: Alfred A. Knopf, 1958), p. 285; and Wolfers, op. cit., p. 118.

the largely unhindered lateral mobility of nations which would be necessary for effective "power balancing."

Applying these notions of the "balancer" to the current world, one must ask if balanced power is to be interpreted as meaning an equalization of the power distribution pattern, or a pragmatically unequal distribution of power.

If unwillingness to resort to hostilities is an effective limitation on the "balancing of power" among major nations today, the adoption of means short of open military engagement would appear necessary. In this light, the situation may not be radically different from certain practices of former major powers who sought to balance competing power. To this end, nations throughout history have utilized a variety of techniques short of war to achieve their stated goals of re-establishing regional "equilibrium."

States have increased their own level of armaments, sought territorial acquisitions, established buffer zones between themselves and the perceived competitor, have meddled in the alliance patterns and even internal politics of the competitor, and conversely have tightened and strengthened their own coalitions.²¹ Regarding the latter, older "we-they" orientations by power competitors have given much ground to broadened interpretations of friendship and "useful nonfriendship."²² One need only observe the varying degrees of "nonalliance" among states in the southern hemisphere today to note that recent coalition-enhancing foreign policies of major nation competitors have produced forms and degrees of rapport and "friendship" with those smaller nations not heretofore characteristic of "balance of power" competition.

The circumstances that were officially sought and the means utilized to attain them bred the seeds of their own defeat; for by maintaining numerous autonomous nation-states, all competing with each other and forming various coalitions and friendships for largely selfish reasons, "balance of power" systems were pervaded by a spirit of rivalry which often nurtured a basically unstable equilibrium.²³ In spite of frequent failures in the past, the desire for a balanced system is still sought and spheres of influence still recommended by such authors as Kennan

²¹ See, Organski, *op. cit.*, pp. 275-278.

²² See, Wolfers, *op. cit.*, p. 23 ff.

²³ Claude, *op. cit.*, p. 88

and Lippman. The methods being employed since 1945 have a familiar ring: territorial acquisitions, buffer zones, meddling in alliance patterns and interference in internal politics. Perhaps David Hume was right, that although our strategies are those of nuclear deterrence and our goal world peace, we are following balance of power policies without using the name.

The Balance in the Sixties

Commenting on the applicability of "balancing" power in the modern world and on some of the difficulties and ambiguities therein, students of world politics have urged that in order for the process to function in the nuclear age, the decision-making groups of major states would have to be substantially better able to react with speed and efficiency in choosing from numerous ready means of response to systemic stimuli, without being obliged to consult citizens' and legislative groups, and without giving overriding concern to existing coalition arrangements or the moral baggage surrounding various policy alternatives.

Similarly, the effective practice of a balance of power foreign policy by major states today would require a clear notion by the participants of where the "point of balance," equilibrium, or relative equality is, as well as an ability to adjust the speeds of respective power development programs to that floating point of equilibrium in dynamic circumstances of rapid societal growth and industrial development.²⁴ Perhaps most significantly, it would also require that men rationally perceive conditions of equilibrium wherein the continuing growth of competing actors in the system is not perceived as hegemony-seeking and threat instigation.

Several students of world politics today point to the multidimensional ties that characterize the major world coalitions, and the absence of any nation or group of nations more powerful than either the United States or the Soviet Union, in suggesting that the "classical" balance of power principle can no longer function because its essential ingredients no longer exist.²⁵

²⁴ Corbett, op. cit., p. 39.

²⁵ Organski, op. cit., p. 275.

Further, the balance of power has normally been viewed as resting in the final analysis upon the ability and will of the menaced disputants to engage in large-scale hostilities with the hegemony-seeker if all other efforts to limit his rise to greater power have failed.²⁶ In this light, a further circumscription is placed upon the balance of power principle, for in the nuclear era there would appear to exist neither a potential nuclear balancer force stronger than the two competitors nor the motivation on the part of the disputants to resort to open hostilities as a final solution to the power competition dilemma.

In referring to the "strategic balance of power," is it accurate to utilize the notion of an essentially bipolar power balance, or distribution--presumably in an aggregate sense rather than by functional areas?

If nuclear weapons make the attainment of objectives of territorial expansion too risky and, through fear of escalation, restrict the use of our military power in pursuing limited objectives, we may find that it is other types of power which are active in the international system. As inferred earlier, nuclear weapons may not be the ultimate increment in national power nor necessarily the most useful power factor for pursuing limited goals in the international system. In examining this question, we must consider other factors, which may be poor coercive instruments but useful means of influence.

The extension of power through influence in the form of economic incentives, psychological subversion, guerrilla warfare and perhaps moral persuasion, has been common in the last twenty years along with the use of nuclear threats to militarily coerce neighboring states. The utilization by an external power, directly or indirectly, of the population within a state to influence its behavior is perhaps more common than the application of external pressures. Moreover, the type of military power which is useful in making such persuasion credible and effective is significantly different from that required in classical balance of power descriptions.

Since, to a certain extent, both great powers have conflicting ideologies, the ability of the third world to remain non-aligned constitutes a source of power in itself--the ability to deny sole allegiance to either superpower. Since neither great power is likely to exert direct

²⁶ Haas, op. cit.

military pressure over significant areas in this third world, the radio station, the proffering of economic incentives, the offer of alliances or guarantees and the ability to identify with the aspirations of the developing world have become important elements of national power.

Thus, in discussing the world-wide balance of power in the 1960's, we are referring to certain functional applications of national power which differ from the classical factors of military power, coercion and hegemony. Nuclear weapons have made military coercive power less credible because the risks involved in their use are inappropriate for pursuing limited objectives.

Within particular regions of the global system, more classical concepts of power remain and regional balances, as long as they are quasi-independent from the bipolar confrontations, are more apt to be influenced by classical power factors such as geography, population, per capita income, industrialization, military power and organization. Even in these cases, nuclear weapons do not necessarily constitute a "great leap forward" in terms of national power. Some of the balances are discussed in the next section.

Even though the term "balance of power" is not frequently employed to describe the current state of international relations, there are a number of examples of great power competition which make it appear that the balance of power is more active in the sixties than it was in the previous decade. Reasons for this can be found in the increasing strength of China, the emergence of new nations and the disappearance of colonialism. As we shall see below, the fragmenting of coalitions and the advent of new nuclear powers within these coalitions have also served to decrease bipolarity and add more flexibility to the international system.

Although ideological cleavages, messianic tendencies and unwillingness to credibly threaten the use of nuclear power would seem to argue against a communist state acting as a balancer, the ideological and economic median position in which the Soviet Union now finds itself suggests it may occupy this role in the future *vis-a-vis* the United States and China. The latter two powers are by no means equal, and the addition of Soviet to Chinese power would not objectively offset the US preponderance of nuclear power. However, Soviet restraint in wars of

national liberation, as opposed to actively pursuing them in conjunction with the Chinese, might tip the balance of influence, and US participation in a nuclear war against an Asian nation would certainly affect its influence in the third world in unfortunate ways.

The Soviet Union cannot, of course, pursue a classical balance role since she is not a disinterested bystander immune from the intentions of other powers. Her behavior in occupying the middle ground geographically, economically, and technologically between China and the United States, however, suggests that she may attempt this role. Moreover, US policies which are aimed at preventing a joint Sino-Soviet confrontation with the United States and which encourage Soviet foreign policies which (as in the India-Pakistan dispute) lean toward promoting stability, seem to recognize that the Soviets can play the role of the balancer if they will.

A more obvious attempt at creating a balancing force, one which would rely on the more classical factors of power, is represented by attempts at a United Europe. Indeed, the long-range goal of the French nuclear program may be to supply the teeth for such a force. In this case, Europe would be the weaker balancer, which might maintain the balance by allying herself, when necessary, with either of the two power blocs. Current French policy in seeking a détente with the Soviets appears, as well as the economic probes toward China, to presage such a policy.

A third evidence of the utilization of concepts similar to the balance of power, but one which relies mostly on non-military factors of power, is represented by the non-aligned world. Here (as in Europe) we see an attempt to balance coalitions rather than individual powers. Although the entire Afro-Asian bloc cannot be considered seriously as a military balancer in world affairs, it can strongly influence the power of persuasion of East and West, and it indeed performs this function in at least three ways:

- (1) In the UN, as a voting bloc, it can give or withhold victory from either side and even change the interpretation of the Charter;
- (2) It can moderate the policies of the major powers through joint representations in both capitals; and ,

- (3) It can directly affect the Soviet-US competition in the third world by its choice of suppliers of economic, political, and military aid.

Until about 1945, international "equilibrists" normally contended that situations of "balanced" power are best viewed "as being pinpointed and as appearing in rather well-defined geographical areas."²⁷ In this connection, balances of power in regional subsystems take on locational and individualizing characteristics, as they function in relatively distinct areas. Equilibrists would contend that such subsystemic balances operate in discrete and peculiar systems, where each subarena, though united to the whole, enjoys a separate individuality.²⁸

On this point, however, we must return to our former discussion of the relations of the Soviet Union and the United States with virtually all regional systems in the world today. In view of the existence of intricate political, economic, and cultural ties laterally and lineally in the international system today, is it realistic to allow the traditional contentions of the existence of relatively autonomous regional "balances" of power to go unchallenged?

No matter how unrealistic the concept of independent regional balances may appear today, both the United States and the Soviet Union act as if they indeed exist, and use the concept of maintaining regional stability (e. g., a regional balance) to justify their policies toward the states in that region.

Although theoretically each region might be characterized as consisting of a number of states, one of whom might take the part of the balancer, with few exceptions the regions upon which our interest is concentrated are more often characterized by two powers, and it is the external great powers which act as the balancer. Great power acts in regional areas to re-establish a balance can take at least three forms:

²⁷ Gareau, op. cit., p. 7

²⁸ See, for example, the discussion of equilibrium and symmetry in subsystems in Wolfram Hanrieder, "The International System: Bipolar or Multibloc," Journal of Conflict Resolution, IX, No. 3 (September 1965), pp. 299-308.

- (1) Open or clandestine intervention on the side of a power, e. g., lending power;
- (2) Provision of weapons and military aid to one of the powers;
- (3) Refusing assistance or aid.

In regional areas of vital interest to great powers, the first course is most likely--as in Berlin. In cases where significant economic or political prestige or influence is tied to one of the parties, the second alternative is more likely, as in the case of the Arab-Israeli competition. Finally, when the conflict occurs over objectives and between countries which are not directly involved in the ideological dispute, the refusal of support by other great powers essentially maintains the balance as far as the disputants are concerned. The behavior of both the United States and the Soviet Union in the India-Pakistan crisis is an example of great powers functioning as a balance to prevent outbreak or escalation of a conflict.

In this section, we have examined some classical concepts of balance of power and reviewed briefly the various methods of implementing balance of power concepts. It has been suggested that nations still act as though a balance of power approach to world politics is applicable, but that the kind of power involved has changed. Nuclear weapons may emphasize the importance of power factors other than military strength in the balance equations. Regional balances are still used as justification for great power activity in the third world and the third world's non-military power in turn has an influence on the nuclear powers.

POLARITY, COALITIONS AND PROLIFERATION

The proposals for creating additional power blocs as balancing mechanisms are but one indication of the changing nature of world politics. It is useful to assess the influence of new nuclear nations on polarity and coalitions, but history suggests that it is less the weapons which create policies than policies which create the need for weapons.

The Status of Bipolarity

In considering polarity in a future world containing many more nuclear powers, it is initially necessary to define the frame of reference, or

functional area of world politics, from which one views poles and power distributions. The current "balance of power" in the world is often said to be a bipolar distribution of military might between the United States and its allies on the one hand, and the Soviet Union and its allies on the other.

There is a common tendency among writers on world politics to consider military power in an aggregate sense, implying that the relative size of a nation's arsenal is matched by proportionate degrees of power or influence vis-a-vis competitors in all other spheres of international exchange and interaction. Regrettably, such is not the case and must here be so specified, before a discussion is undertaken concerning variations in the distribution patterns of power in several functional areas of future world politics.

Based upon an appreciation for the current preponderance of American and Soviet economic structures and military arsenals, one might well predict that, despite the addition of future members to the nuclear club, the lead achieved by the two superpowers will assure that their ability to wage global war will not be seriously challenged in the near future.²⁹

Bipolarity will remain with us in such important respects as global deterrence, and a tense relationship between the United States and the Soviet Union is likely to continue. In the realm of global war - making and deterrence, an aggregate nuclear power duopoly will continue as long as no other single nation or group of nations achieves a meaningful "passive deterrent" system, or credible second strike capability.³⁰ However, this is a bipolarity of destructive potential which does not translate itself readily into a bipolarity of influence. A bipolarity of influence is not the same thing as a bipolarity of nuclear power. Polycentrism and proliferation are indicators that there may be more centers of influence in the world than there are major nuclear powers.

²⁹ Charles T. Stewart, "The Dissemination of Nuclear Weapons," Military Review, XLIV, No. 10 (October 1964), p. 8

³⁰ Ernest B. Haas, Beyond the Nation-State (Stanford: Stanford University Press, 1964), p. 484. Of interest are pages 483-497, which deal with prognostication of the nature of future world systems.

In situations short of global war, the utilization of nuclear weapons will be severely circumscribed--if indeed they are fired at all in the context of a limited conflict--by the fear of retaliation from one of several of the nuclear powers. Under such circumscribed conditions, the threat value of nuclear weapons will presumably continue to be utilized in world politics, although it is unlikely that these weapons will be used.

There is no doubt that the new nuclear powers, which have grown up in the Communist and Western alliance systems, have stimulated and supported polycentrist tendencies. It is easier to be independent politically once you become quasi-independent militarily. As the case of Yugoslavia indicates, nuclear weapons are not a sine-qua non for increasing independence within the bloc. It is probably safer to get out of the bloc with them than without them, however.

France and China are currently on the threshold of creating meaningful nuclear offensive capabilities. However, the economic and scientific case of neither nation is at all approximate to that of the United States or that of the Soviet Union, at the present time. Thus, barring the formation of a significant third force of nations around France, or tremendous economic growth in mainland China, which might rival the pre-eminence of the two current superpowers in the aggregate size of their scientific and economic bases, the widening gap between other nations and the two frontrunners in technology and production makes it appear unlikely that these other nations will be able to overcome the influence of the Soviet Union or the United States by virtue of weaponry alone.

Proliferation within coalitions, while it may stimulate polycentrism, does not pose a direct military threat against either great power. Moreover, the use of such weapons in an ideological East-West dispute is probably no more likely than it was when two powers had the bomb. The borrowed nuclear power of any current nuclear power is probably sufficient to allow it to remain secure.

While the third, fourth and fifth nuclear powers were members of one or the other major coalition, some estimates of future proliferation suggest that the sixth, seventh and eighth will be in the "third world."

Much recent American political thought is couched in a pessimistic tone when concerned with the prospects of the proliferation of nuclear

weapons to many more "poles" within the international system. Latent in such reflection is the underlying presumption that it is better and easier to deal with just one major opponent than a large number of "irresponsible" new nuclear nations. That is, barter in a bipolar world is far preferable to a nuclear "market" community.

Conversely, the opposite means to the same end is urged by many official French and Chinese spokesmen today. It is contended in Paris and Peking that in a bipolar nuclear system--far from being stable and free from the danger of general war--the likelihood is much greater, when all attention is turned to a single opponent. That is, in a bimodal confrontation, one's fears and premonitions will so distort perception of the opponents intentions and actions as to nurture gross misinterpretation and perceptive rigidity concerning his maneuvers.³¹ Hence, the advocates of a multipolar nuclear power distribution urge that in the nuclear duopoly of the 1960's, there is danger for the entire international system that either of the two nuclear superpowers will precipitously involve not only his opponent but the better part of mankind in a counter-action or reaction to distorted threat perceptions.

André Beaufre has voiced the French position regarding additional nuclear poles, or "independent nuclear forces." His advocacy of multiple nuclear decision centers is based upon the desirability of providing the international system with a means of assuring that no one course of events is inevitable in case of a major conflict.

In advocating multiple nuclear decision centers, Beaufre suggests that the potential belligerent would have to consider counter-attacks from several sides and would, hence, shy away from escalating crisis situations. Beaufre sums up his argument for multiple nuclear decision centers with the admonition that "special efforts need to be made to preserve for nuclear weapons that capacity for engendering fear from which we have hitherto so greatly benefited."³²

³¹ Karl Deutsch and J. David Singer, "Multi-Polar Power Systems and International Stability," World Politics, XVI, No. 3 (April 1964), pp. 393ff.

³² André Beaufre, "The Sharing of Nuclear Responsibilities--A Problem in Need of Solution," International Affairs, Vol. 41, No. 3 (July 1965), p. 415.

Such a view assumes that several Nth countries will have the capability to "counterattack from several sides." It is doubtful whether the most likely Nth countries would, even if they could, develop this type of capability when political factors often demand that they concentrate on a specific local concern.

The most obvious effect of broadening the ranks of nuclear actors in the third world would be to increase the number of possible international nuclear exchanges.³³ Perceiving themselves as substantially free from the leadership of a superpower, new nuclear nations might well act with greater autonomy in a wider range of exchanges with other nations of the system. In so acting, as Beaufre would suggest, it might well result that the scope of bargaining and adjustments possible to the competitors and actors would be significantly widened. The end result, once achieved, might be no more destabilizing in terms of world conflict than the present, nearly bipolar, distribution.

Proliferation and Freedom of Action

If proliferation, either within or without current alliance patterns, will not directly challenge US and Soviet military capabilities, how may it affect other factors of US power?

Although the proliferation of military nuclear capabilities across the globe, in the ensuing years, will not challenge the predominant strategic nuclear positions of either Moscow or Washington, it will add important new dimensions to the overall nuclear posture of the world. Today, nuclear weapons are distributed in an essentially symmetrical pattern. With the addition of new "poles" or members to the nuclear distribution pattern, nuclear clusters will predictably have great impact upon their regional politics, although the nuclear clusters may not be strong enough to challenge the nuclear pre-eminence of the two larger nuclear poles.³⁴

Foreseeing these developments, one might conclude that, although the gap between the sophistication characterizing the strategic nuclear capabilities of current superpowers and second level nuclear nations will remain great in the foreseeable future, there are indications that the hegemony of the Soviet Union and the United States in numerous other areas of international exchange and competition will be significantly altered.

³³ Deutsch and Singer, op. cit., p. 392

³⁴ Haas, op. cit., p. 484.

Such a view suggests the inapplicability of former terminology, such as "bipolarity" or "balanced power," which have been used to describe the distribution of aggregate "power among nations" in nearly all areas of inter-nation exchange during the first two decades after the Second World War. In future international systems, at certain levels, the term "multibloc" may indeed be applicable, whereas on other issues more affected by the degree of sophistication in aggregate military hardware, the term "bipolar" will still be applicable to describe, in general terms, the power distribution pattern. But the "then-from-now" distinctions are not entirely valid, for even today, almost all important international relationships are characterized by both fundamental bipolar tension and centrifugal international forces.

This suggests that world politics will continue to experience the utilization of varying degrees and forms of power resources, other than active nuclear firepower, by political actors. Under such circumstances, it might be asked whether the "comparative power" status of nations will not, in many respects, continue to be based upon the evaluation of conventional power factors, rather than on the size and sophistication of nuclear weapons resting in one's own arsenal or that of a competitor.³⁵ If such be the case, it will be necessary to include those factors relating to acceptance of risks as suggested above (see page E-6). The potential power of a number of new coalitions could thus severely restrict the relative freedom of action in non-military areas that the US enjoys in a large part of the world today.

Coalition Changes and Nuclear Spread

The major coalitions, which were formed around single powerful nations, are in the process of change. As the large post-war coalitions were originally predicated on the premise that global war was a real possibility, such groupings may be expected to experience diminishing emphasis as political bases of power for the lesser members expand.

In the case of the major military coalitions which were formed after the Second World War, as inter-coalition competition shifts to economic and political spheres, intra-coalition pressures are

³⁵ John H. Herz, International Politics in the Atomic Age (New York: Columbia University Press, 1959), pp. 32-33.

increasingly generated by second-level members anxious to explore previously forbidden realms of exchange with competitors and opponents. This process is reinforced by the fact that aspirations of middle states for greater militarily-based influence within superpower-led coalitions are effectively limited by the massive gap separating the technological sophistication of nuclear weapons possessed by the two superpowers and those weapons to which lesser members of the groupings could aspire.

Nevertheless, the search for a nuclear capability by middle states in coalitions will in all probability continue. Indeed, statesmen, at times, are even prompted to conclude that it has become virtually impossible for middle-rank states to substantially increase their power in the international arena, or to independently assure their own defense, without some form of nuclear capability. However, nuclear weapons may not be the sole guarantee for enhancing one's national power. As the non-stationing policy of Denmark and Norway indicates, there are pros and cons in the desirability of nuclear capabilities, and movement toward neutrality may be more beneficial to the international influence of some states than their former alliances. Real defense interests may demand a separate nuclear capability in order to avoid their compromise.

As American military and economic commitments in other areas of the world seem to rise, European opinion holds that Washington will be more receptive to European initiatives. One solution, in view of this reduction in the amount of influence that Washington can apply to the strategic problems of Europe, would be for the United States to cater to the establishment of greater European initiatives, so that the slack might be taken up as European states, in coalition with the United States, contributed more to their own security.

Alternate suggestions have been made that Washington selectively transfer certain nuclear weapons systems to "trustworthy" European states, presumably those members of NATO who have enjoyed the warmest friendship with the United States over the past years. However, it could transpire that if the control over certain nuclear weapons systems in Europe would be unconditionally transferred to some individual NATO members, the "bloc" could become less firm and cohesive as an entity, for recent events have shown that nuclearized small nations become convinced that their new weapons could and should provide a platform from which their respective "independent" voices could be

heard louder in coalition and regional affairs. This does not suggest that members of the major Western and Eastern coalitions would become autonomous enough to roam the international landscape into and out of a host of freewheeling cooperative arrangements and military coalitions, without regard to their ties to the superpowers. Among other factors, economic interdependence among participants within the major groupings will largely preclude any ability on the part of middle power members to completely control and determine their own destiny.³⁶ It does mean that the European interests in cultivating US ties for the protection of particular national concerns vis-a-vis one another, will become more pronounced than their interest in collectively submitting to the United States' definition of their national security.

Therefore, nuclear weapons proliferation or transfer within the current Eastern and Western alliances would certainly multiply defense problems, pose difficulties in conflict management, and perhaps exacerbate regional tensions. It is unlikely that such proliferation, itself, would destroy the influence of the United States in Europe, or that an visible nuclear sharing policy could in and of itself prevent such centrifugal tendencies now existing in the coalition.

In this discussion of alliances and coalitions, and the manner in which they may be affected by the proliferation of nuclear weapons, it is important to analyze the responses of Moscow and Washington to the spread of nuclear capabilities across the globe among several states with which they may be involved in any of several forms of "alliance" and coalition. However, with the expansion of the ranks of middle and lesser states in the world who are not formally aligned with either superpower in a major military alliance, it becomes inadequate to merely focus discussion on formally-organized treaty organizations.

At this writing, Washington has no formal defense treaties with either India or South Vietnam, but the evidence is clear enough that this has not prevented the commitment of massive amounts of American economic and military aid to those two nations. Hence, to obtain a clearer appreciation of the effect that the proliferation of nuclear weapons may have upon the alliances of the United States, one must view coalitions and alliances in the perspective of "effective cooperative arrangements."

³⁶ For a discussion of inter-coalition movement see Deutsch and Singer, op. cit., pp. 390-406.

With this perspective in mind, we may now return to the question raised earlier concerning alternative policies of the superpowers in the face of probable proliferation of nuclear weapons, not just among nations with whom they are formally associated in major military alliances, but with those non-aligned states with whom they are involved in real cooperative arrangements and whose destiny is of urgent concern to them.

One policy alternative for the United States, in the face of the proliferation of military nuclear systems among middle states, could be to immediately seek the inclusion of the new nuclear states into one of the two major spheres of superpower influence, or coalitions, by transfer agreements. This would be an attempt to effectively curb any recklessness that the new nuclear nations might develop and, hence, would secure for the international system at least a modicum more of stability than would be the case if the new nuclear nation were "allowed to run loose."³⁷

The proliferation of nuclear weapons will unavoidably have a great impact upon American interests and policies. For example, concomitant with the process of nuclear proliferation is the need for considerable economic aid. Although the presence of substantial economic and technical aid by the United States might not by itself be sufficient to render the middle nation politically beholden to the benefactor, in instances where the aspiring nuclear state is severely limited in its industrial capabilities it may be that American economic aid and guidance could create circumstances where the "use" of a new nuclear arsenal could be structured, conditioned, or even circumscribed.

Another alternative in the face of proliferation is to isolate the new nuclear power and provide guarantees to its potential non-nuclear adversaries. If its major potential antagonist is also nuclear armed, he too could be isolated, e. g., denied borrowed power. To be successful, such a policy would require substantial agreement among all five of the current nuclear powers.

³⁷ Oskar Morgenstern, "The Nth Country Problem," Fortune, LXIII, No. 3 (March 1961), p. 208.

A major dilemma confronting American policy-makers today lies in the fact that tensions and conflict are continuing and potentially nuclear nations, engaged in regional conflicts, are attracted to the possession of nuclear arsenals which might effectively "deter" an actual attack upon them. The problem for the United States is how to keep the positive aspects of the coalition or alliance alive by virtue of transfer agreements while minimizing the dangers of nuclear proliferation.

The foregoing discussion of selected nuclear transfer, nuclear assistance and nuclear isolation within America's formally organized alliance structures might well be applicable to several regional coalitions and informal coalitions involving the United States. Certain stable middle nations and groups of nations that perceive a need of nuclear weapons and show promise of adopting a prudent policy regarding their use might be encouraged in cooperative ventures by the United States and aid might be extended to achieve those goals.

In summary, the breaking down of the bipolar coalitions is a process which may be accelerated by the selective proliferation of nuclear weapons. The transfer of nuclear weapons to truly collective leadership in a coalition or alliance would probably slow down the desires for independent weapons and promote cohesion. Such a policy might also substantially reduce the relative influence of the United States within a "bloc" of countries. On the other hand, the policy of joint US-Soviet non-assistance and isolation of new nuclear powers may assist in reducing East-West tensions, but would certainly speed up the disintegration of current coalitions and alliances.

PROLIFERATION AND MILITARY STABILITY

Granted a slowly dissolving system of East-West coalitions as a result of resurgent nationalism and a relaxation of tension between the US and the USSR, and the high prestige value of nuclear forces as a symbol of national virility, there is a strong probability that proliferation will take place. What will be the influence of this proliferation on military stability?

The Meaning of Military Stability

Military stability has meaning only when the area and nations concerned are defined. Acceptance of the prevailing distribution of national influence by nations within the geographically defined system nurtures the stability and continuity of the groupings. The international system, as a totality, as well as its various subsystems and regional aggregations, is stable as long as it can restructure and adapt political influence patterns in response to fundamental economic and social changes in the relative importance (scope and intensity of national interests and concerns) of its constituent social or national units. Four stability models are discussed in the following section. The individual state, a two or three state system, a region and the world system. The influence of nuclear proliferation upon these systems is examined later in this chapter.

Intra-state stability is a function of the state's political, economic and social organizations and of the degree to which these organizations provide non-violent methods for satisfying the changing aspirations of various subnational groups. Intra-state military stability is likely to continue even if no means for non-violent change are present, if the desire for change among the population or political elites is low.

On the other hand, intra-state military stability is likely to decline when the aspirations of various sub-national groups (either interest or ideological in character) are high and there is no agreement among the political and military elites as to (a) the value of the desired change, and (b) how to satisfy these often conflicting aspirations.

Stability between two competing states is largely a function of the degree to which the national power (political influence) available to each is relatively equivalent to the degree of social and economic influence each exercises in its relationships with other states. Conflict is more likely to occur when a state's national power (political influence) ceases to reflect the real distribution of its social and economic influence among other states. However, as we have indicated, such factors as willingness to risk destruction for specified vital interest and the cohesiveness of the society are also important factors in a state's political influence. The Egyptian-Israeli competition suggests that the concern of Egypt to maintain a level of national power (political

influence) disproportionate to the actual influence of its social and economic systems among other states produces an unstable arms race. This instability will remain as long as the Egyptian emphasis on coercive influence continues to mask the state's basic lack of economic or social influence among other states. The real basis for Egyptian national power (political influence) today is borrowed arms, given by the lender for good will and the future promise that Egypt's large human resources, when matched with technology, will produce truly significant social and economic influence in the Middle East.

Regional stability can result from at least three types of power distribution. First, the unquestioned hegemony of a single power in the region may provide stability, even though individual states within the region are unstable. Second, a region dominated by inter-state competition of relatively equal states may be stable when the states within it successfully pursue a balance of power policy. A third type of military stability may result when all nations in a region are internally-oriented, e. g., almost totally occupied with maintaining their national identity through national political and economic development.

World stability depends largely upon the willingness of the major nuclear powers to avoid provocations which threaten the vital interests of the others and to abstain from intervention in regional conflicts which might escalate into major power confrontations. Although both East and West have provided armaments to the Arab-Israeli disputants, often in the name of maintaining the balance, the recent refusal of the Soviets to supply nuclear weapons to the UAR may indicate an understanding of the need to keep latent conflicts limited. This type of understanding of both the responsibilities and the dangers of power must include the Chinese. But it is doubtful whether other new nuclear nations will ever be asked to share such mutual responsibilities. World stability, therefore, depends to a large degree on great power agreement concerning the degree of interstate conflict each nation can tolerate. The UN Charter recognizes world stability as a function of minimum agreement by the great powers concerning their self-interests. Whether this is called balance of power or nuclear deterrence, some form of at least tacit understanding must exist.

The process of proliferation will create great diversity in the respective nuclear capabilities of the several new nuclear nations. Indeed, it will probably be only at the very top levels of the nuclear club that any meaningful second-strike capabilities will exist, leaving most middle-rank nations to operate in a context of mutual vulnerability vis-a-vis regional nuclear competitors. It is necessary, therefore, to consider both the various means of obtaining nuclear weapons and the types of weapon systems obtained, before estimating the influence of a specific type or case of proliferation upon military stability.

One policy of regional nuclear states may be to maximize the use of the threat value of nuclear weapons even before they are operational. Such a policy would tend to make use of a slowly-developed indigenous capability over a long period of time. The "intent to obtain" weapons thus acts as a factor of power.

Not surprisingly, when a middle nation still lacks a functioning system of nuclear arms and is in the process of creating a nuclear capability, there may well be even greater tendencies to make up in words for what they may still be lacking in means, in order to make threats and demands more meaningful in the interim.³⁸ This was a policy used successfully by Khrushchev in the fifties. Another option is to remain completely silent about your nuclear program, assuming that the competitor will overestimate its progress. This latter approach seems to be the policy of Israel. Sukarno has used the words-in-lieu-of-weapons approach in his predictions concerning the Indonesian nuclear program. The obvious danger in such a policy of enhancement is that the threatened party may feel justified in attempting to preempt the embryonic nuclear capability without using nuclear weapons.

The speed with which a country can obtain a nuclear weapons capability is, therefore, a critical parameter in assessing the influence of such proliferation on military stability. In general, the quicker they can be obtained and deployed, the less destabilizing will be the result. However, a nuclear capability can only be obtained quickly by a direct transfer or stationing of nuclear weapons by an external nuclear power. Such a policy, while it may also endow the new nuclear nation with considerable borrowed power, might invite other great powers to intervene on behalf of local competitors. While such transfers may make

³⁸ Lloyd Jensen, "Military Capabilities and Bargaining Behavior," Journal of Conflict Resolution, IX, No. 2 (June 1965), p. 157.

a preventitive attack by the hostile regional antagonist less likely, they may increase the probability of a conflict escalating once it begins.

Unless all nations with nuclear ambitions in a region can satisfy these ambitions at the same relative rate, instability is almost certain to result. The type of weapons obtained also influences the stability of the inter-state or regional system.

Not only is the rate of acquiring nuclear weapons a factor in regional nuclear stability, but the characteristics of delivery systems employed also are factors in the balance.

When a nation estimates the size of a nuclear competitor's weapons, the second-strike capability must be considered in addition to first strike capabilities. In this regard, one might wonder if Israel should be considered an imposing nuclear power, were a swift single attack by Egyptian planes able to destroy virtually the entire Israeli nuclear facilities concentrated on the Negev.

When surveying other potential nuclear powers for the future, one must realistically foresee that even with the acquisition of a relatively sophisticated system of vulnerable first-strike weapons, most middle-level nuclear states will continue to be very vulnerable to surprise attack.

No new nuclear nation is likely to build, or to receive from super powers, advanced, hardened delivery systems and associated command and control structures. However, the nuclear strike force they do receive may be made more credible by advanced anti-aircraft missiles and by a sufficient intelligence network to provide an advance warning of attack. The critical criteria for comparison is not what superpowers can build, but what hostile nations in the areas have.

It is possible, therefore, that aircraft sufficiently alerted before an attack may constitute a second-strike capability for some middle powers. Certainly, efforts will be made by Nth states to develop some form of second-strike capability, and predictably disproportionate attempts will be made to convince potential adversaries of the functioning existence of impressive second-strike systems. In this way, perception by competitors of a difference between the quality of one's first and second-

strike capabilities will, hopefully, encourage him to calculate small utility in striking first, for fear that all of the opposing nuclear arsenal would not be eliminated.³⁹

For these reasons, when a regional nuclear power boasts of being able to endure any attack and subsequently strike with a retaliatory round bigger than the one received, his boasts will lack credibility unless he can enhance the real nature of his second-strike capability with a shroud of self-inflating mystery or the borrowed power of an ally. Of course, for most middle nuclear powers the actual second-strike capability will be far short of minimal deterrent requirements, but the credibility of a first strike by many middle nuclear powers may similarly be open to question.

Strategic Postures - Uncertainties and Stability

Even assuming that neither adversary in a regional confrontation actually planned a first strike with nuclear weapons, there are a number of factors which might result in miscalculation or irrationality. Some of these are discussed in the following paragraphs.

In unstable regional nuclear environments, miscalculation--although not necessarily fatal in instances of limited conventional hostilities--could bring chaos to the area, for the limitation of conflict depends on the rational calculation of utilities and disutilities by all participants. The danger of the outbreak of nuclearized hostilities becomes the greater, therefore, when the rationality of actors is distorted by the heat of conflict, the tension of the moment, and the fear of submission.

In situations of high tension and perceived danger, the behavior of decision makers is more likely to be determined "by anxiety, stereotypes, self-esteem, defense maneuvers, and social conformity pressures than by single rational estimates of . . . loss and gain."⁴⁰ Thus, in response to the "evidence" coming into the decision arena--particularly as those

³⁹ The utility of projecting the impression of a small gap between effective first and second-strike capabilities is discussed in Henry A. Kissinger, The Necessity of Choice: Prospects of American Foreign Policy (New York: Harper and Brothers, 1961), pp. 188ff.

⁴⁰ Morton Deutsch, "Some Considerations Relevant to National Policy," Journal of Social Issues, XVII (1961), p. 64.

inputs become transformed by the perception of the threatened nation's decision makers--irrationality of option choosing "may take the form either of failing to act in accordance with one's best estimate of cost gains and probabilities, or of faulty calculation of these factors in the light of the evidence available."⁴¹

Similarly, when a society in tension becomes a breeding ground for dissident factions which might challenge the authority of the central administration, the national leadership could feel obliged to retain portions of the national forces to preserve reliable internal control. These circumstances might even evolve into a rigid authoritarianism or despotism, if the leadership were to feel threats from small military and political groups, within the society, which desired to seize political power and perhaps parts of the nuclear arsenal as well.⁴²

In the face of potential nuclear hostilities, when confronted by "conspirators" and "inevitable war" elements of society, the decision group might simply fragment. Extreme responses might result from the tensions bearing upon the leadership of the nation and from the competition for the loyalty and patriotism of key groups by the government, all of which tends to produce and encourage a go-for-broke utilization of the nation's power to meet the challenge.

This is a serious problem when one considers that several of the potential Nth countries have no established patterns of political succession, no popular and responsible political parties, are governed by the military or have a tradition of coups d'etat, and are primarily concerned with harnessing popular nationalism to the regime in power.

In contexts where irrationality, hastiness, and miscalculation are in large measure functions of the tensions of the moment, the process may become virtually self-perpetuating and seemingly irreversible. Threat may beget counter-threat as the party in peril feels the need to snarl

⁴¹ Glenn H. Snyder, "Deterrence and Power," Journal of Conflict Resolution, IV, No. 2 (June 1960), p. 174.

⁴² Herman Kahn, "The Arms Race and World Order," in Morton Kaplan (ed.), The Revolution in World Politics (New York: John Wiley & Sons, 1962), p. 339.

back at all real or imagined adversaries simultaneously, in hopes of presenting, for external as well as internal reasons, a facade of stern determination.

Each time a threat is either not pushed, pushed and rebuffed, or proven to be a bluff, there could well evolve a tendency on the part of the threatener to make the next threat just a little more plausible, partly to save face, and partly to achieve the face value of the demand. In context of demands by nuclear states, the trend toward dual-escalation may be encouraged by the existence of the "ever-diminishing plausibility of the nuclear threat." In the process, signals may be generated by "defensive" actions from one side, which touch off reactions by the other side, in turn generating signals that cause the first to take additional precautions, and so on. Under these circumstances, conflict limitation would require a clear knowledge of what one's opponent considers to be his vital interests.

This would seem to suggest that in order to keep tensions limited among two or more "fairly nuclear" middle powers, fairly widespread rationality must be present. Similarly, graduated deterrence, involving the selection of certain forms of nuclear weapons from one's arsenal to fit the perceived situation, also requires that the actors in the game "know exactly at every moment of the competition what kind of nuclear weapons it is necessary and prudent to use."⁴³

However, it is just in this capability for flexibility that middle powers may fail because of the limited types of nuclear and conventional weapons and delivery systems available to them. Weapon and technological constraints on middle powers may, therefore, prevent the use of great power strategies of counterforce, graduated deterrence and a flexible response.

In a larger view of the limitation of potential nuclear conflict, one might conclude that in the several instances of potential regional hostilities that can be envisioned, to successfully keep conflicts below the nuclear threshold and in some form of conventional weapons context, disputants must first possess the ability to use and control their means of force while sharing the desire not to involve their own or the vital

⁴³ Morgenthau, op. cit., p. 26

interests of their opponents as issues in the dispute. Even if such desires are present, it is doubtful whether strategic flexibility and command capabilities will be obtained as rapidly as a crude nuclear force. Technology rarely spreads that evenly.

In summary, the view of a world in which nuclear proliferation has occurred as being a militarily stable world seems valid only if we assume that every new nuclear nation has advanced weapons systems, a united society, sophisticated command and control systems, and an appreciation of the finer points of nuclear strategy. . . in short, if they are like us. Since we are unlikely to give them these capabilities, the best that can be said is that regional competition between new nuclear powers may be safer and less subject to great power influence if national objectives are limited. Once tensions increase to the point where vital interests are involved, it is less certain that Western strategies of deterrence will be successful in preventing nuclear conflict among new nuclear middle powers.

IMPLICATIONS OF PROLIFERATION FOR US POWER

In the previous sections, we have discussed proliferation in terms of its effect on national power, the balance of power, polarity, alliances and stability. In this section, we shall first survey some possible general policies for meeting instabilities caused by nuclear proliferation. We shall then review the applicability of these options in the light of probable types or cases of proliferation and finally, we shall discuss the implications of these options for US power.

Throughout the paper, we have occasionally referred to possible US policies for meeting threats to stability deriving from nuclear proliferation. This section surveys, in greater detail, possible US actions after proliferation but before conflict. The next section discusses US participation after a possible nuclear regional conflict begins.

US Policies Toward New Nuclear States

No matter how hard the current nuclear states may urge the rest of the world not to "go nuclear," the motivation among middle states to gain the prestige of nuclear possession and their desire to be able to "deter" and threaten opponents will be largely undaunted. If one accepts

this proposition, the delaying tactics of current American policy will presumably do little to prepare the way for dealing with potential problems stemming from nuclear proliferation. Several alternatives are suggested in the following paragraphs.

One means by which the interest and power of the United States in future world systems could be well served might be the negotiation of technical information exchange agreements with certain stable nuclear aspirants, in order to encourage maximum appreciation for the safety requirements, for the technical dangers inherent in possession, and for the optimal command and control devices to be used once nuclear aspirations are fulfilled.

Through the International Atomic Energy Commission, the United States has already shared much "peaceful" atomic information. A large portion of this bank of technical knowledge is convertible to military purposes should that be desired by the sharing nations. Of greater utility for the world might be, therefore, to insure that should such conversion become desired by the sharing nations, they would be able--based upon substantial sharing of principles and data by current nuclear states--to make the conversion with a minimum of technical accident or misinterpretation of safety and control needs.

Similarly, the interests of the United States, and its relationship with, and commitments to several middle states across the globe would be well served were the "hot-line" principle of reliable direct communication between competitors introduced into regional conflict atmospheres. With technological aid from the United States, such communication installations could serve to reduce the chances that probes, threats, and parries would be mistakenly interpreted as gravely menacing when not so intended. However, this need not be limited to sophisticated teletype communications. It might include the use of economic incentives to further discussions between heads of states, encourage joint projects, etc.

In this regard, the contribution of sophisticated warning and defense systems to regional disputants might do much to strengthen the "believability" of rudimentary second-strike capabilities of the disputants and, thereby, serve to reduce the inherent proclivities toward instability found in situations of high mutual vulnerability. In addition to giving or transferring control over such systems to new nuclear powers, there

are unilateral measures which the US might take.

Besides contributing hardware and data, there are additional ways in which the United States might contribute to the limitation of regional conflicts. For example, American monitoring and surveillance systems overseeing the activities of potentially bellicose regional nuclear nations could add a measure of data-gathering and threat reduction that might otherwise be unobtainable to threatened neighbors.

Thus, if Indonesia were to achieve a rudimentary form of submarine-launched nuclear missile capability, probably through the cooperation of a major non-Western state, and seemed willing to use it against her regional opponents when the moment seemed auspicious, American monitoring activities and associated data reduction could do much to supplement the defense and monitoring systems of Indonesia's potential target nations. Such measures would, of course, be part of a larger program of the limitation of potential nuclear conflicts across the globe on the part of the United States, and would presumably be resorted to only under conditions where the "persuasive" and coercive efforts of the United States or her friends had apparently failed to dampen the aggressive spirit of a nuclear Indonesia.

There are, however, some more active policies which the US could take which would involve her more directly in an eventful conflict.

The US has been inclined to provide military aid in pursuit of a balancing policy in non-nuclear situations, both in regional disputes as with Israel, and in the general context of the containment policy.

In the face of escalating regional hostilities which might evolve from the conflicts involving nuclear middle states, one immediate response for the United States could be a very large overt supplemental arms buildup of the underdog nation, probably to include interceptor aircraft and the latest in radar and other air defense equipment. Were it accomplished speedily, before a nuclear strike occurred, it might do much to reduce the threatener's expectations that much of his attack forces would be able to effectively hit their targets.

The United States has already agreed, in general terms, to offer a guarantee against nuclear threats to countries which do not have nuclear weapons but may soon have a nuclear antagonist. Such a policy, though

somewhat short of a major coalition described in the next section, would be likely to involve the United States in nuclear warfare should the guarantee not prove an adequate deterrent. Such agreements need not be nuclear--conventional bombing may suffice. These guarantees might also tie into the measures just discussed, such as improving communication between possible disputants, passive surveillance and information exchanges, and balancing military aid.

One solution to this potential dilemma for the American decision makers might be an active campaign of preventive maintenance for regional stability, before such agent-provocateur motivations become strong. To this end, a symmetrical bipolar power distribution in the world would be maintained as the best means of attaining world peace. It is suggested that an extension of defense arrangements in current coalitions would be able to impose effective limitations upon the "use" of those new nuclear weapons systems.⁴⁴ Thereby, the use of the new nuclear arsenals in regional hostilities would, hopefully, be prevented for the deterrent of a major power commitment would discourage further threats by competing neighbors. While recent history suggests that such bipolar nuclear coalitions are stable vis-a-vis each other, they also appear to be disintegrating from within. In addition, though such a policy might reduce the frequency of regional nuclear conflicts, it might also be designed to keep them limited once they occur, through consultation agreements and strictly contingent aid and military commitments.

Policy After Onset of Conflict

After hostilities occur, the policy to be implemented by the United States, even if nuclear weapons have not yet been used, will fall into one of two major categories, disassociation or participation. Regardless of the policy in existence before the conflict begins, there is always the possibility that this policy can be reversed. A nuclear guarantee can be deemed irrelevant because "our men" started it; weapons trade and economic assistance can be terminated; and it is even possible that limited military contingents could be withdrawn or the stability of the existing regime jeopardized by its pursuit of a policy meeting with American disapproval.

The policy that we shall follow will depend at least as much upon the specific nature of the conflict and degree of bilateral US-Soviet interest in seeing it settled, as it will upon prior US commitments in the area.

⁴⁴ Morgenstern, op. cit., p. 208

When neither or both of the combatants are communist states, Soviet and US mutual interest in avoiding an East-West nuclear conflict may allow both to follow a policy of isolating the combatants. It is essential to realize that at least a tacit US-Soviet understanding must exist to allow either major power to pursue this policy successfully.

The degree of tacit cooperation on regional conflict control between Moscow and Washington that is visible to regional states--such as joint efforts to control the 1965 Kashmir conflict--would seem to offer ambiguous "deterrent pay-offs" to countries seeking borrowed power in the future. This approach would reduce the threat perception of the major powers, latent in every local situation, but enhancing their mutual interest in avoiding central nuclear war and encouraging a more tolerant view of adversary objectives in a particular area.

US and Soviet reaction to the process of nuclear proliferation has so far been to deny, to all but closest friends, their military nuclear secrets, in apparent hopes of keeping the damper on the process of proliferation as long as possible. This is largely a delaying tactic, and not one designed to meet the problem of "after it happens." Then what?

Both sides have suggested nuclear guarantees, the Soviets in the specific case of Egypt, but both have been careful to keep the wording of such guarantees flexible to allow them room for further options. Neither has recently opted for increasing the size of its coalition, a policy which would make disassociation from a future regional nuclear conflict extremely difficult.

While the India-Pakistan conflict is often cited as an example of great power conflict control, it was, in many ways, a special case and it is hard to generalize from it to a nuclear conflict between the same combatants. One of the major reasons for Soviet desires to control such a conflict was their wish to prevent a power vacuum resulting from a larger war, a vacuum which would invite a Sino-Soviet confrontation or American inroads in South Asia. It was probably possible to settle the crisis in this manner because the objectives of the participants were limited. Any regional conflict which may become nuclear may eventually be fought for unlimited objectives, and such a nuclear conflict may leave a power vacuum, especially when great nuclear powers do not intervene.

The situation after a regional nuclear conflict, therefore, must be evaluated against the probability of escalation, in order for the great powers to assess the advisability of disassociation and non-intervention.

A policy of superpower disassociation has been criticized, in advance, by the suggestion that in the long run the price paid would be greater than the benefits gained, for a renunciation of superpower interests in several regions of the globe and a concomitant return to the relative isolationism of protecting immediate vital national interests could virtually write a blueprint for unlimited conflict in Africa, the Middle East, and Asia.⁴⁵

Once participation has been decided upon, a host of new problems arise. In the face of potentially-nuclearized regional hostilities, the need for big powers to speed up their reaction time--in response to the added menace to regional stability stemming from the possible use of local nuclear arsenals in anger--would leave little time for the subtle application of political pressures, negotiations, and the use of world organizations such as the United Nations.⁴⁶

Within this circumscribed reaction period, responses by the United States to potentially nuclear regional conflicts, such as escalating exchanges of fire along the Gaza Strip, could take many forms and involve American resources in a number of ways. A Cyprus or Lebanon-type "peace force" is one example. However, reluctance and hesitation by Washington to use American troops and, hence, to further attract interventionist labels or Communist countermoves would add to the lag time between crisis perception and decision application.

While some participation in the pre-war phases of a conflict may not guarantee participation in hostilities after they break out, previous action concerning the participants will influence US behavior if it decides to take an active part in the conflict.

⁴⁵ William C. Foster, "New Directions in Arms Control and Disarmament," Foreign Affairs, Vol. 43, No. 4 (July 1965) p. 590. In this regard, presumably Foster expressed official government feeling on disassociation.

⁴⁶ Morgenthern, op. cit., p. 206

Although not bound by formal alliance with the United States, regional disputants may nevertheless be special "protégés," making conflicts involving those nations or groups of great interest to Washington. Indeed, American prestige may even become inextricably involved in determining the destiny of certain of its protégés.⁴⁷

The US options for participation in a regional nuclear conflict will be most influenced by the nature of the power opposing the United States' ally or protégé.

Assistance can perhaps be limited to weapons, technical assistance and military advisory groups only in cases where no vital US interests are at stake and where the opponent poses no threat, ideologically or otherwise, to the United States. Conflicts involving a nuclear South Africa might fall into this category.

Even if the protégé's opponent is non-Communist, limitation of assistance to the protégé will be increasingly difficult as more vital interests are at stake. More direct US participation, including limited conventional attacks on UAR or Indonesian nuclear facilities, would be hard to avoid in a UAR-Israel or Indonesian-Australian conflict. In the one case, the stability of the Middle East and oil reserves are at stake. In the Australian case, defense of Western interests in Asia and control of sea lanes are at stake.

Direct nuclear confrontation of East and West might be unavoidable if members of both coalitions, with significant Soviet and US support, were involved. In the case of a conflict between a nuclear East and West Germany, or one between Japan and China, direct attack by the United States on the aggressor (assuming it is the other side) may be required. This would be the type of conflict most difficult to prevent from escalating and should be the priority case for control.

Another critical variable in determining the effect of conflicts between nuclear nations on US power is the character of the outbreak of the conflict. If the protégé's antagonist has obviously been the aggressor, US policy is somewhat clearer than if the cause is ambiguous

⁴⁷ See introductory remarks by Rosecrance in, Richard N. Rosecrance (ed.), Dispersion of Nuclear Weapons: Strategy and Politics (New York: Columbia University Press, 1964), p. 23.

or if the protégé initiated the open hostilities. Similarly, the way the conflict starts, regardless of the identity of the aggressor, has important implications for US policy.

A conflict which begins with a nuclear attack will, because of the nature of the weapons employed, rarely have an ambiguous aggressor. No matter how rational the policy of first strike, the country which uses nuclear weapons will be branded the aggressor and aid in his defense will be an unpopular cause (and perhaps unnecessary) at best.

When the protégé's antagonist attacks first, with nuclear weapons, US policy making will be severely restricted if it opts for participation in the conflict. Who should be attacked, the aggressor or his guarantor? Is his guarantee still good? Does the protégé have weapons left, or must US forces be used? If, as seems reasonable, every effort will still be made to limit the conflict, US strategy will be in approximately this order of priority:

- (1) To let the protégé retaliate with his own nuclear weapons;
- (2) To retaliate against the aggressor with conventional weapons;
- (3) To retaliate against the aggressor with nuclear weapons.

If open conflict between two nuclear nations begins with conventional forces, there will probably be greater response time and more options available to US decision makers. There may be time for US action, backed up with unilateral or bilateral nuclear threats, embargoes, or conventional great power strikes to neutralize nuclear strike forces.

Closely related to the quality of the outbreak of open conflict are the objectives of the participants. These will have been estimated in advance, insofar as possible. Care must be taken not to assume that the availability of nuclear strike forces automatically presupposes unlimited objectives in future regional conflicts.

In pre-nuclear times, it would have been hard to imagine US constraint in the Cuban missile crisis. Thus far, wars in the nuclear age have been limited conflicts with limited objectives. A Chinese-Indian border conflict is no more likely to be a conflict with unlimited objectives when the Chinese have 100 bombs than when they had two.

Perhaps, the areas of most dangerous potential conflict are those where objectives could be unlimited, the Arab-Israeli case and possibly an East-West German conflict. Once a conflict starts, however, vital national interests can quickly turn a border dispute into a war for national survival, particularly after the first nuclear weapon is used. If objectives remain limited, there is a greater possibility of non-military intervention by great powers to achieve a settlement.

In spite of the fact that potential nuclear combatants will attempt to maintain a balance of power vis-a-vis their opponents, the rate of nuclear development will not be equally distributed unless it is managed by the superpowers. If the nuclear status of both disputants is known, it is unlikely, even with considerable "borrowed" nuclear power, that the non-nuclear nation would strike first. Similarly, because of potential guarantees, it is unlikely that a nuclear opponent would begin conflict with a known non-nuclear antagonist by striking with nuclear weapons. In such cases of asymmetry, the nuclear threat becomes the pièce de résistance of ultimatums, quietly communicated in conjunction with a limited military advance. A UN action of interposition, accompanied perhaps by a great power guarantee to use nuclear weapons against anyone who uses them on UN troops, might be a sufficient response. If such an option cannot be implemented, United States guarantees to retaliate against the nuclear power if he uses such weapons, combined with conventional support for the victim of aggression would be in order. In all cases, bilateral US-Soviet cooperation should be sought both to increase the credibility of response and reduce the chances of escalation.

Nuclear Proliferation and United States Power

Among nuclear actors in future international systems, the United States will undoubtedly retain its stature as one of the two most militarily powerful nations. Nevertheless, as the membership of the nuclear club expands, nations which choose the costly road to nuclear development will seek to "use" their new weapons systems to enhance their relative influence or power vis-a-vis competitors and friends. US power must be geared to preventing use of these weapons in combat and to minimizing the likelihood of their use as political threats to gain limited objectives. In many cases, this may require substantial retrenchment of American freedom of action in an area in accord with the wishes of

weak nuclear powers. Non-use of nuclear weapons is closely connected with peaceful political change and achievement of national influence for many countries. For the power position of the United States, the implications will be poignant.

While it is not likely that middle rank nuclear states will seek to overtly threaten the United States, friends of this nation will often be directly involved in the "use" of regional nuclear arsenals. To the degree that the behavior patterns of the states of the world are altered by the changing size and configuration of the nuclear club, the interests and influences of the United States will concomitantly be involved.

By adopting more active policies to cope with nuclear proliferation, the United States could thus contribute much to the control of future regional conflicts and tensions across the globe. An approach which seeks outright prevention or certain nuclear war is insufficiently flexible and extremely short-sighted.

In considering the possible deleterious impact upon American power were the United States to become involved in regional nuclear hostilities, this nation might best seek to appreciate the extended scope and nature of regional conflicts and tensions, and the motives participants may have for introducing nuclear weapons into conflicts. In this manner, the currently-widespread apocalyptic view concerning the "Nth country" problem might be transformed into a more pragmatic search for means of reducing and controlling danger, tension, and miscalculation to meet predictable conditions.

While no nation, in the foreseeable future, will be able to pose a devastating nuclear threat to the United States, they may be able to involve this country in a number of potentially-nuclear regional conflicts. Moreover, the rate of development of new nuclear states may place many of these challenges to US allies in approximately the same time period--roughly 1975-1980. If the United States were committed to the defense of India, Japan, Australia and Israel, and nuclear threats were to develop against all four of these states simultaneously, the strain placed upon US forces would be impressive, unless each of the threatened powers were capable of deterring the aggressor unassisted. Even if the only requirements were those of augmenting nuclear forces in allied states, the logistic and control problem would be immense.

CONCLUSIONS

The long-range prospects for US policy and for the power position of the United States in the international system, given nuclear proliferation, are as follows:

- (1) No nation is likely to be capable of posing a very large-scale, direct, nuclear threat to the continental United States, given our active defenses and retaliatory capability;
- (2) The coalitions currently existing will fragment, barring a war, and military cooperation with our current nuclear allies will decrease;
- (3) As polycentrism progresses, the likelihood of being confronted by a multi-nation nuclear bloc similarly decreases;
- (4) Assuming wide-spread nuclear proliferation, US-Soviet interest in cooperating to prevent or limit future regional conflicts seems both desirable and possible;
- (5) Proliferation will probably not increase regional stability, but the instabilities which result may continue to take the form of limited internal wars and border disputes with conventional weapons;
- (6) US decision-making regarding these limited conflicts will probably increase in complexity. Prior commitments to potential nuclear states should retain for the US considerable flexibility so that escalation can be minimized if regional conflict occurs;
- (7) The United States should increase its sensitivity to qualitative factors in national power which may better predict a new nuclear nation's behavior.

APPENDIX F

THE SPREAD OF NUCLEAR WEAPONS AND
THE INCIDENCE OF WAR 1945-65

APPENDIX F
THE SPREAD OF NUCLEAR WEAPONS AND
THE OCCURRENCE OF WAR
1945-1965

STATEMENT OF THE PROBLEM AND RESEARCH STRATEGY

One of the most important aspects of the spread of nuclear weapons will be its effect upon the occurrence of war. In the investigation of the relationship, it was thought useful to examine 20 years of history which includes both war and the spread of nuclear weapons. During this period, nuclear weapons have spread to four states and numerous internal and interstate wars have occurred. The relationship can be examined by carefully defining war and the spread of nuclear weapons, coding information to make data, and relating the variables to test the general proposition that the spread of nuclear weapons will make war more likely. While it cannot be said that this procedure yields reliable predictions for the future, one can at least see how much relevant experience is available, what it shows, and evaluate the factual foundations for an oftstated expectation of one of the important effects of nuclear proliferation.

Thus, the objective of the study reported here was to test some propositions concerning the affect of proliferation on the probability of war to see if these propositions are supported in the 1945-1965 period. The research strategy employed was as follows:

1. Examine available propositions concerning the relationship between proliferation and the probability of nuclear war.
2. Select armed conflicts which, in the period 1945-1965, might conceivably have been related to nuclear proliferation. Essentially, this is the task of defining "war."
3. Investigate intra-state and inter-state behavior during the period to generate war data for the period.

4. Devise some measures of nuclear proliferation and conduct a statistical study of the relationship between the amount of proliferation and the characteristics of war to see if any relationship between proliferation on one hand, and the values of these characteristics of war on the other, can be found.
5. Assess the results of this fourth step in terms of its possible significance for the effect of additional proliferation beyond the present nuclear powers, and the effect of such proliferation on the probability of future war.

PROPOSITIONS,¹ ASSUMPTIONS, AND LIMITATIONS

A general list of propositions concerning what effect proliferation would have on probability of war was drawn up from a variety of sources. Generally the source material fell into two categories. First there are the statements made by officials of major governments, and second, there is scholarly literature, from both of which were selected certain statements regarding the relationship of war to nuclear proliferation. In forming our general list of propositions from these two kinds of sources, we attempted to represent a variety of political and scholarly positions. Thus, we included propositions which reflected the viewpoint of the United States and others in the NATO alliance, the rather different viewpoint of the French government as well as those of the Soviet Union. From the scholarly community, we tried to include not only those students of international politics who view the possibility of proliferation with great alarm, but also those who believe that the potential dangers of proliferation have been exaggerated relative to other potential problems. In conducting this search for relevant propositions, we found that, even after composing this general list, a considerable process of winnowing was required. Frequently the statements made by individuals purporting to discuss the

¹ The statements on the relationship of nuclear proliferation to the probability of war are really expectations but are often stated in terms of absolute certainty. We know of no empirically verified "laws" on the behavior of states with or without nuclear weapons, and have chosen to modify such statements of expectation so that they are researchable propositions.

effect of proliferation, were in fact, discussions of problem areas which, while closely related--such as alliance problems--were still distinguishable and different from our central question. We noted that individuals discussing proliferation and problems associated with it tended to concentrate on (a) the question of the likelihood that various countries would procure nuclear weapons, and (b) the prospects for US strategies for delaying, minimizing, or heading off such proliferation, rather than what for us was the central question: the relationship of proliferation to the occurrence of war.

Still a third class of extraneous statements, were those which were concerned with the result of proliferation on variables other than the occurrence of war. It was frequently suggested, for example, that widespread additional proliferation would weaken still further the feasibility of strong alliance relationships between the United States and other groups of non-Communist states. It seemed quite clear from the start that even if proliferation were found to have no direct effect on the probability of nuclear war, it might cause the breaking up of alliances and increase the probability of eventual nuclear war. The influence of proliferation on such intervening variables as alliance relationships has not been included in this study. For this initial and limited effort it seemed more desirable to concentrate on the conjectured end result of proliferation (increasing occurrence of war) rather than to attempt to distinguish between direct and indirect mechanisms whereby this might come about.

Having obtained a set of relevant propositions, it was necessary to introduce certain modifications in their formulation in order to facilitate an empirical investigation. Several of the propositions in their original formulation refer to only two possible alternatives: "proliferation" and "non-proliferation," and the alleged consequences are postulated without reference to the number of additional states obtaining nuclear capabilities. We considered this to be an unsatisfactory formulation for all cases because to do so implies that the unwanted proliferation effects do not become noticeable until the number of countries with nuclear weapons exceeds a certain threshold value, (not yet reached at the time the proposition is formulated). While such possibilities are interesting, they could not be substantiated by our method, since by supposition all affects prior to threshold (i. e., at the present time) are excluded. However, we found that when such statements were modified to presume the

existence of the consequences of proliferation at all degrees of proliferation, the resulting questions were often interesting in their own right.

There was also a need to substitute "war" for "nuclear war" because the actual experience of the world with combat use of nuclear weapons in war is very limited. Nuclear weapons have been used in armed combat on only two occasions, both of which were during the terminal stages of a very large war which had encompassed the entire world, lasted for several years, been underway for several years prior to nuclear use, and which appears to have been the product of a complicated chain of events and circumstances extending backwards half a century. While in a narrow sense one could say that proliferation occurred when the number of nuclear powers increased from 0 to 1 immediately preceding Hiroshima and Nagasaki, the decision to use nuclear weapons in 1945 was conditioned by the considerations of a period of time that seems quite different from the post-war period we are presently studying. Thus, if the task is to determine the effect of proliferation on the probability of nuclear war, we are presented with a problem for which there is essentially no past experience, and thus no basis for direct empirical observation as a basis for forming generalizations. In view of this fact, it was decided to determine the effect of proliferation on the probability of war in general, rather than of nuclear war. This seemed intuitively sound in view of the deterrence of surprise nuclear attack, and the widely held belief that nuclear war, if it occurs, will escalate from lower levels of warfare, i. e., the type included in this analysis.

It was also necessary to forego any formal treatment of the problem of the "probability" of war. The distinction between the probability of an event and the frequency of an event is one which is important for careful scientific work but frequently ignored in the thinking about proliferation by both statesmen and scholars. While it may be a relatively straightforward problem to determine how the frequency of war has varied as the number of nuclear powers has increased, the problem of determining probability of war, even of defining what we mean in this context by the term, probability, is an exceedingly difficult one. Intuitively, the difference between the frequency of an event and the probability of an event can be seen by the following common sense example: Consider the game of Russian Roulette. A group of persons playing this game take a six-shot revolver and place a live

shell in one chamber. Each player in turn spins the cylinder of the revolver, points the barrel at his head, and pulls the trigger. If the gun does not fire, he passes it to the next player who repeats the procedure. If the gun has six chambers and only one contains a live shell, we can say that on the average, the gun fires in one time out of every six that the trigger is pulled, and we can say thus that in the context of this game the probability that the gun will fire is one-sixth. However, to generalize from a single game of Russian Roulette to the more general problem of determining the year-to-year probability throughout the world that players will kill themselves in this game, is quite different from stating the probability that some player will kill himself. Furthermore, we could note that, while the probability of a player losing in a specific round may be unpleasantly high (one out of six), the year-to-year frequency of deaths due to the game of Russian Roulette may be fairly small, compared to fatalities induced by other causes. In the same way, it may be a very difficult problem to assign any meaning to the concept of probability of war unless that probability is assessed in a very specific context of geographical area, preceding events, participants and the like. However, the concept of frequency of war throughout the world, while different from probability, can still be useful in establishing the risks which may be involved in the proliferation of nuclear capabilities. Furthermore such information is a necessary prerequisite to the more difficult task of defining the concept of the probability of war and of determining its magnitude. Thus, a key decision in the study was to modify each of the selected propositions by substituting "frequency" in place of "probability."

One aspect stressed in the approach was that particular attention be paid to the problem of defining the quantities whereby proliferation and the frequency of war are measured. Both proliferation and occurrence of war need to be defined using empirical measurements of the real world. This was important for two reasons; first, it would permit other researchers in the area to replicate the work without the possibility of ambiguity. Secondly, we might provide a basis for additional studies of the problem of proliferation and its effects. Because these objectives are very important in the long run for gaining an understanding of the problem, we have gone to considerable lengths to clearly define the terms of the study and to indicate how the concepts are built up from physical measurements.

Some Sample Propositions

To illustrate more concretely how expectations on proliferation and war must be revised for the conduct of systematic inquiry, some samples are listed below, in both original and final form, together with the specific reasoning for the modifications in each case.

(1) William C. Foster contends that:

The probability of nuclear weapons being used will almost certainly increase as the number of fingers on the trigger increases. Moreover, the increase in probability will be more than proportional to the increase in numbers, particularly as, in a world of many nuclear powers, there may well be some who...have relatively little to lose if nuclear weapons are used.² (Emphasis added.)

There are two difficulties involved in interpreting this statement so as to make it capable of verification. First, there do not appear to be any nuclear powers at present who "have relatively little to lose" if they are involved in a nuclear war. And, as noted above, with the exception of Hiroshima and Nagasaki, no nuclear weapons have been used in combat and thus there is insufficient empirical data on nuclear wars to validate the statement. The first difficulty is the easier one to ignore because a small country that came into possession of nuclear weapons would thereby have gained something very valuable (a nuclear capability) which it would wish to protect. Moreover, the acquisition of a nuclear capability might be associated with the more general growth of technological and industrial capabilities in that country, thus providing an additional incentive for responsible behavior.

The second difficulty appears insurmountable--the data on which the analysis might be based is simply not available. However, as suggested above, if the statement is rephrased so that it refers not to

²"New Directions in Arms Control and Disarmament," Foreign Affairs, July, 1965, p. 591.

the probability of nuclear war, but of war in general, then there is available a modest number of events in the post-war era of nuclear proliferation from which data can be obtained.

The proposition rephrased, then is as follows:

- a. As the number of nuclear powers increases, the number of wars increases.
- b. The ratio between the number of wars and the number of nuclear powers increases as the number of nuclear powers increases.

Alternately, one might wish to determine whether that ratio remains constant, or decreases.

(2) Beaufre contends that:

To a potential aggressor... the existence of several focal points of independent decision complicates the deterrence problem to the point of preventing even plausible predictions. This uncertainty is... a deterrent and stabilizing force.³ (Emphasis in the original.)

The proposition, rephrased, is:

As the number of nuclear powers increases, the frequency of war decreases.

(3) Iklé presents the view that:

The diffusion of nuclear capabilities might make the involvement of major powers in local conflicts appear to be more risky, and hence render it less likely.⁴

³ General André Beaufre, "Nuclear Deterrence and World Strategy" in Karl H. Cerny and Henry Briefs, NATO in Quest of Cohesion (New York: Praeger, 1965), p. 221.

⁴ Fred Charles Iklé, "Nth Countries and Disarmament" in Ernest W. Lefever (ed.), Arms and Arms Control (New York: Praeger, 1962,) p. 241. This view is merely presented, not necessarily espoused by Iklé.

The proposition, rephrased is:

As the number of nuclear powers increases, the involvement of major nations in non-nuclear war decreases.

(4) The Soviet Government has asserted that proliferation will increase the difficulties of avoiding war and that it will also increase the difficulties of establishing international peace and security.⁵ A differentiation is made here between establishing peace and security on one hand and avoiding war on the other. We choose to interpret avoidance of war as meaning avoidance of armed conflict of a high level of magnitude and severity,⁶ and establishing peace and security as meaning the avoidance of armed conflict at a low level of magnitude and severity. Thus, the proposition rephrased is:

As nuclear proliferation takes place:

- a. the number of wars of every magnitude increases.
- b. the number of wars of every level of severity increases.

(5) The Soviet Government has also asserted that creation of MLF would "increase imperialist and neo-colonialist pressure on the liberated countries and on the countries fighting for independence."⁷ This statement was primarily directed against the putative granting of access to nuclear weapons to a specific nation, the Federal Republic of Germany. Since this constitutes a single instance of proliferation, and since that case has not yet materialized, the proposition needs to be modified to be susceptible to empirical inquiry.

⁵ Soviet Delegation to the United Nations, "Explanatory Memorandum on Non-Proliferation of Nuclear Weapons," United Nations General Assembly Twentieth Session; A/5976, 24 September 1965, p. 2.

⁶ Whereby the "magnitude" of a war is meant the number of nations involved times the length of their respective involvements, and by the "severity" of a war is meant its destructiveness as measured by lives lost, property destroyed, and the like.

⁷ Soviet Delegation to the United Nations, Op. Cit., p. 3

We chose to modify it to the following form:

As the number of nations that are members of NATO, and have a nuclear capability, increases, the involvement in war of nations having membership in NATO increases.

Thus the involvement of the 14 members of NATO in war would be compared for those periods when first the United States, then the U.K., and then France, acquired nuclear weapons, and the directness of relation between involvement and number of NATO powers with nuclear capabilities would be taken as a measure of the accuracy of the Soviet statement.

Thus, we have selected and modified statements on proliferation for verification in a systematic manner. There are admittedly two important limitations on the relevance of these propositions. First, we are not directly addressing the covariance of proliferation and nuclear war; and second, we have chosen to address the more restricted question of the frequency of war rather than the more difficult question of the probability of war. However, we believe that the results of the study are useful in two ways. First, our quantitative and restricted results can provide a helpful input to more far-reaching and/or deductive studies of the effects of proliferation. In particular, by relating the spread of weapons to war rather than nuclear war, is to conjecture that were a nuclear war to occur, it would be preceded by non-nuclear conflict of the kind included in this study. More generally, it may well be that if proliferation gives rise to certain intermediate influences which increase the frequency of war in general. A second contribution is that some basic data have been developed for more far-ranging research which would deal more directly with the problem of the probability of nuclear war. It would appear that such an inquiry should begin with an analysis of the military behavior which nations have already exhibited in the nuclear age.

DEFINITIONS

Composition of the International System

Because it was necessary to classify armed conflict according to whether that conflict took place within a state or between states, a clear notion of what constituted a nation state was required. The restriction was considered necessary to rule out small principalities,

e. g., Monaco, which play no significant role in international politics. We also wish to eliminate those political entities of such ambiguous status, or of such little importance in world affairs, as to have failed to have gained either recognition by the United States, by the Soviet Union, or to have gained membership in the United Nations. Thus, the following procedures were used to define international system membership:

- a. Find the polities qualifying as members of the international system, 1946-1965.
- b. Find the date that each polity first qualified as a member of the international system in the period Jan. 1, 1946 to Dec. 31, 1965.
- c. Find date that each polity lost its membership in the international system, Jan. 1, 1946 to Dec. 31, 1965.

Definition: A polity is a member of the international system, if and only if (a) it is a member of the U. N., or it is extended de jure or de facto diplomatic recognition by the United States or the USSR, and (b) it has a population of 500,000 or greater.⁸

It is interesting to note also that the definition as formulated permitted the classification of groups such as the Algerian FLN, having important status in international conflict and major power competition, but which for a number of years enjoyed only the status of an insurgency group vying for control of territory of an established nation state. In effect this definition of membership in the international system, although somewhat unorthodox, allowed consideration of such "internal wars" as the Algerian insurgency, which were closely associated with major power competition. Soviet recognition of the Algerian FLN signified to the world that the Soviet Union had a vested interest in the outcome of that struggle.

⁸ See Table 1 for the data developed from this procedure.

Definition of War

A threshold for organized violence for political ends appears useful to distinguish "war" from conflict in general. First, every instance of military and communal violence from 1946 to 1965 from open sources, in which 1,000 or more fatalities occurred, was listed. This procedure gives certain conflicts that were immediately uninteresting: while they resulted in 1,000 or more fatalities, they produced those fatalities over an extended period of years, so that the fatality rate over time was quite low. Since many areas of the world experience sporadic conflicts for extended periods, the list of "wars" would be cluttered with these low level conflicts which, for our purposes, were uninteresting. Moreover, it is essential that a definite beginning point and end be assigned to each war, and this would be especially difficult for the cases of sporadic violence.

Both of these difficulties were surmountable by eliminating all conflicts in which fewer than 1,000 people were killed within 1/2 year preceding or following some date during conflict. The procedure for forming this initial listing of conflicts and classification rules employed were as follows:

- a. Find those conflicts occurring between Jan. 1, 1946 and Dec. 31, 1965, for which 1,000 or more fatalities occurred within 1/2 year of some point in time.
- b. Find the date that each case begins.

Definition: The beginning date is the first day on which fatalities occur for which in the immediately subsequent time period of 1 year, 1,000 or more fatalities occur.

- d. List the total fatalities occurring between the beginning and end dates, inclusive, for the war.

The data obtained following these criteria are much too inclusive for the purpose of study. It seems obvious that the Korean War bore a much closer relation to possession of nuclear weapons by the participants than, say communal violence in India. To relate all of these "wars"

to proliferation would include many conflicts which were irrelevant, and almost certainly dominated by factors other than the number of states having nuclear weapons. However, the procedure does provide a tentative list of wars from which one can select a listing more appropriate for the study. (see Table 2).

Type B Wars: Partly interstate wars

A Type B war is a classification which represents a considerable narrowing of the initial list of conflicts. Additional conditions are required of the conflicts initially enumerated to insure that those classed as a Type B will have a minimum of relevance to international confrontations likely to be affected by nuclear capabilities.

1. Definition: Type B wars are those from the undifferentiated list of conflicts (Table 2), which satisfy the following additional conditions:
 - a. At least two factions, or sides, have been identified (i. e., we wish to screen out unorganized group violence.)
 - b. At least one member⁹ of the international system is aligned with, or constitutes one or more of the factions.
 - c. At least one of the members of the international system satisfying (b.) above, is involved in conflict on other than its own metropolitan territory.

⁹An international system member will be said to be involved in a conflict if, during the conflict, it has sustained 250 or more battle deaths in the zone, or if it has transported goods from its metropolitan territory to personnel of one of the factions, or if its formal military personnel or nationals have traveled from its metropolitan territory to the combat zone and have rendered services to personnel of one of the combatants.

d. At least 1,000 Type B¹⁰ battle deaths occur in the war within 1/2 year of some point in time.

2. Definition: The beginning date of a Type B war is characterized by one of the following:

a. If a participating member of the international system issues a declaration of war and if no battle deaths are incurred in the quarrel by a member of the international community outside its own metropolitan territory prior to the declaration, then the beginning date of the war is the first day in which non-metropolitan battle deaths are sustained by some member of the international community.

10. Type B battle death is any instance of one of the following:

- a. Formal military personnel of a member of the international system dead or permanently missing as a consequence of deliberate acts by a faction of the deadly quarrel in question.
- b. Formal military personnel or a member of the international system dead from accidents, disease or exposure in the combat zone of the deadly quarrel in question.
- c. Combatant military personnel not formally part of the forces of a member of the international system, dead or permanently missing as a consequence of deliberate acts by a faction of the deadly quarrel in question.
- d. Combatant military personnel not formally part of the forces of a member of the international system, dead from accidents, disease or exposure in the combat zone of the deadly quarrel in question.
- e. Non-combatants in the combat zone dead or permanently missing as a consequence of deliberate acts by combatant personnel of the deadly quarrel in question.

- b. If the conditions of (a.) are not all satisfied, then the beginning date is the first day on which fatalities are incurred by a nation-state outside its own metropolitan territory and for which in the immediately subsequent time period of 1 year, 1,000 or more battle deaths occur.
3. Definition: The end date of a Type B war is characterized by one of the following:
 - a. If all factions agree to an armistice, and if no non-metropolitan battle deaths are incurred in the quarrel by a qualified nation subsequent to the armistice, then the last day in which non-metropolitan deaths occur is the end date of the war .
 - b. If (a.) is not satisfied, but the corresponding situation holds for a peace treaty, then the last day of non-metropolitan deaths is still the end date of the war.
 - c. If neither (a.) nor (b.) is satisfied, then the end date is the last day both on which non-metropolitan battle deaths occurred, and for which in the immediately preceding time period of one year, 1,000 or more battle deaths occurred.
4. List the total Type B battle deaths between the beginning and end of the war.

It was found that Type B wars were quite numerous in the 1946-1965 period. Thus the listing of such wars constitutes a large set of cases that are minimally relevant to the basic question of the study (See Table 3).

Type A Wars: Interstate Wars

We are now ready to discuss a more restrictive class of wars that satisfied the intuitive concept of an international war, and that were potentially more related to the proliferation of nuclear capabilities.

As before, the conditions required for a Class A war constituted a refinement of the prior types of conflicts (i. e., of deadly conflicts producing over 1,000 fatalities, and of Type B wars). In addition to satisfying the conditions of a Type B war, these additional conditions were embodied in the following definitions.

Definition: A Type A war is a Type B war which satisfies the following additional conditions:

- a. At least two members of the international system are aligned against each other on opposing sides or factions.
- b. At least two qualified nations satisfying (a.) above, have sustained Type A battle deaths.
- c. At least 1,000 Type A battle deaths occur in the war within 1/2 year of some point in time.

Definition: A Type A battle death is any instance of one of the following:

- a. Formal military personnel of a member of the international system dead or permanently missing as a consequence of deliberate acts by a faction of the deadly quarrel in question.
- b. Formal military personnel of a member of the international system dead from accidents, disease or exposure in the combat zone of the deadly quarrel in question.

Definition: The beginning date of a Type A war is characterized by one of the following:

- a. If a participating member of the international system issues a declaration of war and if no non-metropolitan Type A battle deaths are incurred in the quarrel prior to the declaration, then the beginning date of the war is the first day in which Type A battle deaths are incurred by some participant on other than its own metropolitan territory.

- b. If the conditions of (a.) are not all satisfied, then the beginning date is the first day on which Type A battle deaths are incurred by some participant on other than its own metropolitan territory and for which in the immediately subsequent time period of one year, 1,000 or more Type A battle deaths occur.

Definition: The end date of a Type A war is characterized by one of the following:

- a. If one of the participating nations effectively occupies all of the national territory of all opponent nations, then the war ends on the first day of this effective occupation.
- b. If (a.) is not satisfied and all participating nations agree to an armistice, and if no non-metropolitan Type A battle deaths are incurred subsequent to the armistice, then the end date is the last day in which non-metropolitan Type A deaths are incurred by some participant on other than its own metropolitan territory.
- c. If neither (a.) nor (b.) is satisfied, but the corresponding situation holds for a peace treaty, then the last day of non-metropolitan Type A deaths is still the end date of the war.
- d. If neither (a.), (b.), nor (c.) is satisfied, then the end date is the last day on which non-metropolitan Type A deaths are incurred and for which in the immediately preceding time period of 1 year, 1,000 or more Type A deaths occurred.

The Type A wars from 1946-1965, shown in Table 3, have been so infrequent that they do not constitute a large enough sub-population to allow the inference of the influence of proliferation upon the frequency of war. While this is unfortunate because we have assumed that nuclear warfare will grow out of escalation of conventional interstate wars, it shows that the expectations in the propositions are based upon inadequate historical experience. It was therefore necessary to focus the analysis on the less restrictive cases, the Type B wars.

MEASUREMENT OF PROLIFERATION

There are a number of ways which might be employed for determining when a nation has developed a nuclear capability because of the differing interpretations of what constitutes nuclear capability. Some of these are: (1) development of production facilities for nuclear explosive material; (2) the decision to build weapons; (3) the test of an operational bomb; (4) the completion of production of a nuclear weapon delivery systems; (5) first deployment after production; and (6) the full scale production and deployment of such items in the form of an operationally ready strike force. The most desirable kind of measure of proliferation would be some procedure for assigning a value to each nation in the world that would indicate how far it had progressed in its nuclear development.¹¹ However, the care required in devising such a scale and the difficulty in acquiring the relevant information precluded the employment of this criterion for proliferation. Instead a single event was chosen which would provide a clear indicator as to when a given nation achieved a nuclear capability. It was also important that this event be not only an unambiguous indicator of the state of nuclear progress in the given nation, but also that it be readily determined from open sources. The event which was selected for this purpose was the first test explosion of either a nuclear weapon or a nuclear device. By this definition five countries presently possess a nuclear capability. The present nuclear powers, then, and the dates of their respective first nuclear test explosion, are:¹²

United States	16 July 1945
Soviet Union	29 August 1949
United Kingdom	3 October 1952
France	13 February 1960
China ¹³	16 October 1964

¹¹Thus, for example, by such a procedure, the United States and the Soviet Union might each be assigned the value 1.0, Britain might be assigned the value 0.875, India 0.5, and China and France 0.75.

¹²S. Glasstone (ed.). The Effects of Nuclear Weapons Washington, U. S. Atomic Energy Commission (GPO, 1962), pp. 672, 679, 680.

¹³Statement by President Johnson, White House Press Release, State Department Bulletin, 2 Nov. 64, p. 612.

We now proceed to a discussion of how the developed data on the incidence of war from 1946 to 1965 and the information on the dates of the first tests of the present nuclear powers were related.

ANALYSIS OF DATA

The Amount of War in the International System

As indicated above in a summary of the research strategy, the objective of this study was to determine the influence of proliferation on the amount of war in the international system in the past 20 years. Although a number of criteria were devised in the course of the study for measuring the amount of war in the system, resources did not permit the use of all of them in the analysis and processing of information, and it was necessary to rely on a single measure of war involvement: The number of wars in which system members first became involved in a given time period. This was taken as indicative of the amount of war in the system during that period. It should be noted that this measure is a very indiscriminate one: it counts all wars in which a state was involved as equivalent regardless of the number of fatalities incurred (above the threshold), the number of combatants or amount of material involved, the identity of the participants, the geographical locale of the conflict, its duration, or the war outcome. And the measure does not take into account involvement in wars in a given period in which the participants have all first become involved prior to that period. Thus there are significant features of the wars counted in the analysis which are not reflected; however, the measure was adopted because it was simple to determine and because intuitively it seemed closely related to the basic problem of determining how proliferation affects the probability that nuclear war, in general, will begin.

The Major System

After examining modified propositions concerning the expected influence of proliferation, it appeared that one of the most interesting and direct relationships would be the number of nuclear powers and the amount of war in the international system. If the data showed a steady increase in the war involvement of the major powers, as nuclear weapons were acquired by each of the five presently nuclear states, this might be regarded as an indication that proliferation has, in fact, been accompanied

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by an increased probability of war. We were interested in looking at the major states of the world because their great size, importance, and presumably, their relatively high degree of industrialization would make them particularly susceptible to the dangers of nuclear war. Furthermore, they would tend to interact with other nations on a more world-wide basis than the smaller states. There is also the contemporary concept that "major powers" are those states which now have, or can with relative ease obtain, possession of nuclear capabilities. In short, the behavior of the "major states" is interesting because they may be likely to become involved in serious disagreements with nuclear powers because they are the likely targets of nuclear weapons, and because they tend to have a high potential for nuclear weapon capabilities.

By the term "major state" we mean those states which interact primarily with other nations on a world-wide rather than a regional or local basis. Again, as with the other concepts developed, we were faced with the problem of defining the concept in empirical terms in such a way that states thereby included satisfied our good sense of what constitutes a major power. And again, it was necessary that the empirical information required to enumerate the major states be reasonably unambiguous and easy to collect. A number of tentative approaches to this problem were attempted which employed information concerning the population, economic productivity, and degree of industrialization of each nation; however, these did not prove satisfactory, and in the end we relied upon a simpler criterion.

Definition: A polity will be classed as a major power if and only if:

- a. It is a member of the international system (see discussion of system composition above and Table 1)
- b. Its territory and people were governed in 1945 by a government which was granted permanent membership on the United Nations Security Council.

A word of explanation is in order for part (b.) of this definition. Permanent UN Security Council membership was taken as a reasonable criterion for major power status at the end of World

War II because that membership was conferred on those states which would be the major post-war powers. Even though the social system and regime of one of those states (China) has dramatically changed and although the importance of states obviously is subject to change over the years, the judgment of the UN founders seems to have been substantiated by the first 20 years of post-war developments.

The major states, then, according to this criterion are:

1. United States
2. Soviet Union
3. Britain
4. France
5. China

It is notable that these states deemed likely to be the major post-war powers at the time of the San Francisco Conference in 1945 are also those which have exploded a test nuclear device or weapon. Since, by this definition the enumeration of the major powers is identical with the enumeration of the nuclear powers, we will frequently refer to the "major powers" and present "nuclear powers" interchangeably.

Time From First Nuclear Explosions versus Aggregate War Involvement by Major System Members: A Substantive Result of the Study

The concept of aggregate war involvement is intuitively clear although its precise formulation proved to be cumbersome. In what follows a new variable is introduced, the concept of aggregate war involvement is explained, its formulation presented, and the rationale for choosing this particular way of using the war involvement and proliferation data is presented.

Thus far, the numerical data developed has been of two kinds: the war involvement of international system members, (i. e., the number of wars in which the membership became involved) and the degree of proliferation, (i. e., the number of nations having exploded at least one nuclear weapon or device). Now we introduce a third variable: elapsed time from first nuclear explosion for a nuclear power in year X.

Definition: Given that a state exploded its first nuclear device or weapon in year Y, then the elapsed time from the first nuclear explosion for that state in any year X, is the value $X - Y$ years.

We will refer to this value as the "elapsed time in X" for the given state. For example, the elapsed time in 1955 for the United States equals $1955 - 1945 = 10$ years. When, for a given state, the year X precedes the year in which the explosion takes place, the elapsed time in year X for that nation has a negative value. For China, the elapsed time in 1956 equals $1956 - 1964 = -8$ years, which indicates that the year 1956 preceded China's first test explosion by 8 years. When X is the year in which the first nuclear explosion of the given nation took place, the elapsed time in year X equals 0. For the Soviet Union, the elapsed time in 1949 = 0 since the first Soviet test explosion took place in 1949.

Given a value for X, the value of "elapsed time in year X" depends only on the date of the first nuclear test for the given country. Thus, the "elapsed time" variable is a transformation of the original proliferation variable (i. e., date of first test) into a new form. Using the transformed proliferation variable, one can show relationship of it to aggregate war involvement. Roughly, "aggregate war involvement" is a measurement of the tendency of those nations which have acquired nuclear capabilities to become involved in war when they are at comparable stages of development of that nuclear capability. We assume that the influence of anticipated or realized nuclear capabilities was equal or following by an equal number of years their respective first explosions. Thus, for example, the influence of acquired nuclear capabilities on the military behavior of the United States in 1946, the Soviet Union in 1950, Britain in 1953, France in 1961, and China in 1965 (i. e., those years for which elapsed time equals one year for each system member) are assumed equal.

Clearly, however, it may be invalid in many of these cases to infer that actual military behavior would be influenced solely by their own nuclear capabilities. It is necessary to filter out the affects of additional factors if the affects of the growth of nuclear capability are to be isolated. One isolation technique which might be employed is simply to add the war involvement values for all five nuclear nations for each elapsed time value for each given year preceding or following the respective first nuclear explosions. This would tend to dampen those "random" factors which increased the

involvement in some cases, but decreased the war involvement in others. In the terms of the nomenclature developed above, one of the variables would be the transformed proliferation variable, elapsed time in year X. If the typical value of this variable was n years, then the value of the second variable would be the war involvement of the United States, n years after or prior to its first explosion (depending on whether n was positive or negative), plus the war involvement of the USSR n years after or prior to its first explosion, and so on for Britain, France, and China.

The rationale for this approach was that, while this aggregate measure of war involvement would not characterize a given chronological year, (X must have different values for the five nations to obtain equal values of n), it might roughly characterize all points of nuclear development for the five nuclear powers having comparable affects on major power war involvement. However, this approach still contained numerous sources of contamination. For one thing, for countries such as the United States, which exploded a nuclear device early, war involvement prior to the first explosion falls in the World War II period, or before, which is beyond the scope of the study. If one wishes to treat the post-war period as qualitatively different from earlier periods, the inclusion of pre-1945 war involvement data constitutes a distortion. This would seem to be particularly true here, since we wish to relate probability of war to nuclear capabilities, and World War II was dominated by considerations other than possession of nuclear capabilities. A second problem is that for countries such as China, which exploded a first nuclear device only recently, time for involvement in war following that explosion is relatively short.

Thus, for a given n , the aggregate measure included the individual war involvement of a given state only if that data was for a year from 1946 to 1965 inclusive. This in turn meant that the aggregate measure of war involvement was obtained from differing groups of nations for differing values of n . The values of n , and the corresponding groups of nations from which war involvement is aggregated are displayed below:

$n = 20$ years to $n = 17$ years: US

$n = 16$ years to $n = 14$ years: US and USSR

$n = 13$ years to $n = 6$ years: US, USSR, and UK

The war involvement experiences of the United States and China are the major contributors to the aggregate war involvement values for the high positive and low negative values, respectively, of elapsed time. Since both states have become involved in Type B wars relatively frequently, measurements could exhibit unusually high or low values due to influences, other than the acquisition of nuclear weapons, which induced them to become involved in war. To correct for this bias, it was sufficient to divide the war involvement value of each elapsed time value for each of the five nations by their average war involvement over the twenty years from 1946 to 1965. Thus the aggregate involvement values would reflect only the relative involvement of each nation compared to its twenty year experience.

Even after having performed the above adjustments, it was found that the behavior of states as represented by the corrected aggregate values exhibited large variance. This can be seen from the display of adjusted aggregate war involvement versus elapsed time counting nuclear major state involvement in Type B wars, Figure 1.

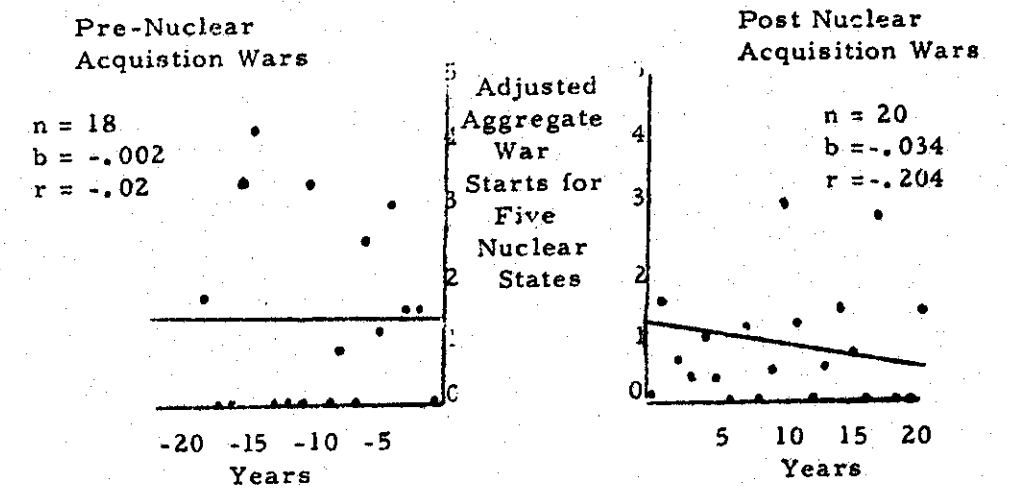


Fig. 1 Relationship of Type B Wars involving 5 Nuclear States to Proliferation, 1946-65.

The inferences drawn from the scattergrams, regression lines and correlation coefficients in Figure 1 must be approached with caution for a number of reasons, the most important being that war starts are related only to the spread of nuclear weapons. While this is the relationship which we set out to discover, there are apparently many factors which contribute to the causes of war or to the maintenance of peace. No single factor explanation of war is likely to account for much of the war-like behavior of states, and this analysis does not contradict such an expectation. Secondly, the period of time (20 years), the number of nuclear states (5) and the number of cases of war involving them are quite limited. Indeed, it could be argued that several of the Type B wars involving the nuclear states which have been included here have not caused serious disturbances in international politics even though they exceeded a certain mortality level. Furthermore, important attributes of warfare other than their dates of outbreak have been ignored, e. g., length, number of states involved, total damage, resources allocated, or political outcomes. Fourth, the "risk" or probability of nuclear warfare as a function of proliferation has not been measured directly. Risks are extremely hard to define and measure, and there is no experience with nuclear wars. Simple models¹⁴ which are based on the assumption that all nuclear states display equal proclivities toward nuclear war with all other states have been rejected in producing the data and in the analysis.

Finally, this analysis does not pretend to explain how proliferation relates to warfare, much less to predict the probability of war, given the additional spread of nuclear weapons. What has been sought is the modest goal of the degree of association between proliferation and war outbreak as a means of testing the policy position that these phenomena will be directly related.

¹⁴ M. Lvov, "A Time of Choice, Izvestia, Oct. 21, 1965, p. 2 in Current Digest of the Soviet Press, XVII, 42, p. 21: "It is apparent that if still other states gain access to nuclear weapons, then a kind of chain reaction of weapons proliferation could arise among more and more new states... The risk of war using nuclear weapons will grow in geometric progression."

Findings

1. The war behavior of the present five nuclear powers before and after they acquired nuclear weapons has not been significantly different.¹⁵
2. Correlation between nuclear weapons and war involvement is very low, before and after acquisition. In other words, the possession or non-possession of nuclear weapons accounts for only tiny portions of variance in war involvement.

Another way of relating war involvement of nuclear weapons proliferation is shown in Figure 2. Here we see a confirmation of the findings from the more complex procedures used to develop Figure 1. It is apparent that the rate (slope) of Type B war involvement for the nuclear states over the twenty years has not changed markedly as proliferation took place. One may speculate that relatively small increase in numbers of great power war involvements in the early 50's and mid 1960's may be due to the existence of large interstate wars (Korea, Indochina) which involved and preoccupied the great powers.

¹⁵ Corroborative evidence on the relative stability of numbers of conflicts over the 1946-1964 period is found in an independent study from open sources conducted by R. P. Richardson and S. Waldron, et. al., "An Analysis of Recent Conflicts," Annex B to Navy Contributions to Deterrence at Conflict Levels Less than General War, 1975-80, Study 14, Center for Naval Analyses, Institute of Naval Studies: Cambridge, 1966. This study uses a much broader definition of conflict than the "war" criteria included here. The total number of conflicts (including non-combative acts) is 380 with a mean of approximately 20 conflict starts per year and range of 11 to 30. When conflicts are adjusted to the number of states in the system the linear regression line is at 0.2 conflict starts per year per state with 0 slope. It is also interesting that the INS and the Bendix studies found 79 and 76 "wars" respectively above the mortality threshold of 100.

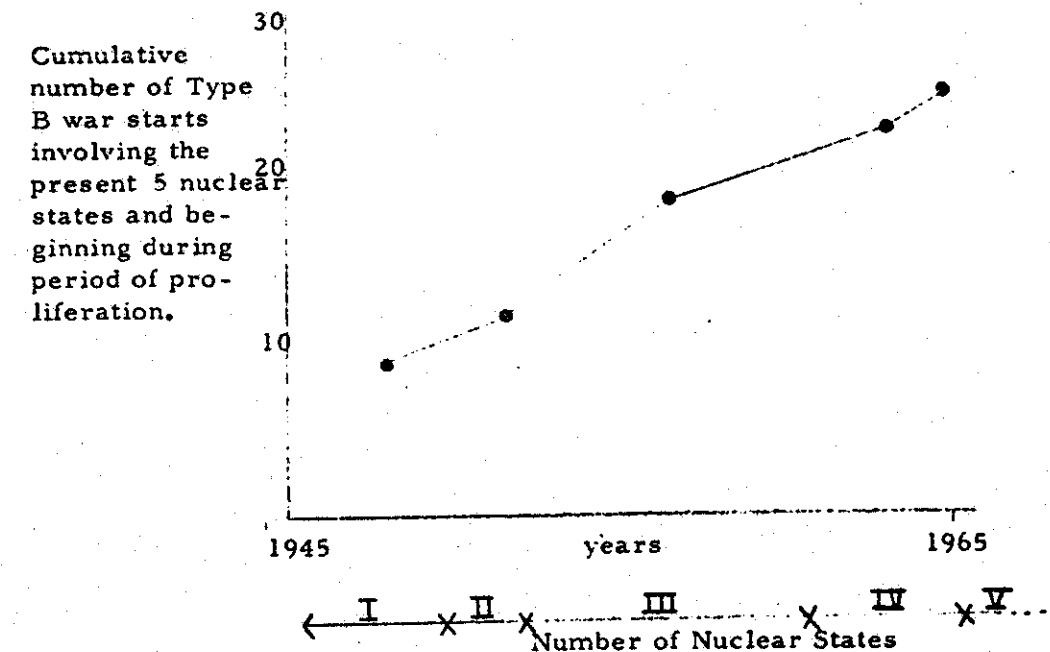


Fig. 2 Type B War Involvement of 5 Great Powers During Nuclear Proliferation

Findings:

1. If proliferation is influential at all in number of nuclear state war starts, its influence is negative or is overridden by other stronger potentially negative influences.¹⁶
2. Proliferation may have little or no influence at all on nuclear-state involvement in Type B wars.

Conclusions:

1. The proposition that the spread of nuclear weapons will be accompanied by an increase in the probability of nuclear war is not borne out by twenty years of history in the nuclear age, provided, that one establishes rules for what is war and that one infers probability from the incidence of Type B war starts involving nuclear states.

¹⁶ Such as, decolonialization, a loosening of bipolarization, modernization of underdeveloped regions, the U.N.'s peacekeeping role, industrial recovery in Europe and Japan, the growth of integration (regional security arrangements), or increase in the effect of mutual nuclear deterrence.

2. Recognize that there are no empirically verified generalizations which will predict the probability of war given the further spread of nuclear weapons. Therefore, policy on the spread of nuclear weapons should be based on considerations other than its expected influence upon the probability of war until a stronger positive relationship can be found.

Recommendations for Further Study:

1. Use a measurement for proliferation other than the first explosion of a device and examine the temporal covariance of war and proliferation.
2. Expand the number of variables considered to include those which seem intuitively attractive as accounting for war behavior in order better to isolate the influence of proliferation.
3. Compare the post-World War II behavior of major powers to that following other large wars, e. g., after 1815 or 1918, to see if behavior in the nuclear age is essentially different than in prior periods following great wars.

TABLE 1

COMPOSITION OF THE INTERNATIONAL SYSTEM, 1946-1965

System Membership	Date of Qualification for Membership	Criterion of Membership UN-US-USSR
Afghanistan	1946	UN
Albania	*	US
Algeria	1960	USSR
Argentina	*	UN
Australia	*	UN
Austria	*	US
Belgium	*	UN
Bolivia	*	UN
Brazil	*	UN
Bulgaria	*	USSR
Burma	1948	US
Burundi	1962	UN
Byelorussian SSR	*	UN
Cambodia	1950	US
Cameroon	1960	US
Canada	*	UN
Central African Republic	1960	US
Ceylon	1948	US
Chad	1960	US

* Member of the system as of January 1, 1946

TABLE 1 (Con't)

System Membership	Date of Qualification for Membership	Criterion of Membership UN-US-USSR
Chile	*	UN
China (Peoples' Republic)	1949	USSR
China (Taiwan)	*	UN
Colombia	*	UN
Congo (Brazzaville)	1960	US
Congo (Leopoldville)	1960	US
Costa Rica	*	UN
Cuba	*	UN
Cyprus	1960	US
Czechoslovakia	*	UN
Dahomey	1960	US
Denmark	*	UN
Dominican Republic	*	UN
Ecuador	*	UN
Egypt	*	UN
El Salvador	*	UN
Ethiopia	*	UN
Finland	*	UN
France	*	UN
Germany (East)	1955	USSR

* Member of the system as of January 1, 1946

TABLE 1 (Con't)

System Membership	Date of Qualification for Membership	Criterion of Membership UN-US-USSR
Panama	*	UN
Paraguay	*	UN
Peru	*	UN
Philippines	1946	US
Poland	*	UN
Portugal	*	US
Rumania	*	USSR
Rwanda	1962	US
Saudi Arabia	*	UN
Senegal	1960	US
Sierra Leone	1961	US
Singapore	1965	US
Somali Republic	1960	US
South Africa	*	UN
Spain	*	US
Sudan	1956	US
Sweden	*	US
Switzerland	*	US
^o Syria	*	UN

* Member of the system as of January 1, 1946

^c Syria temporarily lost membership in the international system from 1958 to 1961 when it merged with Egypt to form the United Arab Republic.

TABLE 1 (Con't)

<u>System Membership</u>	<u>Date of Qualification for Membership</u>	<u>Criterion of Membership UN-US-USSR</u>
Tanzania (Tanganyika and Zanzibar)	1961	UN
Thailand	1946	UN
Togo	1960	US
Trinidad and Tobago	1962	UN
Tunisia	1956	US
Turkey	*	UN
Uganda	1962	US
Ukranian S. S. R.	*	UN
USSR	*	UN
United Kingdom	*	UN
United States	*	UN
Upper Volta	1960	US
Uruguay	*	UN
Venezuela	*	UN
Vietnam (North)	1950	USSR
Vietnam (South)	1950	US
Yemen	1946	US
Yugoslavia	*	UN
Zambia	1964	UN

* Member of the system as of January 1, 1946

TABLE 2

UNDIFFERENTIATED LIST OF CONFLICTS FROM WHICH
CLASS B WARS AND CLASS A WARS WERE TAKEN

Location	Time	Location	Time
<u>ASIA</u>			
Tibet	1950-1952	Indonesia	1956-1959
Nepal	1959-1962	Vietnam	1959-1966
Thailand	1962-1966	Laos	1959-1966
China	1945-1949	West Irian	1960-1962
Malaya	1945-1956	Goa	1961
Indonesia	1946-1949	India-China	1962
Indochina	1946-1954	Malaysia-Indonesia	1964-1965
Taiwan	1947	India-Pakistan	1965
Kashmir	1947-1949	Indonesia	1965
Ceylon	1958	<u>MIDDLE EAST</u>	
Hyderabad	1948	Israel-Arab States	1947-1949
Burma	1948-1951	Sinai (Suez)	1956
Philippines	1948-1952	Yemen-Aden	1956-1960
Korea	1950-1953	Yemen	1959-1966
China-Burma	1950-1953	Iraq	1961-1966
Tibet	1956-1966	Israel-Syria	1962-1963
Quemoy-Matsu	1954-1956	Lebanon	1958
Quemoy-Matsu	1958	Iraq	1958-1959
India (Nagaland)	1954-1963	Syria	1961-1962

TABLE 2 (Con't)

Location	Time	Location	Time
Iran	1947-1949	Greece	1946-1949
<u>AFRICA</u>		Hungary	1956
Madagascar	1947-1948	<u>LATIN AMERICA</u>	
Kenya	1952-1955	Paraguay	1947
Algeria	1954-1962	Columbia	1948-1966
Cameroon	1956-1960	Guatemala	1954-1958
Burundi	1959-1964	Costa Rica	1947
Ethiopia-Somalia	1960-1961	Bolivia	1946
Congo	1960-1964	Bolivia	1949
Angola	1960-1965	Bolivia	1950
Algeria-Morocco	1963-1964	Haiti	1956-1957
Ethiopia-Somalia	1963-1964	"Bay of Pigs"	1961
French Morocco	1952-1956	Nicaragua-Honduras	1957
Ethiopia	1960-1961	Cuba	1957-1959
Zanzibar	1962-1963	Venezuela	1957-1966
Zanzibar	1961-1962	Bolivia	1960-1966
Zanzibar	1964	Dominican Republic	1961-1962
<u>EUROPE</u>		Dominican Republic	1956-1966
Cyprus	1955-1959	Cuba	1961-1966
Cyprus	1963-1965		

TABLE 2 (Con't)

Location	Time
Bolivia	1952
Argentina	1955
Nicaragua-Costa Rica	1955

TABLE 3 ENUMERATION OF TYPE B WARS AND TYPE A WARS

Name of War	Type B Wars		Type A Wars	
	Start Date	End Date	Start Date	End Date
<u>ASIA</u>				
Chinese Civil War	July 19, 1946	21 Apr. 1950	N/A *	N/A
Korean War	June 25, 1950	Aug. 5, 1953	June 25, 1950	Aug. 5, 1953
French Indochina War	Dec. 1945	June 1, 1954	1950	June 1, 1954
Taiwanese Rebellion	Mar. 1947	Dec. 1947	N/A	N/A
First Kashmir War	May 1947	Jan. 1, 1949	May 1947	Jan. 1, 1949
Malayan Emergency	June 1948	Jan. 1956	N/A	N/A
Hukbala hap Uprising (Philippines)	Jan. 1949	1954	N/A	N/A
Tibetan War	Oct. 7, 1950	May 23, 1951	N/A	N/A
Tibetan Revolt	Feb. 1956	Jan. 1962	N/A	N/A
Indonesian Rebellion	Dec. 1956	Dec. 1959	N/A	N/A
Vietnam War	June 1959	--	June 1959	--
Sino-Indian Border Dispute	Oct. 20, 1962	Nov. 22, 1962	Oct. 20, 1962	Nov. 22, 1962
Second Kashmir War	Aug. 5, 1965	Sept. 23, 1965	Aug. 5, 1965	Sept. 23, 1965
Indonesian Post-Coop Crisis	30 Sept. 1965	Dec. 1965	N/A	N/A
Indonesian Revolution	Jan. 1946	Dec. 1949	N/A	N/A
Burma	1948	1951	N/A	N/A
Laos	1959	--	N/A	N/A
Thailand	1962	--	N/A	N/A
<u>AFRICA and MIDDLE EAST</u>				
Algerian War	1 Nov. 1954	Mar. 1962	1960	Mar. 1962
Angolan Civil War	Feb. 4, 1961	July 1964	N/A	N/A
Congo Rebellion	June 1960	Aug. 1965	N/A	N/A
Kurdish Rebellion (Iraq)	Mar. 1961	1965	N/A	N/A
Israel-Arab States	1947	1949	N/A	N/A
Kenya	1952	1955	N/A	N/A
Suez (Sihai Campaign)	1956	1956	N/A	N/A

* N/A means Not Applicable because this is not a Type A War.

(TABLE 3 Continued)

Name of War	Start Date	End Date	Start Date	End Date
<u>AFRICA and MIDDLE EAST</u> (Cont.)				
Burundi	1959	964	N/A	N/A
<u>EUROPE</u>				
Hungarian Revolt	1956	1956	N/A	N/A
Greek Civil War	June 1, 46	Oct. 1949	N/A	N/A
<u>LATIN AMERICA</u>				
Columbian Insurgency	Apr. 9, 48	1965	N/A	N/A
Dominican Republic	Apr. 24, 65	Jan. 66	N/A	N/A
Paraguay Revolution	Mar. 7, 47	Sept. 47	N/A	N/A
Bolivian Revolt	Apr. 9, 52	Jan. 53	N/A	N/A
Cuban Revolution	Nov. 20, 56	Jan. 59	N/A	N/A
Venezuelan Insurgency	Jan. 1, 58	1965	N/A	N/A

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