

The Future of Deterrence In U. S. Strategy

AD 687071

Bernard Brodie
Editor

Prepared for
U. S. Air Force

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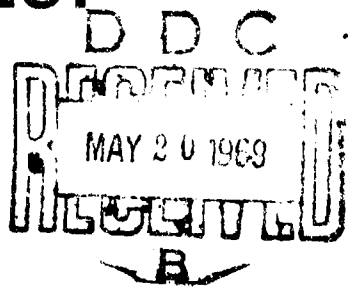
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Bernard Brodie
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The United States Air Force
AF-49(638)-1772

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1968

FOREWORD

The following work was done by means of a contract with the United States Air Force, which, however, limited its control to specifying the subject matter for research and study. The Air Force allowed us complete freedom to organize the project according to our own lights, and to pursue our research and writing without restriction.

We wish therefore to express our gratitude to that service, and specifically to the officers concerned, for their generosity in supporting in a fashion so appropriate to scholarship a project of direct interest not only to them but also to all students of international security. The Air Force is naturally by the same circumstances absolved from any responsibility for points of view expressed in this study, and for any specific statements of the several authors.

The group of persons who contributed significantly to the work included, besides those specifically indicated as authors of the several pieces, the following: Messrs. John Huetter, Jacek Kugler, Michael O'Hara, Stanley Rosen and Hasmukhrai Patel, all of whom are graduate students at UCLA, and Professor John C. Ries of the Department of Political Science. We should like also and especially to thank Miss Nina Bertelsen for her dedicated and skilled supervision of the numerous problems involved in coordinating the study, and Mrs. Chitra Kallay for her careful and highly competent editing of the final product.

Los Angeles, California
May 20, 1968

Bernard Brodie

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INTRODUCTION

CONCEPTS OF DETERRENCE SINCE 1945

Introduction

Inasmuch as the idea of deterrence is as old as war itself, the threat of force always having coexisted with the actual use of it, one would have expected the idea of nuclear deterrence to take hold as soon as the bomb itself made its appearance in 1945. There can be no doubt that it did in the minds of those chiefly responsible for our national security policy; but we must recall also that the concept of the nuclear weapon as a deterrent had to contend with the overwhelming dread with which it was received, which in turn gave rise to some unusual and even novel efforts to do away somehow with the bomb itself as a weapon in national arsenals. These efforts reached their climax in the famous Baruch proposals presented to the United Nations June 14, 1946, and need not be further described here.

The net result was a certain ambiguity in national policy following 1945. We know that the efforts on the part of the U.S. government to secure adoption of the Baruch proposals were sincere. The continuing construction of nuclear weapons, which was intended as a re-insurance against diplomatic failure with those proposals, for that and other reasons proceeded at a low level. The level of production in fact remained remarkably low, at least by present standards, until the outbreak of the Korean War in June of 1950.

However, we see in our national leaders at the outset, a fairly clear conception of what deterrence will be about. Secretary of Defense James V. Forrestal's position was that "...those that hate war must have the power to prevent it."¹ President Harry S. Truman for his part recorded in his diary that in a world that appeared so close to war as it did to him in 1946, "the atom's power in the wrong hands can spell disaster. In the right hands, however, it can be used as an overriding influence against aggression and reckless war."² Against these ideas as a background, we have to consider as a mark of confusion rather than of calculated deception the following remark of Secretary of State James E. Byrnes that "the suggestion that we are using the atomic bomb as a diplomatic or military threat against any nation is not only untrue in fact but it is a wholly unwarranted reflection upon the American government and people."

The ideas which Secretary of War Henry Stimson laid before President Franklin D. Roosevelt in the last month of the latter's life--that

¹ Walter Millis, ed., The Forrestal Diaries (New York, 1951), p. 45.

² Harry S. Truman, Memoirs, Vol. II. Years of Trial and Hope (Garden City, New York, 1956), p. 312.

international control of nuclear weapons had to be based on the interchange of scientific information even with the Soviet Union³--met some early opposition from Winston Churchill,⁴ and finally died as a basis for policy before the end of 1946 with the growing evidence of the animosity of the Soviet Union. Even before World War II ended, a telegram in April 1945 from Ambassador Averell Harriman that warned against excessive optimism concerning the Soviet Union made a deep impact on Washington.⁵ The subsequent reports of Mr. George F. Kennan, who, as Harriman's chief aide in Moscow in the latter days of the war, had chief responsibility for drafting of the above-mentioned telegram, were not such as to encourage the idea of cooperation with the Soviet Union concerning atomic energy.

Meanwhile, there also began to appear some writings by various nuclear scientists and military and political analysts. The first significant book to be published was by a group of atomic scientists, its message being pretty much summarized in its title: One World or None, edited by Dexter Masters and Katherine Way.⁶ These scientists in general stressed the impossibility of defense against nuclear weapons, and accordingly urged world government as the only solution. Appearing shortly thereafter was a small volume of essays by a group of Yale University professors entitled The Absolute Weapon.⁷ The chapters by the other co-authors, Frederick S. Dunn, Arnold Wolfers, William T. R. Fox, and Percy Corbett, dealt in the main with non-deterrence matters, but the two chapters by Bernard Brodie, who was also the editor of the whole volume, constituted the first general analysis of nuclear deterrence. Among Brodie's argument were the following: (a) that resort to conflict, or the use of atomic bombs in any conflict, becomes less likely if both sides have them from the beginning in ample numbers; (b) that the effectiveness of nuclear retaliation as a deterrent depends upon guaranteeing the security of the retaliatory forces; (c) that any general war [though the finer distinctions between general and limited war were to come later] would henceforth have to be fought with military forces-in-being at the outset; (d) that anxiety specifically about atomic war would be a major factor in international crises; and (e) that while the atomic bomb obviously put great premium on surprise attack,

³Richard G. Hewlett and Oscar E. Anderson, Jr., The New World, 1939/1946. Volume I. A History of the United States Atomic Energy Commission (University Park, Penn.), 1962, p. 340.

⁴Ibid., p. 384.

⁵Samuel P. Huntington, The Common Defense: Strategic Programs in National Politics (New York, 1961), pp. 33-34.

⁶Dexter Masters and Katharine Way, One World or None, New York: McGraw-Hill, 1946.

⁷Bernard Brodie (ed.), The Absolute Weapon: Atomic Power and World Order, New York: Harcourt, Brace, & Co., 1946.

such attack, including preventive war, could not be considered as an acceptably strategy for the United States.

These and other pertinent arguments presented in the book are commonplace enough now, but one of the reviewers of the Brodie book, Chancellor Robert M. Hutchins of the University of Chicago, expressed his outrage at the whole conception of using nuclear weapons for deterrence.⁸ In his opinion world government and vigorous international control of nuclear weapons was the only solution.

The Later Truman Years

The four outstanding strategic facts in the world (towards the end of the first Truman Administration) were as follows:

- 1) the predominance of Russian land power in Europe and Asia;
- 2) the predominance of American sea power;
- 3) United States exclusive possession of the atomic bomb, combined also with predominance in means of the delivery through large bombers;
- 4) general American productive capacity--probably irrelevant within the time span of a general nuclear war but of crucial importance at all other times.

In 1948 Secretary Forrestal wrote the President: "Throughout my trip in Europe I was increasingly impressed by the fact that the only balance that we have against the overwhelming manpower of the Russians, and therefore the chief deterrent to war, is the threat of immediate retaliation with the atomic bomb."⁹ A year earlier, as he also told the President, he had had "substantial misgivings" about the ability of long-range bombers to get through to their targets in the Russian homeland, but these misgivings had now been erased.

It must be stressed that the notions of the time concerning deterrence were somewhat distinct from those concerning appropriate methods for fighting a war should it come. The latter issue involved questions of the adequacy for victory of each of the various possible methods. The Air Force diverged from the Army and Navy primarily in being ready to accord a greater degree of decisiveness to the initial air power stage of any future general war. The battle of doctrines later became tense, and was to manifest itself above all in the B-36 controversy of 1949. There was inevitably some confusion between the decisiveness and the deterrence issues--which were and have remained logically related but by

⁸ Robert M. Hutchins, New York Times, June 9, 1946, p. 6.

⁹ See Warner Schilling, Paul Y. Hammond, and Glenn H. Snyder, Strategy, Politics and Defense Budgets, New York, 1962.

no means identical. A force or capability which is not necessarily decisive in the sense of giving assurance of victory may nevertheless be a very powerful deterrent.

Some of this confusion or ambiguity was manifested in our conduct of the Berlin blockade. Despite being markedly inferior in available surface forces in Europe, we were ready to stand up to the Russians to the extent of insisting upon our rights of occupation and proceeding to institute the air lift. By the same token, however, President Truman was not confident enough of the deterrent value of our nuclear monopoly to be willing to challenge the Russians by sending an armed convoy down the autobahn from Helmstedt to Berlin. It was a matter partly of his not wishing to push deterrence too far, but that consideration seemed also to be overlaid with the feeling that if deterrence failed we might not be able to win--our nuclear stockpile still being very small in 1948. Naturally, both these feelings were affected profoundly by our extreme reluctance to get into an inevitably devastating war with the Soviet Union, even if we could be utterly confident of victory in the end.

There were also other indications of our reluctance to rely too far upon the deterrence value of our nuclear monopoly. Referring to the measures being taken at the end of 1948 which resulted in the creation of NATO in the following year, the British sent a telegram observing that "the Russians might be so provoked by the formation of [such a] defense organization that they would resort to rash measures and plunge the world into war."¹⁰ The same kind of misgivings concerning Russian readiness to attack in order to forestall our building up our military forces was later to characterize the much greater American build-up triggered by the onset of the Korean War in June 1950.

Naturally, there were a good number of nuances of relevant convictions among senior members of our government, marked by a minimum of effort to make explicit either the common beliefs or the distinctive nuances. For example, Secretary of Defense Robert A. Lovett, reporting on Russian policy in 1948, observed that the position of Russia was "of a dual nature at the moment: (1) constant probing to find out the solidity of our intent; and (2) a reflection of their own fear of a preventive or aggressive war on our part."¹¹ This rather sophisticated view called attention to the Soviet penchant for testing the area in which they might be free to maneuver without triggering our deterrent action, while at the same time it suggested that our deterrent capability could also stimulate on the other side fear of our waging a preventive war.

Nevertheless, by 1948 we were almost entirely committed as a nation to heavy reliance upon deterrence through nuclear weapons, which two

¹⁰ See Warner Schilling, Paul Y. Hammond, and Glenn H. Snyder, Strategy, Politics and Defense Budgets, New York, 1962, p. 144.

¹¹ Ibid., p. 148.

years earlier we had undertaken to banish from international affairs. Yet there were already concerns arising, reflected in the so-called "Finletter Report," that once the Soviet Union acquired a nuclear arsenal of its own, "the strategy of monopoly would be in ruins." In 1949, the Navy under the leadership of Admiral Arthur W. Radford launched its attack on the deterrence strategy, as implemented especially in the B-36. In the heat of the argument, Radford went so far as to deny the very effectiveness of a deterrence. "The threat of instant retaliation," he said, "will not prevent it [war] and may even invite it."¹² At about the same time, however, Winston Churchill was saying from England: "It is certain that Europe would have been communized and London under bombardment some time ago but for the deterrent of the atomic bomb in the hands of the United States." This comment may indeed have helped to elicit among the United States Joint Chiefs of Staff an agreement to rely upon "atomic bombing as a deterrent to war..."¹³

However, it was also in October, 1949, that the Soviet Union exploded its first nuclear weapon. In the following year Mr. Hanson Baldwin of the New York Times was already referring to deterrence in the past tense. "There is no doubt," he said, "that the A-bomb was a real deterrent to Russian armed aggression during the series of crises in the past year. It is quite clear that our A-bombs will have much less effect in this respect now that our atomic monopoly is broken."¹⁴ Baldwin also complained about the apathy that existed towards the building of subterranean structures, "with no thought given to the realities of the atomic age." His remarks reflected no great confidence in nuclear deterrence once the other side has the means of replying in kind, and he seemed little interested in the relative dimensions of the opposing nuclear forces. On the other hand, senior military officers like Generals George C. Marshall and Omar Bradley were still talking about the "conclusiveness of the land battle" in any general war. However a war might begin, these people argued, it must end in the mud on the ground.

The year 1950 was also that of the formulation of the famous document NSC-68, which while relying fundamentally on nuclear deterrence, nevertheless pointed to the need also for building up other kinds of military strength--as well as related political, economic, and psychological elements--within the United States and among its allies.

It was with the onset of the Korean War that nuclear deterrence received its first serious test. The Berlin Blockade had not truly

¹² See Gen. Maxwell D. Taylor, The Uncertain Trumpet (New York, 1960), pp. 63-64, 74.

¹³ Unification and Strategy, H. Doc. 600/HR CAS/81C2/1950, p. 26.

¹⁴ Hanson W. Baldwin, "Strategy for Two Atomic Worlds," Foreign Affairs, Vol. 28 (April, 1950), 390-391.

been such a test, because neither side showed any inclination really to challenge the other. Today it seems most unlikely that the Russians were prepared to use force to keep us from ground access to Western Berlin. They clearly were not inclined to interfere with our air lift, even to the extent of jamming our GCA (ground controlled approach) apparatus. Nor can the original North Korean attack in June of 1950 be deemed a real failure of deterrence, because some of our leading military and political figures, including Secretary of State Dean Acheson, had some months earlier openly avowed that we considered Korea to be outside our "defense perimeter." The intervention of Communist China against American forces in November and December of 1950 also leads to ambivalent conclusions, because it followed five months of intense Chinese observation of a war in which the United States refrained from using any kind of nuclear weapons. There can be no doubt that this restraint on the part of the United States had much to do with the Chinese decision. Nevertheless, the Chinese could not be certain that our restraint with nuclear weapons, practiced against the North Koreans, would continue even if they entered the war--especially if we suffered a large defeat at their hands, as we initially did. Even so, they intervened in force. Quite possibly this lack of caution was due in part to their failure at that time to appreciate fully the power of nuclear weapons.

If the United States had used tactical nuclear weapons against Chinese forces on that occasion, it would very likely have broadened the scope for nuclear deterrence in the future. There were several reasons why we did not use them, above all the fact that our total stockpile for nuclear weapons was still small, certainly by present standards, and therefore allowed only a small margin for use of weapons tactically. Along with this constraint went also a conviction in the higher reaches of our political and military leadership that the attack in Korea was simple a ruse de guerre to get us fully committed to Korea while the Russians prepared an all-out attack in Europe. That such an attack was imminent commanded enough conviction to make certain that our small fund of nuclear weapons would not be "wasted" in a far-off and relatively, indecisive area.

This is not to argue that atomic bombs would surely have been used in Korea if we had been free of any such concern about Europe. Nevertheless, that concern helped produce what until that time had been an unpredictable application of nuclear restraint on our part--and incidentally a restraint which had fairly costly military consequences. Surely the defeats and the serious losses we suffered in the weeks immediately following the Chinese intervention could have been greatly diminished or, more likely, even avoided had we been prepared to use nuclear weapons tactically in Korea. Communist China was then closely allied to the Soviet Union, but the latter at that time could not have had any appreciable stockpile of nuclear weapons.

It must, however, also be added that military doctrine had then hardly begun to grapple with the question how nuclear weapons might be used tactically. There was, for example, a conviction in the higher

ranks of the Air Force--apparently based on the experience of Hiroshima, where a bridge quite close to ground zero had remained intact--that nuclear weapons were practically useless against bridges. This was later shown to be completely in error; the Hiroshima bridge was after all 2,000 feet below the point of burst, and, like all bridges, was built to sustain loads bearing from above. A key bridge over the River Hahn, which could undoubtedly have been destroyed in one attack by a single nuclear weapon exploding reasonably close to it, stood up against three weeks of repeated bombings with conventional bombs while Chinese troops and supplies continued to pour over it.

The Air Force was, however, particularly concerned about saving the limited stockpile for the "real enemy" and for uses that were clearly strategic. It is difficult now to determine how much that concern affected the depreciatory appraisal of the tactical value of nuclear weapons. The Army was clearly more willing to consider tactical use of nuclear weapons in Korea, but did not seriously push the matter--perhaps because of its awareness of the political restraints. It may be recalled that when President Truman in answer to a question in a press conference had remarked that of course the United States was weighing the use of tactical nuclear weapons in Korea, British Prime Minister Clement Atlee came hurrying to Washington to persuade the President against such considerations.

The thinking and theorizing about limited war that began early in 1952 while the Korean War was still going on were precipitated less by the war itself than by the knowledge among some specialists that a thermonuclear weapon was going to be fired in the tests of the following November--and that it would almost certainly be successful. Nevertheless, that thinking, however provoked, received an enormous boost from the experience of the Korean War, which began to be referred to as an example of modern limited war. From that time on nuclear deterrence, hitherto always vaguely considered to be somehow imperfect in its reliability, was more sharply conceived to be a restraint upon the enemy's resorting to general war but not necessarily a restraint upon limited and local aggression. At the same time the idea began swiftly to take hold that deterrence against local aggression required special allocations of forces available for the specific area.

The question remained wide open whether local deterrence could also be based on nuclear weapons used tactically and locally, or whether it required large additional conventional forces. It should be observed that the Korean War resulted in a great acceleration of U. S. production of nuclear weapons, which up to that time had been restricted by consideration of such marginal and really trivial issues as raw materials costs. The rate of production of nuclear weapons at the end of the Korean War was at least three times greater than that at the beginning. It was obvious that a substantial proportion of the newer weapons being produced could be allocated to tactical uses, besides which there was a concurrent development towards varying the family of weapons both with respect to yield and also to gross weight. The latter development

greatly broadened the array of military aircraft capable of carrying nuclear weapons without excessive cost in range. Nuclear warheads were also being designed for artillery shells, and for the shorter-ranged missiles soon to become available. It was apparent that we were moving into an era in which one group of nuclear weapons would be clearly pertinent to strategic targets and another group would be as clearly available only for tactical or local use, with others in between being available for one use or the other.

The Early Eisenhower Years

However, President Dwight D. Eisenhower, whose administration began in January 1953, remained determined throughout his eight years in office that the defense budget must be kept within bounds (which he later defined as representing a ceiling of \$38 billion), and that this could be accomplished only through heavier reliance upon strategic nuclear deterrence. It was one of the purposes of the Dulles "massive retaliation" speech of January 12, 1954 to establish this fact. Admiral Radford, now chairman of the Joint Chiefs, had meanwhile undergone a complete conversion to a point of view which accorded fully with that of the administration. The resulting strategic posture was called the "New Look." Actually, the "New Look" was not as new as all that. When Mr. Kennan had suggested back in 1949 that we should have two and possibly more fully mechanized ground divisions available for any emergencies for which an atomic holocaust would be an excessive answer, the reply came through from the Joint Chiefs of Staff that "economy puts such ideas out of the question."¹⁵

The Korean War, which finally ended with an armistice in mid-1953, marked an inevitable turning point in the relations between the United States and what was then known as the Communist Bloc. Crises prior to that war, including the Berlin blockade, had never proceeded to the point of actual fighting between American and Communist forces, even on a small scale. The Korean War was, on the other hand, among the catalog of United States wars a major struggle. President Truman had said in 1951, "The attack upon Korea makes it plain beyond all doubt that Communism has passed beyond the use of subversion to conquer independent nations and will use armed invasion and war." His Secretary of Defense, Mr. Louis Johnson, observed: "The real significance of North Korean aggression is this evidence that even at the risk of starting a third world war, Communism is willing to resort to armed aggression, whenever it believes it can win."¹⁶

Nevertheless, our focus remained fixed on the Soviet Union rather

¹⁵ See Walter Millis, Harvey C. Mansfield, and Harold Stein, Arms and the State: Civil-Military Elements in National Policy (New York, 1958).

¹⁶ Statement submitted to Senate Committee on Appropriations, Hearings, Supplemental Appropriations for 1951, 81 Cong., 2 Sess., p. 272.

than on Red China, which had been our major opponent in that war. General Omar Bradley, chairman of the Joint Chiefs of Staff, was reflecting the views of the Joint Chiefs when he stated in 1951 that Red China was not the major enemy seeking to dominate the world; thus a war with her would be "the wrong war, at the wrong place, at the wrong time, and with the wrong enemy." To him the effort to end the war in Korea, even by considerable compromise, was good strategy, not appeasement. "Refusing to enlarge the quarrel to the point where our global capabilities are diminished is certainly not appeasement but militarily sound course of action under the present circumstances."¹⁷ The prevailing reasons for these views are twofold: first, the Communist Bloc seemed still to be absolutely unified and dominated from Moscow, and second, Communist China had no nuclear weapons.

Meanwhile, even before the Korean War had ended, the U. S. Air Force had settled into the kind of strategic thinking that was to prevail throughout the decade. As General Muir Stephen Fairchild put it in 1951: "Air Force thought and action is oriented about the concept that our primary effort must be directed towards providing the means of surviving such an [initial] atomic phase, not only without disaster, but so that our relative strength would be such that we may mobilize and bring to bear any force that may be required to assure victory."¹⁸ President Truman's Secretary of the Air Force, Thomas K. Finletter, had stated in the following year that the "primary mission of the SAC, in the event of hostilities, is to attack and destroy the enemy's ability to wage war. This task is of primary importance, since our defense system, regardless of its excellence, cannot possibly stop all enemy bombers once they are air borne. Long-range atomic counterattack by SAC must therefore provide a principle of protecting American cities and productive centers."¹⁹ It should be noticed that the Secretary's view implied what later came to be known as pre-emptive attack--as opposed to the idea of defending the retaliatory force by defensive methods. General Fairchild's remarks are somewhat ambiguous in that regard, but they seem to suggest recognition of a vulnerability problem, probably intended to be handled by relying on getting into the air before the attack arrived. But deterrence seems in these views to be something at best tentative and unreliable.

The early fifties were also the period of the establishment of the North Atlantic Treaty Organization, the basic charter of which had been signed in October, 1949. The formation of the Alliance and the commitment of forces necessary to fulfill its function brought to the fore the

¹⁷ See Bartın J. Bernstein and Allen J. Matusow (eds.), The Truman Administration: A Documentary History (New York, 1966), p. 480.

¹⁸ House Subcommittee on Appropriations, Hearings, Department of Defense Appropriations for 1952, p. 1219.

¹⁹ Thomas K. Finletter, Semi-Annual Report of the Secretary of Defense, January, June, 1952, p. 205.

various contemporary conceptions of strategy in the United States and elsewhere, though American ideas about the common defense were to remain for a long time dominant over those of the other Allies.

It is undoubtedly their relatively relaxed assessment--far more relaxed than ours during this period--of the danger of Soviet military aggression that helped the Europeans to rely more confidently than we did on the deterrence value of our strategic nuclear forces. In the United States, Secretary of State Dean Acheson, who held that post through most of the Korean War and who would be one of the first to reply publicly to the "massive retaliation" speech of his Republican successor, was already in 1951 making a strong plea for what were later to be called "conventional forces." According to Acheson, the ground troops would be necessary to deter limited or "disguised" aggression, "and would also serve to hold the bases and to detain aggression long enough to enable the retaliation through air power to take its effect."²⁰ In Acheson's remarks we notice again the argument that conventional forces might still be necessary for lesser or "disguised" forms of aggression, even if the nuclear strategic forces were accorded full reliability for deterring wars on a larger scale.

In the final year of the Truman administration--which was a period in which the Korean War was still going on, though negotiations to end it had begun early in 1951--the Administration proposed as a permanent peacetime force for the future an Army expanded from eighteen to twenty-one divisions; a Navy from 400 combat vessels to 408; and an Air Force from 90 wings to 147 by mid-1954.²¹ It can thus be seen that the strategy to which the Kennedy administration would commit itself some eight years later was really a resumption of that to which President Truman had already been tending before his exit from office.

The assumption of the Presidency by Eisenhower meant an abrupt change in the direction towards which United States strategy and military build-up had been heading. Where President Truman had projected a military budget of \$41 billion for the next fiscal year, President Eisenhower decided that this must be dropped to \$36 billion.

However, Secretary Dulles emphasized in his massive-retaliation speech not only the deterrent value of the strategic striking forces but also of the creation of NATO. He called attention besides to "the internal pressures and discontents in the Soviet camp."²² President

²⁰ Robert Endicott Osgood, NATO: The Entangling Alliance (Chicago, 1962), pp. 79-80.

²¹ See House Committee on Appropriations, Hearings, Department of Defense Appropriations for 1953, pp. 85, 88, 89, 195-96.

²² Department of State, Bulletin, Vol. 30, No. 758, Jan. 4, 1954, p. 4.

Eisenhower in his State of the Union message in January 1954 also underlined the fact that the United States would "maintain a massive capability to strike back." He then listed the six points which underlay United States defense planning: 1) "We are determined to use atomic power to serve peace, but also to use our large and growing arsenal of weapons against an aggressor. We propose sharing with our allies a certain knowledge of the tactical use of such weapons. 2) The integration of the new weapons systems into military planning creates relationships that emphasize air power and permit economies in the use of manpower. 3) These new concepts require maximum mobility... 4) Our national defense must rest on the most economical and mobile use of manpower. 5) The mobilization base must be maintained, and 6) There must be a strengthened plan of air defense including early warning, interceptors, and guided missile squadrons."²³

Thus was the "New Look" introduced, almost entirely on grounds of the need to economize in defense spending. As Secretary Dulles had put it, "the basic decision was to depend primarily upon a great capacity to retaliate, instantly, by means and at places of our choosing...As a result it is now possible to get, and share, more basic security at lesser cost."²⁴

In response to critics of his January 1954 speech, Secretary Dulles in April 1954 in an article in Foreign Affairs emphasized continued U. S. reliance on collective defense. "The cornerstone of security for the free nations must be a collective system of defense," he said. "Without them, [our allies] our striking power will lose much of its deterrent power. With them, strategic air power becomes the supreme deterrent."²⁵ He insisted, however, that "strategic air bombing capabilities must take first priority in a military budget program."²⁶ He then said, "The result would be a workable policy of deterrence. For a would-be aggressor will hesitate to commit aggression if he knows in advance that he not only exposes these particular forces which he chooses to use for his aggression, but also deprives his other assets of sanctuary status. That does not mean turning every local war into a world war. It does not mean that if there is a communist attack somewhere in Asia atom or hydrogen bombs will necessarily be dropped on the great industries of China and Russia."²⁷

Sharp dissent was expressed in military circles. General Omar

²³Department of State, Bulletin, Vol. 30, No. 758, Jan. 18, 1954, pp. 75-79.

²⁴John Foster Dulles, Speech before the Council on Foreign Relations, in New York Times, Jan. 13, 1954, p. 2.

²⁵John Foster Dulles, "Policy for Security and Peace," Foreign Affairs, Vol. 32 (April, 1954), pp. 355-356.

²⁶Ibid., p. 358.

²⁷Ibid., p. 359.

Bradley, then Chairman of the Joint Chiefs, left no doubt that he and the other Joint Chiefs were quite unhappy about the New Look. He saw no change in Soviet hostile attitudes, or any diminution in their military capabilities.²⁸ General Matthew Ridgway, then Army Chief of Staff, complained that the cuts were jeopardizing the security of the country. "The United States army," he said, "must be able to meet the requirement of a general war, peripheral of localized wars, atomic or non-atomic. By decreasing our ground forces we decrease our ability to respond in those cases."²⁹ General Ridgway had been our supreme commander in the Far East, replacing General MacArthur, during the last stages of the war in Korea. It was obvious that that war had made a deep impression upon him. His statement is noteworthy because of his distinguishing among the several kinds of wars that we might have to fight in the future, with the implication that each kind required a special form of military power.

A similar kind of reasoning was apparent in the statement of Rear Admiral John D. Hayes in September, 1954: "The horror of a probable use of tactical nuclear weapons dictates the need for a future strategy and a system of tactics applicable for limited war." He went on to develop a concept of "peripheral strategy," involving probing the enemy's "outside points for weaknesses," which would involve sea power and land forces.³⁰

In the civilian part of the defense community, opinion was divided about the credibility of our deterrence. Some, like Mr. Finletter, basically accepted the massive retaliation concept but felt that insufficient resources were being put into strategic air power to make that policy effective.³¹ He held the role of ground forces to be that of providing hostages and of shoring up the morale of the allies. He emphasized also the need for alliances to secure bases to make "preventive air power" effective. By "preventive air power" he undoubtedly meant deterrence. He felt confident about the adequacy of "the deterrent" until 1956, when the Soviet Union would have the ability to destroy "our ability to hit back."³² The answer to that new capability, in his opinion, would have to be a great increase in our own strategic air forces.

²⁸House Committee on Appropriations, Hearings, Departments of Defense Appropriations for 1954, pp. 473, 478-79, 480.

²⁹House Committee on Armed Services, Briefings on National Defense, (No. 3) Jan. 26, 1955, p. 348.

³⁰Rear Admiral John D. Hayes, "Peripheral Strategy, Littoral Tactics, Limited War," 6 Army, Sept. 1954.

³¹Thomas K. Finletter, Power and Policy: United States Foreign Policy and Military Power in the Hydrogen Age, New York: Harcourt-Brace, 1954.

³²Ibid., pp. 3-4.

Various other civilians, including J. Robert Oppenheimer, Lloyd Berkner, Klaus Knorr, and Karl Kaysen, spoke during this time, i.e., 1953-54, of the need to defend our retaliatory force against surprise attack.

Bernard Brodie, who had already called attention to the same problem in 1946, wrote: "Our first and most pressing military business is therefore to reduce the vulnerability of our strategic striking forces. Such a vulnerable strategic air force, one that the enemy can neutralize by surprise attack--is not merely no deterrent, it positively invites attack."³³ Concerning future deterrent needs, Brodie in January 1954 also advocated the development of "special delivery capabilities" [i.e., missiles] for H-bombs targeted against cities.³⁴

There was also a concurrent movement for building up conventional forces for coping with limited or local aggressions. Mr. Adlai Stevenson, in joining the critics of Dulles' massive retaliation speech, argued: "We need more conventional ground forces instead of their reduction, in order to respond in local aggressions of the Korean type."³⁵ Similarly, Dr. Wm. W. Kauffmann: "In order to reduce our dangerous dependence on massive retaliation and the instrumentality of SAC, we must strengthen the arms of the other services. The most obvious need is in the ground forces."³⁶ Brodie pointed out that to fight limited wars with limited objectives requires strengthening our conventional capabilities.³⁷ Brodie, however, remained concerned with developing the tactical use of nuclear weapons.³⁸ Conventional and nuclear tactical capabilities were, in his opinion, both necessary.

The sense of the Dulles view of 1954 was later summarized by President Eisenhower, in his autobiography, in the following homely language: "I saw no sense in wasting man power in costly small wars that could not achieve decisive results under the political-military circumstances then existing. We should refuse to permit our adversary to enjoy a sanctuary;

³³Bernard Brodie, "Unlimited Weapons and Limited War," Reporter, Vol. 11, (Nov. 18, 1954), pp. 16-21.

³⁴Bernard Brodie, "Nuclear Weapons: Strategic or Tactical," Foreign Affairs, Vol. 32 (Jan. 1954), pp. 215-229.

³⁵Adlai Stevenson, New Republic, Vol. 130 (March 29, 1954), p. 13 from an address at Miami, March 6, 1954.

³⁶William W. Kaufmann, The Requirements of Deterrence, Princeton, New Jersey, 1954.

³⁷Bernard Brodie, Strategy in a Missile Age, (Princeton, New Jersey, 1965), chap. 9.

³⁸See Bernard Brodie, "Nuclear Weapons: Strategic or Tactical," Foreign Affairs, Vol. 32, Jan. 1954.

we should not allow him to blackmail us into placing limitations as to the type of weapons we would employ. The Communists would have to be made to realize that, should they be guilty of major aggression, we should strike with means of our own choosing at the heads of the Communist power."³⁹

This is indeed a robust position, and for a democracy, at least, more suitable for a monopoly possession of nuclear weapons than for the situation which was then already developing. Though the first Soviet fission bomb had followed the first American fission bomb by something over four years, the first Soviet thermonuclear device followed that of the United States by a little over eight months. By the mid-50s, the Soviet Union still could not be credited with having a large nuclear stockpile, but she was clearly headed in that direction. Strategic thinking, ideally, must move not merely abreast of but hopefully in advance of changing circumstances.

According to General Maxwell Taylor, the N.S.C. review of the New Look of January, 1955 reflected recognition of a condition of fairly stable nuclear deterrence, but also of a need for greater mobility and flexibility in U.S. military capabilities.⁴⁰ Professor Glen Snyder holds that as early as 1955 massive retaliation was being amended to mean some sort of "measured response." Awareness of the issue, according to him, came with respect to the Quemoy and Matsu crisis of 1955.⁴¹ Undergoing development also was the idea that strategic retaliation, if used at all, might itself be limited and controlled. Professor Klaus Knorr, who later edited together with Dr. Thornton Read a book on that subject, attributed the notion of "limited strategic retaliation" originally to the fertile imagination of Dr. Leo Szilard.⁴² Related to that idea, but distinct from it, was the notion of "limited" or "finite" deterrence--the gist of which was that deterrence of general war was now becoming stable enough to permit economies in the area of strategic forces and hence a greater building up of tactical forces. This view was for a while to be much favored by the Navy.

Meanwhile the advancing size and development for specialized uses for the American nuclear stockpile was promoting further thinking about the use of tactical nuclear weapons. By October 1957, Secretary Dulles was saying: "In the future it may thus be feasible to place less reliance upon deterrence of vast retaliatory power. It may be possible

³⁹Dwight David Eisenhower, Mandate for Change, 1953-1956, (Garden City, New York, 1963), p. 454.

⁴⁰Taylor, op. cit., p. 26.

⁴¹Glenn H. Snyder, Deterrence and Deterrence and Defense: Toward a Theory of National Security, (Princeton, New Jersey, 1961), p. 145.

⁴²Klaus Knorr and Thornton Read, eds., Limited Strategic War, New York, Praeger, 1962.

to defend countries by nuclear weapons so mobile, or so placed, as to make invasion with conventional forces a hazardous attempt."⁴³

Also in the mid-50s, we see the Administration finally showing some awareness of the vulnerability problem affecting our retaliatory forces. In his autobiography, President Eisenhower indicates that this threat motivated him to support the Navy's Polaris submarine program.⁴⁴ There was also developing a more general interest in air defense. Eisenhower in a 1956 speech said that "sixty cents of every defense dollar was going to build up air power and air defenses." At the same time General Alfred M. Gruenther, then SACEUR, was advocating an integrated defense for NATO.

In the European theater a philosophy of distinctive characteristics was developing with respect to the overall defense of the NATO countries. For one thing, defense of the western European countries tended always to be conceived of in terms of a general war, rather than a limited one. Although the Korean War had involved us first with the North Koreans and then with Communist China, which was decidedly the junior partner of the still-existing Soviet bloc, a war in Europe could hardly be fought through proxies, and could therefore hardly be limited. The early thinking of the NATO delegations, however, was very much influenced by views that can only be described as somewhat old-fashioned, if not pre-atomic. It was a time when both British and American army generals were talking about "broken-backed war," meaning war that would be carried on by ground troops using conventional weapons after each side had shot its full bolt of nuclear weapons. The Lisbon Conference of 1952 had suggested as a goal towards which the organization should be working the number of 100 active divisions for the central front. It soon thereafter became clear that nothing like this number would be available, and the number was scaled down in subsequent years to a level of thirty active ground divisions, a number fated never to be reached in any real sense. One of the reasons for this revision downward was that tactical nuclear weapons were being sent to Europe, but it was also true that a version of the massive retaliation idea, which was already losing sway in the United States, was coming to the fore in European defense. In 1957 Admiral Radford spoke of the ground forces in Europe having the function of a "trip-wire."⁴⁵ At about the same time, however, General Lauris Norstad, who had succeeded General Gruenther as SACEUR, was expressing his "sword and shield" philosophy, in which he also invoked the notion of a "pause." The "trip-wire" concept had a minimal need for ground forces, but General Norstad's view of the "pause" in which strategic nuclear weapons were not to be used until after the Allied ground

⁴³ John Foster Dulles, "Challenge and Response in United States Policy," Foreign Affairs, Vol. 36, (October, 1957), pp. 25-43.

⁴⁴ Eisenhower, op. cit., p. 457.

⁴⁵ See Henry A. Kissinger, The Troubled Partnership, (New York, 1965), p. 96.

forces in Europe had had a chance to impress the attacking opponent with the resolve to defend themselves, had greater need for ground forces.⁴⁶ The shield which was to contain the presumed capability for imposing a pause for reflection on the enemy comprised primarily the allied tactical forces in Europe, and the sword of retribution was the strategic nuclear forces stationed in the United States.

Professor Henry A. Kissinger also points out that American concern with a "missile gap" prompted us to press our allies to let us station IRBMs on their soil, which in turn "established an inextricable link between the defense of Europe and the United States." Deployment rather than post-attack decision would determine U.S. response. Kissinger also notes the initial European dismay that their defense would depend primarily on nuclear weapons.⁴⁷

One must observe the existence of a good deal of plain confusion concerning when nuclear weapons might be used. IRBMs and tactical nuclear weapons were being sent to Europe, but under the strictest enjoinder that they would not be used without Presidential approval. General Norstad's concept of the pause also implied a withholding of all nuclear weapons in the first stages of battle, with resort to use of nuclear weapons remaining a high policy decision--though he was not happy to have that decision taken entirely out of his hands. On the other hand, General Maxwell Taylor in his book The Uncertain Trumpet says that the armed forces were authorized "to count on the use of atomic weapons not only from the outset of general war but also in situations short of general war when required by military considerations."⁴⁸

The situation reported by General Taylor is amply confirmed from other sources. The armed services, especially the Air Force, believed entirely the President's assurance that authorization would indeed be forthcoming in any need--partly because no assurance could be more authoritative and also because they wanted to believe it. There were some analysts who urged that this assurance be taken with caution, if for no other reason than that the President was much too busy a man really to attempt to think ahead into situations which he could not presently foresee. The fact that such caution was necessary was later to be proved by the Quemoy crisis of 1958, when the Joint Chiefs advised President Eisenhower that they did not have the capability to intervene effectively unless he authorized them to use nuclear weapons, whereupon the President directed them to desist from direct intervention. As it happened, the indirect kind adopted proved effective enough.

Underlying the changing policy of the administration were certain changing assumptions about the nature of the enemy and the kind of threat

⁴⁶General Lewis Norstad, NATO Letter, Feb. 1, 1957, pp. 27-30.

⁴⁷Kissinger, op. cit., p. 98.

⁴⁸Taylor, op. cit., p. 39.

he posed. In his memoirs Eisenhower says: "More subtle infiltration and subversion under the cloak of promises of communist aid to uncommitted countries were becoming more noticeable."⁴⁹ Admiral Radford also confirmed the belief that the threat appeared to be more one of subversion than of surprise attack. At the same time, where the administration had previously been committed to the notion of a "year of maximum danger" with respect to its planning, it now adopted the idea of a "continuing and relatively constant threat."⁵⁰

Naturally, all the developments described above proceeded in an atmosphere of fairly vigorous debate. The same kind of thinking which had caused the earlier criticisms of the massive retaliation idea continued to work against the whole of the New Look pattern. However, it is possible in retrospect to marshal a number of footnotes which would give a false conclusion concerning the weight of competent criticism at any one time. An occasional book or article might make an impression, but spread as they were over time, their total effect on the administration was bound to be light. President Eisenhower had the advantage of being a victorious former general of enormous prestige. Moreover, he could hardly be charged with favoring Army over Air Force ways of thinking. The strong reaction to the New Look could therefore hardly come before some new crisis--or the advent of a new president. As it turned out, none of the crises of the latter 50s were serious enough to involve the actual use of American arms.

Nevertheless, events taking place in the latter fifties were to have radical effects on American civil-military politics. In August 1957 the Soviet Union announced that it had successfully tested an ICBM. A few weeks later, on October 4, 1957, the previous Soviet announcement was more than substantiated by the launching of Sputnik, the first of the earth's artificial satellites. This was a rude shock for the American people, accustomed to taking for granted that they were easily ahead of the Soviet Union in everything concerning technology. The reaction from this shock was a shift in unofficial American thinking to an exaggerated degree in the opposite direction--a trend cleverly exploited by Chairman Nikita Khrushchev, who now found it most satisfactory to have his exaggerations accepted at face value.⁵¹

It was in this atmosphere that the year 1959 marked the publication of several more than usually influential works. First was the publication in January of that year of an article in Foreign Affairs by Albert Wohlstetter, titled "The Delicate Balance of Terror." Taking an idea that was by no means novel, i.e., that the American retaliatory force, then comprising exclusively bombers, was vulnerable to surprise attack,

⁴⁹ Dwight David Eisenhower, Waging Peace, (Garden City, New York, 1965), p. 230.

⁵⁰ Samuel P. Huntington, op. cit., pp. 68-69.

⁵¹ Arnold Horelick and Myron Rush, Strategic Power and Soviet Foreign Policy, (Chicago, 1966), pp. 29-31, 37.

Wohlstetter implemented this conviction with a beautifully executed piece of writing containing a remarkable array of data and marked by closely reasoned logic. He undoubtedly exaggerated the "precariousness" of the balance of power, largely because of his neglecting entirely to take into account relevant political and psychological considerations. Nevertheless, his article deserved to make the deep impression that it did. Later in the year the reports of the Gaither Committee and the Rockefeller Brothers Panel were made available to the government, and the fact that they were highly critical of current strategy was generally admitted.

At about the same time, General Maxwell Taylor's The Uncertain Trumpet was published, following that officer's resignation from the Army in protest against the Administration's defense policies. Taylor wrote in a white heat of indignation, and his book included statements like the following: "My personal conclusion is that until about 1964 the United States is likely to be at significant disadvantage against the Russians, in terms of numbers and effectiveness of long-range missiles--unless heroic measures are taken now."⁵²

In September of 1959 Brodie's Strategy in the Missile Age was published. This book summarized Brodie's work since the beginning of 1952, some of which had been published in articles but most of which had originally been classified. The book stressed the primacy of the concepts of limited war, of protection of retaliatory forces against surprise attack, and of the targeting problem in general war, especially with reference to the need for "damage limitation." Although Brodie was later to become sharply critical of some of the Kennedy strategic policies, his book was nevertheless in large measure an anticipation of the Kennedy defense philosophy as contrasted with that of Eisenhower.

Despite the mounting criticism of the Eisenhower defense policies, and the growing public fear that we had failed to keep our advantage over the Soviet Union even with respect to the central instruments of strategic attack upon which the Eisenhower strategy was based, the Administration remained fixed in its final years to more or less the budgetary limitation it had set for itself at the beginning. The defense budget for FY 1959 was set for \$39.8 billion, an increase of only \$.9 billion over the previous FY; in 1960 the defense budget was \$41 billion. Secretary of Defense Charles Wilson was quoted as saying that "this rise would hardly cover the increased cost of inflation."⁵³ In fact, in view of inflation and the rise in GNP during his administration, Eisenhower's defense budgets were relatively lower in real terms at the end than at the beginning.

As Walt Rostow put it in his book published in 1960: "In part this extremely limited budgetary reaction reflected the fact that new weapons

⁵²Taylor, op. cit., p. 131

⁵³New York Times, No. 11, 1967, p. 8.

were still in the research and development stage, incapable of large-scale production. In part, however, it reflected a willingness of the Administration to continue to accept risks with the nation's security in the interests of economy beyond those advised by any of the non-governmental groups which had examined the nation's security problem over the previous four years, and by its own military advisors."⁵⁴ Also, as Rostow argued on an earlier page: "The Administration had feared since 1953 that a full airing of the facts of the arms race would lead to an irrepressible demand for an enlarged military budget. Given the nation's image of itself in relation to the world, it is doubtful that the military position of second rank in new weaponry would have been explicitly accepted as the foreseeable end in national economy."⁵⁵

Concerning that fear of "irrepressible demand," it is otherwise difficult to understand how the Administration had kept hidden from the public for some eighteen inexplicable months the fact that in November of 1952 it had successfully detonated a thermonuclear device. That announcement was in fact not made until some ten months after it was known that the Soviet Union too had had a comparable success.

It was against this background of rising disillusionment and dissatisfaction with the strategic wisdom of the great victor of World War II that President John F. Kennedy took office in January, 1961.

The Kennedy-Johnson Administrations

By the time John F. Kennedy was inaugurated President in January 1961, ideas of limited war, especially with non-nuclear weapons, were very much in the air. The new President had been a member of the Senate Armed Services Committee, had avidly interested himself in these matters, and had read a good deal of the available writings concerning them. He came into office with some ideas firmly fixed in his mind. As his former assistant, Professor Richard E. Neustadt, has put it, one of President Kennedy's "three main purposes in office" was to get "the nuclear genie back into the bottle."⁵⁶ He also had a deep concern with nuclear "proliferation," which was connected in his thinking with the obligation to reduce our own dependence on nuclear weapons for resisting aggression. In his Secretary of Defense, Robert S. McNamara, he found both a dedicated and loyal servant and one who was also free from independent influences, more ready to fall in with the same philosophy.⁵⁷

⁵⁴Walter Rostow, The United States in the World Arena: an Essay in Recent History, (New York, 1960), p. 374.

⁵⁵Ibid., p. 368.

⁵⁶Richard E. Neustadt, "Kennedy and the Presidency: A Premature Appraisal," Political Science Quarterly, Vol. 74 (Sept. 1964), p. 325.

⁵⁷Bernard Brodie, "The McNamara Phenomenon," World Politics, Vol. 17 (July, 1964), pp. 672-686

It should be recognized, however, that he was also keenly aware of the essential requirement for a strong nuclear strategic force as a back-stop against any possibility of ultimate escalation. He was in fact determined to recapture the strategic superiority which he and others thought we had lost in the so-called "missile gap." He was also imbued with the idea, which had come to the fore in the years just preceding his inauguration, that we needed not only a strong retaliatory force but one largely invulnerable to surprise attack. Although the "missile gap" turned out to be a myth, the need for achieving greater immunity to attack was certainly critical, especially since we were entering into the age of long-range missiles. Fortunately, the ICBM lent itself much better to passive defenses, by way of the underground silo, than seemed to be the case with aircraft. Also, there were no alternative means of protection for missiles as some thought was available for aircraft, such as "air-borne alert." Unlike aircraft, missiles had to wait until the command to attack was certain, but it was also possible to protect them so that they were able to wait. At any rate, a large part of the \$8 billion boost in the defense budget which marked Kennedy's advent to the Presidency was devoted to strategic offensive capabilities, and these involved pressing ahead with missiles as replacements for bomber aircraft, and proceeding as rapidly as possible to providing underground installations for their protection--as well as providing related systems, including those having to do with early warning.

However, inasmuch as the new Administration wanted equally keenly to develop special capabilities for fighting limited wars with conventional weapons, some areas of economy had to be found unless the defense budget was to be increased by really huge proportions. An important area in which Mr. McNamara chose to find such economies was in what amounted to a decisive choice not simply for long-range missiles but also against bombers--at least with respect to those systems under development. Although even at this writing our long-range bomber force remains in being, it is of much diminished importance compared to the missile components of our retaliatory force and is surviving only with aging aircraft. Secretary McNamara's refusal to accept the XB-70 as a basic strategic bomber, allowing only two vehicles to be completed and designating these the RB-70, seems to have been an expression of this basic decision. The Secretary did maintain that the RB-70 had special shortcomings which had affected his decision, but it was nevertheless a fact that we had no other advanced bomber in a remotely comparable stage of development.

There is no doubt, however, that President Kennedy's first love was the "special forces" (as recognized by his widow, who had them given a special place at his funeral in November 1963), and all related measures having to do with pushing tactical nuclear weapons not merely into the background but so far as possible into the realm of guaranteed non-use. The Kennedy Administration was determined not only to make a sharp differentiation between limited and general war and to keep within the former category at almost all costs in the event of future confrontations, but also as far as possible to make limited war capabilities synonymous with conventional capabilities.

The last-mentioned point has sometimes been denied by persons associated with the Administration who point to the large build-up in numbers of tactical nuclear weapons in Europe during the Kennedy-Johnson administrations. However, one can also point to numerous statements during that same period, on the part of Mr. McNamara and others in the Defense Department, which alleged the need for greatly building up allied conventional forces in Europe in order to be able to withstand even a massive non-nuclear attack from the Soviet Union. Clearly there was a great deal of pressure on our allies to produce such forces, or rather to increase substantially those forces already designed for or allocated for NATO use, and to refrain from making them dependent on tactical nuclear support. The verbal attacks of leading American officials on the French nuclear program were also inspired by related considerations. There was, besides, a good deal of philosophizing about the so-called "fire-break" theory, which in effect alleged that wars could be kept limited only so long as nuclear weapons were not used.

One may say that the relevant concepts to which the new administration appeared wedded were (a) that deterrence on the tactical level must be separated from deterrence on the strategic level; (b) that the former depends on having large forces emphasizing conventional capabilities; and (c) that anything resembling a "massive retaliation" capability must be regarded not as an option but rather as a means of enforcing the limitations upon any existing conflict.

In this discussion we have now arrived into an era which is fairly contemporaneous, which is to say one which need not be recalled in detail to contemporary readers. The Johnson Administration has thus far been in all relevant respects simply a continuation of the Kennedy Administration, largely because of the continuance in office until 1968 of Secretary of Defense Robert S. McNamara.

However, before we leave the historical record, we should note that the intellectual readiness of the Kennedy Administration to separate limited from general war helped bring President Kennedy and his entourage to face up to the great confrontation of the Cuban missile crisis of October 1962, which was a resounding success. On the other hand, there is also no question that it helped to get us committed to Vietnam to the degree that we are committed at this writing, which it may be too early to categorize as a misfortune but which appears to leave little room for optimism about the ultimate evaluation of the decision. It will certainly be relevant to subsequent chapters to consider both why the Cuban affair was such a success and why the Vietnam involvement has already clearly uncovered numerous critical miscalculations.

Chapter I

THE ALLIANCE ENVIRONMENT

by

Klaus Knorr

I. Introduction

Conjecture about the future alliance environment of the United States will benefit from an understanding of past alliance relationships and their changes, the purposes which alliances serve in American foreign policy, and the basic nature of military alliances.

A. The Historical Trend

As the historical section of Introduction demonstrated in detail, the expansive resort by the United States to peacetime alliances after World War II--a sharp break with prewar practice--followed from the image of a hostile opponent environment centered in the USSR, the perception of a vital American interest in containing Soviet aggression, and an assumption about the nature of any military conflict that put a high premium on strong defensive forces in the areas most vulnerable to a possible Soviet thrust. With this eager embrace of alliances went an image of allies whose interests were essentially identical or complementary to those of the United States, who would be grateful for protection by the United States, accept American strategies and support these by generously contributing appropriate forces of their own.

During the past ten years, the bond of many of these alliances has slackened because the allies concerned have downgraded the military threat emanating from the Soviet Union, and because their rising national self-confidence, and their evolving conception of national interest and security, clashed with the posture demanded by the United States. The fact that the alliance ties between Communist countries have also suffered a decline indicates the presence of general conditions--spelled out in Chapter III--making for a greater fluidity and flexibility of alliance structures in the entire international system than prevailed during the first two postwar decades.

B. The Utility of Alliances

Even though this paper concentrates on relationships between the alliances of the United States and its capacity for strategic deterrence ten or fifteen years hence, we must at least take brief note of the larger context within which these relationships become fully significant to policy-makers.

The historical record reveals that military alliances may strengthen

or weaken the national-security or power position of a state. As pointed out in Chapter III, one's allies may be consumers or producers of security. However, whether they are, or will be, presents a question far easier to pose than to answer. The answer turns on complex conditions apt to undergo substantial, and sometimes abrupt, change.

1. An ally may add directly to the military strength of the United States vis-a-vis a potential opponent, for example, by providing military bases that increase the mobility and therefore the effectiveness of U.S. military forces. 2. An ally may reduce the need for U.S. forces required to deter--or, in the event of war, defeat--an opponent; that is, an ally may assume some of the burden of deterrence or defense in a particular area that would otherwise rest on the United States. 3. But an ally may also add to the burden imposed on U.S. forces for purposes of deterrence or defense. Thus, an ally may provoke a serious international crisis or even initiate military aggression, and thereby bring about events running counter to the interests of, and placing heavy military burdens on, the United States. Or the military or political weakness of an ally may encourage direct or indirect aggression against it. Or an ally may quarrel with another ally and thereby impair the threat value of an alliance. 4. But even if an ally is a net "consumer" of security, its retention as an ally may be, or may be deemed to be, beneficial to the United States if this country perceives a strong interest in maintaining the territorial and political integrity of the ally or simply in deterring aggression anywhere, and perceives the formal act of commitment as adding to the power of deterrence.⁵⁸ 5. Finally, an alliance may be valued for reasons transcending strictly utilitarian calculations of foreign and military policy, and reflecting common bonds of historical association, nationality, culture and friendship.

Whether, or how much, an alliance benefits the foreign policy or security position of the United States, depends also on whether or how much, the formal tie and a more or less specific set of mutual obligations add a net value. This is an important question precisely because the status of alliance involves costs as well as gains. As already indicated, the United States may welcome the extension of a formal commitment if this is expected to increase deterrence power. But such a commitment also reduces U.S. freedom of action and may be experienced as a burden if circumstances change. Moreover, a formal alliance may require the United States to do more for the other country--in terms of diplomatic support,

⁵⁸This declaratory function of alliance is highly dependent on the foreign-policy role assumed by the United States. Regarding the distant future, this role may be located on a continuum anywhere between two extremes: first, the United States is concerned only with direct threats to its own security and shuns all alliances (an extreme isolationist or Fortress-America posture); second, the United States is concerned with military threats to all states (an extreme world-order interest or Pax-America posture).

military and economic aid, etc.--than it would otherwise. Furthermore, a country may--vis-à-vis a common threatening opponent--reduce the contingent burden on U.S. military strength even if no alliance is concluded or maintained.

Suppose, for example, that some time in the future Japan adds substantially to her military forces because she feels acutely threatened by Chinese military capabilities and aggressiveness. In that case, Japan would significantly share the burden of deterring Communist China whether or not Japan were a formal ally of the United States. Without an alliance with the United States, Japan might perceive the task of coping with an eventual Chinese military threat as hopeless and hence decide on a course of weakly armed neutrality. In that case, an alliance would benefit the United States if the latter remained interested in curbing Chinese aggression. Yet without such an alliance, Japan might also add appreciably more to her military capabilities than she would when in a position to depend for protection more confidently upon the United States. In that case, an alliance might impose an unnecessary burden on the United States. The fact is that countries have often attempted to shift the burden of their own security as much as possible onto an ally. To the extent that the United States is purely interested in what another country can militarily contribute to its own security, or that of its neighbors, or even that of the United States itself, it is that country's capabilities and behavior which count. Whether an alliance will improve this capability and behavior is contingent on other factors.

Making these distinctions sheds light on some of the key issues involved in the utility of military alliances. But the problem of evaluating the worth of any particular alliance remains forbidding. Not only is it hard to foresee and compare the immediate consequences of different courses of action, the worth of an alliance also depends upon future contingencies which are inevitably uncertain in terms of configuration, implication, and probability.

C. The Predictability of Alliances

Military planning in the United States would be greatly assisted if, looking ten or fifteen years ahead, we could predict which countries would want to be allies, which ones it would be worth having as allies, and exactly what consequences--in terms of United States goals or military power--would result from particular alliances or their absence. Unfortunately, we must squarely face the fact that we have no methods, apt to inspire confidence, for making such predictions. The record of the past testifies to this inability. To offer just a few examples: in 1939, Hitler expected neither Italy nor Japan to become active allies of Nazi Germany in the war which had then broken out, or the United States to become an ally of Britain. No responsible official predicted in 1953 that the Sino-Soviet alliance would be seriously strained fifteen years later, that France would loosen her ties with NATO as much as she did by 1967, that Pakistan would cultivate friendly relations with China, or that Cuba would become a protege, if not ally, of the Soviet Union.

Methods of prediction available now are not appreciably better than they were fifteen years ago. We must assume, therefore, that the alliance environment will probably undergo significant changes over the next ten or fifteen years which we are unable to foresee.

A few general observations may serve to reinforce this conclusion. First, we cannot be sure at this juncture that the United States demand for alliances ten or fifteen years hence will be on the same level, or respond to the same purposes, as it is now. Second, whatever this demand, the supply of potential allies will depend upon future U.S. behavior toward the outside world. Thus, the outcome of the war in South and North Vietnam may have a considerable bearing on this country's ability to attract and retain allies. Third, the future availability of allies depends also, and perhaps mainly, on the military threats to which countries are subjected by other powers. Yet we do not know whether or not there will be an increase in the Soviet military threat to Western Europe over the next ten or fifteen years, or whether Communist China will pose an acute military threat to some or all of her neighbors. Fourth, even if we believed that such acute threats would arise, we could not be sure that this perception would be shared by the governments of countries in Europe and Asia. Fifth, even if such threats actually occurred, and were properly perceived, we cannot know now whether all the endangered countries would wish to bolster their security by an alliance with the United States. Some might prefer local alliances, or a policy of conciliating the threatening power, or seeking refuge in a posture of strict neutrality.

The dilemma of non-predictability suggests two major conclusions. It would be hazardous and indeed foolish to base United States planning on the assumption that the alliance environment in ten or fifteen years will be roughly what it is today, or on any other single predictive assumption. Instead, based on an understanding of relevant political, economic, technological, and military conditions at work in the present world, of trends observable in these conditions, and of the historically proven fact that such conditions are subject to more or less rapid change, we must identify a set of possible futures, and make these, and their implications, the foundation of our plans. Of course, we cannot be sure that any chosen set of hypothetical futures will contain the reality actually visited upon us in time to come. But that one in the set will prove close to it is more likely than that one chosen assumption will hit it on the nose. Designing a set does not mean that we must treat all included hypothetical futures as equally likely. Indeed, whenever justifiable by analysis, we will distribute tentative rankings in terms of probability. But presented with a range of possible futures, the military planner is alerted to the need for preserving an adequate degree of flexibility in United States capabilities.

The dilemma of non-predictability also suggests the merit of parsimony in the design of possible futures. That is to say, it does not pay to include many actors, and relationships in the outside world; it is

better to concentrate on states and situations likely to have a potentially crucial or substantial impact on the security position of the United States. As the future is unrolled, an excluded state may turn out to have an important effect. Thus, ten or fifteen years hence, it might be that the presence in, or absence from, the alliance environment of any one of a hundred small states has a critical impact on world or U.S. security.⁵⁹ Yet the odds on picking this one out of a hundred states or more are clearly prohibitive.⁶⁰

It seems sensible, therefore, to assume that the United States might become involved militarily in any one of a large number of states, that these states have certain characteristics in common,⁶¹ and that the United States--if it continues with its present foreign-policy posture--requires effective military capabilities to employ in these countries. Otherwise, we will limit specific conjecture about the future alliance environment primarily to those states whose alliance with the United States, or whose opposition to the potential enemies of the United States, would contribute significantly to deterrence and defense.

In the following Chapter, we will first note some general trends that may affect the future alliance of the United States, then record some observations on allies which are small military powers, and finally concentrate on the significant military powers and their possible place in the future alliance environment.

II. Possible Alliance Futures

A. Some General Trends

We start with the assumption that most present allies of the United

⁵⁹It would be splendid if such a contingency could be foreseen now. But if it were, and we acted on this foresight, it might not happen. This shows that all futures are hypothetical. If our capability for prediction were up to it, which it is definitely not, we would be able to say now: unless we do X, Y will happen ten or fifteen years hence.

⁶⁰Of course, we could try to narrow the field. Since we assume the Soviet Union and Communist China to be the most potent sources of military aggression, we might concentrate on the states on their periphery, and ignore Africa and Latin America. Even then the problem of prediction would be prohibitive. Will it be Denmark or Burma? But, as the case of Cuba shows, in the era of internal upheaval and insurgency, we could be dead wrong on the choice of areas. It could be Venezuela, or Tanzania, or Morocco.

⁶¹These properties can be analyzed in terms of military relevance. For instance, the large majority of these states are poor, have weak governments, backward means of communications, and difficult terrain, are in the tropical or subtropical zones, and have access to the sea.

States are virtually certain to remain allies over the next ten or fifteen years. We do not foresee conditions that would lead them to experience such drastic changes of their national interests that they would want to abandon the relationship. However, we do not mean this to be a strong assumption. History, it is clear, discloses a high mortality rate for alliances, and some of these allies may well want to discard the ties. The assumption simply means that, fifteen years hence, more U.S. allies will belong to the class of present allies than to the class of present non-allies. It is also clear that the assumption is stronger for the immediate future than for the end of the period under consideration. Thus, we believe it to be virtually certain that NATO and the U.S.-Japanese defense pact, both up for renewal or renegotiation within the next three years will be renewed. The domestic dissatisfaction in Europe and Japan with these alliances is not strong enough to endanger the renewal of the treaties. However, it is possible that France will not remain a member of NATO; and if these treaties are modified in the process of renewal, they will be changed in the direction of somewhat loosening rather than tightening extant bonds.

As noted, and discussed in Chapter III, the international system as a whole has been characterized recently by a trend toward a loosening of the alliances concluded after World War II. At this time, we expect this tendency to continue; but we must note that it is extremely sensitive to the behavior of the Soviet Union, Communist China and the United States. The trend, as it affects Western Europe, might reverse itself if the Soviet Union initiated strong military threats toward that area. Similarly, Moscow and Peking might become effectively re-allied if China felt highly threatened by the military behavior of the United States. However, even if this direction regarding the alliance systems concluded after World War II persists, other and new alliance relationships might come to flourish in the international system. The eagerness of states to seek or to maintain alliance with the United States will vary chiefly with the degree of national military aggression expressed in the international arena, and with the ability of the United States to provide effective protection. Moreover, if the opponent environment of the United States becomes more diffuse and ambiguous, as suggested in Chapter II, then it is likely that the alliance environment will exhibit a similar trend toward diffusion and ambiguity. Fluidity in one environment will tend to beget fluidity in the other. If transient opponents appear on the scene, they will stimulate pressures toward the conclusion of transient alliances.

B. Small-Power Allies of the United States

The United States is at present allied with a great number of small military powers. To some of these it is tied by a special historical relationship (e.g., the Philippines) and/or by a community of political and cultural values (e.g., several Western European nations, Israel). Other allies in this class are protégés especially dependent on United States protection (e.g., South Korea, Taiwan). It is doubtful that all these relationships will survive the next ten or fifteen years. It is

worth remembering in this respect that a special close relationship existed between the United States and Cuba not very long ago. But most of these alliances will survive, as least formally. Moreover, other small-power states may become allies or protégés of the United States in the future whether or not a formal alliance treaty is concluded prior to a severe crisis engulfing such states.⁶² Some of these small-power allies, present or potential, are, or will become, a significant military factor vis-à-vis small-power neighbors, and may therefore contribute to military stability, and to United States policy, in a particular area. Thus, Israel is a strong military power relative to the Arab states in the Near East; and Thailand, South Korea and Australia are currently supporting the American military effort in South Vietnam. As a class, however, these small-power allies of the United States are actual or potential consumers of security provided by this country. Their ability to support and complement U.S. military capabilities is far less important than their ability to involve the United States in their protection from small-power or large-power aggressors. They are essentially security clients. That is, the United States may perceive an interest in opposing all aggression, and particularly in countering aggression against its acquired protégés; but these states are militarily an actual or potential liability under all but exceptional circumstances.

However, in this respect, including their ability to involve the United States in military action on their behalf, there are notable differences among these small powers. Some are part of effective regional alliances, involving middle powers, that afford a degree of security from regional capabilities (e.g., the smaller members of NATO) while others are not (e.g., Israel, South Korea, Iran). Some possess respectable military forces of their own (e.g., Turkey, Israel, South Korea) while others do not (e.g., Norway, Malaysia). Some are status-quo powers, and neighboring on status-quo powers with reference to territory and boundaries (e.g., the smaller NATO allies, excepting Greece and Turkey, nearly all Latin American countries) while others are not (e.g., Israel-Arab states, India-Pakistan, Cambodia-Thailand, Morocco-Algeria, Kenya-Somalia-Ethiopia). Some are, for historical reasons, hostile to, or experience hostility from, neighboring countries (e.g., Cambodia-Vietnam, Israel-Arab states) while others do not (e.g., the smaller NATO allies, excepting Turkey and Greece). Some are close to the periphery of the Soviet Union and Communist China, while others are not. Finally, a few are highly developed politically and economically, and internally cohesive (most smaller NATO allies, Israel, Australia, New Zealand) while the majority are decidedly less developed in these respects, politically disunited or amorphous,

⁶² It would be unrealistic not to recognize that the United States has quasi-allies as well as formal allies. Thus Israel is not a formal ally, but if she were in mortal military peril, the United States would probably feel constrained to come to her rescue. Similarly, even though India is not a formal ally, the United States would probably not be indifferent or inactive if India were seriously endangered by a Chinese invasion.

governed by feeble and unstable governments, and hence susceptible to subversion from within and without (e.g., South Vietnam, Laos). This latter characteristic is especially consequential since it invites indirect aggression as a prelude to, or substitute for, direct aggression; and this danger is particularly acute where internally weak states have a common boundary with Communist states.

Given the distribution of these several characteristics, we will separate out the small-power members of NATO--whose security problems can be properly discussed in conjunction with the larger NATO powers, and also Australia and New Zealand which are unlikely, during the period under consideration, to suffer direct and overwhelming military aggression, particularly in circumstances that can be anticipated now. This leaves Israel--whose case is sui generis--and the vast majority of less developed countries in the small-power class.

Assuming that the United States will not dissociate itself from present security clients, or reject new candidates for this status, the demands of this part of the alliance environment will be highly sensitive to the future opponent environment. In this respect, we can imagine four distinct possible futures over the next ten or fifteen years.

1. Intensely Hostile Opponents. Both the Soviet Union and Communist China, supported by most other Communist states, commit frequent indirect aggression on behalf of nationalist and radical forces against weak conservative governments of less developed countries, are ready to intervene in "national wars of liberation," send arms and economic aid to states taking an anti-U.S. stand, and to other countries with a view to reducing U.S. influence. The Soviet Union and China improve their strategic nuclear capabilities in order to deter the United States from effective counter-intervention, and the Soviet Union develops mobile forces for military intervention in distant theaters of conflict. The greatest pressure will be exerted on less developed countries adjoining, or in close proximity to, Communist territory, but the Communist anti-status quo offensive will not neglect targets of opportunity in Africa and Latin America. The United Nations is powerless to curb local conflicts. There is rising nuclear proliferation, in part supported by existing nuclear powers.

2. Very Hostile Opponents. This is the possible future which approximates the present situation. Both main Communist powers seek assiduously to diminish United States influence in the less developed world. They promote the substitution of nationalist-radical for conservative regimes but are cautious to avoid direct military confrontations with the United States. The Soviet Union is especially active in expanding its influence in the Middle East and North Africa. The USSR and China do not act in unison although their actions may be complementary in particular areas of conflict (e.g., Vietnam). Chinese criticism presses the Soviet Union to be more aggressive than she would chose to be otherwise. As in the conflict over South Vietnam and in the Middle East crisis of 1967, Soviet-American opposition prevents the UN from

functioning as a constructive force in preventing, confining, and quickly terminating local conflicts. There is a strong trend toward nuclear proliferation.

3. Moderately Hostile Opponents. Both China and the USSR are chiefly concerned with internal problems of development. They seek to maintain and increase their foreign influence primarily by non-aggressive means. They intervene in local conflicts, international or civil, only with circumspection and prove stubborn only if a local conflict takes place close to their boundaries, or if the survival of a Communist or near-Communist regime is endangered. Cooperation by the Soviet Union and the United States permits most local conflicts to be controlled under UN auspices. Both powers act to discourage nuclear proliferation.

4. Unhostile Opponents. The Communist powers continue to adhere to their anti-capitalist and anti-"imperialist" ideological posture, but they are prepared to leave the further spread of communism or radicalism to the play of domestic forces in the less developed countries. Communist China is admitted to the United Nations, including the Security Council; and cooperates in the confinement and termination of local conflicts under UN auspices. The international traffic in arms is subjected to international control. All nuclear powers act in concert to prevent further nuclear proliferation, give strong security assurances to non-nuclear-weapon states, and begin to introduce a measure of international nuclear disarmament.

In visualizing these futures it should be noted that there is one possible variation in the entire set. Instead of both large Communist powers presenting the same posture, it is, of course, possible that their postures differ, e.g., that Soviet behavior approximates pattern (3) while China's approximates pattern (2).

It is impossible to predict which of these possible futures, if any, will actually obtain over the next ten to fifteen years. But we think it likely that one of them will, that (1) and (4) are distinctly less likely than (2) and (3), and that--for the first part of the period at least--the Chinese posture will be somewhat more hostile than the Soviet. We believe that there is a chance for (3) gradually or intermittently to displace (2), which is close to the present environment, and that this prospect is affected considerably by United States behavior. An American posture which would favor this prospect has the following characteristics: (a) The United States maintains an edge over the Soviet Union on the level of strategic deterrence; (b) it maintains highly mobile forces for effective employment overseas but reduces the stationing of overseas forces in close proximity to the Soviet Union and China; (c) the United States is willing to cooperate with the Soviet Union, and eventually also with Peking, on an increasing range of issues of mutual interest; and (d) the United States will let the play of domestic forces decide the political organization of less developed countries even if radical, and occasionally Communist, forces win out without appreciable foreign support.

C. Potential Large-Power Allies of the United States: Europe

We now turn to the class of states which, as allies, could not only involve the United States in military crises and conflicts, and thus become security consumers, but which could also contribute substantially to their own and regional security. Under favorable circumstances, they could be net producers of military security.

This means those states which are now ranked as great or middle powers or likely to accede to these ranks over the time period under consideration. At present, only the United States and the USSR rank as great powers. A combination of Western European states, highly integrated politically and militarily as well as economically, would command the technological and economic resources to approach great-power status by the end of the period under consideration. However, this is unlikely to happen. Viewed from the present juncture, such a degree of unification would take a good many years to achieve, and it would require such a structure at least ten further years to develop military capabilities commensurable with those of the two super-powers. We see no other single state attaining this level by the end of the period. All present middle powers are in the category of potential allies of the United States: the United Kingdom, France, West Germany, Italy, and Japan. These are modernized states of considerable population, industrialized, highly advanced in science and technology, and with a relatively high GNP. It is unlikely that any other country will acquire this combination of properties in ten or fifteen years.

However, as the example of Communist China has shown, it is possible for large and populous, though economically underdeveloped and poor, countries to develop nuclear military capabilities as significant as those of the industrialized middle powers. The question, therefore, arises whether India, Indonesia, Pakistan, and perhaps Brazil are likely to gain such military significance within the next ten or fifteen years. Four factors chiefly accounted for China's military development over the past ten years: (a) a modern scientific and technological sector which, though very small in relation to total population, is considerable absolutely speaking; (b) a strong effort at training scientific and technical manpower; (c) a government firmly in control of the state and determined to allocate critical and scarce resources to the military sector; and (d) scientific and technological assistance from abroad in the nuclear field. Of the four countries we mentioned, only India can approach China regarding condition (a); none quite approaches China regarding (b); each is far from China regarding (c); and is unlikely to approach it in this over the next ten or fifteen years unless these countries go Communist, in which case they disappear from the alliance environment of the United States. It is unlikely, though not perhaps impossible, that any of these four countries will receive from abroad the kind of critically important aid in military technology which China got from the Soviet Union at one time. We conclude that none of the states is likely to achieve China's military development during the time period under consideration. However, India at least, deserves some

attention. In respect of size of population and scientific and technological development, she resembles China more than do the other three states; and she might, within ten or fifteen years, attain military capabilities of considerable significance within the Asiatic context. The amount and kind of foreign aid she receives will have a substantial bearing on this possible development.

The states we have listed because they possess, or may come to possess, considerable military significance, and because they are potential allies of the United States, are also among those countries generally listed in the top bracket of states capable of developing nuclear weapons.

Futures

Conjecturing about the future alliance environment of the United States, all potential allies of military significance are either European or Asian powers. At present, the European powers take little interest in the military security of South Asia⁶³ and the Far East, and the Asiatic powers take little interest in the military security of Europe; that is, neither set of countries expects to employ appreciable, if any, military power in the region of the other. Although it is barely conceivable that--during the next ten or fifteen years--the major West European countries will achieve a high degree of political and military integration, develop strong military capabilities of worldwide employability, and act as world powers, this seems to us extremely unlikely. We therefore assume that, during the period under consideration, the security interests of both sets of countries will be limited to their own region. Hence, we deal with the alliance environment in successive parts, first in Europe, and then in Asia.

We may begin with two assumptions. First, during the next ten or fifteen years, the United States continues to have a vital interest in the military security of Western Europe. Second, supposing that this security required the deterrence of Soviet aggression during the past two decades, this deterrence rested overwhelmingly on the strategic nuclear power of the United States. This deterrence threat was made sufficiently credible by the presence of sizable U.S. military forces in central Europe. British deterrence power was marginal, and the tactical forces maintained by the European allies were throughout greatly inferior to those of the USSR.

A moderately cohesive NATO. This is the situation prevailing at present. A continuation of this security pattern is certainly one possible future over the next ten or fifteen years. Assuming there will be any Soviet military threat, latent or actual, the U.S. threat of strategic retaliation then remains the crucial basis of military stability.

⁶³Britain's residual interest in the Indian Ocean area is marginal and on the decline.

This threat will remain effective as long as the United States strategic forces are capable of massively penetrating Soviet defenses, and substantial American forces stationed in central Europe assure virtually automatic U.S. military involvement in any Soviet attack in the area. The European contribution would be essentially limited to hosting the U.S. forces and supplying additional troops large enough to raise any engagement by Soviet forces to a level signifying a deliberate and large-scale attack. On this assumption--which we call a moderately cohesive NATO--an alliance with the present, or even somewhat diminished, cohesion is adequate; and the withdrawal of French forces and territory from SHAPE is not fatal.

A very cohesive NATO. We can imagine a NATO appreciably more cohesive than it was in 1967. This will be a NATO oriented around a strong cross-Atlantic tie. France would return to full-fledged and cooperative membership. The European allies would make ample financial contributions in order to maintain sizable U.S. and British forces on the continent; and they would be responsive to U.S. proposals for strengthening tactical forces. They would eschew any posture of nuclear independence; and the nuclear capabilities of Britain and France would be subjected to a high degree of allied control.

A uniformly uncohesive NATO. Even if the North Atlantic Treaty Organization is renewed in 1969, the organization drifts into a state distinctly less cohesive than it is at present. The decline of cohesion affects the total membership, that is, involves relationships between the European allies as well as relationships between them and the United States. In this event, American and British troops now stationed on the continent might be progressively cut back and, eventually perhaps, repatriated entirely. SHAPE and the other inter-allied institutions become increasingly ineffective, and wither. Other countries might follow the French example and withdraw from active cooperation. Such a development might, or might not, be accompanied by greater national defense efforts on the part of some allies.

Cohesive NATO Europe drifts apart from U.S. The decline in NATO cohesion is not universal through the present membership. But there is a decided weakening of the cross-Atlantic tie accompanied by the development of a very cohesive grouping of European states--involving the members of the Common Market, with or without Britain. Such a development might or might not be accompanied by a marked increase in, and perhaps integration of, the military effort of the European states involved. If it were, this would almost certainly involve the strengthening of nuclear capabilities under European control. The development of such a NATO might or might not be accompanied by a stable détente between the United States and the USSR.

Truncated NATOs. Another possible future would be a general decline of NATO cohesion but the maintenance of a high degree of cohesion between the United States and one major ally in Europe. One possibility would be a strong de facto alliance between the United States and West Germany. Under one variation, Germany would be heavily armed with nuclear weapons

under dual control; under another, the United States might tolerate, or even back, the development of national nuclear weapons by West Germany.

Another possibility would be a strong de facto alliance between the United States and the United Kingdom, or perhaps between the United States and Britain and France. Such an evolution might occur if West Germany withdrew from NATO and opted for a position of neutrality in the expectation of promoting reunification with East Germany. Or it might happen because West Germany decided to develop nuclear weapons of its own.

Implications

A very cohesive NATO. If our initial assumption about the past deterrence of Soviet aggression against Western Europe is accepted, then a NATO more cohesive than prevails now would not essentially change the future requirements imposed on the strategic deterrence power of the United States. To be sure, the strategic posture of the United States would benefit from the acceptance of an integrated deterrence posture for the alliance, for such integration would imply the coordination, if not subordination, of European nuclear forces under U.S. leadership. Unitary crisis management would be greatly facilitated under this condition, and no extra burden would be placed on the U.S. deterrent capacity by disunity among allies.

(A very cohesive NATO might or might not mean a greater European willingness to provide more effective tactical forces in response to U.S. demands. A high degree of cohesion would almost certainly require some U.S. concession to the European conception of security, namely, that Western Europe requires deterrence of aggression rather than defense. It is dubious, in any case, that the overall deterrence posture of NATO would be strengthened by the provision of strong defensive capabilities.)

A highly cohesive NATO would be in keeping with the community of va. existing between most of its members; and it would provide a solid capacity for deterring Soviet aggression. But it would not lighten the burden on U.S. strategic forces since this country would have to continue to deter not only a Soviet attack upon itself, but also a Soviet attack, or threat thereof, on Western Europe, and--in order to sustain the credibility of its deterrent threat--the United States would have to continue to maintain a substantial garrison in central Europe.

A uniformly uncohesive NATO. If lack of cohesion pervades the entire alliance, the United States interest in deterring Soviet aggression against Western Europe would continue to require reliance on U.S. strategic deterrence power, but under conditions distinctly more difficult than under the alternatives of a moderately cohesive or very cohesive NATO. Among these difficulties, the following contingencies are important. First, making the U.S. deterrence threat sufficiently credible would become much more difficult if all U.S. troops were repatriated. Second, any Soviet aggression against a single West European ally might no longer

elicit alliance-wide resistance, with the result that immediate reliance on the U.S. strategic threat would be increased. Third, some allies might, in a serious crisis, repudiate the U.S. deterrent threat. Fourth, a European ally, acting independently, might precipitate a serious crisis involving the United States. Fifth, the existence of independent European nuclear forces would complicate crisis management. Sixth, a highly dis-united NATO might tempt the Soviet Union to behave more aggressively in Berlin and elsewhere in Western Europe, and this would put a heavier strain on the American capacity to deter.

A cohesive NATO Europe drifts apart from the U.S. If a weakening of the cross-Atlantic tie is accompanied by the development of political and military cohesion among several European states, the consequences are less determinate than in the cases so far discussed. But they are more favorable than those of a NATO uniformly lacking in cohesion. The dangers that serious crises would be precipitated, and crisis management complicated by the independent action of individual states, and the danger that Soviet aggression would not elicit an alliance-wide response, would be much less. To be sure, any complete repatriation of U.S. forces from Europe would tend to diminish the U.S. retaliatory threat. At the same time, however, the European grouping might itself shoulder more of the retaliatory burden, and the United States strategic threat might be more in the nature of a back-up. The critical factor would be the gradual development of European-controlled nuclear forces. The greater this development, that is to say, the greater the retaliatory threat which the European grouping itself could divert against the Soviet Union, the better off would be the United States in terms of the burden on its retaliatory capabilities. The European grouping need not possess strategic power approximating those of the Soviet Union in order to help deter Soviet aggression. European deterrence power would be adequate if the European states could threaten the USSR with appreciable damage, and Soviet leaders would have to reckon with the possibility of U.S. strategic involvement. And, in any case, a West European military build-up, even if modest by super-power standards, might give Europeans considerable confidence in their ability to resist Soviet pressures.

If this development occurred, the cohesive NATO Europe would doubtlessly be weak in military terms initially. In this phase, especially if it were prolonged, the USSR might be tempted to seek gains from exerting military pressure on the Western European nations, especially West Germany. This would be unlikely, however, if the Soviet Union were interested in a détente with the United States, or if the United States capacity to deter Soviet aggression in Europe were undiminished at the time.

We conclude that this possible NATO would certainly be more favorable to the United States than a uniformly cohesive NATO, and that a strong development of European nuclear capabilities in a NATO which is very cohesive in Europe but very weak in its Atlantic tie, might reach a point at which the United States would be better off--in terms of the claims of its strategic deterrent power--than under the moderately or

very cohesive NATO futures discussed above. However, if the European powers, though united, failed to develop military strength, especially in nuclear armaments, or during the initial phase of such military development, the burden on U.S. strategic capabilities would remain undiminished compared with the present situation.

Truncated NATO's. The consequences of any truncated NATO are less determinate than those of the NATO futures thus far discussed. The present burden on U.S. deterrence powers might be marginally, and perhaps even appreciably, relieved if this country came to maintain a strong de facto alliance with the United Kingdom, or with both Britain and France, while West Germany had chosen neutralization. This partial relief would result less from coordination of British (and French) strategic forces with those of the United States than from the possibility that a neutralized Germany (and Berlin) would be less of a source of instability in central Europe. Indeed, such a development might be highly compatible with a détente between the United States and the Soviet Union.

However, this possibility is predicted on the assumption that the Soviet military concern over NATO Europe arises from Soviet insecurity rather than any latent Soviet desire to extend its control over Europe, if necessary and safe, by military means. On the other hand, if one posits a basically aggressive Soviet leadership, neutralization of West Germany might tempt Moscow to entertain aggressive designs on this heartland of the continent from which American troops had been withdrawn. In that case, the burden on U.S. deterrence power would rise rather than decrease.

A strong de facto alliance between the United States and West Germany would leave the present burden on U.S. deterrent power essentially unchanged, provided such an alliance could not require the United States to give strong backing to German desires for reunification.

Probabilities

Even though it is impossible to predict with any degree of confidence which alliance future will prevail in Europe ten or fifteen years hence, we can identify some general conditions which would press the stream of events in one direction rather than another. If these conditions turned out to be more predictable than the alliance future themselves, then we might be able to assign tentative, and low-confidence, probabilities to some of the alliance futures.

(But whatever the trends that can at present be discerned in these general conditions, and hence also in associated alliance patterns, they need not persist throughout the period under consideration. Trends might weaken and be reversed, and alliance patterns change accordingly. Disregarding the dramatic impact of traumatic events, however, such changes would not be abrupt since considerable momentum inheres in governments

and their policies. However, periods of change can bring special risks and military danger, for such periods are marked by uncertainties that may lead to misunderstanding, to false hopes and ill-founded fears. When such changes occur in NATO, the Soviet government is bound to review its own policies.)

Regarding the future evolution of NATO, four key conditions are apt to be influential: (1) the nature of the opponent environment; (2) U.S. policy toward NATO and the NATO states; (3) the European movement; and (4) the relationship between the United States and the Soviet Union.

Nature of the Opponent Environment

The critical opponent is the USSR. NATO cohesion tends to vary with the perceived Soviet military threat. European threat perception is sensitive to Soviet capabilities and behavior. In this respect, the relevant Soviet capabilities are those capable of deterring the United States from intervening in a European conflict as well as Soviet forces able to attack Western European states. The relevant Soviet behavior is that toward the United States as well as that toward Western Europe. Appropriate forms of aggressive Soviet behavior toward the United States may be interpreted in Europe as resting on Soviet confidence in deterring the United States and hence likely to decrease the probability of effective American intervention on behalf of West European security. If this happened, and American behavior seemed to confirm Soviet confidence, an increased Soviet threat toward West European nations might not produce NATO cohesion but attempts at placating and accommodating the Soviet Union.

In turn, and as analyzed in Chapter II, the likelihood of an increase in Soviet military threats to Western Europe depends mainly upon: (1) the nature of Sino-Soviet relations; (2) the relations of the eastern European countries with the USSR; (3) the confidence of Soviet leaders in deterring the United States from intervening forcefully in a European crisis; (4) the weakness of European states resulting from political disunity and military weakness; and (5) the disposition of Soviet leaders to pursue foreign-policy goals by resort to risky and destructive military means. The probability of a severe Soviet threat to NATO Europe will tend to rise the less Soviet leaders are preoccupied with Chinese antagonism, the more the eastern European states pursue pro-western policies in defiance of Soviet wishes, the greater the confidence of Soviet leaders in deterring American intervention in a European crisis, the greater their willingness to follow a militarily riskful policy, and the weaker, and militarily disunited among themselves, are the Western European nations.

At this time, we believe that Soviet leaders are strongly motivated to avoid a direct military confrontation with the United States; are highly preoccupied with their relations with Communist China; are highly preoccupied with the internal development of the Soviet Union, and unwilling to adopt adventurist military policies. Of course, this conjecture is subject to revision as we perceive changes in the underlying factors. If such changes do not occur, however, we expect that grave Soviet

threats are unlikely; that a very cohesive NATO is less likely than a moderately cohesive NATO; and still less likely than an uncohesive NATO.

U.S. Policy Toward NATO

The future development of NATO is obviously sensitive to United States policy toward the alliance. This factor would be highly determinative if we make extreme assumptions about changes in United States policy. An extreme assumption would be that the United States will sharply revise its policy about nuclear weapons in the alliance. Thus, it might propose a genuine nuclear sharing, that is, the subjection of all nuclear capabilities to multilateral control within the alliance. Or the United States might promote the development of nuclear capabilities under European control (national or multilateral). The first policy would favor the development of a very cohesive NATO; the second policy would favor the development of a cohesive NATO Europe drifting apart from the United States. The unilateral withdrawal of U.S. forces from Europe would tend to favor the development of the same kind of uncohesive NATO, or else of a uniformly uncohesive NATO. In the absence of such sharp reversals of U.S. policy, a moderately cohesive and a uniformly uncohesive NATO are more likely in the future than a very cohesive NATO.

The European Movement

A strengthening of the movement toward European political as well as economic integration would favor the development of a cohesive NATO Europe drifting apart from the United States. Yet even though the development of the Common Market has progressed according to schedule, the movement toward political integration is generally considered to have lost momentum in recent years. The accession of Britain, which is uncertain at this time, would be unlikely to resuscitate the movement toward a high degree of political and military integration. However, it is not impossible that the United Kingdom will be accepted into the Common Market and that she would, in that event, orient her policies increasingly toward a strengthening of Western European power. This would favor the development of a cohesive NATO Europe and, depending on other conditions, one eager to reduce its political and military dependence on the United States.

US-SU Relationship

The key question is whether the two superpowers maintain a condition of détente or revert to a posture of unmitigated antagonism. The former condition would push in the direction of a uniformly uncohesive NATO or, if the détente seems to frustrate West European aspirations, it might provide an incentive toward a growing cohesion of NATO Europe. In other words, we believe a relatively uncohesive NATO, or a cohesive NATO Europe with a weak cross-Atlantic tie, compatible with a condition of US-SU détente. A reversion to US-Soviet antagonism, on the other hand, is

per se less determinative, and hence compatible with all NATO futures.

At no time during the next ten or fifteen years could a US-Soviet détente be regarded as a mainstay of American security policy in the sense that it would be safe to retrench militarily. Any détente between two superpowers, no matter how desirable, must be regarded as essentially fragile. It would be very sensitive to the strategic balance of forces even though a détente be based on other factors than mutual deterrence. It might be interrupted as the two great powers get involved in local conflicts. It might be valued less by one power than the other. It could not be depended upon.

At this time, we regard all truncated NATOs as improbable. A generally uncohesive NATO accompanied by a strong de facto alliance between the United States and Britain could happen only if the United Kingdom were refused membership in the Common Market, and if the Common Market countries avoided an appreciable military effort. An uncohesive NATO accompanied by a strong alliance between the United States and West Germany could happen only if the Soviet Union behaved very aggressively but only Bonn among the European NATO states mustered a will to stand up to Soviet pressure. A most difficult problem would arise if West Germany decided to acquire national nuclear armaments despite opposition by the United States, France, and Britain. This would upset European stability especially since the Soviet Union would be likely to react vigorously. The West Germans might choose the nuclear option if they felt abandoned by both the United States and France and were sorely frustrated by lack of progress toward German reunification. But there are no indications now that West Germany might move in this direction.

Conclusion

Given, first, our expectations about possible NATO futures and their implications; second, the tentative nature of attributed probabilities; and third, the continuingly strong United States interest in preserving the integrity of Western Europe, we conclude that it would be unsafe for the United States to relax its requirements for a continued ability, during the next ten or fifteen years, to deter the Soviet Union from any military aggression against non-Communist Europe.

Even if the Soviet Union remained militarily unaggressive in this area, as we believe likely, and even if its relationship with the United States were one of prolonged détente, there could not be, at any one time, sufficient confidence in the continuation of this Soviet posture to justify any asymmetrical reduction in U.S. deterrent power. This burden could be relieved appreciably only if several Western European powers combined in order to render themselves substantially less dependent for their security on the United States, and this would mean that they establish substantial strategic deterrent capabilities of their own. In that event, U.S. capabilities could eventually assume a back-up posture. Even though such a development would run counter to present United

States policy against nuclear proliferation, this might come to be regarded as a desirable evolution if U.S. power of extended deterrence turns out hard, or impossible, to maintain. However, as we see the prospects at the present time, such a development is less likely than that NATO will continue as a moderately cohesive alliance, as it is now, or that it will suffer a further decline in cohesion.

Potential Large-Power Allies of the U.S.: The East

From the viewpoint of U.S. military interests, the East is in several ways quite different from Europe. First, the American interest in Western Europe's integrity is more traditional and deep, based in large part on political affinities which transcend pure balance-of-power or world-order interests. With the exception of the Philippines and Israel, the Asian states are strictly actual or potential security clients. Second, while the Western European states are highly cohesive internally, most non-Communist states in Asia have weak and unstable governments, and many lack solid political integration and hence are susceptible to subversion from within and without. Containing Communist aggression is, for this reason alone, much more difficult a task in Asia than it is in Europe. Third, while there are at least three military middle powers in Europe capable of making an appreciable contribution to their own security and that of their neighbors, Asia is at this time bereft of military middle powers of equivalent consequence. Fourth, while the central deployment of sizable U.S. forces especially in West Germany lends a great deal of credibility to the United States security guarantee, many and large areas in Asia lack this form of American commitment. Fifth, while any large-scale (i.e., deliberate) aggression by the Soviet Union in central Europe would induce the employment of nuclear weapons, thus greatly raising the risk of conflict, the use of nuclear arms is less likely in Asia.

For these reasons, Europe is at present militarily more stable than Asia. To destabilize the European situation requires deliberate and extremely risky action by an aggressor. Asia, on the other hand, is so unstable politically and militarily that it requires deliberate action by the great powers not to get involved and entangled in local conflicts. These reasons also mean that a persistent U.S. policy to deter and stop Communist aggression in Asia--provided, of course, that the Communists behave aggressively--is much more difficult than in Europe. This is so because aggression in Asia can proceed by indirect means and by proxy against states many of which are soft politically and militarily; because conflict environments are--in terms of geographic features, communications facilities, and political character--unfavorable to the efficient operation of American conventional forces; and because the use of nuclear weapons is far less likely in Asia than in Europe.

This latter point deserves special emphasis. It implies that U.S. strategic nuclear power is in Asia only of limited usefulness in deterring or otherwise coping with indirect and conventional forms of aggression.

Thus, in the Vietnamese war, the strategic capabilities of the United States may serve to limit the form of Soviet military aid to North Vietnam and the Vietcong. Otherwise, they are of no visible significance.

Of the five major differences between Europe and Asia, we expect no essential change regarding the first and second. A change in the fourth is also unlikely even if the United States were to maintain sizable forces in South Vietnam and Thailand throughout much or all of the period under consideration. But important changes loom regarding the fifth difference, and may occur regarding the third.

China as a Nuclear Power

It must be assumed that, during the next ten or fifteen years, China will develop nuclear forces capable of effectively threatening United States bases in the Pacific, and perhaps the United States itself. The deterrence of such attacks should be assured as long as United States strategic forces are capable of threatening assured destruction in the Soviet Union, since Chinese capabilities will almost certainly amount to no more than a small fraction of Soviet capabilities. Indeed, the United States may be able to maintain a strong counter-force capability vis-à-vis China. But this advantage might be negated if the United States had to reckon with Soviet strategic backing of China. This contingency would depend on the future complexion of Soviet-China relations.

Yet even though China will develop operational nuclear weaponry during the period, it does not follow that conflicts in Asia will, as in Europe, raise almost automatically the specter of nuclear war. As long as China does not make use of its nuclear armaments, the United States will remain under weighty restraints not to employ them first. In that case, the effect of U.S. nuclear superiority will be limited to creating anxiety in Chinese minds lest the restraints on American nuclear action prove less than absolutely prohibitive in a severe crisis.

Japan and India as Military Middle Powers?

Although neither Japan⁶⁴ nor India can be ranked as military middle powers at the present time, the question is whether they may become so during the next ten or fifteen years, and whether, should this happen, they could be expected to relieve the United States of some of the burden of extended deterrence and defense to which, given present American

⁶⁴ Japan's present defense forces are probably strong enough to ward off any conventional attack China is able to mount. But Japan's defensive capability would be inadequate against a Soviet attack, and she has no capabilities now to deter Chinese nuclear pressure in the future.

policy, the United States is potentially subject.⁶⁵

If the Japanese people wanted to rearm, and especially if the United States consented to, or assisted in, such rearmament, Japan could become a major military power in ten or fifteen years. She has all the technological, economic, and organizational resources for becoming a military power with nuclear as well as non-nuclear capabilities on a scale under most conceivable circumstances adequate to deter attack upon herself. However, in Article 9 of the Japanese constitution, the Japanese people pledged themselves to renounce forever war as a sovereign right and the threat to use military force as a means of settling international disputes. The critical question, therefore, is whether the Japanese will decide to repudiate or ignore their pledge during the next five or ten years. Although the Chinese development of nuclear explosives has caused some disquiet among Japanese leaders, there is no strong sign of an impending shift of opinion on this matter. Most influential Japanese do not seem to feel threatened by either China or the Soviet Union. Indeed, no such threats have been uttered, and any Japanese anxieties lest such threats might arise in the future seem easily assuaged at present by confidence in the security protection extended by the United States.

We consider it nevertheless possible, though at present improbable, that Japan will recover an interest in her own military power either as a result of a display of Communist aggressiveness, combined with an expanding nuclear arsenal in China, or of a recrudescence of a Japanese desire to play once again the role of a great power in the Far East, a role which her resources could certainly sustain. If this happened, and if Japan developed nuclear armaments, the implications would not necessarily favor the United States. Unfavorable consequences would be unlikely to arise because such a Japanese development might be accompanied with a growing hostility toward the United States.⁶⁶ Nor would they arise if Japan rearmed strictly for reasons of bolstering her own security. Unfavorable consequences could result if Japan rearmed in order to play once again the role of a great power, for in that case she might pursue independent and risky courses of action which might entangle the United States. However, even this highly speculative contingency is improbable during the period under consideration since it would take Japan a considerable period of time to develop military power for other

⁶⁵This burden is, of course, contingent. It becomes actual only if and when significant Communist aggression occurs, or would occur if not deterred.

⁶⁶This is extremely unlikely since Japanese rearmament would take place under the leadership of politically conservative parties. To be sure, if the leftist socialists got into power, they might be anti-American in their policy, possibly vigorously so. But these political forces are strongly wedded to the anti-militarist provision in the constitution. A Japan governed by the leftist socialists would almost certainly adopt a neutralist course and refrain from substantial rearmament.

than defensive missions.

It seems more likely, therefore, that a militarily stronger Japan, and especially one acquiring nuclear capabilities, would somewhat relieve the load on United States deterrence power in the Far East. This effect would probably increase over the longer run, that is, after the time period under consideration.

In terms of economic, technological, and organizational resources, India is now and will remain substantially behind Japan during the period under consideration. Nevertheless, her present resources, which are increasing and bound to increase further, give her the basis for developing military forces which, although falling short of Communist China's, could become an element of strength in the Indian Ocean area, and possibly be capable of deterring and repelling conventional attack on the part of China. India is also capable of developing nuclear weapons. But--given Communist China's head-start, her superior resources, and a geographic situation which would make it far more difficult for India to threaten retaliation against Chinese cities than it would be for China to threaten Indian cities--India could hardly hope to become more than a nuclear power quite second-rank to China. Under these circumstances, Indian leaders might prefer to concentrate on strengthening her armed forces against a Chinese conventional threat and to rely on other nuclear powers to deter China from employing nuclear arms.⁶⁷ Such a policy would stabilize the military situation along the Indian-Chinese boundary, and this would certainly be in the interest of the United States. It would not, however, relieve the contingent burden on U.S. nuclear deterrence power. Nor would such relief be likely to result if India decided to go nuclear.

Looking ten to fifteen years ahead, our conclusions regarding Asia are: (1) Given the continuation of its present foreign policy, the United States must be able to deter Chinese nuclear threats against other Asiatic states as well as against its own bases and the United States itself. (2) U.S. nuclear threats against conventional aggression will lack credibility. (3) Conventional defense by the United States of Asiatic countries subject to direct or indirect aggression is very difficult, especially on the mainland, in view of the military, political, and economic weakness of many countries. (4) The maintenance of U.S. bases and troops on the mainland would bolster defense, but would also be costly, and might be counter-productive by inciting the very aggression they are meant to deter or stop. (5) There is a somewhat less than even chance that India will become self-sufficient in coping with any Chinese conventional threat. (6) Only Japan has the resources to become entirely self-sufficient in terms of security, and there is some chance that she will choose to become so.

⁶⁷ India might nevertheless opt for nuclear armaments for reasons of status, or with reference to Pakistan, or in the hope of achieving adequate deterrence power against China in the longer run.

Overall Conclusion

On the basis of conjectures about the future alliance environment of the United States ten or fifteen years hence, we foresee two possible futures as far as the worldwide engagement of U.S. strategic deterrence power is concerned. (1) Conceivable allies of the United States will not appreciably reduce the present burden on U.S. strategic capabilities; (2) Some conceivable allies in Western Europe and Asia will develop military forces of their own, including nuclear forces, sufficiently strong to take over the burden of deterrence in their region to such an extent that U.S. capabilities occupy a reserve position. Future (1) is more likely than future (2).

Moreover, the difference between these two basic hypothetical futures is mainly one of the risks of immediate involvement in regional crises, that is, a difference in detachability. Under neither assumption can the United States afford a lesser effort at maintaining an imposing deterrence posture than it is doing now. Indeed, as long as the United States adheres to a policy of containing Communist aggression, the United States will require either a strategic nuclear capability which is at least marginally superior to that of any other nuclear power, or a splendid local-war fighting ability capable of great mobility and quick response. Outside Europe, moreover, strategic superiority will be a substitute for very good local-war fighting forces. The military effort required by the United States would be very large.

Substantial relief could probably come only as a result of two possible developments: (1) The main Communist powers slacken or completely eschew aggressive military policies. (2) The United States limits or abandons its policy of deterring or repulsing international aggression, especially on the part of Communist states, the world over.

Chapter II

THE OPPONENT ENVIRONMENT

by

Arnold L. Horelick

I. Introduction

A. Deterrence and Perceptions of the Opponent

Deterrence emerged in the early post-World War II years as the dominant U.S. strategic concept in response to two radically new developments: a marked change in American perceptions of peacetime threats to vital U.S. security interests, and the availability to the United States of revolutionary new means of waging war. It was this confluence of American nuclear weapons and a threatening, seemingly monolithic international movement, headed by the world's second most powerful state, that led to American reliance on nuclear deterrence to protect the interests of the United States and its allies.

Either of these elements alone--the new weapons or the perceived new threat--might not have sufficed to produce a strategy so critically dependent on deterrence. Without nuclear weapons, strategic deterrence of an opponent believed to be as powerful and expansionist as the Soviet Union of the late 'forties and early 'fifties, might not have been thought feasible for Europe, the primary area of concern in those years. If then prevailing Western perceptions of Soviet military power and aggressive intentions had been correct, the Western allies would have been obliged to mobilize countervailing conventional military power, a tension-raising process that would have increased the likelihood of general war in Europe; or an accommodation on Soviet terms would probably have had to have been made in Europe, entailing in all likelihood the retraction of U.S. military power and political influence from the continent.

The relationship between technology and deterrence is dealt with in Chapters IV and V. Here we are concerned with an equally crucial element in the deterrence equation: the opponent environment. The advent of nuclear weapons alone might not have led to the adoption of a strategy of deterrence by the United States had the global power structure that emerged from World War II been different. Deterrence presupposes an opponent who needs to be deterred; and nuclear deterrence presupposes an opponent so intensely hostile and powerful that to prevent him from doing what he might otherwise do the threat of societal extermination seems appropriate. This is not to say that American possession of nuclear weapons would not significantly have affected international politics even, say, had Great Britain emerged as the dominant European power after World War II; but in the absence of a putative opponent perceived to be unremittingly hostile, limitlessly ambitious, and possessing a large

non-nuclear military advantage in the crucial theater, elaborately articulated strategies of deterrence and costly force structures for implementing them might not have been developed.

It is one thing to treat the character of the opponent as the critical variable in a world of American nuclear monopoly; it is quite another thing in a world of many nuclear powers. Today the mere acquisition of nuclear weapons by yet another state does not automatically create a compelling requirement for other nuclear powers to design deterrence strategies particularized with respect to that state. This is, in part, because of the low capabilities typically associated with new nuclear forces. But even supposing the emergence of a new, relatively invulnerable nuclear strike capability of non-negligible size, a particularized deterrence strategy for dealing with it may not seem necessary to an established nuclear power if the political relationship between the new nuclear power and the established one is such as to make conflicts of potentially war-provoking intensity seem highly implausible to both. (The larger the disparity between the nuclear capabilities of two non-antagonistic states the less likely it is that either will feel obliged to design deterrence strategies for dealing with the other. For the stronger power, a strategy of deterrence against the weaker will usually seem unnecessary since the great disparity in its favor would alone be taken as sufficient guarantee against the marginal threat that might arise from a deterioration in the political relationship; for the weaker side, enunciation of a deterrent strategy against the major power will probably seem futile since, given the great disparity in forces, it would not add significantly to whatever credibility was already implicit in mere possession of a small nuclear force, while it might needlessly aggravate political relations with the non-threatening large power.)

With respect to states that are perceived to be antagonistic, military and particularly nuclear capabilities are basic ingredients in assessing deterrence requirements; but even then the relationship between the two is not unilinear. In the first place, there may be large discrepancies between the military capabilities actually possessed by a state and those imputed to it by others; or, as has more often been the case, between estimated future opponent capabilities and those it subsequently acquires. Clearly there must be some minimal capability credited to a potential opponent before a requirement for deterrence emerges. But the degree of deterrence believed to be required, and the design, structure, and level of forces created to achieve it, are the product of estimates of an opponent's capabilities and of the probability that he would actually employ them if confronted by some lesser deterrent power (i.e., expectations regarding the strains to which deterrence may be subjected).

These last two factors have been closely related throughout the cold war. Uncertainties about an opponent's future military capabilities--uncertainties which even the most advanced reconnaissance methods cannot eliminate--will tend to be resolved pessimistically if the opponent's

intentions are perceived to be aggressive and optimistically if they are perceived to be benign. During most of the post-war period, American concern over the adequacy of deterrence almost always reflected pessimistic expectations stimulated by the image of a strongly hostile, resourceful, aggressive opponent, held at bay only by superior American strategic power. When the image of the Soviet opponent began to change, so too did the behavioral expectations, and America's sense of security with respect to deterrence of Soviet aggression grew accordingly. By the same token, the high level of present concern over the requirements for deterring aggressive behavior by the Chinese People's Republic is out of proportion to currently credited Chinese Communist capabilities or to those the CPR is expected to acquire in the coming few years. Again it is the image of the opponent--in this case the perception of an extremely hostile and expansionist opponent--that strongly influences the way in which deterrence requirements are conceived.

B. Military Planning and Forecasts of the Opponent Environment

This paradoxical situation points to a fundamental dilemma that confronts long-range military planning. To ignore current and past behavior and policies, and the perceived intentions of an opponent, while concentrating exclusively on the military capabilities that are estimated to be within his reach, may not only lead to policies of "over-insurance" that could strain the nation's resources and divert them from other vital national needs, but also raises the danger of the self-fulfilling prophecy: the opponent environment is in no small measure shaped by the opponent's perceptions of U.S. behavior, capabilities and intentions, as signalled by American defense policies. Moreover, single-minded concentration on covering all possible strategic bets against all conceivable future opponent capabilities may foreclose opportunities for strengthening non-antagonistic relationships with opponents when limited areas of shared interests and concerns exist.

However, the great disparity that may exist between the speed with which perceptions of opponent intentions may change, on the one hand, and the long lead times required to affect substantial changes in strategic capabilities, on the other, necessarily obliges the military planner to seek insurance against sudden changes in opponent behavior or in perceptions of his intentions, as well as against unexpected improvements in his strategic capabilities. It is for this reason, too, that military planning cannot be tied so closely to any particular long-term projection of the opponent environment that it commits future force structures and strategies to environments that fail to materialize, while rendering them inappropriate for those that do. Planning choices must be made which, while perhaps not optimal for any one projected future environment, endow future forces with sufficient flexibility to cope with a broad range of possible opponent environments. Such planning should be informed by a set of reasonable expectations about the range of alternative future environments in which the military forces may have to operate.

Long-term political forecasts of the future opponent environment are necessarily so uncertain that their contribution to military planning can only be a modest one. They can help alert the military planner to some of the possible long-term military implications of trends in the present opponent environment that might otherwise escape his attention. They can provide the planner with a check-list of conditions likely to produce a variety of opponent environments different in their military implications from the present one and thus facilitate prompter reorientation of military planning than might otherwise occur should changes in the conditions governing the opponent environment actually materialize. However, if long-term forecasts of the future opponent environment are to fulfill effectively even these modest planning functions, they must be subjected to periodic review and reformulation as successive branch points of development are reached and new alternative paths of development become discernible.

C. The Historical Trend

The future that concerns us in this study, the next ten to fifteen years, is as far removed from the present as we now are from the death of Stalin in 1953. The great changes that have occurred in the opponent environment in the past decade and a half provide ample warning against basing long-term planning on simple straight-line projections; but there is sufficient correspondence between the present environment and the earlier one to argue also against merely assuming radical discontinuities in the future.

One fundamental continuity is the fact that since the end of World War II, American opponents in international politics have been almost exclusively states or political movements ruled by Communist leaderships. The use (or threat of use) of force by the United States has been reserved for contingencies involving the direct or indirect expansion of Communist-led states or of movements believed to be controlled by Communists. Another basic continuity has been American preoccupation at the strategic level with the security threat posed by the most powerful Communist state, the Soviet Union.

What has changed substantially is the character of the political relationship between the United States and the Soviet Union (from cold war to limited détente) and, more radically, the relationship between the Soviet Union and other parts of the world Communist movement, particularly the Chinese People's Republic (from Soviet hegemony to polycentrism).

During most of the post-World War II years, the U.S.-Soviet conflict was the dominant fact of international life, conditioning the policies of most of the major powers of the world toward each other. These were the years of "two camp" politics, when the interests of America's allies were closely aligned with those of the United States, upon which they openly relied for protection. This cohesion in the West was surpassed on the Communist side, where the identification of

world Communism and the Soviet State was both total and of long standing.

The subordination of the Communist movement to the Soviet state had one meaning when the Soviet Union was weak and isolated and without great influence in the world system of nation-states. It led frequently to diplomatic disputes between the USSR and other states which held the Soviet Union responsible for the subversive activities of native Communists, but it did not threaten to disrupt the international system itself, nor did it raise seriously the danger of interstate military conflict. Soviet domination of world Communism took on radically new significance after World War II when the Soviet Union emerged as a superpower and the hegemonial leader of a system of Communist party-ruled states.

In the West, the identification of world Communism with the Soviet State made a policy of containment of Communism seem essential to prevent Soviet expansionism. The American nuclear weapons monopoly and Soviet conventional superiority in Europe led inevitably to heavy Western reliance on strategic nuclear deterrence in support of the containment policy.

Though doubts began to arise about the viability of nuclear deterrence as the Soviets acquired strategic weapons capable of striking the United States, the impact of growing Soviet power was mediated by other far-reaching political changes which brought into question some fundamental assumptions of Western policy with respect to Soviet aggressive propensities and the degree of control exercised by Moscow over world Communism.

Pessimistic Western expectations about Soviet behavior stemmed largely from the ruthless manner in which Stalin had consolidated Communist rule in those countries of Eastern Europe occupied by Soviet forces at the end of the war. The Greek civil war, Soviet efforts to blackmail Turkey, the Communist take-over of Czechoslovakia, the Berlin blockade of 1948-1949, and the Soviet-supported North Korean invasion of South Korea, deepened Western suspicions of the Soviet Union still further. However, the first post-war Soviet political offensive against Western Europe spent itself by the early 'fifties, as the states of that region, with American assistance, achieved a remarkable economic recovery and regained political stability, making themselves largely invulnerable both to Communist subversion and to Soviet blackmail. A renewed effort by Stalin's successors to break the Western alliance by military pressure and threats, centering on Khrushchev's offensive against West Berlin, failed in the late 'fifties and was called off in 1961. Meanwhile, the post-Stalin Soviet leadership was shedding some of the old Stalinist dogmas about the inevitability of war with "imperialism." In many areas of international life, comparatively normal relationships began to develop for the first time between the Soviet Union and the advanced countries of the non-Communist world. Finally, after the traumatic experience of the Cuban missile crisis the restraining effects of the risks of nuclear war clearly began to dominate in Soviet policy over the temptations offered by the new weapons to project Soviet power for political purposes.

By the mid-'sixties the locus of actual or anticipated violence had shifted from Europe to Asia and to other underdeveloped regions of the world where the principal actors on the Communist side were small Communist-ruled states or Communist-led insurgents, supported in varying degrees by one or both of the large Communist powers, but not necessarily controlled by either. With respect to conflicts in those portions of the globe, limited areas of shared concern developed between the United States and the Soviet Union to prevent peripheral struggles involving allies, clients, or protegés, from escalating into direct military confrontations between the superpowers.

Related both causally and symptomatically to the altered character of U.S.-Soviet relations is the far more radical change in the relationship between the Soviet Union and the world Communist movement, a change that is the consequence of the disintegration of world Communism as a unitary movement with a common strategy articulated by a single high command. The breakdown of the Stalinist monolith was already foreshadowed during the dictator's lifetime by the survival of Tito's independent Communist regime in Yugoslavia after its expulsion from the Cominform in 1948. A year later the advent to power of a self-made Communist elite in China, a country which, unlike the small states of Eastern Europe, could aspire to great-power status, created the potential for a radical alteration in the complexion of the world Communist movement. However, the speed with which authority in the world Communist movement fragmented in the late 'fifties and early 'sixties and the sharpness of the conflicts produced by the growing differentiation of interests among Communist states and movements were unexpected.

The developments which accelerated and intensified this process of disintegration are well-known: the death of Stalin and the denunciation of the Stalin personality cult; the successful Western containment of Soviet expansion in Europe; the proliferation of Soviet interests in underdeveloped non-Communist parts of the world; the refusal of the Soviet leaders to accept nuclear risks in support of policies that would primarily benefit another Communist state; the deradicalization of Soviet and European Communism; and particularly the eruption of open conflict between the two giants of world Communism, the USSR and the CPR, which was both the most profound consequence of the breakdown of world Communism and the most important single factor in perpetuating and exacerbating the process of disintegration.

While the military power and economic resources of the United States, and its will to employ them when necessary, will continue in the future to be the principal factors constraining Soviet behavior in international affairs, the estrangement of China and other parts of the Communist movement from the Soviet Union will affect both the opportunities for Soviet leaders to project their power and influence into new areas of the world, and their incentives for doing so. Provided that American overseas commitments are not sharply cut back, the costs and risks to the Soviet Union of supporting aggression or insurgencies by other Communist states or by Communist-led movements will continue to be high, while the benefits,

even in the event of local success, may appear to be increasingly dubious from the Soviet point of view. Nevertheless, powerful pressures will continue to push the USSR in the direction of involvement in third area conflicts. So long as the reputation for leadership in the Communist world--or in parts of it--has meaning for the Soviet Union, and there continues to be strong competition for that leadership, Soviet policies in the third world will continue to be highly sensitive to those of its chief Communist rival, China, and to those of other states and movements whose allegiance Moscow values.

II. Possible Opponent Futures

A. Strategic Centrality of the Soviet Union

U.S. requirements for strategic deterrence during the next ten to fifteen years will almost certainly continue as in the past to be determined primarily by the foreign policies and military capabilities of the USSR. This is so because the Soviet Union alone among possible future opponents of the United States will be able to destroy American society. This does not mean--in the future, any more than in the past--that actual military conflict with the Soviet Union is more likely than with other opponents. During the cold war, U.S. and Soviet military forces have never directly clashed, yet the USSR clearly has always been the chief object of U.S. strategic deterrence, even when the United States was embroiled in military conflict with other Communist opponents (twice on a very substantial scale).

Nor is continuation of the pronounced trend toward political multipolarity, including nuclear proliferation, likely to alter the present defense priority assigned to strategic deterrence of the USSR. With respect to the most advanced technologies of mass destruction, the world of the 'seventies and early 'eighties will continue to be essentially bipolar. Indeed, in the absence of a major U.S.-Soviet strategic arms limitation agreement, their competition in the development and deployment of costly new military technologies, such as ABM and MIRV, will probably increase still further the military and technological distance between the two superpowers and all other nations.

Continuation or extension of the present limited détente would tend to reduce pressures on U.S. deterrent forces, though it is uncertain whether there would be sufficient confidence in the stability of détente to justify large-scale force reductions. (Ironically, China's acquisition of a modest nuclear capability, coupled with its highly antagonistic relations with both the United States and the Soviet Union, gives Peking what amounts to an effective veto over any far-reaching arms limitation agreement that the U.S. and USSR might otherwise be prepared to reach.) By the same token, the greatest strain on U.S. strategic deterrence that could be produced in the coming decade would be Soviet resumption of aggressive policies in Western Europe or a major effort to upset the strategic equilibrium.

Indirectly, Soviet policies and capabilities will also largely determine the burden which evolving Chinese nuclear power can place on U.S. deterrence in the 'seventies and early 'eighties. It is doubtful that Chinese leaders, with the nuclear forces likely to be at their disposal, would pursue such highly aggressive policies as might threaten to bring the U.S. strategic deterrent into play unless they knew the United States to be uncertain about the continued availability to China of the Soviet nuclear umbrella. A Soviet leadership pursuing a policy of détente towards the United States would hardly make its own deterrent forces available to support aggressive Chinese moves. Thus, Soviet policies could either magnify or diminish substantially the strains that future Chinese nuclear forces might impose on U.S. deterrence.

Alternative Future U.S.-Soviet Strategic Relationships

While any number of plausible future U.S.-Soviet strategic relationships can be envisaged, the strategic state of overwhelming U.S. superiority that dominated international politics during most of the post-war period is gone and seems most unlikely to return. Although the United States might remain quantitatively and qualitatively superior to the Soviet Union during the 'seventies and early 'eighties, this superiority will no longer confer upon U.S. forces a first-strike capability such as they possessed during the 'fifties and early 'sixties.

Now that the USSR is credited with an assured destruction capability by American leaders, it is difficult to conceive of circumstances under which the Soviet Union would willingly settle for a strategic posture that commanded credit for less. Barring some major one-sided technological breakthrough of a kind that cannot now be foreseen, strategic superiority in the coming ten to fifteen years is therefore almost certain to be marginal in its military character and highly ambiguous in its political effects.

The impact of U.S. acknowledgement of a Soviet assured destruction capability upon Soviet incentives to seek further improvements in the USSR's strategic position is probably ambivalent. On the one hand, some of the previous pressure to overcome U.S. superiority may have been relaxed. Inferiority that is credited with the capacity to inflict "unacceptable damage" in a second strike does not rely so much on the forbearance of the superior side. At the same time, however, the temptation to seek acquisition of acknowledged parity, or even marginal strategic superiority--goals that may now seem within reach--has probably also grown in some Soviet quarters.

In considering circumstances under which future Soviet leaders may seek to alter the existing U.S.-Soviet strategic balance, we must bear in mind not only their military and political incentives for doing so, but also the principal physical and political constraining factors.

Assuming Soviet economic growth rates somewhat higher than in the early 'sixties, but lower than the highs of the mid-'fifties, the USSR's

GNP by 1980 might be twice as large as at present. Large increases in military expenditures would thus be possible without increasing the percentage of the GNP devoted to military purposes. However, competition from high-priority, non-military programs will probably also increase despite overall economic growth. Substantial long-term commitments have already been made, particularly in agriculture. While there are far fewer political constraints in the Soviet system than in democratic societies against sudden, rapid diversion of vast resources from other sectors into armaments, the Soviet leaders' freedom of action in this regard is less than what it was under Stalin or probably even under Khrushchev. Continued oligarchic rule, particularly if divisions persist among the oligarchs on questions of resource allocation, will tend to limit further the ease with which rapid shifts may be made to military spending. And present trends toward economic decentralization if continued, will raise the economic and social costs of sharp increases in military spending.

Another constraint--one over which Soviet leaders have even less control--is that imposed by U.S. strategic choices. How difficult it would be for the USSR to improve its strategic posture will depend in no small degree on the magnitude and success of countervailing American efforts. Soviet knowledge that it is well within the economic power of the U.S. to neutralize any increased Soviet effort will certainly affect Soviet strategic choices.

In addition to the pace and scope of U.S. military programs, developing technology will also determine how great an effort the Soviet leaders will have to make in the future to maintain or to improve the present strategic position of the USSR vis-à-vis the United States. The trend has been for technological advances to boost the costs of successive generations of strategic weapons and hence to magnify economic constraints on Soviet strategic build-ups. Nevertheless, it cannot be entirely ruled out that the USSR might make a series of breakthroughs that would enable Soviet leaders to leap-frog their opponents and, at comparatively low cost, overcome U.S. superiority acquired over the years in weapon systems that for one reason or another had become obsolescent.

Future Soviet strategic choices will not be determined by security considerations alone. The behavior of Soviet leaders since the mid-'fifties exemplifies their belief that the threat of an unprovoked U.S. attack is extremely low, if not nonexistent. They probably do not feel obliged to achieve parity or superiority in strategic forces merely as insurance against surprise attack. The question they face is: what strategic force posture is needed to support Soviet foreign policy objectives and, given budgetary and technical constraints, as well as likely U.S. responses, can such a posture be achieved?

Future Soviet choices may be broken down into three general categories: (1) acceptance of continued strategic inferiority consistent with maintenance of a credible second-strike capability; (2) attainment of strategic parity that will deprive the United States of whatever

marginal military or political advantages it now derives from its superior forces; (3) achievement of some form of marginal strategic superiority.

1. Strategic Inferiority

Strategic inferiority, if it continues to embrace a credited assured destruction capability against the United States, might prove acceptable to Soviet leaders in the future, provided: (a) They perceived no new U.S. inclination to exploit its marginal strategic advantage for other than defensive purposes; and (b) that the limitations imposed by U.S. strategic superiority on Soviet international conduct continued to be acceptable.

The acknowledged erosion of the U.S. first-strike capability doubtless reassures the Soviet leaders regarding the danger that some future U.S. government might contemplate an unprovoked nuclear attack upon the Soviet Union, but the large-scale American war effort in Vietnam, and particularly the long-sustained U.S. bombing campaign against the North, may already trouble Moscow about the kinds of lesser military activities that American administrations might be prepared to engage in under the protection of U.S. strategic superiority. As the storm center of international conflict swings away from Europe to the third world, Soviet leaders may cease to find tolerable those limitations on their freedom of action that result from their present apparently unbending determination not to risk military conflicts of any kind with U.S. forces anywhere in the world.

If such changes were to occur in Soviet perceptions of the United States, or in Soviet foreign policy objectives, Soviet leaders might be strongly motivated to strengthen their strategic posture, either to enhance protection of the Soviet homeland or to acquire greater political leverage for use abroad against Western interests.

It may be questioned whether marginal U.S. strategic superiority could still, if tested, enforce important limitations on Soviet behavior now that the Soviet Union has acquired an acknowledged "assured destruction" capacity. Certainly the distinction between inferiority and parity is blurred when inferiority encompasses such a capacity. However, the magnitude of the disparity in strategic forces, even where the weaker side is credited by the stronger with a capacity to inflict "unacceptable damage," may critically affect the stability of beliefs on both sides about mutual deterrence.

It is one thing for American leaders, in peacetime, to express lack of confidence that their superior strategic force could destroy a sufficiently large proportion of the opposing Soviet force to preclude "unacceptable damage" to the United States. Such lack of confidence reinforces their already strong general aversion, fed by many sources, to engage in thermonuclear war with the Soviet Union. It may be quite another thing, however, for Soviet leaders, facing a strategic force

that is manifestly stronger than their own, to accept the risk of provoking the United States on the strength of doubts expressed by American leaders before a crisis. The confidence of U.S. leaders is not the sole criterion by which the value of marginal U.S. strategic superiority can be assessed; its independent effects upon the calculations and behavior of Soviet leaders in various contingencies are also highly relevant.

These effects are likely to be amplified by the oligarchical, bureaucratic structure of decision-making that has now replaced the personal rule of Stalin's and in limited measure, Khrushchev's time. Ambiguities and uncertainties in crises arising out of the possible role of marginally superior U.S. forces are more likely now to be resolved pessimistically by Soviet leaders if only because of a general tendency toward lowest common denominator decision-making imposed by such an oligarchic leadership structure. By the same token, however, the size and character of the "minimum" Soviet force required to neutralize U.S. strategic superiority, as arrived at by consensus among a group of leaders with partially divergent interests and preferences and representing a variety of competing bureaucracies, may be quite different from what a single, powerful leader might establish. (e.g., Khrushchev seemed to feel quite comfortable with a comparatively small intercontinental force and, for some years, was even willing to live with an essentially fictitious deterrent.)

Finally, some Soviet leaders, particularly among the military, may object to acceptance of continued inferiority because it would narrow the range of future Soviet options, and could hamstring the Soviet Union indefinitely with an inferior "launching platform" for future attempts to capitalize on technological breakthroughs as the path to more decisive kinds of strategic superiority than is now within reach of either side.

2. Strategic Parity

If the accelerated build-up of Soviet strategic forces that has occurred since the fall of Khrushchev indicates a determination on the part of his successors to eliminate, rather than merely to narrow, the gap between U.S. and Soviet strategic power, and if this effort succeeds during the next decade in creating a situation of effective strategic parity between the two superpowers, the range of Soviet foreign and military policy options will clearly be extended. "Parity" denotes here a strategic state in which the forces of the Soviet Union are sufficient to deprive those of the United States both of their military and political advantages. This need not require precise quantitative and qualitative equality of forces, though a sizeable disparity between the forces of the two sides may be inconsistent with a prolonged stable state of parity.

A mutually acknowledged state of U.S.-Soviet strategic parity might lead the Soviet Union to adopt one of several alternative military policies:

- (a) acceptance of this new strategic state and of measures designed

to perpetuate it; (b) an intensified technological arms race to break the strategic stalemate; or (c) a build-up of non-strategic Soviet military power, particularly capabilities for conducting mobile warfare in distant parts of the world. The third alternative is compatible with either one of the first two, though an effort to stabilize the strategic balance might liberate resources for a build-up of sub-strategic capabilities, while a race to break the strategic deadlock would probably be resource-competitive.

With respect to foreign policy, the chief alternatives might be (a) strongly hostile policies with respect to the United States, strong political or military pressures on American allies to become neutral, and active assistance to Communist or other anti-Western insurgent forces in countries where political conditions seemed ripe, or (b) serious efforts to reach a general accommodation with the West, possibly including arms limitation and arms embargo agreements.

Less extreme intermediate courses of action of a more familiar type might also be considered and adopted. The actual choice between alternative military policies and political strategies would of course depend on the political circumstances in which the decisions were made. But the common point of departure for consideration of these alternatives would be strategic balance more favorable to the Soviet Union than any that has yet existed.

Under certain circumstances, including perhaps a radical deterioration in Soviet-Chinese relations, the improved bargaining position provided by strategic parity might lead to serious Soviet efforts to reach a general accommodation with the United States. This would probably presuppose the continued modification both of the totalitarian character of the Soviet regime and of its commitment to world revolutionary transformation. A modified Soviet regime might be especially inclined to seek agreements that would end or curtail the arms race with America. For such a regime the hazard arising from nuclear proliferation might conceivably appear to exceed that arising from the existence of American strategic forces. The prospect of eliminating that threat by single-minded hostility to the United States, a poor prospect even under improved strategic conditions for the USSR, might seem less attractive than the promise of stabilizing the world political system in concert with the United States.

Such a radical change in the foreign policy orientation of the Soviet Union would have profound consequences for the United States and for the world community. However, while the advent of strategic parity might heighten the optimism of Soviet leaders about the bargain they could strike with their Western adversaries, and motivate them more positively to enter serious negotiations on such basic questions as Germany, European security, and arms limitation, what might first be required would be a demonstration that strategic parity did not offer a more satisfactory basis than the former inferiority for pursuing more traditional Soviet objectives. Thus, while a basic modification of Soviet foreign policy objectives in the future is possible, it is less likely to result from

strategic parity (which might tempt Soviet leaders to test the new strategic relationship for whatever fresh political benefits it might yield), than by a prolongation of some measure of U.S. strategic superiority held in reserve to insure against Soviet reversion to extremely hostile policies.

Soviet temptation to exploit the new strategic balance for renewing the cold war against the West would stem from increased Soviet confidence in the ability of the strategic equilibrium to withstand severe political and even low-level military shocks. Acquisition of strategic parity might bring the Soviet leaders to resume the offensive abandoned in 1962, this time prepared to exert greater pressures than before against exposed Western positions like West Berlin.

This does not mean that Soviet leaders would feel free to commit any hostile act of which they were capable short of launching a strategic nuclear attack against the United States. A secure U.S. strategic force capable of destroying Soviet society would necessarily exert a restraining influence on all major Soviet foreign policy calculations and behavior. This would be so even if threats by American leaders deliberately to set in motion the machine of mutual destruction were not believed, because the possibility that general war might nevertheless occur through accident, irrational action, miscalculation, or as the uncontrolled culmination of a process of escalation would leave a residual fear of war that would tend to rise and fall with fluctuations in tension between the United States and the USSR. The precise restraining effect of such a residual fear of war on Soviet policy would vary according to circumstances. Its inhibiting effect upon Soviet foreign policy, however, would necessarily be weaker than the effect produced by fear that war might arise, not only inadvertently, but also from deliberate action, or chain of actions, by the United States.

Even when their strategic force was vastly inferior to that of the United States, Soviet leaders seemed confident that the United States was unwilling to contemplate general war except as a last and desperate resort, and that it wished, if possible, to avoid any direct military confrontation with the USSR. However, as long as the United States enjoys strategic superiority, Soviet leaders must fear that American leaders, if engaged in the armed defense of some important Western interest and confronted by Soviet local superiority, might threaten to extend the war, and actually do so, in order to meet the USSR on terms of equality or superiority. Under these circumstances, the USSR must seek to achieve its objectives without provoking American armed resistance. And if military conflict should appear imminent, prompt disengagement or withdrawal is enjoined in order to avoid the risks of escalation.

Conditions of mutually acknowledged strategic parity might erode this crucially important difference in willingness to escalate. If there were a shared estimate that the United States could not match Soviet military capabilities except at very high levels of violence, and could no longer surpass them even at the highest level, Soviet leaders might

be encouraged to conduct political offensives more aggressively and tenaciously.

Of course, even in conditions of strategic parity Soviet leaders would strongly prefer success in a new offensive by threatening to employ force rather than by actually employing it. This would continue to be apparent to the Soviet Union's opponents, and Soviet leaders would still have to convince their adversaries that, while they preferred to avoid military conflict, if possible, they were now prepared to risk it, if necessary, to secure their objectives. The Soviets might well suppose that once their opponents recognized the willingness of the USSR to run the risk of limited military actions they would prefer small concessions to wars. An attempt to demonstrate this new Soviet determination might lead to a major cold war confrontation.

The effect of Soviet acquisition of strategic parity on the conduct of Soviet foreign policy would be mediated by the particular political circumstances surrounding this change in the strategic balance. If awareness that the United States no longer enjoyed a comfortable cushion of strategic superiority came suddenly, perhaps as a consequence of some dramatic new Soviet military demonstration or in conjunction with a sharp, sudden diplomatic confrontation, it might greatly inhibit U.S. reactions and shake the confidence of American allies. The impact would probably be less severe if Western reliance on U.S. strategic nuclear weapons for defense of key areas declined slowly and deliberately, particularly if it were accompanied either by a compensatory build-up of Western non-strategic military power, or by reductions of both Western and Soviet theater forces such that a balance of military power on the continent was created.

However, even if the advent of strategic parity found the USSR with a highly favorable balance of forces in Europe, Soviet application of severe political or military pressure there would entail serious risks. If these pressures proved insufficient, the offensive would not only fail to achieve its objectives, but might leave the Soviet Union relatively worse off than before. Renewed Soviet threats and pressures might reverse the strong present trend toward erosion of the Western alliance. If the renewed offensive failed to rout or paralyze the allies, it might have the effect of restoring their unity and firmness of purpose. Consequently, unless the Soviet leaders believed that strategic parity provided unusually good conditions for achieving large political gains, they would be unlikely to apply sharp pressures to that end. Conceivably, a series of estimates by the Soviet leaders that the situation was not ripe for a renewed offensive in Europe could gradually lead to abandonment of such plans, and to an enduring new relationship between the Soviet Union and Western Europe. Soviet attention in international politics might then fix itself even more decisively on the third world, where its major competitors would be the United States and the Chinese People's Republic and where the most relevant military capabilities would be sub-strategic.

3. Strategic Superiority

A third possibility is that the Soviet Union will seek to achieve credit for at least some marginal form of strategic superiority over the United States to serve as the basis for a highly aggressive foreign policy that might place vital U.S. interests in jeopardy.

The present disparity in favor of the United States and the superior resources of the United States for engaging in an intensified strategic arms race mean that such a course would be fraught with great economic and technical difficulties for the Soviet Union. Given improved U.S. intelligence capabilities, Soviet efforts to achieve credit for superiority through deception on the scale of the "missile gap" myth of the late 'fifties would probably not succeed again. Moreover, Soviet willingness to take the actions necessary to compel large Western concessions would depend critically on its actual estimate of the strategic balance: if the gap was too great between the estimate and the claims, even a high degree of success in concealing the discrepancy from their opponents might not compensate for self-limitations imposed by the Soviet leaders' awareness of their inferiority.

This at least was the experience of the late 'fifties and early 'sixties, when Khrushchev attempted on the basis of an unexpectedly early breakthrough in strategic missile technology to gain credit for strategic capabilities that the Soviet Union was not to acquire for a number of years. Even when the U.S. was uncertain about the true extent of Soviet capabilities, Khrushchev's knowledge of real Soviet inferiority obliged him to stop short of measures with respect to Berlin that might have provoked hostilities with the United States.

However, it is possible that the outlook would change if the USSR succeeded in building a stronger strategic foundation of real rather than fictitious power. If the Soviet Union were to achieve real parity, Soviet leaders might be tempted to reach for superiority, or credit for it, by capitalizing quickly on some new technological advance. The military risks and political costs of an attempt to achieve large political gains on the basis of some claimed or actual marginal strategic superiority would be lower if the Soviet leaders could be confident that even in conditions of acute crisis the United States would continue to credit the Soviet Union with an assured destruction capability.

The requirements for employing superior strategic forces politically are far less stringent than those for employing them militarily. Even so, the objective military requirements are not easily attained. The USSR might lack the means of satisfying these requirements, and in any case might be discouraged from making the attempt, particularly if U.S. defense and foreign policies were deliberately designed to discourage it. This appears to be the situation at present.

However, there will be strong pressures, particularly from the Soviet military, to maintain an option for attempting to acquire superior

forces. This would argue for a broad aggressive program of research and development in advanced military technologies. Under conditions of parity in particular, the strategic balance might be asymmetrically sensitive to technological breakthroughs or surprises, since a politically aggressive power that wished to destabilize the balance could choose among promising new military technologies in order to concentrate its resources for the acquisition of a temporary advantage that might be suitable for prompt political exploitation.

The Locus of Future Conflicts: Europe or the Third World?

Assuming that an assured destruction capability against the United States has now become a minimum requirement for Soviet strategic forces, our analysis suggests that future Soviet decisions with respect to programs that exceed that requirement will depend critically upon Soviet expectations regarding likely contingencies in which the USSR's military power might be brought to bear, politically or in the field.

During the last years of his rule, Khrushchev evidently came to the conclusion that Soviet policies of threats and pressures in Europe had become counter-productive: they were galvanizing rather than paralyzing the NATO allies. Détente, on the other hand, reduced European perceptions of the Soviet threat and thereby promoted divisive tendencies in the Western alliance. As long as Soviet leaders continue to take this view of the relative merits of a threatening versus a relaxed posture in Europe, one major incentive for a large build-up in Soviet strategic power and in European theater forces will be lacking. Even with a substantial improvement in the Soviet strategic posture and a marked Soviet advantage in theater forces, a major new Soviet provocation in Europe would be extremely risky, and it would probably not make more accessible other objectives in areas of the world remote from the centers of Soviet power.

Should the advanced countries of the West continue to seem unpromising targets for political offensives backed by Soviet strategic power, Moscow's expansionist impulses in the coming years might seek outlets primarily in the underdeveloped parts of the world into which Khrushchev first introduced Soviet power and influence a little more than a decade ago. Toward the end of his rule, Khrushchev, having found the political returns less rewarding than he may have anticipated, began to slow down the pace of Soviet involvement. In the past year or two, however, his successors have begun to accelerate it again, particularly in the Middle East and in Southeast Asia. More intervention-oriented Soviet policies in the third world might require stronger Soviet strategic forces to withstand U.S. efforts to deter Soviet intervention with strategic threats; however, given the peripheral nature of U.S. interests in the third world, compared to Europe, the strategic power required to support aggressive Soviet policies in the underdeveloped countries would be considerably less than what would be required to back aggressive Soviet policies in Europe. The USSR might shift its military emphasis toward the development of capabilities that would permit it to project

its strength more effectively into remote areas. This would mean the adoption of programs to increase the mobility, flexibility, and versatility of conventional Soviet military forces (e.g., improved airlift, sea-lift, amphibious forces and reconnaissance).

U.S.-Soviet competition in the third world might conceivably be limited by tacit agreement on "ground rules" governing military intervention by the superpowers. This would constitute an extension of the détente to the underdeveloped world in the interests of reducing the danger of superpower confrontation. However, this might be much more difficult to achieve than the European détente. In Europe, détente requires only that both sides abstain from deliberate actions that might upset what is otherwise a highly stable military-political equilibrium. In the third world, the pre-existing condition is a high degree of instability, including periodic outbreaks of violent conflict. U.S.-Soviet détente in that part of the world would require a virtual agreement for joint policing of troubled areas or their abandonment to the play of local forces or the intervention of other powers.

B. Future Opponent Alliance Relations

For purposes of this paper, we define as possible future U.S. opponents those states (or foreign political movements and insurgencies) with which the United States might plausibly become involved in armed conflict within the next ten to fifteen years, or against which the threat to use force might be employed by the United States. In addition to states presently ruled by Communist parties, potential U.S. opponents include all those states which might come under Communist rule, or otherwise become allies, clients, or protégés of the major Communist powers, for purposes hostile to the United States. In our view, this excludes all present European allies of the United States, as well as other "middle powers" of the world allied to the United States (Japan) or neutral (India). We distinguish here between the possible neutralization of present U.S. allies and their entry into an alliance system hostile to the United States. Thus, while the weakening (or even disruption) of U.S. alliance ties with such key states as the Federal Republic or Japan is possible and would have serious implications both for regional and global power relationships between the United States and its major Communist opponents, the alignment of these states with either the USSR or China in an anti-American alliance is highly implausible.⁶⁸

The number of remaining possible future opponents of the United States is so large that forecasts about particular countries would be pointless. What is certain is that interstate conflicts, insurgencies, and civil wars in regions of interest to the United States will occur from time to time in the coming years. Whether or not any of the protagonists are drawn into the opponent environment of the United States

⁶⁸ See Chapter I on The Alliance Environment.

will depend chiefly on how the two superpowers and China choose to relate themselves to these conflicts.

The opponent environment of the United States ten to fifteen years hence will be shaped largely by the future course of two major trends in relations among states presently or potentially hostile to the United States and its allies.

1. Among the 14 states ruled by Communist parties, a pronounced trend toward differentiation of relations has already created in the Communist world subsystem a variety of interstate relationships covering the entire spectrum from hostility to close alliance. Although the pace and extent of change has varied greatly within the Communist world, the overall tendency has clearly been toward loosening of ties between the Soviet Union and all others.

2. Between the Soviet Union (and to a still small, but potentially important degree, China) and non-Communist states or political movements hostile to the United States, or to American allies or protégés, there is a growing web of relationships, including ties of an ambiguously military character. These developing relations, while still falling short of formal alliance, are involving the USSR increasingly in the foreign and military policies of a number of non-Communist states in the third world.

With respect to the Communist-ruled states of the world, the Soviet Union's commitments remain great, though increasingly differentiated, while its control over their external behavior is declining, though not at a uniform rate. China thus far has only ambiguous commitments to and very little control over the external behavior of other Communist states except tiny Albania, and, to an unknown extent, North Vietnam. The mutual aid provisions of the 1950 Sino-Soviet Treaty seem to be regarded as a dead letter by present Chinese leaders, and their Soviet counterparts have hinted several times that only "friendly" socialist states can count on the protection of the Soviet nuclear umbrella. The Warsaw Treaty Organization, the only multilateral military grouping in the Communist world, includes one state, Albania, with which most of its "allies" have neither inter-state nor inter-party relations, and another, Rumania, which participates only intermittently and selectively in the political and military activities of the alliance. In recent years, Yugoslavia has drawn closer to the Soviet Union on many major international issues, but remains an independent socialist state, outside the Soviet alliance system, thus retaining for itself substantial freedom of maneuver in international politics. The limited character of Moscow's military support to North Vietnam and its deference to Hanoi on matters relating to a possible political settlement of the war illustrate the ambiguous character of the USSR's commitments to and influence with the Asian Communist states. With the youngest and most vulnerable Communist state, Cuba, the Soviet Union's relations are highly ambivalent, for Cuba's economic and military dependence on the USSR are largely offset by Castro's power of moral blackmail against the Soviet Union in the world revolutionary movement.

There is a growing involvement of the Soviet Union, and to a lesser extent of China, in the international relations of non-Communist "progressive" states in the third world. Soviet commitments and obligations, while still limited and not yet formalized, are increasing. The USSR's control and influence in these quarters is on the whole increasing as well, but it is nowhere decisive and its stability is highly tenuous. The leading edge of this second trend has been the extensive program of Soviet military aid to underdeveloped countries. Since 1955, the USSR has provided billions of dollars worth of arms and equipment and thousands of Soviet military advisers to selected non-Communist countries, particularly in the Middle East. The results have not been uniformly favorable from the Soviet point of view. The largest Asian recipient of such Soviet assistance, Indonesia, made a radical anti-Communist about-face in both its domestic and external policies in 1965; in the Middle East the military worth of Soviet weapons in the hands of technologically underdeveloped clients has been held up to serious question by the stunning Israeli victory in the Six Day War. However, Soviet political influence in the area was probably strengthened rather than weakened by the Arab defeat.

The future course of this trend will substantially determine the character of U.S.-Soviet relations in the third world in the coming decade. Soviet leaders will have to decide whether the political gains to be derived from ambiguous military commitments to small, unstable non-Communist states are commensurate with the costs and risks that such policies entail. This now appears to be a contentious issue in Soviet politics. Certainly, future U.S. policies in the third world, particularly with respect to potential U.S. interventions, will condition Soviet policies, as will pressures for and against deeper Soviet involvement emanating from inside the Communist world.

On balance, we believe the Soviet Union is likely to increase its ties and obligations to small non-Communist states whose potential for involving the USSR in their own conflicts is far greater than their ability to contribute directly to Soviet security. However, as long as small clients and protégés remain under non-Communist rule, Soviet leaders will probably be careful to limit their commitments, stopping short of giving formal security guarantees.

The implications of these trends for the future of deterrence are ambivalent or indeterminate. Against a set of opponents whose policies are dominated by a single hegemonial power, deterrence tends to be indivisible: Effective deterrence of the hegemonial power translates itself into deterrence of the other opponents as well. Strategic deterrence of the Soviet Union by the United States has had a pervasive effect on Soviet external conduct from the highest strategic to the lowest tactical levels, and--while the Soviet Union controlled the Communist camp--on the conduct of all other Communist states and Communist-led movements as well. It was not so much the fear of immediate "massive retaliation" against the Soviet homeland that placed pressure on Soviet leaders to discipline militant allies (China, Cuba), but fears of escalation that

might culminate in a U.S.-Soviet military confrontation.

In an increasingly polycentric opponent environment, the indivisibility of deterrence becomes highly questionable. As Soviet control over other actual or potential opponents of the United States diminishes, the linkage between American strategic deterrence of the Soviet Union and deterrence of lower level aggression by other Communist actors will be weakened. Insofar as diminished Soviet control may also mean reduced Soviet commitments, other U.S. opponents may become increasingly vulnerable to attack by U.S. military forces, but U.S. strategic forces, previously effective because of their ultimate threat to the Soviet Union, would be less relevant.

The effects on the behavior of Soviet allies, clients and protégés will depend on how the balance is struck between the degree of Soviet influence and the degree of Soviet commitment. To the extent that the Soviet Union arms other states, particularly in the third world, gives them political and diplomatic backing against local enemies, and offers vague counter-deterrent support against the United States, the adventurous tendencies of such minor powers might be enhanced. However, to the extent that Soviet influence over minor powers grows together with its assistance to them, the Soviet interest in avoiding confrontations with the United States--provided the U.S.-Soviet strategic balance continued to make such Soviet interest overriding--could have important restraining effects on those states which were dependent on the USSR, if their behavior threatened to embroil the superpowers in conflict. These ambivalent tendencies were seen most clearly during the June 1967 Arab-Israeli war, when the Soviet Union alternately played the role of crisis-fomentor and appeaser.

Although Soviet involvement with a variety of non-Communist regimes is growing and will probably continue to grow in the coming decade, the Soviet Union, and the CPR as well, will almost certainly continue to assign the highest priority in alliance relations to Communist-led states. Barring such highly implausible developments as the advent to power of pro-Soviet or pro-Chinese Communist parties in one or more of the present Western-allied or neutral "middle powers" of the world, the two most crucial alliance relationships in the Communist world will probably continue to be those between the Soviet Union and China, and between the USSR and the Warsaw Pact states of Eastern Europe.

C. Sino-Soviet Relations

In histories written by Communists, the victory of the Chinese Communist revolution is ranked second in worldwide significance only to the October Revolution in Russia. On this historical plane the Sino-Soviet split of the last decade must certainly be given third place. This is a measure of the setback which the rift between the Marxist-Leninist giants administered to Communism as a world movement. But the future relationship between these Communist states can also have fateful consequences for the rest of the international community.

This is particularly true for the United States, and for the future of its deterrence forces and strategies. The evolving Sino-Soviet relationship will determine whether the burdens on U.S. strategic deterrence imposed by Soviet military power, the only force capable of rivalling that of America, will be reduced or increased by the policies and capabilities of a second Communist power.

Especially sensitive to the future course of Sino-Soviet relations is the potential military and political role of emerging Chinese nuclear power. Given even highly pessimistic Western assumptions about the size and character of the nuclear capabilities likely to be at the disposal of the Chinese Communist leaders during the next ten to fifteen years, the likelihood of Chinese initiation of the use of nuclear weapons (or of threats to go first) will remain low. This is so not only because of the vast nuclear superiority, regional as well as global, that the United States will certainly continue to enjoy against China, but also because Chinese initiation or threats to initiate the use of nuclear weapons would be superfluous and inappropriate for the most likely targets of Chinese expansionism in Asia.

Most potential targets of Chinese aggression are neighboring states in the south whose internal weaknesses and instabilities make them vulnerable to take-over by subversion, by military action of Communist-led insurgents with or without extensive external support, or, at most, by conventional Chinese military efforts. India, while she will probably not become vulnerable to defeat by subversion or insurgency on a national scale, is unlikely to become so militarily formidable that she could neutralize Chinese conventional strength, or so politically isolated from either of the superpowers that she would be a cost-free target for Chinese nuclear weapons or for casual Chinese nuclear threats.

Apart from their psychological value as symbols of the great power status to which Chinese leaders aspire, the principal function of Chinese nuclear weapons during the 'seventies will almost certainly be to deter a threatened American nuclear attack on China under conditions in which U.S. initiation might be plausible. Such contingencies might include large-scale employment of conventional Chinese forces against neighboring states to which U.S. forces had been deployed, or a full-scale Chinese Communist invasion of Taiwan. Employed in such a manner, the kind of nuclear capability that will be available to Peking in the coming ten to fifteen years may not place a much greater strain on U.S. deterrence in Asia than would the shadow of the Soviet nuclear umbrella for which the Chinese capability is a substitute. Deliberate and unequivocal withdrawal of the Soviet nuclear umbrella might even leave a nuclear-armed China less secure than she would be without a modest nuclear capability, but with a Soviet pledge to provide protection. However, more ambiguous Sino-Soviet strategic relationships might amplify the counter-deterrent value of Chinese weapons by raising the risk of their employment as a trigger for some portion of the larger Soviet capability.

On the other hand, acute Sino-Soviet hostility might compel China to

divert its nuclear weapons and delivery programs away from an anti-U.S. orientation in order to confront the superpower closer at hand. This might seriously degrade the counter-deterrent value of Chinese nuclear weapons vis-à-vis the United States in Asia.

Sino-Soviet relations have not changed their essential character since 1963, when the long simmering dispute erupted into open polemics. There were some abortive efforts at rapprochement initiated by the Soviet leaders after Khrushchev's ouster in 1964, and there have also been new rises in tension, threatening to aggravate the relationship still further. Here we consider three alternative Sino-Soviet futures: stabilization of the present tense and ambiguous relationship; an open, formal break; and a limited rapprochement. On balance, we believe that rapprochement is less likely than further deterioration. However, none of these alternatives should be regarded as end-points of development; they could represent successive phases through which the relationship may pass in the next decade or so.

1. Stabilization of the present relationship: The Soviet Union and China pursue independent foreign and military policies and remain estranged from one another in the international Communist movement, though neither "excommunicates" the other.

This is roughly the situation prevailing at present. Soviet and Chinese foreign and military policies might at times proceed along parallel lines, though not in alliance; at other times, they might operate at cross-purposes, though stopping short of actual hostilities. This relationship could evolve either into an open Sino-Soviet break or a limited rapprochement of some kind, but should it become stabilized and persist over a prolonged period of time, its implications, now only vaguely perceived, would become more salient than they now are for U.S. foreign policy and defense planning.

The need to design strategies and military forces that treat the USSR and the CPR separately, already recognized in the U.S. decision to deploy a "thin" ABM defense, would certainly be strengthened. Given an ambiguous Sino-Soviet relationship, differentiated U.S. policies would seek not so much to play one Communist giant off against the other as to ensure the neutrality of one in the event of a crisis in U.S. relations with the other. Militarily, there would be a high premium on strategies and forces that could be employed to threaten one and not the other. For most practical purposes this would mean strategies and forces that could be applied against China without menacing or provoking the USSR.

As long as the Soviet Union and China failed to coordinate their foreign and defense policies, and were unwilling to act jointly against the United States or its allies, the U.S. would probably not be confronted by simultaneous "two front" threats. Even if simultaneous crises were to occur involving the United States with the Soviet Union and China, in two different areas, U.S. leverage in dealing with separate opponents

in unlinked crises would be greater than if the USSR and CPR were working in tandem.

Sino-Soviet disunity would interfere with aggressive Soviet policies in Europe or the Middle East far less than it would hinder aggressive Chinese policies in Asia, since China can contribute little to Soviet capabilities in areas remote from the Chinese mainland, while the presence or absence of the Soviet nuclear umbrella over China could importantly influence the willingness of Chinese leaders to resort to local aggression in Asia.

One special danger of a prolonged Sino-Soviet dispute that is resolved neither by rapprochement nor by formal schism is that it could provide the framework for a strong competition between the Communist giants for allies and clients among the Communist and underdeveloped non-Communist states of the world. A rapprochement would presumably include a "spheres of influence" or at least a "rules of engagement" agreement that would dampen the competition; an open break, on the other hand, might compel third parties to choose between the two, thus weakening their bargaining positions. In a highly competitive Sino-Soviet environment, the power of third parties embroiled in conflict with the U.S. or one of its allies to involve either the Soviet Union or China will be significantly greater. Since Chinese policy with respect to the Soviet Union has in any case been to try to compel the USSR to abandon détente, the strains exerted by third parties seeking support against U.S. or U.S.-backed interests would be felt most strongly by the USSR.

These competitive pressures might continue, as they have in the past, to limit Soviet willingness to deepen the détente with the United States. A Soviet decision to continue with the détente despite these pressures, in order to control by agreement with the United States the risks of superpower embroilment in third world disputes, could lead to a complete break between the USSR and the CPR and to a growing disassociation of the Soviet Union from the revolutionary movement in the third world.

2. Formal break: An open, complete, Sino-Soviet break that precludes any but antagonistic relations.

As long as the relationship was so characterized, the Sino-Soviet "cold war" would probably be the central international preoccupation of both sides. This would not preclude antagonistic relations between either or both Communist powers and third parties, particularly the United States, but it would preclude jointly conducted Sino-Soviet policies of any kind.

A formal break between the two largest Communist states would be signalled by their mutual excommunication from the world Communist movement, and probably by a rupture of diplomatic relations as well. The Sino-Soviet Treaty would either be renounced or allowed to expire in 1980.

A formal break would have repercussions in a large number of arenas,

in the first instance in the world Communist movement, which would doubtless split even more sharply than at present along pro-Soviet and pro-Peking lines. Neutrality would not be an ideologically legitimate position in a clash between two Communist powers who no longer regarded each other as Marxist-Leninist. The CPR, as the weaker of the two sides, might be prepared to tolerate neutrality on the part of former Soviet satellites, but the USSR might decide to use a formal break with China as the occasion for an effort to restore discipline in the larger part of the world movement. This would mean settling for a smaller Soviet-led movement than could be assembled on a more permissive basis, but the Soviet leaders might on balance prefer this.

Mutual Soviet and Chinese preoccupation with their conflict might also turn the disputed Sino-Soviet border into a zone of military clashes of varying intensities, most probably of the raid-and-retaliation type. Such clashes would almost certainly cause both the USSR and CPR to concentrate large military forces in border areas. Intensely hostile Sino-Soviet relations would doubtless also affect the strategic weapon programs and deployments of the two powers to the advantage of other states, including the United States. The deployment of a significant Chinese ICBM force facing the United States might be delayed by the assignment of a higher priority to the construction of an IRBM force oriented on Soviet targets. By the same token, Soviet strategic deployments against China in the Far East and Central Asia would divert resources that might otherwise be expended on weapons aimed at the United States and Western Europe. Under these circumstances, the Soviet Union might seek to invest more heavily in a mobile strategic weapon system that could be shifted on strategic warning from one opponent to the other.

A complete break between the USSR and China would be compatible with a broad range of possible U.S.-Soviet and U.S.-Chinese relations, including:

a. A prolonged and deepened détente between the U.S. and USSR, perhaps even leading to a European settlement, which Soviet leaders might welcome in order to free them to face a possible Chinese threat in the East.

b. A U.S.-Chinese détente, sought by Chinese leaders to free their hands to deal with the USSR. This would require not only a radical revision of the foreign policy orientation of the Chinese leadership, but also a change in U.S. attitudes toward possible future Communist insurgencies in Asia. These could turn into focal points of Sino-Soviet disputes, provided the U.S. did not assert an overpowering interest of its own.

c. Finally, a complete Sino-Soviet break might result in a shifting triangular U.S.-Soviet-Chinese relationship, with the United States in a position to play a balancing role. This would be the most favorable outcome for the U.S. of an intensely hostile Sino-Soviet relationship, but would require an extremely flexible American diplomatic and

military posture and a U.S. foreign policy orientation that was radically de-ideologized.

3. Limited rapprochement: The USSR and CPR in an alliance of equals, close when mutual interests are perceived, otherwise loose; a tacit "spheres of predominant influence" arrangement replaces open competition in the world Communist movement.

This is probably the most cohesive Sino-Soviet relationship that could develop in the next decade or so, barring a basic discontinuity in the historic development of one of the two states that would throw it into a position of extreme dependence on the other (e.g., a major war that crippled the CPR). Moreover, a hegemonial position for one of the two states in such an alliance would probably presuppose such a radical weakening of the other as to make their alliance less weighty from the standpoint of U.S. security than a looser alliance of two strong states.

However, even an improvement in Sino-Soviet relations such as would be entailed by the formation of a loose alliance of equals would require major changes in the internal and external policies of both. The Sino-Soviet rift is now so deep and has so fully involved the prestige of the rival leaders that a prerequisite for healing it would almost certainly be a change in the character of the leadership of one or both countries. As noted above, the Chinese leaders rebuffed the early efforts of Khrushchev's successors to improve relations. The crucial factor in the years ahead will be the Maoist succession in China. The succession struggle, already violently in progress in China, will presumably be resolved early during the period of concern to us in this study. To heal the Sino-Soviet breach, a new, more pragmatic successor regime would have to emerge in Peking, prepared, if external circumstances required it, to make common cause even with the "revisionist barbarians" in Moscow.

The external circumstances required would probably have to involve a severe threat to a major common Sino-Soviet interest that, in the view of both parties: (1) could not be safely or adequately dealt with except by common Sino-Soviet action; and (2) would impose costs that both parties would regard as unacceptable if not successfully countered. (This does not mean that the interests of the two Communist powers would have to be identical, but that the disadvantages perceived by each side arising out of failure to take common action would not be so asymmetrical as to make one power willing to accept a minor setback in order to see the other suffer a catastrophe.)

The war in Vietnam contains the raw materials for such a scenario, and if escalated to a sufficiently high level, could impel Moscow and Peking to work toward concerted policy and joint action. At intermediate stages, however, as has already been demonstrated, threats to common interests of the Soviet Union and China are more likely to exacerbate their relationships than to heal it, since they open up new and sensitive issues in the struggle within the world Communist movement to

distribute blame and responsibility for setbacks.

The evolution of a working Soviet alliance with a nuclear-armed China would pose serious security problems for the United States. Indeed, such an alliance would probably be born of acute crisis in U.S.-Soviet and U.S.-Chinese relations since, as noted above, perception by the USSR and CPR of a common threat is probably a prerequisite for such a closing of ranks. The crisis would almost necessarily have to come in Asia; it is hard to conceive of a Chinese interest in Europe important enough to provide a basis for common Sino-Soviet action.

The restoration of the Sino-Soviet alliance would probably require U.S. general war planning to be based on the assumption of a simultaneous "two front" nuclear war against two nuclear-armed opponents. The burden on U.S. general purpose forces would also grow under such circumstances because there would be reduced confidence in the ability of U.S. strategic power to deter large-scale Communist aggression in Asia. There is a possible silver lining in the cloud, however: a restored alliance might give the Soviet Union greater influence than it now has over the conduct of Chinese foreign policies. If this were so, the increase in Sino-Soviet military potential might be balanced by decreased Chinese bellicosity. Much would depend on the state of U.S.-Soviet relations. If the Soviet Union still had a strong interest in preserving some features of the détente and in avoiding armed clashes with the United States, its restraining influence on China might be strong. The nature of the U.S.-Soviet strategic balance would be particularly crucial. The best insurance against aggressive Russian or Chinese exploitation of a restored Sino-Soviet alliance would be some credible margin of U.S. strategic superiority that would discourage efforts to test the stability of existing U.S. alliance arrangements.

The Warsaw Treaty Alliance

Neither individually nor as a group are the Warsaw Treaty allies of the Soviet Union today capable of posing a threat to U.S. security interests severe enough to place important strains on deterrence. (The GDR could technically pose such a threat by closing Western access routes to West Berlin, but the effectiveness of such a move would depend entirely on the extent to which it enjoyed Soviet backing.) Moreover, what the WTO allies might add collectively to Soviet military capabilities is not substantial enough to tip the balance of power in Europe (even supposing WTO forces proved to be reliable).

Yet the Soviet leaders can be expected to regard continued alignment of the Eastern European Communist-ruled states with the USSR as a security objective second only to defense of the Soviet homeland. The establishment of a group of allied (formerly satellite) states to the west of the USSR, astride the traditional invasion paths from Europe, represents the most important prize of the Soviet Union's victory in World War II. The loss of this prize would not only deal a crippling blow to Soviet prestige and superpower standing, but would also be perceived by

Soviet leaders as raising a threat to the security of the USSR itself. Moreover, if the Soviet political offensive against the West is ever to be resumed, it could scarcely be done if access were blocked by a belt of hostile or even unaligned small states in Eastern Europe. Finally, failure to hold the states of Eastern Europe in line would signal collapse of Soviet authority over that part of the world Communist movement most susceptible to Soviet control.

For these reasons, the Soviet commitment to its WTO allies will remain primary in the foreseeable future; it will take precedence over commitments to other Communist states, and over any obligations the Soviet Union may incur with respect to non-Communist states.

Nevertheless, barring a radical reversal of present trends in Soviet relations with the Communist states of Eastern Europe, the parameters within which Moscow will maintain its primary commitment to its WTO allies, and extract from them the material and symbolic tributes due to the hegemonic leader, will almost certainly be more constraining than they were during the first dozen years of the alliance. A return to the pattern of relations of the early 'fifties is perhaps as unlikely as a complete healing of the Sino-Soviet breach.

At the other extreme, we may also exclude the defection of one or more of the present WTO states to NATO, or to any other alliance with an anti-Soviet orientation. Between these extremes, however, many variations in Soviet relations with the states of East Europe, collectively and individually, are possible. Here we shall delineate, within the limits outlined above, the conditions under which the WTO is likely to become a more or less cohesive alliance in the coming ten to fifteen years and the implications therein for U.S. deterrence strategy.

As in NATO, present trends in the WTO seem to point toward a less rather than a more cohesive alliance in the coming years. Factors which would contribute to further WTO dis cohesion include:

1. Continued U.S.-Soviet détente, notably low tension in Europe.
2. Fragmentation of NATO. Alliance loosening in the West both stimulates similar tendencies in the East and makes looser East European ties to the USSR more tolerable to the latter. The Soviet Union will seek to exploit dis cohesion in NATO by its own policy of "bridge-building" to individual West European countries which, like present-day France, may occasionally align themselves with the USSR on important international issues. In return, however, the Soviet Union will probably have to adopt permissive policies with respect to developing ties between Eastern and Western Europe.
3. Increased East-West trade. This would decrease the present heavy economic dependence of the Warsaw Pact countries on the USSR. How far this will go depends in large measure on the fate of the present East European economic reforms which, if successful, would

raise the efficiency of the economies of the WTO countries and enable them to enter world markets more actively. It will also depend on the extent to which Western states facilitate the economic weaning away of Eastern Europe from the Soviet Union through appropriate trade and credit policies.

4. Continuation of the Sino-Soviet dispute, without resolution either by a formal break or by rapprochement. This would tend to keep important bargaining power in the hands of Eastern European leaders.

5. Continued strengthening of nationalism, and of the trend toward ideological erosion in Eastern Europe. The WTO states will tend increasingly to assess the utility of the Soviet alliance in terms of narrowly traditional European security concerns, and will be reluctant to align themselves with the USSR on extra-regional issues which may be of great importance to Moscow's global position, but of only marginal concern to the status of Eastern Europe. (Rumania's refusal to align itself with Moscow during the June 1967 Middle Eastern war illustrates this tendency.)

6. The German question, as probably the most crucial consideration. Fear of West German revanchism, or more generally of a rise in German power on the continent will remain the most potent force binding the WTO countries, particularly the "Northern Tier" states (Poland, Czechoslovakia, and the GDR) to the Soviet Union. Certainly disruptive tendencies in the WTO would be given free rein if the states of Eastern Europe were to receive reassurances regarding the permanency of post-war territorial boundaries, and guarantees that West Germany will not acquire nuclear armaments. West German adherence to a non-proliferation treaty might reduce East European anxieties somewhat, but will not remove the issue altogether from the politics of the WTO alliance.

A more dis cohesive WTO would further encourage present low West European estimates of the danger of Soviet aggression in Europe. The result would probably be an even lower perceived need among most U.S. allies for strong Western conventional capabilities on the continent, and an even greater reluctance to contribute forces. The consequences for the United States might be ambivalent.

On the one hand, so long as there were no major Soviet force reductions, the unilateral U.S. security burden would grow, which might create strong domestic pressures for a reappraisal of American commitments to NATO. Alternatively, there might be increased reliance on West German forces (provided the Federal Republic continued to be somewhat less sanguine than other NATO allies about Soviet intentions). This might, however, work against dis cohesive tendencies in the WTO, and perhaps also raise West European suspicion of the FRG, and resentment of the United States for fostering a "special relationship" with the Federal Republic.

Maintenance of a politically and militarily viable U.S. position in

Western Europe in the event of prolonged U.S.-Soviet détente and dis-cohesion in the Communist bloc would probably require highly flexible U.S.-West European political and military arrangements, so that changes in perceptions of Soviet intentions or in actual Soviet behavior could be reflected in rapidly altered Western military dispositions. The premium on highly mobile U.S. forces would grow still more. The principal danger to European security would arise from allied failure to develop mechanisms permitting rapid responses to insure against the consequences of sudden changes in Soviet behavior.

Under certain conditions, a more dis-cohesive WTO might reduce rather than increase the burden placed on the United States for the defense of Western Europe. For example, if Soviet troop withdrawals or thinning out came about in consequence of changed relations in the WTO, the burden on the United States might be eased. East European force reductions not compensated for by new infusions of Soviet forces would have a similar effect.

In general, dis-cohesion in the WTO will tend to circumscribe Soviet freedom of maneuver in Europe, at least as long as maintenance of a united front with their Communist allies remains important to Soviet leaders. To achieve unanimity in the WTO, the Soviet Union will be under pressure to accept a "lowest common denominator" policy in Europe. This would reduce the probability of radical new Soviet policy departures or the adoption of high pressure strategies that might threaten to embroil reluctant Soviet allies in unwanted political conflicts, thereby adversely affecting their political and commercial relations with Western Europe.

Dis-cohesion in the WTO might no longer have moderating effects on Soviet policy in Europe if it went so far or so fast that Moscow felt it threatening the dominant Soviet position in Eastern Europe, particularly if the scope and pace of the WTO disintegration were not matched on the NATO side. Under these extreme circumstances, the Soviet leaders might be willing to sacrifice détente in Europe and attempt to restore discipline among their former satellites by creating a new crisis atmosphere in European politics, perhaps by renewing the abandoned cold war offensive against West Berlin. Under these circumstances, dis-cohesion in the WTO could eventually lead to sharply increased tensions in Europe and great new strains on U.S. deterrence.

Although the present trend toward a loosening of ties between the WTO states of Eastern Europe and the Soviet Union seems likely to grow stronger, it could be arrested or even reversed in the coming ten to fifteen years by a number of factors external as well as internal to Eastern Europe:

1. Breakdown of the U.S.-Soviet détente, particularly a new European crisis.
2. A revival of NATO cohesion, which a rise in tension in Europe

would probably encourage.

3. A heightened perceived threat from Western Germany, particularly an effort by the Federal Government to acquire an independent nuclear capability or access to NATO nuclear weapons. Such a development would almost certainly cause the "Northern Tier" states to move closer to the Soviet Union, and might result in the introduction of some form of nuclear sharing (offensive weapons or ABM) into Eastern Europe. The advent to power of a right-wing government in the Federal Republic would probably have a similarly galvanizing effect on the WTO.

4. Failure of East-Wing "bridge-building," particularly with respect to trade, that would deprive the states of Eastern Europe of options for relieving their present economic dependence on the USSR. Internally, failure of economic reforms in Eastern Europe might weaken the political stability of Communist regimes, increasing their dependence on the Soviet Union and discouraging them from seeking to strengthen their domestic bases of support at the expense of the USSR.

5. A resolution of the Sino-Soviet split, either through rapprochement or a definitive break, as it would tend to reduce Eastern European freedom of maneuver between the two Communist giants, and facilitate Soviet efforts to restore bloc discipline in the WTO.

A more cohesive WTO would in itself not necessarily increase the future requirements imposed on U.S. strategic deterrence. The military contributions that the Communist states of Eastern Europe are capable of making to the Soviet Union are substantially less important than those which America's NATO allies are capable of making to the Western cause. However, a more cohesive WTO would almost certainly be the consequence of a general rise of tension in Europe, and would probably contribute to heightened perceptions among West Europeans of the need for stronger deterrence. In these circumstances, additional deterrence requirements imposed on U.S. forces might be offset by an increased willingness of NATO allies to contribute to the common defense.

We have thus far discussed only broad tendencies that might affect the overall character of the Soviet-led alliance in Eastern Europe. Variations among individual allies of the USSR, however, are not only possible, but are already strongly in evidence, and are likely to increase. The de facto if not de jure retirement of one or more of the present WTO countries from the alliance is not to be excluded. (This is not to be confused with adherence to a Western alliance, which the USSR would almost certainly not tolerate.) After the Hungarian revolution of 1956, most analysts of East European affairs set the limits of Soviet tolerance of desatellization at renunciation of the Warsaw treaty. But the circumstances of the 'seventies will be quite different from 1956. There will be new avenues of disengagement from the Soviet alliance open to East European states. One member of the WTO alliance, Albania, has for all intents and purposes already severed its alliance ties since the Hungarian Revolution. It did so via an alliance

with China, another Communist state, a factor which, coupled with Albania's geographical remoteness and limited value to the USSR, facilitated its defiance of Moscow. Rumania, too, has successfully edged toward neutralism, initially by asserting an independent position in the intra-Communist dispute between the USSR and China, and then gradually by adopting independent positions on a variety of international issues, most dramatically at the time of the June 1967 Arab-Israeli war. Even on questions of European security, Rumania has sometimes refused to align itself with its WTO allies (e.g., by refusing to attend the Karlovy Vary conference in the spring of 1967 and later by establishing diplomatic relations with the Federal Republic).

Unless present worldwide trends are sharply reversed, the Soviet leaders will find it increasingly difficult to cope with such disengagement tactics in the future. Neither ideological authority nor doctrinal rectitude, but material interests and security considerations will henceforth be the prime determinants of allegiance to the USSR. And certainly Western policies will substantially affect the perceptions of Soviet allies and clients regarding the degree to which they must rely on the Soviet Union for security and for economic well-being.

III. Conclusion

The Soviet Opponent

1. U.S. strategic deterrent requirements will continue ten or fifteen years hence to be determined primarily by the capabilities, policies, and behavior of the Soviet Union.

2. There are two broad possible futures:

(a) The Soviet Union will continue to refrain from threatening the "core" interests of the United States in the developed parts of the world, thus relegating strategic nuclear weapons to a reserve role in primary relations between the superpowers. Under these circumstances, Soviet leaders would probably settle for strategic parity, or even accept marginal U.S. superiority, provided the Soviet Union continued to be credited with an "assured destruction" capability and the U.S. did not employ its marginal superiority to extract political concessions from the USSR.

(b) The Soviet Union, with a credible "assured destruction" capability, will resume a policy of strong pressure against vital American interests, preceded or accompanied by an effort to attain some measure of strategic advantage over the United States. Such a Soviet policy would impose heavy burdens on U.S. deterrence, and would restore strategic threats and counter-threats to the central place they occupied in international politics in the late 'fifties and early 'sixties.

3. Broad Soviet policy choices will be strongly influenced by their

assessments of opportunities to improve their strategic posture vis-à-vis the United States. In the NATO area, such an improvement would probably be regarded as a prerequisite for resumption of an offensive strategy. Their decisions will also be influenced by their assessment of alternative policies that did not rely so heavily on military pressure in order to advance Soviet interests.

4. On balance, we believe Soviet leaders will probably regard indirect, non-military means of weakening American interests in key areas such as Europe and Japan as less risky and more promising, relying on and abetting the operation of historical disintegrative processes which they believe are at work in the Western alliance systems.

5. New dangers will result from the inherent instability of the third world, and from the erosion of superpower ability to control the potentially catalytic behavior of volatile small allies, clients and protégés.

6. The relevance of U.S. strategic deterrence in third world regional conflicts will depend in part on the success of U.S.-Soviet agreements on ground rules for limiting the dangers of superpower confrontation.

7. Alternatively, the U.S. might seek deployment of remote area warfare capabilities powerful enough to deter intervention by the USSR (or China).

8. However, frequent U.S. employment of superior remote area warfare capabilities would provide Soviet leaders with powerful incentives to strengthen their own capacity to project military power into distant areas.

9. Interventionist U.S. policies in the third world might also bring pressures on the Soviets to strengthen their strategic forces in order to support new political or limited military probes where the local balance of power favored the USSR or its allies. Soviet choice of either of these alternatives would increase the dangers of escalation and thereby add to the burdens on strategic deterrence.

The Chinese Opponent and the Role of Polycentrism

10. A credible U.S. first-strike capability against China will probably be available well into the next decade, and extended U.S. strategic deterrence, which will probably decline in importance vis-à-vis the USSR, may continue to play a major role in U.S.-Chinese relations.

11. However, it will be difficult to make U.S. strategic power equally relevant to low level aggression or Chinese-supported insurgency.

12. U.S. strategic superiority should be more than adequate to deterrence of overt, large-scale Chinese or Chinese-supported aggression in Asia, provided that China is not backed by Soviet strategic power.

13. A Sino-Soviet rapprochement might increase the strains on U.S. strategic deterrence, unless the United States enjoyed substantial strategic superiority over the Soviet Union; in that case, the Soviets might exert a moderating influence on those Chinese policies likely to provoke U.S. military intervention.

14. So long as Sino-Soviet relations remain strained, a self-equilibrating mechanism will tend to restrain China from blatantly expansionist foreign policies. Chinese opportunities and incentives for seizing leadership of revolutionary movements will rise when Soviet policies in the third world are cautious and moderate; but Soviet aloofness will make direct Chinese military intervention too risky even in the comparatively few areas to which China has easy physical access.

15. The Communist alliance system ten or fifteen years hence will probably be even less cohesive than it is at present. So long as the two major Communist opponents are at odds with each other, it is unlikely that both will simultaneously engage in strongly hostile policies threatening important U.S. interests.

16. A less cohesive Communist alliance system might even feed, rather than reduce Chinese hostility toward the U.S., if a U.S.-Soviet détente were one of the major factors creating tension between the USSR and China. A complete break between the USSR and China might provide an opportunity for the U.S. to play the role of balancer in a triangular relationship, but this would presuppose a warming in U.S.-Chinese relations at least as substantial as the post-Cuban missile crisis thaw in U.S.-Soviet relations.

17. A more cohesive Communist alliance environment would almost certainly increase the strains on U.S. deterrence, for it would probably result from a realignment of Communist states around a deeply anti-American policy.

18. While a more unified Communist alliance system would not add substantially to Soviet capabilities for pursuing hostile policies, it might rekindle the world revolutionary ardor of the Soviet leadership and provide new incentives for resumption of highly aggressive policies against the non-Communist world.

19. For the CPR, a consolidation of the Communist alliance system on a militantly anti-American platform would enhance Chinese freedom of action in Asia by re-establishing the role of the Soviet deterrent in the Far East. By the same token, however, restoration of Soviet guarantees would probably also entail some measure of Soviet control or veto power over potentially dangerous Chinese policies.

Overall Conclusions

1. We foresee a continued need for a U.S. strategic capability that is at least marginally superior to that of the Soviet Union in order (a) to cope with possible Soviet reversion to extremely hostile policies

against core interests of the United States (e.g., new probes against West Berlin), or (b) to reduce Soviet temptations to adopt such policies.

2. In its role as insurance against Soviet temptations, and its advantages, marginal U.S. superiority would have to be employed sparingly; strategic threats would have to be reserved for use only in defense of the most vital American interests. Stabilization of U.S.-Soviet relations with marginal U.S. strategic superiority would probably require conceding an assured destruction capability to the Soviet Union.

3. The opponent environment ten or fifteen years hence is likely to be more diffuse and ambiguous than it is today. With respect to the two strongest opponents, the USSR and China, there will probably be alternating phases of U.S. preoccupation with the security threats posed first by one and then the other. In addition, there may be a series of transient minor opponents, temporarily allied with one or another of the major Communist powers. Linkages between opponents will be difficult to evaluate, and the American national interest in international disputes involving such ambiguous linkages will often be difficult to determine.

4. The ideological character of international conflict will be further attenuated. The foreign policies of actors in international politics will become increasingly differentiated and oriented more on traditional national and regional interests.

5. The most important possible exception to this trend may be China, whose leaders may see in the deradicalization of Soviet policies an opportunity to seize leadership of militant Communist movements the world over.

6. American deterrence strategies and forces narrowly focussed on a few particular opponents and contingencies might lack sufficient flexibility to cope with the political-military challenges of such an uncertain world. There will be a high premium on military strategies and forces differentiated with respect to a wide variety of opponents and contingencies.

Chapter III

THE SYSTEMIC ENVIRONMENT

by

R. N. Rosecrance

I. Introduction

What follows is an introductory and incomplete attempt to focus on some of the influences--economic, political, and military--that may help to set the limits of polarity in the future international system. Economic variables suggest a great equality of power between the two major protagonists in the system, but a considerable, and conceivably widening gap between these two and all others. Political variables suggest a possible refashioning of alliance relationships in ways that might see the breakup of all alliances; the exchange of one set of alliances for another; a large number of vaguely formulated, but perhaps increasing U.S. commitments to other states under conditions of détente; and the consolidation of a large and cohesive anti-U.S. bloc. Military variables may suggest two contrary outcomes: nuclear proliferation with a reduction in U.S. commitments as new nations emerge as military powers capable of contributing to local deterrence; nuclear proliferation with a maintenance of and perhaps an increase in U.S. commitments as new nations emerge with nuclear forces which are vulnerable, prone to accident, and which may hold the possibility of triggering the forces of one of the two major powers. In such an eventuality, U.S. military requirements would certainly increase. That increase could be destabilizing if global rather than differentiated and regionally specific strategic capabilities are developed. It could be destabilizing unless implicit adversary or cooperative control arrangements are developed with the principal antagonist.

None of the situations discussed is expected to be directly approximated or achieved in the real world; rather, it is important to list and examine certain "landmark" cases and configurations in order to chart the terrain of probable outcomes.

II. Physical Polarity

The future systemic environment will be more fluid and more flexible than the international one of the past twenty years. Despite the continuing predominance of the United States in economic and technological terms, other powers will narrow the gap. While the United States produced almost half of the world's gross national product in 1950, it will account for only one-third of the world's production of goods and services in 1975. Whereas in 1950 the United States had almost five times the

Soviet's productive output, it will have less than twice Russian GNP in 1975. The gulf between second and third powers, moreover, is likely to widen. The Soviets will have more than double the economic product of the third-ranking state eight years from now; in 1950 there was only a small Soviet preponderance over other Western countries.

III. Political Polarity

The political environment will have undergone a comparable transformation. While political, opinion, and press trends indicated lineaments of a bipolar system in the past, they seem unlikely to do so in the future. A number of different political foci are possible. It is possible, first, to conceive of the breakdown of previous bipolar connections without the refashioning of others. A breakup or radical loosening of alliance ties could lead to a real multipolarity, with a much greater degree of military self-sufficiency for newly non-aligned powers. Such an evolution in turn would greatly affect U.S. responsibilities in the world at large. If U.S. as well as Soviet alliances were to dissolve, the U.S. would not only not have major allies to protect, it would also, by virtue of the diminished challenge of the Soviet bloc, have less reason to do so. It would be implicit in such a system that the U.S. and Russia would remain the major protagonists, but it would be unlikely that others could commit them to war against each other. Escalation of local conflicts would be highly improbable; only anonymous delivery capabilities which might make one of the major world actors think it was being attacked by the other, would be likely to provoke an unintended war. If this possibility became serious with the development of advanced missile and command and control systems on the part of other powers, it is conceivable that these would call for additional measures of cooperation between the United States and the Soviet Union.

Second, it is possible to imagine alliances within the traditional bipolar realm fragmenting while new connections were forged outside it. There is some evidence that the Soviets and the United States have paid increasing attention to the nations where a nuclear capability is either possible or imminent. Outside traditional alliance structures, these nations have had a special attractiveness: economically under-developed, politically fragile and unwieldy, they might, given national cohesion, exert an important regional influence. They might, under proper circumstances, assume some portion of the task of regional or international containment. At the same time as nuclear nations, their military capabilities or populations could become targets for stronger nuclear neighbors, requiring in turn outside assistance and support. Countries with nuclear weapons potential might want closer relations with one (or both) of the two major powers. Early, intensely ideological phases have partially been outgrown; there is a new consciousness of the deficiency of national resources for internal economic tasks; there is a growing recognition that external security problems cannot be solved alone. It would be conceivable, then, that the fragmentation of old blocks could lead to the formation of new ones. While France and Germany were charting their own courses internally, India and Japan might seek closer relations with the United States. These evolutions in turn would raise

problems for U.S. deterrent capacity. If there was consolidation of a new bipolarity, then the U.S. would have to extend the full range of deterrent protection to these states against possible challenges of a reformulated Soviet bloc. Since, for a variety of reasons, deterrent credibility in a new nations environment is not as strong as deterrent credibility in Europe, the U.S. might have to employ special strategic techniques to provide reassurance. It might also have to provide tactical reassurance at the lower end of the weapons spectrum to protect such countries from internal and subversive challenges that were never a problem in Europe. This political development in short, might require an even greater degree of strategic and tactical superiority than exists at the moment.

Third, the future could see, coincident with the erosion of past alliances and the spread of nuclear weapons, a broadened détente between the United States and the Soviet Union. The détente would in all likelihood, be a persistent feature of international relationships to the extent that the Sino-Soviet split continues and even deepens in scope and intensity. If there is no Sino-American rapprochement in the next fifteen years, the existence of a common foe may help to keep the S.U. and the U.S. from coming at odds. At the same time, it seems hardly likely that the contacts between the two superpowers would extend from détente to détente. There are a number of reasons for this, including continuing interests in Europe on the part of both powers and despite the disrepair of alliances in that crucial region. It may be true that the area of greatest U.S.-S.U. common interests is Asia where both have stakes in restraining China and in demonstrating that the Chinese thesis on revolutionary war is in error. In the Middle East, in Europe and in other parts of the globe, China does not seem to be a serious contender for power and influence; changes in regional balances then directly affect the position of the two superpowers themselves. Even the spread of nuclear weapons is not likely to forestall central competition. As nuclear capacities spread among Nth powers, U.S. and Soviet capabilities will have to keep pace to maintain superiority; these changes in turn may raise questions about the balance between the two. It is not at all uncharacteristic that the present negotiations between the Soviets and the U.S. on offensive and defensive missiles involve considerations of national nuclear capabilities as well as the central balance; increased capacity to deal with the former may possibly pose instabilities in regard to the latter. Finally détente is not likely to be buttressed by a lasting agreement between the United States and the Soviet Union because opportunities for maneuver in the coming international world may be much greater than they have been before. As alliances erode, nuclear weapons disperse, and previously non-aligned states are drawn into the central power confrontation, diplomacy takes on a new fluidity and uncertainty. The U.S. is not precluded from acting in what used to be the Soviet preserve in Eastern Europe. The Soviets are not dissuaded from action in the West. Most of the underdeveloped states are now more hospitable to both American and Russian policy than they were before. The formation of a solid bloc of neutralists apart from and opposed to the major powers now seems even more remote than it was ten

years ago. Arenas of diplomatic opportunity abound, and it would be unusual if they were not exploited.

Military capabilities appropriate to this altered situation may be quite different from those disposed only a decade ago. In 1957 deterrence rested, in some important sense, upon the solidity and resolution of the European allies. Internally cohesive and stable, unified in resistance to Communist encroachment, the Europeans could only be attacked frontally. Diplomatic overtures, subversion and propaganda could have no important role in altering the European stance. If the Europeans were attacked directly, they would resist with all power at their command and the U.S. could be committed to respond. In one sense, then, European cohesion deprived the Soviets of the lower end of a spectrum of military threats and initiatives; it also guaranteed a dramatic U.S. response. In the future if alliances continue to unravel, new tactics will become possible. U.S. deterrence policies may no longer be able to rely upon the solidity and unanimity of Europe to highlight and lend significance to a unilateral Soviet action. It is possible that initiatives or destabilizing actions will occur that the Europeans will not regard as destabilizing. This should not be difficult to imagine: a similar situation in fact characterized the diplomacy of the 1930s. Under such circumstances, the United States might want a capability to deter destabilizing Russian actions in arenas where political resolve and internal orientations were no longer so clear-cut. This would require a very flexible military capability at all levels of threat; it would also necessitate political savoir faire and sophistication to be able to raise similar and countervailing challenges in spheres of historic Soviet concern. Where disunity or a deficient cohesion invites outside initiative, the only remedy may be an ability to exploit dis-cohesion elsewhere in the system.

Military capabilities not only have to deal with instabilities caused by the détente and the fragmentation of alliances; they must also be fundamentally consistent with the maintenance of the détente itself. Indeed, an argument can be made that if future international constellations are to be much more fluid, a fixed central reference point (the détente) is the more necessary to cope with them. Indeed, without the détente, it is difficult to imagine an international system accommodating without central war a constant procession of new nuclear powers and chronic internal instability in the underdeveloped sector. This is true even though the détente will make for more fluid international relationships and probably reduce deterrent credibility. The task of the future may well be to convince the Soviets (and to an extent the Chinese) that the more substantial strategic capabilities and the enhanced ones for limited and sublimited warfare which are required by the newly flexible international environment will not be used provocatively or offensively. The past does not indicate that there is a direct relationship between U.S. military and strategic power and Soviet hostility, such that a growth in the first is automatically linked with a growth in the second. As these capabilities are in part explained and justified by the need to prevent destabilizing actions by rising Nth powers or by

a militarily resurgent China, they may be acknowledged and even accepted by the USSR without destabilizing counteraction. If the détente is to continue, however, it may be necessary to have direct contacts and conceivably even joint plans of operation in the event of contingencies which would, at the instance of some third state, disrupt the central balance. The spread of nuclear weapons need not be cataclysmically explosive if outside states do not acquire (or are not permitted to acquire) either passive or active triggering capacities of detonating major power deterrents. The very fluidity of international relationships will probably also demand closer coordination of Soviet and American policy in new and unforeseen crisis circumstances.

A paradox emerges then: on the one hand, U.S. deterrent capabilities must probably be larger and more flexible in circumstances of future and continuing détente; on the other, there must be even closer ties with one of the nations (the S.U.) whose provocative or disruptive actions must be deterred. These connections will be necessary to avoid the destabilizing consequences of nuclear proliferation. In the third world it is clear that internal violence is likely to be a chronic problem of the future. It also seems evident that developed states (though not necessarily developing states) display much less internal discord and conflict than undeveloped states. In some cases internal discontent and discord comes to involve outside powers as well; outside states can get pitted against one another simply because of a vacuum of power, political cohesion and economic strength within an underdeveloped nation. It may therefore be in the joint Russian and American interest to avoid involvement in such conflicts, or to keep it strictly limited; alternatively, it may be important for both nations to help build the economic fiber within a nation which can reduce causes of social discontent. In respect of internal matters at least, security does seem to correlate with level of economic development.

Fourth, it is possible to imagine an even more substantial future consolidation of nations with interests or attitudes opposed to the United States. This outcome is not likely, but it is a "worst case" eventuality that must be considered. It could emerge, conceivably, from conflict, in which U.S. forces remained undefeated, but still unable to compel a reasonably equitable solution of the conflict might have the effect of further implicating the USSR in Chinese designs. Other nations could become much more disenchanted with the prosecution of the war. An inconclusive, but prolonged struggle would perhaps be least desirable from the standpoint of American public opinion as well. In the end, it would be highly unlikely that a new and larger coalition embracing both the USSR and China would be formed against the United States, but it cannot be entirely ruled out.

Even more realistically, it is possible that erosion of alliances will proceed more rapidly in one sphere than in another. While the U.S. may lose ground in Western Europe, the Russians may roughly maintain their position in Eastern Europe, and mirabile dictu, bring the Chinese back into the Soviet fold as well. If at some future time the United

States was to be confronted with an unfavorable balance of resources, technology, industrial plant and labor force, two consequences might follow: first America would have to make up through its own efforts those technological and political contributions to deterrence previously provided by allies; second, it would be relieved of the burden of protecting allies who were net consumers of security, and would to that degree have resources left over for protection of the U.S. homeland. These would be small, not only because a "fortress America" situation is a remarkably demanding one militarily, but also because certain areas of the world--Europe, the sealanes, and perhaps the rimlands of Asia--are simply strategic to U.S. defenses whether or not they are populated by American allies. The United States might want to defend Europe in its own interest, and regardless of the political inclinations of individual European states. In this sense, a "fortress America" strategy could enormously reduce the political, economic and strategic resources which the U.S. would need to use to deter its opponents, without greatly reducing the geographic perimeter of U.S. strategic interests. For such purposes only a capability in both conventional and nuclear terms far in excess of that existing today or apparently planned would suffice.

IV. Military Polarity

Changes in the economic and political environments may not proceed coterminously with those of the military environment. At least two opposed theses must be considered: (1) that trends toward political multipolarity are proceeding more rapidly than trends toward military multipolarity; (2) that trends toward military multipolarity are moving more rapidly than trends toward political multipolarity. It is, of course, quite important to determine which of the theses is most correct. If the first is true, the spread of nuclear weapons does little but confirm and extend trends which were afoot previously; it also suggests that reverses in military interdependence or independence are not likely to have significant political consequences. If the second is true, the spread of nuclear weapons need not accelerate the breakdown of alliance systems; under certain circumstances, it might even lend them a new vitality. If the nuclear capabilities locally developed are used to deter opponents whose initiative had previously been forestalled by U.S. capabilities, their development would be a fillip to American defense efforts. If they add little to American assured destruction capabilities, while possibly posing the problem of active or passive triggering capacities against U.S. opponents, they may represent a net debit to American security.

By the late 1970s and early 1980s a number of additional states will almost certainly have acquired nuclear weapons. Acquisition of the bomb itself, however, does not specify rules of employment, nor does it guarantee the severing of previous alliance relationships. In some cases, a new nuclear nation will be more dependent upon its alliance guarantor after acquisition than it was before. Interim deficiencies may be made up by guarantor second-strike capabilities. In the longer run, even Nth power retaliatory capabilities may not suffice. The fledgling nuclear state may demand the protection for its population that comes only with a ballistic missile defense system; this in turn would have to be

provided by a guarantor state. Again, Nth country evolutions would not necessarily produce a diminution in alliance cohesion; alliance ambits might even be extended to new states as (1) they acquired nuclear weapons and (2) became aware that obvious lacunae could be filled only by major power assistance. In the net, therefore, there seems no secular trend in the direction of general multipolarity as the specific result of the spread of nuclear weapons.

While the maintenance or extension of existing alliances during nuclear proliferation is not out of the question, U.S. capabilities and policies for dealing with a proliferated world may have to be somewhat different than they are at present. Adversary or cooperative control instituted directly or indirectly with the Soviet Union could help confine the aggressive aspirations of paired nuclear antagonists. As increase in the size, diversity and invulnerability of U.S. (and possibly S.U.) offensive forces would reduce triggering capabilities in the hands of Nth powers. EMD would provide protection, not only against attacks on major power population centers but also against preemptive counterforce strikes by Nth country opponents. Provision of EMD or other defensive systems to threatened nuclear or non-nuclear states could also contribute to stability of the middle or small power environment. If enhanced strategic capabilities on one side seem to unbalance the central equilibrium, it may be necessary to develop strategic nuclear and thermonuclear systems that are plainly intended for employment only against defined opponents. A major disadvantage of SLEMs and ICBMs is that they cannot obviously be designated for use only against one state or for use in only one region. Aircraft with limited radii, operating from known bases, IRBM and MRBM capabilities with the capability to hit only fixed antagonists--all these might help to dissociate strategic increases designed to cope with the spread of nuclear weapons from weapons systems intended to deter or to limit damage in an attack launched by the USSR. In general, it may be true that offensive systems increasingly will need to be more specific for particular enemies; defensive systems increasingly will need to be less specific and capable of being used by a variety of possible friends. Sea or airborne ballistic missile defense has a particular rationale in the latter field.

The basic difficulty posed by the spread of nuclear weapons is that to ensure the security of the United States, the vertical arms race must proceed in such a manner as to neutralize the horizontal arms race. Attempts to deal with the Nth country capabilities could, theoretically, involve us in a further round of the strategic arms race with the Soviet Union. Differentiated systems will help overcome this "coupling"; but it may be necessary to provide some reassurance to Moscow at the same time. In one sense the United States has had a rather sectarian view of deterrence since 1945. On the whole, major emphasis has been placed on holding down the utility (or increasing the disutility) of a Soviet first strike. Actually, however, V_{FS} is only one of several quantities that enter into deterrent calculations. A fuller listing (adapted from Daniel Ellsberg, "The Crude Analysis of Strategic Choices" RAND P-2183) would include:

- V_p = Utility a nation attaches to peace
- V_{fs} = Utility a nation attaches to its own first strike (including opponent retaliation)
- V_{ss} = Utility a nation attaches to its second strike (including opponent attack)
- p = Assessed probability of an opponent strike

Given these quantities, deterrent stability is improved by:

- a. Increasing V_p
- b. Reducing V_{fs}
- c. Increasing V_{ss}
- d. Reducing p

A second nation, seeking to deter the first from attacking, will try to change the four quantities in the desired direction. While (b) has represented the major method of assuring reliable deterrence in the past, at some point in the future, other techniques may become equally or more relevant to deterrent stability. Under the conditions of détente plus the spread of nuclear weapons, it may be important to increase confidence in the Soviet second strike capabilities, reducing the incentive to preempt (c). This could be the more important if the U.S. implaces significant AEM capabilities. Reassurances from the U.S. that the probability of an American first strike was very low or negligible would serve to reduce p (d). Measures which made the Soviets happier with their lot under conditions of peace (the existing status quo) would increase V_p (a). Though separate and distinct policies might be followed on each count, it seems probable that increased diplomatic communications with Moscow on matters of mutual interest could have a reassuring effect.

V. Tentative Inductions

U.S. deterrence policy in the future may have to cope with a wide range of international worlds. In one sense, while the future is always unpredictable, it is possible to argue that immediate future-futures will be more unpredictable than usual. This is because the salient characteristic of future international systems seems to be their fluidity, flexibility and changeableness. At this point it is difficult to rule out evolutions, which by present lights, might seem highly improbable. The extremes of future outcomes would seem to range from a major consolidation of opposing forces against the United States (including a bridging of the Sino-Soviet split) to a U.S.-S.U. nuclear condominium. In the first case, deterrent policies would have to cope with the most extreme of central challenges; in the second, they would have to deal only with challenges posed by the spread of nuclear weapons. The second case has largely been neglected here and on two grounds: (1) that it perhaps artificially simplifies strategic problems for the U.S., and in any case it has been dealt with effectively in BSR 1413; (2) that it was very

difficult to imagine a full consolidation of Soviet-American cooperation as long as a fluid international system holds out possibilities for domestic and international advance in several regions of the world. If past alliances are fragmenting, it is difficult to believe that either superpower will fail to take advantage of the fact to advance its own position. The realistic alternatives lie on a continuum between these two polar outcomes. While the more specific situations and scenarios to follow cannot be anticipated or circumscribed here, it seems likely in general that the United States (and also the Soviet Union) will have to honor more strategic and tactical deterrent commitments in the future than it has in the past. This seems probable because: (1) more nations seem to be seeking military, strategic or defensive guarantees from the major states now than previously; (2) those states which are moving to positions of greater independence within past alliances (and which, as a result, may be moving toward a greater military independence as well) seem unlikely to acquire the kind of capability in the next fifteen years which would enable them to stand on their own against a major strategic antagonist. U.S. protection and defensive and offensive systems may still be required. Even a semi self-reliant Europe, bent on political independence, could not simply be written off by the United States. But subscribing to additional commitments may not just call for additional forces. A great deal of our future deterrence policy will depend upon the détente with the Soviet Union. As we undertake new commitments, we may wish to regulate the lengths to which we may have to go to defend them by establishing adversary control or cooperative control arrangements with the Soviet Union. If it turns out to be difficult, or economically exorbitant to maintain strategic and tactical superiorities in all situations relevant to the defense of those commitments, contacts with the USSR for the purpose of reducing the number or intensity of confrontations in which we might have to honor our commitments (at great cost to ourselves as well as the adversary) may be extremely useful.

APPENDIX A

Economic Interrelationships

Tentative Propositions

(Since contrary tendencies exist in the data, some of the following propositions exhibit this contrariety.)

1. There is a general tendency for regional location to be partially determinative of the number and intensity of economic contacts, trade, etc.
2. Trade data indicates the drawing of Japan more and more completely into the Western system of trade and economic relationships.
3. While Eastern Europe remains the primary region of Soviet economic penetration and concern, other Western countries, particularly West Germany, are coming to exert an important role in Eastern European trade.
4. The Soviets and the U.S. are paying more attention economically to the underdeveloped and rapidly developing states like India and Japan.
5. Western European trade with the U.S. has gone down comparatively to intra-regional trade in Europe itself.
6. In some contexts, like those of South Asia, Latin America and Africa, trade developments betray an other than regional focus. Latin American states have much more in common (in terms of trade) with Western Europe and the United States than they do with each other. Broadly speaking, the same could be said for Africa and South Asia.

APPENDIX B

Political Interrelationships

Tentative Propositions

(Since contrary tendencies exist in the data, some of the following propositions do not accord with each other.)

1. The favorability of establishment press attention in Western Europe toward the United States has declined over time.
2. The favorability of establishment press attention in Western Europe toward the Soviet Union has increased over time.
3. Both the favorability and the attention devoted by the Soviet and U.S. establishment press to nations which might acquire nuclear weapons has increased.
4. Both the favorability and the attention devoted by the Soviet and U.S. establishment press to neutral nations in general (in Africa, Latin America and elsewhere) has decreased.
5. Despite an increasing U.S. establishment press concern with the Far East, there has been no appreciable decline in U.S. attention toward Western Europe.
6. While there seems to have been a numerical decline in concern on the part of both U.S. and S.U. establishment press sources with Latin America and Africa since 1961, there has been no decline in concern with foreign nations as a whole. Interests in both cases seem to have focussed on Europe and the Far East.
7. Despite an increasing S.U. establishment press concern with the Far East, there has been no appreciable decline in S.U. attention toward Eastern Europe.
8. In general terms, while erstwhile or actual allies of both the U.S. and the S.U. have expressed less favorable attitudes (in terms of establishment press) toward their respective core powers, the U.S. and the S.U. in general terms have not (in terms of establishment press) expressed less favorable attitudes toward erstwhile or actual allies.
9. Statistics on official visits indicate a growing multipolarity in diplomatic attention on the part of erstwhile or actual allies of the two superpowers; they do not indicate a correlative multipolarity in diplomatic attention on the part of the superpowers themselves.

APPENDIX C

Military Interrelationships

Tentative Propositions (Since contrary tendencies exist in the data, some of the following propositions do not accord with each other.)

1. Those countries which are candidates for nuclear status seem to be equally concerned to establish relationships with the two major powers to safeguard their strategic status either before or after a decision to acquire nuclear weapons.
2. With the development of peripheral BMD capabilities, several countries are apparently interested in U.S. deployed defensive systems as a possible surrogate for national nuclear weapons.
3. General multipolarity and the spread of nuclear weapons do not seem to be directly and positively correlated: tendencies toward multipolarity in Western and Eastern Europe have not always been buttressed by nuclear capabilities; tendencies toward nuclear dispersion have not always resulted in a collapse or weakening of previous alliances.
4. The spread of nuclear weapons will probably increase, rather than reduce the involvement of the superpowers in small power conflicts.
5. Additional commitments or involvements will require specific or differentiated strategic (and probably tactical) capabilities.
6. Additional commitments or involvements will probably require adversary or cooperative control arrangements with the Soviet Union.

Chapter IV

DETERRENCE AND MILITARY CAPABILITIES

by

Daniel Weiler

I. Introduction

The essential objective of all deterrence strategies is that of preventing aggression by threat of punishment. Depending on circumstances, "punishment" denotes punitive physical destruction at various levels and over various periods of time, or denial of an opponent's goals through successful defense, with attendant political penalties for him, or some combination of these actions.

Opponents contemplating commission of provocative or hostile acts make risk calculations at varying levels of sophistication and self-consciousness. These calculations must deal with four basic questions, from which all detailed military planning will follow:

1. Will the act provoke unacceptable physical destruction to oneself or to vital allies?
2. If not, because the enemy elects (or is forced) to defend (rather than simply retaliate), will his defense be successful?
3. If he defends successfully, can attendant political costs be sufficiently muted, obscured or mitigated?
4. Should a penultimate war outcome be anticipated in which a choice must be made between defeat by the enemy's successful defense and a military escalation that would raise an unacceptable new risk of punitive physical destruction?

To answer these questions, a potential aggressor must first assess his opponent's military capabilities, regardless of his intentions or strategies. That is, he must decide whether the consequences he fears (and which would deter him from acting) could theoretically come to pass, given the size and character of opposing military forces in being. If the answer is affirmative (and only if it is), he must then make the far more difficult calculation as to the probabilities of the consequences he fears in fact occurring, given varying assumptions about war outbreak and prosecution.

In assessing these probabilities, therefore, a potential U.S.

opponent must go beyond his initial appraisal of American military capabilities; he must judge the quality of his own forces and estimate the outcomes of a military clash in a wide range of circumstances, not all of which he will be able to control or influence. At the same time, he must decide how his contemplated actions will influence the U.S. decision to use military force against him; whether the U.S. will or will not react in a manner that would insure (or raise serious risk of) unacceptable punishment. In order to arrive at such a decision, he must make an appraisal of U.S. national interests and international commitments, of American national style in crisis, and of the personal style, will, and political position of the U.S. President and other U.S. decision makers. Thus, both the capacity of the United States to inflict punishment, and the probabilities in any given case that it will employ that capacity, reside in whole or in part in U.S. military capabilities. The "non-weapons" components of U.S. military capability--training, strategy and doctrine--are in turn important because of their bearing on the ways in which weapons will be used.

In general, then, deterrence is eroded or endangered when an opponent calculates:

1. The United States is physically unable to inflict unacceptable destruction under any circumstances;
2. The United States is theoretically capable of inflicting such destruction, but the chances of its being able to do so in the face of opposing military action are sufficiently low to warrant the risks of conflict;
3. The United States is unable to mount a successful defense against a given military move;
4. If the United States defends successfully, the aggressor will not lose so much as a consequence of the conflict that he is unwilling to risk a poor outcome;
5. If the United States defends successfully at first, the opponent can overcome this defense by escalating the conflict, with sufficiently low risk of punitive physical destruction or unacceptable political/military consequences.

An opponent may come to one or more of these conclusions by correctly perceiving U.S. military weakness in circumstances that provide him opportunities for low risk military action. Alternatively, he may be in doubt as to U.S. capabilities or intentions, but secure enough to test them even at the risk of failing to achieve his objectives. Finally, he may just miscalculate. His information on U.S. forces or intentions may be wrong or outdated; his calculations may be crude and

inadequate; he may be misled by ambiguous U.S. policies or statements; he may be ideologically predisposed to make poor judgments about the United States; he may act impulsively under extreme pressure.

To insure against perceptions of American military weakness, the U.S. maintains technologically sophisticated military forces sufficiently powerful and flexible to make miscalculation about U.S. capabilities extremely unlikely. These forces also support policies designed to reduce the risk of an opponent misreading U.S. intentions, such as public definitions of the national interest by high officials, formal alliance commitments, and the selective basing of military units. Broadly speaking, the deterrent effectiveness of U.S. military capabilities can be defined in terms of their contribution to these goals of insuring against perceptions of U.S. weakness and reducing the risks of miscalculations of U.S. intentions.

Our concern in this chapter is with the deterrent effectiveness of U.S. military capabilities a decade and more from today. Clearly, we cannot predict the future with sufficient confidence to allow firm judgments about the weapons systems that will be available a decade hence. Nor can we safely predict such important variables as future alliance structures or international political contexts. We deal here with these uncertainties by delineating classes of deterrence situations of continuing interest, and ideal-type military capabilities required for adequate support of successful deterrence in each generic situation. We then go on to discuss the implications of these relationships, our purpose being to indicate how different resolutions of key uncertainties could influence the future effectiveness of U.S. deterrence posture.

II. Classes of Deterrence Situations

Classes of Opponent Relationships

1. Major opponent, direct relationship. This category denotes only intercontinental adversary relationships, without regard to contested third areas in which conflict might erupt. Only the Soviet Union is in this category now; by 1980 most estimates place Communist China, at least marginally, in this class as well.

2. Major opponent, third area relationship. At present, Europe is the most vital third area where there exists a possibility of conflict between the United States and a major opponent. However, there are also a number of other areas in which the national interests and military capabilities of major U.S. opponents raise the possibility of a future confrontation. These third areas include the so-called "rim countries," the Asian sub-continent and Southeast Asia (where China probably is now, and most likely by 1980, a major opponent), and the Middle East (where the Soviet Union will probably continue to be the major opponent of concern).

3. Minor opponent, major opponent participation. Two classes of situations are important. The first is of the minor opponent with a major opponent ally: contemporary examples include Cuba, North Korea, and North Vietnam. The second is one in which firm alliance relationships do not at first exist, but where a third area regional conflict catalyzes the interests of major opponents who then find themselves taking sides with one minor power against another. Current situations of this kind are found in the Middle East and the India-Pakistan dispute.

4. Minor opponent. This category covers disputes between the United States and a minor power where the latter cannot count on the friendly participation of a major ally. Today, this means principally the countries of Latin America (excepting Cuba, with some residual uncertainty in a few other cases), and possibly some African nations.

5. Minor opponent, other minor power participation. With or without major allies, minor opponents could have minor (probably regional) allies on whom they could depend for help. This might especially be the case in third area regional conflicts involving more than two nations. For example, should the United States intervene against Egypt in a Middle East crisis, other Arab nations might conceivably come to Egypt's assistance (possible Soviet aid notwithstanding).

Classes of Hostile Action

1. Nuclear attack of any kind on the United States.
2. Nuclear attack of any kind on a vital third area, U.S. ally, or U.S. overseas base (including the use of tactical nuclear weapons as part of a ground/air assault).
3. Massive conventional attack on a vital third area, U.S. ally, or U.S. overseas base (with or without prior use of tactical nuclear weapons).
4. Conventional incursion against a vital third area, U.S. ally, or U.S. overseas base, ranging from small unit faits accomplis to incursions large enough to signal the launching of a massive attack.
5. Irregular warfare, ranging from revolutionary "wars of national liberation" to organized guerrilla-terrorist attacks.

Classes of Political-Psychological Contexts

1. Peace, good relations. This category does not exclude adversary relationships, but does presuppose a low expectation of unprovoked overtly hostile or aggressive acts (e.g., "extended détente").
2. Peace, bad relations. "Cold war," or its equivalents.

3. Peace, international crisis. This defines the context in which a specific clash of interests has significantly raised the risk of super-power conflict, but where chances are perceived as moderate to good for finding a political solution (e.g., Berlin, 1961; the Sino-Indian clash, 1962; the Middle East, 1956, 1967).

4. Peace, extreme emergency. This defines the class of situations in which there is imminent danger of conflict because one or more nations feel themselves in a crisis where there is no acceptable choice but the threat of actual war, initiation of hostilities or surrender of a vital national interest (e.g., the Cuban missile crisis, 1962).

5. War. During a conflict, deterrence remains applicable to acts of escalation or revenge.

These classes of deterrence situations address the key questions, who is deterred, what is deterred, under what circumstances. The classes within each list are not mutually exclusive, and there are a wide number of who-what-circumstance combinations and permutations. Each class of deterrence situations indicates a generic category of concern against which military capabilities can be broadly judged for relevance and effectiveness. Thus, each generic category (or combination thereof) implicitly describes an extremely wide variety of possible circumstances, events, and personalities.

III. Ideal-Type Military Capabilities

In this section, we list military capabilities for the support of successful deterrence in each of the five classes of opponent relationships described above, and, within each category of opponent relationships, for each of the classes of hostile actions that may be relevant. The selection of capabilities is guided by the assumption that military forces must be adequate for coping with the most unfavorable combination of circumstances that can reasonably be anticipated and for which forces can feasibly be designed, though there may be very low expectations that such unfavorable circumstances would come to pass. Capabilities are stated in terms of the capacity to perform a particular kind of military task or to maintain a particular kind of posture with respect to possible opponents; some examples of relevant weapons systems are also given.

Major Opponent, Direct Relationship⁶⁹

1. Nuclear attack of any kind on the United States (this is the only class of hostile action in this opponent category).

⁶⁹ Terms are defined in the discussions following each category of opponent relationships.

a. Secure, withholdable second strike forces capable of penetrating enemy defenses and inflicting unacceptable damage on the attacker. For convenience, we adopt current terminology and refer to this as an "assured destruction" capacity. It should include the ability to strike at one major opponent without putting a second major opponent at risk.

b. A possibly desirable capability would be the capacity to strike a small point target with a single low yield weapon that could be delivered with extremely high accuracy and reliability.

Major Opponent, Third Area Relationship

1. Nuclear attack of any kind on a vital third area, U.S. ally, or U.S. overseas base.

a. Assured destruction; plus either--

b. Marginal strategic superiority, or

c. "Splendid" local superiority

2. Massive conventional attack on a vital third area, U.S. ally or U.S. overseas base (with or without prior use of tactical nuclear weapons).

a. Assured destruction; plus either--

b. Marginal strategic superiority, or

c. "Splendid" local superiority

d. "Some" local war fighting capability if (b) is chosen

3. Conventional incursion against a vital third area, U.S. ally, or U.S. overseas base, ranging from small unit faits accomplis to incursions large enough to signal the launching of a massive attack.

a. Assured destruction; plus either--

b. Marginal strategic superiority, or

c. Local superiority

d. "Some" local war fighting capability if (b) is chosen plus

e. Good brushfire capability

4. Irregular warfare, ranging from revolutionary "wars of national liberation" to organized guerrilla-terrorist attacks.

- a. Local superiority
- b. Usable force in the area

The precise meaning of "marginal strategic superiority" has not been established. It sometimes denotes the incremental difference between forces required for the assured destruction mission and extra forces that could be used if necessary in a campaign of strategic escalation in which residual assured destruction capacity is retained throughout. Because the requirements for this in any given case are subject to debate, and because the force levels required for this task are sensitive to assumptions about how a war might be fought, the strategic force posture required to maintain marginal strategic superiority is not clear. An alternative use of the term, phrased in terms of expected war outcomes, denotes that capability which, though it does not protect the United States from the high likelihood of unacceptable damage in nuclear war, leaves an opponent with a certainly of sustaining such damage. Typical gross configurations include "more" total numbers of boosters and/or penetratable warheads in secure second strike forces; an extremely reliable capability to strike one or a few point targets with one or a few highly accurate low yield warheads; a good air breathing threat; a defense against the air breathing threat; an effective light to moderate ballistic missile defense, including defense of strategic offensive forces not otherwise equally well protected; current, accurate strategic and tactical intelligence; and very secure command and control. Some or all of these (and associated) capabilities may provide marginal strategic superiority in a given strategic context, depending on the opponent and on the way in which a conflict unfolds.

Local superiority refers to tactical superiority in the theater; the manifest ability to prevail in battle over an opponent's forces in the area, or those he can get to the area. Depending on the opponent, the theater, and the school of strategic thought favored, this can mean either conventional superiority with parity in tactical nuclear capability, or tactical nuclear superiority with conventional parity, or both tactical nuclear and conventional superiority. This capability is generally considered more difficult to measure than are strategic capacities such as "assured destruction," for it implies the possibility of protracted campaigns involving massive ground forces fighting a war of unpredictable character and dimensions. In contrast, strategic capabilities seem more amenable to estimation in terms of raw destructive power against known targets in the face of opposing forces of similar capabilities which, supposedly, are used with maximum possible efficiency. In fact, it may be as difficult to judge the outcome of one type of campaign as the other; there is little evidence to support the belief that strategic nuclear wars would be substantially less prone to unforeseen consequences and the "fog of war" than other types of conflicts.

Local war fighting capabilities are essentially those that would make it possible to mount a defense in the theater strong enough to

force an opponent, if he wished to prevail, to escalate the conflict to a level that seriously increased the ultimate risk of strategic nuclear war. The components of such a capability are even more difficult to estimate than the requirements for local superiority. Since local superiority is virtually always preferred, but usually expensive, local war fighting capabilities of inferior, but substantial, quality will often typify, faute de mieux, the theater defense capacity in being. Current NATO stance is viewed by many observers as an example of this type of capability. A good brushfire capability is generally included in local war fighting capabilities, but this assumption should not be taken for granted. Such a capability in Europe, for example, might imply the existence of relatively small, highly trained, mobile ground units equipped with superior conventional weapons and excellent communications to all NATO command levels. This force would be equipped to deal with small border incursions or similar localized crises, but the capacity of NATO to organize its defenses against a deliberate assault in strength might be of a different order than its capacity to maintain a good brushfire capability of the kind described. Some strategists doubt the necessity of having such a capability, especially in Europe, to cope with conventional incursions; others also question the need of a local war fighting capability for the deterrence of either small incursions or massive conventional attacks, preferring to rely instead on the deterrent capacities of marginal strategic superiority or a "splendid" local superiority, backed by an assured destruction capability. These strategists are opposed by adherents to a school of thought that emphasizes the importance of the lesser war fighting capacities for enhancing the credibility of a response that could ultimately lead to the use of strategic weapons.

There is considerable doubt whether irregular warfare is a class of hostile action that is amenable to deterrence strategies. This may be true in particular of irregular warfare waged by minor opponents (discussed below). Major opponents may be somewhat easier to deter because threats to use military force against them are more relevant and believable than threats against minor powers. However, the applicability of particular military capabilities remains an open question, and military force is widely considered most useful when supportive of political measures, without which military capabilities alone may not be sufficient. It does seem clear that if a major power is to be deterred from waging irregular warfare, relevant military requirements would include both local superiority and usable force in the area. Local superiority would confer a freedom of military maneuver (e.g., freedom to attack sanctuary areas) that could change the character of the conflict and create risks for the opponent that were not present at the outset. These risks would include both physical destruction and military defeat in a manner implying severe political penalties. Usable force is violence that does not incur political/military penalties great enough to make the exercise of military power dysfunctional and self-defeating. Thus, in highly politicized guerilla conflicts, the indiscriminate use of low accuracy saturation bombardment weapons could have the effect of alienating an indigenous population whose overt or tacit support might

be necessary for ultimate military and political success. It cannot be assumed that counter-insurgency weapons and tactics developed during the current Vietnam conflict will prove universally relevant in the future, or that they are necessarily the best weapons and tactics that could be employed in Vietnam today. Evidence on the latter assumption is uncertain and may remain incomplete for some time. Typical capabilities associated with usable force include improved ordnance delivery accuracy, and tactical intelligence, and more efficient use of munitions of all calibers.

Minor Opponent, Major Opponent Participation

1. Nuclear attack of any kind on the United States.
 - a. Assured destruction (both opponents)
 - b. Highly reliable, highly accurate capability to strike at one or a few point targets with low yield weapons.
2. Nuclear attack of any kind on a vital third area, U.S. ally, or U.S. overseas base.
 - a. Assured destruction (both opponents); plus either--
 - b. Marginal strategic superiority, or
 - c. "Splendid" local superiority
 - d. Accurate single shot capability (see (1) (b), above)
 - e. Local superiority (minor opponent)
3. Massive conventional attack on a vital third area, U.S. ally, or U.S. overseas base.
 - a. Assured destruction (both opponents); plus either--
 - b. Marginal strategic superiority, or
 - c. "Splendid" local superiority
 - d. Local superiority (minor opponent)
 - e. "Some" local war fighting capability (major opponent), if (b) chosen.
 - f. Quick response capability.
4. Conventional incursion against a vital third area, U.S. ally, or U.S. overseas base.

- a. Assured destruction (major opponent); plus either--
- b. Marginal strategic superiority, or
- c. Local superiority (major opponent)
- d. Local superiority (minor opponent)
- e. Good brushfire capability (both opponents)
- f. Quick response capability
- g. Usable force in the area

The ideal-type deterrence requirements listed above are presumed relevant to a future world in which some minor opponents may possess primitive nuclear striking forces. Thus, a nuclear attack on the United States by a minor opponent, though extremely unlikely, is a contingency that will in some measure influence force posture planning for the next ten to fifteen years. For a nuclear armed minor opponent with a major ally, however, a U.S. assured destruction capability, though necessary and doubtless easy to maintain, may have to include or be supplemented by, a very reliable, highly accurate capability to strike at one or a few point targets with low yield weapons--what we have termed an "accurate single shot capability." This could be desirable because the threat of massive nuclear retaliation against a small opponent may not be credible, and because the U.S. might wish to reduce the risk of provoking and engaging the major opponent (a desire that would further reduce the credibility of a massive nuclear response).

Nuclear attacks on a vital third area, U.S. ally, or U.S. base could likewise be made by either the minor opponent or his major ally. Such attacks could take place either in the area of immediate confrontation, or elsewhere (e.g., as an escalatory measure or a move in an area where the opponent has greater strength than he has in the area of confrontation). Capabilities required to deter a major opponent from such an attack are essentially the same whether or not he acts as the ally of a minor opponent. However, if such capabilities include a "splendid" local superiority in a given theater, the military forces that confer such superiority could not be drawn upon at length for a conflict with a minor opponent elsewhere without risking the erosion of deterrence in their original locale. In order to deter minor opponent nuclear attacks of this kind, an accurate single shot capability could be as useful (or more so) as it is in strengthening the deterrence of minor power nuclear attacks on the United States, since a massive U.S. retaliation for a nuclear attack on a third area or ally would be even less credible than in the former case, and the risks of involving the minor opponent's major ally would be nearly as great. In addition, if a "splendid" local superiority is relied upon for deterrence of a major opponent, it may or may not be a superiority that is also relevant to a minor power, since it may exist in a locale different from that of the conflict with

the minor opponent. Accordingly, the requirement for local superiority over a minor opponent is considered separately.

Because of his major ally, the threat of retaliation against the minor opponent's homeland (either massively or with an "accurate single shot") may not be highly credible; it would probably be more so as a response to the intervention the major opponent may make to help his minor ally overcome local U.S. superiority. Such intervention would be risky for the major ally, since the U.S. could conceivably respond against his own homeland, or escalate the conflict locally in such a way as to seriously increase the risk of an ultimate strategic war. But since a lower risk response for the U.S. would be an attack on the minor power, the latter's incentives for restraining his major ally from supporting him directly are increased, and he could prefer to retreat or negotiate in the face of U.S. local superiority. Thus, local superiority over the minor opponent is complementary to strategic capabilities in approximately the same manner that "some" local war fighting capability against a major opponent complements marginal strategic superiority and assured destruction capabilities. Of course, if "splendid" local superiority over a major opponent does not exist in any area (being supplanted by reliance on marginal strategic superiority) the requirements for separate local superiority over the minor opponent is apparent, though it could be met (depending on the theater) from other ("non-superior") war fighting capabilities in being.

Similar considerations apply to ideal-type requirements for deterrence of massive conventional attacks or conventional incursions. Deterrence of such attacks by both the minor opponent and his major ally is desired, and the requisite capabilities are for the most part identical with those listed in the category of "major opponent, third area relationship," with the addition of a separate requirement for local superiority over the minor opponent. This capability may not be the same as others directed at the major opponent, but its role, due to the low credibility of a nuclear response against a minor power, could be even more important than it is in deterring small power nuclear attacks. In addition, a capacity for quick response is desirable, so that minor powers may perceive a U.S. ability to forestall a sudden fait accompli, with associated international political pressures against subsequent U.S. intervention. Ideal capabilities associated with quick response would include a capacity for large (secure) air deployment of ground forces, including some ability to loiter in the vicinity of conflict and return to staging areas; faster (secure) surface troop ship and support fleet deployment capability, possibly with some submarine troop deployment capability as well; reduced POL requirements, especially for ground forces; and lighter, more portable infantry and artillery weapons and vehicles.

Usable force to assist in the deterrence of conventional incursions is necessary to convince a minor opponent that the U.S. would not be forced to choose between no response at all and one that might be so heavy and indiscriminate that it would risk domestic and international

political costs high enough to be intolerable.

The category of irregular warfare is not included on this or following lists of ideal-type capabilities because, when waged by minor powers, (with or without major power support) it is not a militarily deterrable class of hostile action. It is often argued that a successful outcome in Vietnam will itself have a deterrent effect on future acts of irregular warfare contemplated by various opponents. We do not find this argument persuasive. Indeed, the effect could just as easily be the opposite: potential opponents may believe that the human, political and economic costs of Vietnam to the United States have been so great (ultimate U.S. "success" notwithstanding) that American leaders will be extremely reluctant to embark upon such intervention again. This does not mean that irregular warfare cannot be successfully defended against, but that those who contemplate its initiation are unlikely to be deterred by fear of physical destruction or U.S. military intervention on the ground.

Minor Opponent

1. Nuclear attack of any kind on the United States.
 - a. Assured destruction
 - b. Accurate single shot capability
2. Nuclear attack of any kind on a vital third area, U.S. ally, or U.S. overseas base.
 - a. Assured destruction
 - b. Accurate single shot capability
 - c. Local superiority
3. Conventional attack on a vital third area, U.S. ally, or U.S. overseas base.
 - a. Assured destruction
 - b. Accurate single shot capability
 - c. Local superiority
 - d. Quick response capability
4. Conventional incursion against a vital third area, U.S. ally, or U.S. overseas base.
 - a. Local superiority

- b. Good brushfire capability
- c. Quick response capability
- d. Usable force in the area

Minor opponent, Other Minor Power Participation

1. Nuclear attack of any kind on the United States
 - a. Assured destruction against all opponents
 - b. Accurate single shot capability
2. Nuclear attack of any kind on a vital third area, U.S. ally, or U.S. overseas base.
 - a. Assured destruction against all opponents
 - b. Accurate single shot capability
 - c. c. Local superiority (any combination of opponents)
3. Conventional attack on a vital third area, U.S. ally, or U.S. overseas base.
 - a. Assured destruction against all opponents
 - b. Accurate single shot capability
 - c. Local superiority (any combination of opponents)
 - d. Quick response capability
4. Conventional incursion against a vital third area, U.S. ally, or U.S. overseas base.
 - a. Local superiority (any combination of opponents)
 - b. Good brushfire capability (any opponent)
 - c. Quick response capability
 - d. Usable force in the area

The rationale for the capabilities listed in the last two categories is treated, inter alia, in discussions of the capabilities listed as ideal-types for the first three categories of opponent relationships.

Deterrence Requirements and Political-Psychological Contexts

Hostile acts that may be relatively easy to deter in time of peace could prove difficult or impossible to deter during crisis of war, when an opponent might feel desperate or panic-stricken and could act irrationally. Alternatively, important new national interests might be created during the course of crisis or war, thus altering an opponent's incentives (and perhaps his willingness to accept great risks or to endure severe punishment) in unpredictable ways. An adequate, balanced deterrence stance is one that is effective even under strained and dangerous circumstances, and "worst case" guidelines for force posture planning are attempts to deal with these important uncertainties, in addition to those surrounding future enemy force postures.

The paradoxes associated with "worst case" force posture guidelines are well known, and exemplify the so-called "security dilemma," wherein reciprocal arms building programs contribute to heightened political tensions which in turn lend impetus to the arms race. Thus, a serious criticism of military programs based on "worst case" planning is that they tend to have a self-fulfilling quality; that they trigger precisely those kinds of reactions by an opponent that could make "worst cases" more likely. Such programs, it is argued, thereby become self-justifying and self-perpetuating as well.

Conversely, force posture planning guidelines could be based on over-optimistic projections of future opponent capabilities or intentions, or could neglect the dangers of heavy pressures on deterrence during crisis or war. We might call this "best case" planning. Should resultant deterrence posture be "too little" rather than "too much," an opponent might perceive opportunities for hostile action or low risk adventures that he would otherwise have regarded as foreclosed. Thus, it is argued, over-optimism could contribute to the failure of deterrence, whereas "worst case" planning could lead to the creation of forces so powerful that an opponent would see no opportunity for hostile action, and the probabilities of "worst cases" coming to pass would be negligible precisely because we had taken steps to prepare for such eventualities.

The rock on which these abstractions flounder is our inability to predict the ways in which U.S. military programs will influence those of our opponents, or their perceptions of risk and opportunity. Will heavy U.S. military investments spur reciprocal heavy investments by an opponent, and will his capabilities therefore grow in ways that could have been avoided? Will he also grow more hostile and more daring? Or more cautious, hostility notwithstanding? Will the net result at any point in the cycle be a lower overall probability of conflict (and are there some stages of mutual interaction that are more dangerous than others)? Will more modest U.S. military investments result in reciprocal modesty by our opponents, and reduced mutual risk, or will they tempt opponents in ways that might ultimately increase the probability of conflict?

The answers to these questions always begin with the qualification, "It depends . . ." But the broad question persists: How do we build to insure against extreme or unlikely contingencies without increasing mutual suspicion, hostility, and the probability of conflict? We offer only a few observations here:

1. Policies often are even more important than capabilities. Our opponents are chiefly interested in how we intend to use the military forces we acquire. They will not react (any more than we do) wholly on the basis of what we might be capable of, but will attempt to assess our motivations and intentions. These will largely be revealed by U.S. foreign policy; military capabilities alone are usually mute. If the United States makes it clear that a military advantage is being relied upon for insurance, to guard against unlikely contingencies, the Soviet Union and other opponents may not feel under great pressure to alter the military balance. However, if U.S. military power is used to challenge important national interests of an opponent, one response we should expect is attempts by him to gain a more favorable military position vis-à-vis the United States. For the Soviet Union, such attempts could take the form of a significant challenge to our over-all military superiority; for other powers with fewer resources, a relative increase in their ability to damage the United States or defend against it might appear equally urgent.

In general, the uses to which a given capability will be put by its owners are uncertain and highly dependent on unpredictable opportunities. Important military capabilities are usually years in the making between initial decisions and actual deployment; national intentions as revealed (in part) by foreign policy will unfold in the interim. A certain amount of precautionary reaction--"insurance"--is therefore to be expected as a consequence of many U.S. decisions to augment current capabilities.

However, there may also be a point at which observations of military capability alone could dominate decisions on either side about force posture required to maintain deterrence. This is the point at which the United States (or, conversely, one of its major opponents) appeared to be acquiring a military capability that could have as its purpose the support of a grave challenge to the opponent's national interests, or would at least open up new opportunities that might be aggressively exploited once they were perceived. For the most part, this possibility is limited to the relationship between the United States and its major opponents, since gross differences in power between the U.S. and minor opponents would ordinarily make the problem irrelevant. Thus, though policies will usually be more important than capabilities in informing our opponents of U.S. intentions, the caveat remains important: at some point, attempts to provide too much insurance may be misread as attempts to support changes in the international status quo or to challenge vital national interests of major opponents.

2. Declaratory policies play an important role. What U.S. leaders say about the intended use of military forces is not entirely discounted

by suspicious or hostile opponents. If declaratory policies are internally consistent, if they are a reasonably accurate reflection over the long run of actual foreign policy (thus enhancing their veracity), and if they appear compatible with other information available to opponents (e.g., intelligence, press reports, industrial news), they can have an impact (albeit, essentially unmeasurable) on opponents' ideas of U.S. intentions.

3. Differences among kinds of military capabilities are important. Many weapons systems are capable of being used in more than one way, depending very much on the policies of their owners (e.g., even hardened and dispersed "second-strike" forces can be used aggressively). Nevertheless, attention to the task of acquiring weapons that are reasonably unambiguous in purpose to the extent such lack of ambiguity can be designed into the system without serious impairment of its military effectiveness, could have an ameliorative effect on the "security dilemma." One broad guideline that seems relevant to such a prescription would argue for the design of weapons systems whose roles, so far as possible, are discrete, restricted, and identifiable, and against a policy of relying on a limited range of systems for the performance of all military tasks. Such an argument would mitigate against acquisition of some "dual-capable" systems (e.g., planes suitable for either the air defense or strategic offensive missions) on the political grounds that such acquisition could make it more difficult for an opponent to judge U.S. intentions, and raise the risk of his over-reaction. Other factors (notably cost) may dominate such decisions, but it would be useful to consider this political dimension as well.

4. Posture planning for détente is a new experience. An important consideration in each of the general points discussed above is their relatively greater importance for policy during détente than during cold war. The psychology of cold war is one in which both sides have extremely pessimistic expectations concerning their major opponents. In such an atmosphere, ambiguous or worrisome augmentations of an opponent's military capabilities, coupled with assertive or adventurist foreign policies, meet mutual expectations. Though the precise character of the cycle of action and reaction is far from clear, the "security dilemma" arms-tension-arms spiral typifies cold war situations and is widely accepted on both sides almost as a matter of course. In a situation of détente, and in planning for extended détente, much the opposite is the case: mutual expectations are generally those of restraint, moderation, and conservative, cautious foreign policies. Further, the desirability of maintaining détente (though each side may have quite different reasons for wanting to do so) creates great pressures for calm and sanguine interpretations of opponent policies and programs that, in a cold war situation, could be expected to elicit very different kinds of reactions. Détente thus has a tendency to create self-perpetuating forces, much like cold war. In such an atmosphere, there is a higher premium than ever on policies that minimize the risk of being misread by an opponent. Whereas, during cold war, mutually pessimistic expectations are taken in stride, the sudden conviction

during détente of a change for the worse in the policies and intentions of an opponent would be taken more as a betrayal of tacit understandings, and would risk the reappearance of old attitudes of hostility and suspicion, only with more force and rigidity than ever. The risks of a return to the politics and dangers of cold war would be high, and it could be difficult to reverse directions once this cycle of interaction gathered momentum.

IV. Discussion

In Section III, above, we listed and discussed a number of ideal-type military capabilities for the support of successful deterrence. The assumptions guiding our selection of these requirements were about the character of the opponent and action to be deterred. The conservative guideline is one that plans for an opponent who is more malevolent and efficient than we in fact believe him likely to be. We could undertake many versions of such an exercise, however, without approaching the question of force posture planning emphases over the next decade. Tentative conclusions about such planning emphases will depend more on our views about the kind of world in which military capabilities may have to function over the next ten years or more. The range of requirements that emerges from a consideration of classes of deterrence situations may reveal the kinds of conditions under which a failure to provide a requisite capability may result in an inadequate deterrent posture. But the probability of a given capability being essential for deterrence cannot be predicted with high confidence. Probabilities are not a function of the number of classes of situations in which a given capability would be useful, since the probability of any particular class of situations actually occurring is not inherently predictable. Nor, of course, are the particular circumstances, events, and personalities that fall within any category of deterrence situation.

Since an important criterion in deterrence planning is the provision of insurance against contingencies that may be unlikely but whose realization would bring grave consequences, these uncertainties are largely ignored, and deterrence capabilities are often planned on the basis of "worst case" guidelines. Planning emphases become roughly proportionate to a scale of anticipated consequences of "worst cases," with heavier emphasis on forces designed to deter those actions that would be most disastrous for the United States. Thus, while a sudden massive nuclear attack on the United States may be deemed highly improbable, forces designed to deter such an attack are given the highest priority, since its consequences, were it to occur, would be the worst imaginable. The existence of those deterrent capabilities is then presumed to reduce the already low probability of such an attack to nearly zero.

Pulling in the other direction is the realization that the most unpleasant contingencies are also by and large the most improbable, and that forces must therefore also be designed to deter actions whose consequences might not be irreparably disastrous, but whose likelihood (partly because the results may be remediable) is greater. In addition,

some actions whose likelihood may in this sense be relatively higher could have consequences that would be potentially remediable if hostilities were to be confined to a level of violence consistent with the original action, but such confinement may not be possible. Thus, the failure of deterrence at a "lower" level of violence may lead to an escalation which places the burden on capabilities designed to deter the very worst cases, at the "highest" levels. And it may impose this burden under circumstances of crisis or conflict that would appreciably raise the risk of deterrence failing even at the highest levels.

We have here two different kinds of requirements. One is for the design of forces to deter very improbable actions whose consequences would be extremely terrible. The other is for the design of forces to deter a wider range of actions of greater but varying likelihoods, whose consequences range from trivial to serious but remediable, but which in some cases also raise the risk of uncontrolled escalation to actions which could have the worst imaginable results. Forces appropriate for deterrence in one kind of situation may turn out to be inappropriate for the other; past attempts to "stretch" military capabilities to cover both high level and other deterrence requirements have proved (we now believe) risky and inadequate.

It is difficult to argue with the assertion that forces must be provided to deter actions whose consequences would be disastrous, however low the probability might seem of such actions coming to pass. Important questions of emphasis arise for the most part in planning for the deterrence of other kinds of contingencies. Limits on resources make it unlikely that we would be able to afford the full range of capabilities discussed in Section III, above. Both high costs and the uncertainties of the future place a premium on military capabilities that are inherently flexible and suited for a wide variety of deterrence and war fighting roles, and relative force posture emphases may be decided on grounds of cost or technical feasibility. To some extent, they will also imply a set of assumptions about the world of the future. Better initial guidance for such planning may be possible if we make such assumptions explicit, thus forming a picture of those conditions under which given contemplated force posture emphases would seem suitable. With the passage of time and the acquisition of further information, periodic reassessments to judge whether the assumed conditions still seem relevant would help to sharpen ongoing analyses of deterrence posture.

While our assumptions about future conditions should be conservative, reflecting our desire to provide insurance against unlikely contingencies, they need not reflect a one-dimensional "worst case" model. We should assume a variety of future conditions that it would be only prudent to anticipate. The concept of prudence as one yardstick for force posture planning implies:

1. Assumptions about the future which, if too pessimistic, have merely caused us to err on the side of caution, with minimum political penalties;

2. Assumptions which, if too optimistic, are still conservative enough so that shifts in policy and planning can be accommodated without undue risk.

Prudent assumptions, then, are those that will insure a capacity to take advantage of unexpectedly favorable conditions without risking the capacity to cope with those that are most probable or unexpectedly unfavorable. Instead of a single set of "worst cases," we should examine at least two sets of future conditions; one labeled "prudent pessimistic assumptions" and the other "prudent optimistic assumptions." Force posture planning that concentrates on one set (or one condition in a set) at the expense of the other (or other conditions in either set), risks the creation of capabilities that may be inadequate on the one hand for deterrence, or on the other for taking full advantage of new political opportunities. Examples of both kinds of assumptions follow, in which we draw heavily on the work done in other chapters of this Report.

Prudent "Pessimistic" Assumptions About the Future

1. The U.S.-Soviet adversary relationship will continue, characterized by a return to "cold war" politics.
2. The U.S.-Communist China relationship will not improve and will probably worsen.
3. The U.S. and the Soviet Union will both possess assured destruction capabilities at high levels of potential damage.
4. The U.S.-Soviet strategic relationship will be one of assumed parity (in terms of general war outcomes).
5. Chinese Communist military capabilities will grow substantially, and will include a serious regional nuclear threat and a moderate inter-continental capability.
6. There will be a limited rapprochement between the Soviet Union and Communist China.
7. There will be no diminution of U.S. worldwide interests, commitments and responsibilities.
8. The United States will have fewer formal allies and considerably reduced overseas base rights.
9. International politics will be characterized by political multipolarity and shifting alliances.
10. The number of nuclear powers will at least double, including fledgling nuclear powers in the third world.

11. Modern, sophisticated conventional arms of all kinds will be in the possession of most countries, but there will remain large differences in military power among nations.

12. The gap in military capabilities between the superpowers and other nations will widen, but the absolute levels of potential violence and destruction during conflict will be higher.

13. The most advanced technologies and military systems will be increasingly expensive, but other modern, sophisticated, highly destructive military technologies will be relatively cheap and easy to acquire.

14. For advanced systems, the time between initiation of R&D and acquisition of an operational capability will remain substantial and increase.

Prudent "Optimistic" Assumptions About the Future

1. The U.S.-Soviet adversary relationship will continue, but in an atmosphere of extended détente.

2. Opportunities will arise for the political settlement of several outstanding issues between the United States and Communist China.

3. The Sino-Soviet rift will grow worse, possibly culminating in a formal break.

4. Communist China will be unable to afford a regional and an intercontinental nuclear capability.

5. The U.S. will have a few very strong, stable allies, who will assume an important part of the defense burden in their areas.

6. Present U.S. overall superiority to the Soviet Union and Communist China, will grow, though the Soviets will maintain an assured destruction capability.

7. There will be little or no additional nuclear diffusion, and none to the third world.

We reiterate that these are not "predictions" of any kind. They are examples of some things it would be only prudent to assume about the future, depending upon how constant present trends remain, and upon how a number of outstanding current issues and decisions are resolved. The lists could clearly be expanded and made more detailed, and such exercises are often valuable as a way of alerting us to important possibilities. Also, these lists are not simply mirror images of one another. For a number of pessimistic assumptions, an optimistic version might simply be, "it won't happen that way." There may not be an "opposite" way for it to happen. In addition, not every item on each list represents a

black and white case--some are perhaps mixed blessings. For example, extended détente may be responsible for a further loosening of alliance ties; increasingly expensive advanced systems may be good for the richer nation; mutual assured destruction capabilities may strengthen international stability. Finally, it need hardly be added that the most probable future, whatever its murky outlines now, is one that consists of mixed situations, some congenial and some threatening.

Our "prudent assumptions" suggest a number of possibilities. If we are "pessimistic" about the future (as caution suggests we surely must be), we might anticipate a world more dangerous in many respects than it is now. The uneven pace of economic development in the third world, coincident with the increasing availability of modern conventional weapons, could widen present differences in military capabilities among the developing nations. A "strategic stand-off" between the United States and the Soviet Union, together with the growing regional power of Communist China and intense U.S.-Soviet and U.S.-Chinese rivalry focused on the third world, would add pressure to regional instabilities marked by arms races and changing alliance patterns within constantly shifting regional balances of power. In such an international political setting, the risks of serious regional conflicts (eventually involving the major powers) would probably increase. Against such a background, Communist China might decide to press harder for the removal of U.S. influence from Asia. She might find opportunities in the unstable politics of the area (and a reduced U.S. presence and weakened alliance structure) for the sponsorship of irregular warfare or some more direct but low risk military probe. She might count on improved relations with the Soviet Union to help deter a U.S. response against the Chinese mainland itself.

In a multi-polar world of shifting alliances and intense superpower competition for influence and power in the third world, some alliances may be formed for very limited purposes, and we may encounter, more frequently than in the past, situations in which an ally's enemy is not necessarily our own, and vice versa. In such a world, the use of nuclear weapons by the superpowers against one another would probably grow increasingly less credible. But confidence in stability at the strategic level, together with heavy involvement in the politics and disputes of the third world, could raise the likelihood of military clashes between superpowers at the sub-strategic level. The consequences of such conflict would be difficult to predict, but the possibility could not be ignored that it would seriously erode shared expectations of stability at the highest levels, and lead to an intensification of the strategic arms race, as well as competition in conventional weapons, and a serious intensification of the "security dilemma" spiral.

A further proliferation of nuclear weapons would raise the possibility of their being used in some serious regional dispute. Though the gravity of such an occurrence would continue to make it unlikely, it would be impossible to discount altogether, in particular if some primitive nuclear forces are not combined with adequate provision for secure command and control, thus perhaps increasing the chance of unauthorized or accidental

use at a critical moment. United States intervention in such a battle would for like reasons risk a nuclear attack (or at least the threat of attack) on U.S. forces or staging areas. Here again, though the likelihood of such an attack would be extremely low, the proliferation of primitive nuclear forces, coupled with an intense regional conflict in which there were some risk of loss of political or senior military control over such forces, could create a situation of great danger.

If we are "optimistic" about the future, we might perceive a somewhat different balance of possible risks and opportunities. The world might be one of comparatively stable political relationships, reflecting in part reasonably good U.S.-Soviet and U.S.-Chinese relations. Chinese weakness, the Sino-Soviet split, U.S. military superiority, and strong regional middle power U.S. allies would all probably exert pressure toward less volatile third world politics than we might expect if we were to remain pessimistic. There might accordingly be lower risks of regional conflicts, and significantly lower risk of great power clashes as the result of their interventions in such conflicts. Thus, though political multipolarity might characterize the international system, the consequences of it could be altogether different, depending largely on the nature of big power relations.

Such a world would not be without its risks, which would be characteristic of the politics of détente. One such set of risks would be those associated with the special strains felt by defensive alliances in such periods. Should U.S. allies perceive a relatively quiescent opponent in the Soviet Union or Communist China, and judge the threat to their own security as quite low, the advantages of close cooperation with the United States might not seem great, and alliance bonds could slip considerably. We already see some examples of this problem in NATO politics. Should a further loosening of alliance ties take place, it is clear that our world of "optimistic" assumptions contains within itself the seeds of a potentially more difficult and dangerous reality. In particular, a disparity in the pace at which alliance ties weaken in the Western and Communist camps could lead the Soviets or Chinese to perceive new, potentially tempting opportunities for low risk political/military adventures. Though such probes might only serve to re-unify alliances, they would also carry some risk of miscalculation leading to serious conflict, and certainly a considerable risk of precipitating a return to cold war politics at a level of suspicion, recrimination and potential danger, perhaps higher than ever before.

Another important peril in such a world has been discussed above in Section III: that a misperception of how the United States intended to use its power would result in a serious and destabilizing new challenge to U.S. military superiority. It might not even be necessary for the Soviets to conclude that the United States intended to use its superiority to alter the status quo and challenge important Soviet national interests. Should the Soviet Union conclude that its bargaining position in international affairs has been seriously eroded, that the United States was able effectively to block even those international changes

regarded by Soviet leaders as minimum necessities, a Soviet decision to mount a new and potentially destabilizing challenge to U.S. superiority might result.

Future Force Posture Emphases: Conclusions

Several tentative conclusions about future force posture emphases suggest themselves, though their validity and accuracy is a subject on which most relevant evidence will only be obtained as these ideas are constantly re-examined, tested, and amended in the light of fresh information.

In some respects our analysis may have as much relevance for foreign policy as for force posture planning, but it is the latter concern that occupies our attention here. Perhaps the most obvious conclusion should be stated first: we should not make the mistake of over-relying on military technology for the solution of political problems. It will not be possible to cover every conceivable requirement for deterrence and war fighting, up and down the line, by providing a relevant military capability. The range of requirements may be too vast, the future is not sufficiently discernible, and some potentially serious problems (e.g., irregular warfare) will not yield to proposed solutions that rely mainly on military capabilities.

There will probably be an even greater interrelatedness of military requirements in the future than we have known so far. For example, as we move toward a situation of strategic parity in general war outcomes (e.g., mutual assured destruction capabilities), other capabilities may take on more importance. The Soviet Union may choose to emphasize improvements in limited war capabilities in order to challenge U.S. military superiority outside of Europe. Should the United States respond to such a challenge with a renewed emphasis on strategic capabilities, it could mean that our strategic forces will ultimately be asked to assume elsewhere a deterrence function that is carried today only in relation to Europe, where a powerful Soviet conventional war capability makes the strategic threat necessary. Or, in another vein, heavy reliance by the United States on a conventional military response to irregular warfare could conceivably make such conflicts more nearly resemble limited conventional war. Especially should Communist China (or, conceivably, the Soviet Union) have heavy interests at stake in the conflict, U.S. force posture for intra-war deterrence could influence the risks of uncontrolled escalation. Thus, a balanced force posture, in which some emphasis is given to all requirements, would seem a sound planning policy for the future.

Of special concern, whether we are optimistic or pessimistic about the future, is the growing military capability of smaller nations, including the possibility of some additional diffusion of nuclear weapons. This implies that we should devote special emphasis to planning for the creation of usable force and a quick response capability, attempt to maintain local conventional superiority over most possible combinations

of minor opponents, and study the utility of improving and maintaining an accurate single shot capability. Such forces could be especially valuable in a world that looked more like the one suggested by our "pessimistic" assumptions, where our base rights were reduced, we had fewer allies to count on, and the risks of serious involvement with China or the Soviet Union in regional conflicts would depend in part on how quickly we were able to respond in force (and to maintain a known capability for such response) to a local crisis. Nor would a significant U.S. capability for quick response with usable force necessarily signal a U.S. intention to challenge important Chinese, Soviet, or other national interests (thereby decreasing the probability of stable relations). As we have noted, much of the way in which American opponents would interpret U.S. capabilities would depend on U.S. behavior and policies. In addition, a growth in U.S. quick response capabilities of the kind that did not depend on overseas basing (as a cautious assumption) could help to remove the irritant to local nationalisms of the U.S. military presence, and to improve prospects for political stability in some third areas. Nor would U.S. military posture under those circumstances look as threatening to the Chinese and their allies.

We will probably wish to devote increased attention to means for improving our information gathering and interpretation capabilities, and to strategies for sharply reducing the time between R&D and operational capability for some weapons systems. We shall want to lower the risks of placing insufficient emphasis on some military capabilities; of premature commitment to creation of some weapons systems; of making poor weapons systems choices in a world of technological abundance; and of being surprised by a successful challenge to some aspect of U.S. military superiority. Increasing costs and the political dangers of inadvertantly seeking "too much" insurance (discussed in Section III, above) make attractive further efforts to reduce the "intelligence gap" and to secure significant improvements in our capacity to effect quick deployment of a weapons system from a highly diversified R&D effort. This would allow us safely to defer deployment decisions for longer periods of time than we now can, in order to take maximum advantage of fresh information that may be relevant to such decisions.

It is not intended to suggest that the emphases noted above should be made without attention to the basic requirement of maintaining an assured destruction capability against any possible combination of opponents, nor is it suggested that these emphases be at the expense of other important efforts such as the maintenance of a good local war fighting capability in Europe. What is suggested is that in the future, the force posture emphases noted here may be of greater importance, relative to other capabilities, than they are today. The assumptions supporting these conclusions can and should be tested against the unfolding reality of tomorrow's world.

Chapter V

TECHNOLOGY AND DETERRENCE

by

Arnold Kramish

I. The Implications of Technology in Deterrence

The role of technology in deterrence is to enhance the threat of punishment in responding to aggressive initiative or to nullify or reduce a potential threat. It is plausible that a technological threat which is developing may be met by pre-emptive action, or a real or supposed superiority in technological armament might tempt the confident party to initiate conflict. Imbalance of forces, technologically constituted or not, can be--and often is--destabilizing.

The technological environment, whether or not it is militarily oriented, is constantly changing, resulting--for the major powers at least--in a "race" to maintain the balance. The balance is generally considered to be stabilizing, but there is some contention over the effect of the effort to maintain it. Just as there are fundamental reasons why technology does not stand still, so are there fundamental reasons why the race to maintain balance is not necessarily destabilizing.

The first of these is that inasmuch as the two possible protagonists desire deterrence to be effective, there is not only a "take" of information but often a "give" on the constitution and progress of force development. Thus, a certain "intelligence balance" has to be maintained and technology is making this task simpler. Second, the major powers compete with one another in exploiting the most advanced frontiers of technology. This demands time, expense, and decisions. This lead time, together with intelligence and a universal awareness of the state of scientific and technical progress, allows the nations which are technologically mature to constantly adjust the balance between themselves.

While this is an expensive process, making claims on all manner of a nation's resources, it may not result in a more unstable deterrent state--thus far it seems not to have done so. Do these considerations apply between two states, at equivalent or non-equivalent, lower levels of technological development and capabilities? Would they apply to the two major powers if they were engaged in a process of armament reduction instead of enhancement? Concern with lead time is the lot of the major powers, mainly, and it occurs during the escalation of technology. Lead time may have less significance as a factor in force-balancing for other nations, for a variety of reasons--because technology diffuses ever more rapidly, because technologies, military or civilian, increasingly interact with one another, because the newest types of technological armament can often be bought or otherwise acquired, and because knowledge

that a system will work is often the single most important piece of technical intelligence.

Since the R&D lead time problem is diminished or absent during a period of arms reduction between the major powers, it is probable that such periods may entail risks far more dire than those inherent in the attempt not to fall behind the potential and period of advancing technology. For a country on the way up the technology ladder by itself, lead times are long; with some help, they can be considerably shortened; and during a period of reduction, they are brief indeed. Here it may be helpful to introduce the concept of option time, which may be the prime consideration for deterrence situations between most low-major powers.

The most obvious, and potentially the most dangerous, possibilities of converting to weapon systems in ever briefer option times lie in the rapidly developing peaceful nuclear programs of many nations. The ability to manufacture and process nuclear materials is in itself not sufficient to make bombs, but the ancillary techniques are also being diffused in diverse ways--for example, symmetrical implosion techniques are being developed at many centers throughout the world, not to perfect fission bombs, but to generate intense magnetic fields for pure research purposes. Criticality studies of bomb-like assemblies are being conducted for purposes of developing breeder power reactors. Many techniques for conducting equation of state studies are directly related to bomb development, etc. Thus, a nation which becomes sophisticated in the benign applications of nuclear energy and in certain other areas of scientific research will acquire a progressively briefer option time during which at least rudimentary, and possibly more sophisticated nuclear armament could be acquired in time of crisis. It is possible that international controls may someday alleviate this situation, but any collapse of such controls would leave these arguments valid. And during a time of crisis between two powers with widely disparate option times, stability of the situation may be difficult to maintain even before a single nuclear weapon is acquired by either.

Furthermore, if nations have already developed and possess a variety of nuclear armament, and then enter into an arms reduction accord, a situation of high mutual confidence would have to somehow be maintained. For complete weapons knowledge is already theirs and cannot be erased. Consequently, any crisis during a period of arms reduction implies, with brief option times for both parties, possibly a more critical situation than a similar crisis situation occurring during a period of "armaments race." This may be a most difficult conclusion to accept, but it appears to have some validity and is deserving of further analysis. The same arguments would apply to delivery vehicles and other advanced armament.

Another factor important in the deterrent equation is mutual appreciation of each other's technology and its military implications. Because this mutual appreciation may be lacking in situations where advanced armaments are given or sold to technologically deficient nations, a balance of technological armament, in terms of quality and quantity, does not

necessarily imply deterrence. The recent Arab-Israeli confrontation is illustrative of this point.

It is obvious that technological systems, symbiotically coupled with manpower were responsible for swift conquest and termination in that situation. This raises the question of whether technology in some situations really plays a different or dominant role in either deterring or terminating conflicts. Would the presence of the present levels of Soviet and American equipment in Vietnam shifted, say, to 1962, but not operational against each other have kept the level of conflict to the 1962 level? Or would Hanoi, and does she now, regard the confrontation of Soviet and American weapons as an entirely isolated, almost auxiliary conflict, between the U.S. and the S.U.? Meanwhile, Hanoi conducts its "other war" almost as a separate entity, with separate objectives. Because of the nature of the latter conflict, sheer manpower, individual firepower, and accommodations of U.S. forces to that type of war may be more important to termination (or would have been more important to deterring, hypothetically speaking) than the war of advanced armaments which is also being fought.

It is not clear that two neighboring areas, supplied with "balanced" modern armament would be deterred from conflict. Something more is required, something nebulous but acquirable, for deterrence to be effective. This "something" involves a process of accommodation with technology, not only within a small sector of the armed forces, but throughout national establishments. Only then is there an appreciation at political, military and other levels of the implications of conflict. If and when a nation becomes quite generally more technologically oriented is there a possibility that technology will acquire a major role in the deterrent equation. This is in a situation of attempted "balance," where both parties are brought to weapon parity by one or more of the major powers. If there is parity without understanding, technological balance may imply quite the opposite of deterrence.

Traffic in technologically advanced armament is and may continue to remain more serious than the slower process of nuclear proliferation, unless factors beyond those of "balance" are taken into account. At even lower levels (technologically speaking) of conflict, say guerilla warfare, technology will assume its possible deterrent role even more slowly. Regardless of the increasing emphasis on the technologies of war fighting, the technologies of mutual strategic deterrence and assured high levels of destruction appear destined to evolve at faster rates; the gap between strategic and non-strategic technologies will grow.

II. How Technology is Evolving

In considering the effect of technological progress upon various deterrent postures during the time period under consideration, it is not feasible to display the entire spectrum of possible future technology as exemplified by a Delphi-like study. Indeed often such lists turn out

to be misleading because, while they represent a consensus of informed opinion, they often are not backed by sound technological analysis showing specific technology trends and expectations. Some expectations are not considered in this chapter, because the fundamental breakthroughs have not been achieved in those technologies, so it is impossible to depend on those technologies maturing in time enough to affect deterrent postures a decade or two hence. An example of such a technology, of course, would be the achievement of controlled nuclear fusion. However, some of the technologies developed in an ancillary way while investigating such goals are proven to be of importance in near future weapon systems. To take the same example, plasma technology, which is important for space systems and metallurgical research, is developing parallel with some of the problems of plasma control encountered in the investigation of thermonuclear reactions. Consequently, rather than attempting to predict the effect of a dramatic technology on future systems, we shall focus our discussions on a few specific fields in which there is a steady gain of knowledge and a steady, almost certain expectation that desired results will be achieved on the assumption that efforts are sustained. It is then possible to predict a broad class of such technological capabilities which may have remarkable or even revolutionary effects in future deterrent postures. Specific technologies will be selected to underline special points of emphasis in this study.

A. When the Future is Largely Predictable

The subject of materials is ordinarily prosaic except for those currently involved in the exciting effort to develop new materials with properties either uninspected or heretofore believed to be unachievable. Coincidental with the development of the materials themselves, and no less important, is the development of new types of tools to fabricate these materials and the emergence of fundamental types of instrumentation to investigate their properties. Recent knowledge gained from these new tools gives rise to expectation of a high probability of fulfillment that many types of desired materials for weapons can be developed. Furthermore, there will in many instances be a choice of materials for specific system missions. This high expectation factor is not yet present in other postulated systems--for example, a laser weapon, (although non-weapon military applications of the laser are already becoming important in ranging, detection devices, etc.).

Thus we may count on materials technology having a larger effect in the long and short-term deterrent posture. It is a highly competitive technology between the United States and the Soviet Union and has already fundamentally affected the deterrent picture. High strength fibre systems are already here. Strong ductile alloys, such as beryllium aluminum, are already finding their roles in military systems. Requirements for new material can be specified and the effect of those new materials in weapons systems evaluated. For example, should more ductile heavy metals like tungsten be developed, they might result in the ability to fabricate better space payload shielding (against meteorites, radiation, et cetera) and provide a communications window during reentry.

Better boron fiber tungsten composites leading to more efficient rocket nozzles, et cetera, could also be reasonably expected. Already available are such unusual materials as pyrolytic graphite, a substance lighter than aluminum, with a high strength to weight ratio, with unusual electrical conduction properties, and utilizable in a temperature range from -450F to 7000F°. Materials like these represent really dramatic breakthroughs and provide the weapons technologists with solutions to problems plaguing them in designing nose cones, rocket nozzles, weight-limited components and a host of others. The advantages of boron-resin composites, ceramic "whiskers," large monocrystals, novel ablative materials, beryllium and beryllium composites, etc. are becoming increasingly more appreciated by those concerned with developing the entire range of weapons systems.

B. When the Future is Hopeful, but the Effort Must be More Bold

Optics has experienced more revolutionary growth in the past decade than it has since Newton's formulations; it too had previously been considered (in relation to nuclear physics) an unchallenging subject. Materials advances, coupled with the new science of optoelectronics--and again the new instrumentation which has allowed investigation of the solid state--thin films, the developing, equally exciting field of cryogenics, have all contributed to a new era of optics. Particularly important is the intelligence function relying upon sensors operating in several different bands of the spectrum. Thus, we have and are developing the means not only of imparting the ordinary visual image (from space or from terrain) but to give information on hidden silos, objects in deep submersions, and flora description, et cetera.

A major difficulty in utilizing this information, when gathered in remote stations, is the bottleneck caused in transmitting the massive amounts of data involved in a series of pictures to the collection station. This delay of hours or days is certainly an inhibiting factor when the information gathered (say in a Vietnam-type situation) would be vital for immediate action.

The answer to the problem may lie in the use of lasers, which could increase the data handling rate by a factor of several magnitudes, thus providing real-time transmission which could be vital in many forms of confrontation--even political. This is a hopeful--almost certain--development of the next decade.

But there is another aspect of laser research which has a lesson in the strategic picture. The more expensive and often wasteful phases of military equipment evolution occur in the development stages. The research laboratory environment (particularly where basic research is conducted) is not particularly receptive to experiments where equipment is destroyed and must be replaced with each try. This "destructive research" inhibition relates to the creation of extremely intense laser beams for weapons applications. Even at the present time, intensities achieved in a ruby crystal system could be significantly multiplied if

the crystal were allowed to be destroyed with each shot. With crystals costing several thousands of dollars apiece, the reluctance of the experimenter to do so is understandable. But in strategic applications, the cost may well be dwarfed by the value of the objective. Here, then, is an example of the type of gap which must be bridged between the research laboratory and the strategic planner if full use of developing technology is to be made for the nation's defense needs.

C. Simplicity is Often the Best Solution

The growing interest in fluidic rather than electronic controls portends strategic implications. This is a technology, about a decade old, in which streams of liquids or gases are controlled by other streams of fluids. Logic elements employing this principle can be used, for example, in rocket control systems, helicopter stabilization and various computer applications.

The beauty of fluidic controls is their simplicity, ruggedness, their immunity to radio-frequency jamming, and the fact that radiation (as might be used in an anti-missile system) is relatively ineffective against them. The strategic implications are apparent--and finalize the point that the entire spectrum of developing technologies from the most complex to the most simple must be explored. Persistence in pursuing concepts already familiar and promising will have its payoff.

D. The Dominance of Technologies

The technological horizons are not so vast that "balance" vis-à-vis another nation is becoming increasingly difficult to maintain, particularly because no single nation, however great, commands the resources to explore and to develop the entire technological field. Furthermore, there is often a choice, a difficult one, of alternate technological routes toward the same strategic objective.

Continued commitment of resources as well as assured technological intelligence on opponent capability are the criteria for using the best of technology in maintaining strategic balance. It has not yet been demonstrated that any particular military technology can be sure to dominate any other technology. Thus, research and development coupled with watchfulness and careful evaluation are unending requirements.

There are also the problems of dominance of scale, because of the factors of diversity and scale, "matching" military systems within an alliance is becoming increasingly difficult. This is very much one of the symptoms of the "technological gap." Conversely, technology itself is contributing to the political fractures in alliances. Attempts at "technological alliances" conflict with security and commercial considerations--and both the latter inexorably dominate. Thus, as far as the technological components of the strategic balance are concerned, the alliance defense burden would seem increasingly to bear upon the United States.

III. Some of the Specific Problems

There is, presumably, a situation of mutual deterrence between the U.S. and the U.S.S.R. But it is not a static position, for nuclear delivery capabilities are continuously being upgraded by both sides, complicated by the beginnings of ABM development and installation. The evolution of warheads, guidance mechanisms, control circuitry is impossible to consider in open essay. But some of the problems are evident, and the necessity for technological innovation clear.

For example, should the Soviets develop a weapon system capable both of moving from one ballistic or orbital trajectory to another combined with a multiple warhead capability, it might be possible to counter this threat only by an ABM system which did not require all of its target information at launch; i.e., a short duration loiter capability for the intercept missile in space. Developing this type of capability or an equivalent is one of the more difficult and serious technological challenges in meeting possible variants of Soviet MIRV or other novel threats.

Countering Soviet missiles or assuring penetration or ineffectiveness of a Soviet ABM defense will also require further knowledge of nuclear effects in space and the upper atmosphere; the direct acquisition of this knowledge is, of course, prohibited by the Partial Test Ban Treaty. But laboratory simulation studies, combined with further theoretical insights, are possible but challenging. The knowledge required to deter threats directed from space is in itself a separate technological frontier.

Deterrence at all levels demands intelligence information gathered, transmitted, and evaluated with ever increasing speed and reliability. Technology is providing this capability to the S.U. and U.S., and eventually to other powers like Japan (as a "spinoff" from its peaceful space and optics industries). Limitations in present orbital reconnaissance systems will be overcome by techniques like combining a multiple array of electro-optical, radar and infrared sensors giving a composite picture of objects which might elude any individual type of sensor. The same techniques can be used in fighter and bomber aircraft, coupled with a computer, which then guides the aircraft to a proper attack course. Developments like these promise to contribute much to strategic and non-strategic deterrence situations, possibly down to the guerilla warfare level.

When such information is collected in orbit, the delay in transmission may amount to hours or days, however, such developments as utilizing laser beam channels may alleviate this deficiency. But manned orbital satellites will permit on-board interpretation of essential or important information; i.e., giving a degree of selectivity tailored to particular and changing missions. The appropriate data may then be selected on-board and transmitted quickly enough to be useful in targeting in ABM systems, even down to small battlefield actions.

Unusual troop and equipment buildups could be discriminated.

Technical intelligence relating to the "lead time" in strategic systems competition also becomes increasingly more important; the ever present necessity of the past in interpreting the opponent's intent (as opposed to the relatively easier task of interpreting his hardware) remain. This is complicated by the problem which constitutes the central ingredient of deterrence strategy: in what manner do you impart to your opponent the knowledge that you know? There must be optimum ways of imparting this knowledge to give maximum deterrent effect; and this is one of the aspects of deterrence whose solution does not lie wholly in technology.

Many of the new technologies concerned with air-breathing vehicles will have considerable impact upon both strategic and non-strategic balance of forces. The deterrent implications of tactical aircraft will be mutually appreciated in some instances (particularly when a nuclear capability is present), but the major role of tactical aircraft would seem to be in termination of conflict. Manned bombers constitute a deterrent proportionate to the damage they might inflict. They are sometimes not necessarily employed (as in Vietnam) in strategic encounters, and under such circumstances, also could be considered to be termination armament. As a strategic threat, their utility remains, even in the missile age, because some defensive systems designed to counter the missile threat may be ineffective against low-penetrating advanced manned bombers.

Emergence of the giant cargo carriers may prove to be the major application of aircraft in a broad spectrum of deterrent situations. The C5A-Galaxy, soon to become operational, with an internal capacity (volume-wise) more than 4-1/2 times that of the already impressive C-141A afford the possibility of quick airlift of supplies and manpower to crisis and conflict areas. The C5A is a product of the newest technological advances in titanium, fiber glass laminates, and other new materials. Also important was the development of a turbofan engine designed for low specific fuel consumption, particularly long operational life, and exceptional thrust--all dependent largely upon materials breakthroughs.

A follow-on aircraft, the LGX or "Megaplane" with a takeoff weight perhaps fifty percent greater than that of the C5A may confidently be expected if development is pursued. But more significant than the prospects inherent in pushing C5A technology to the LGX stage is that this particular program reopens consideration of the advantages of nuclear powered aircraft. Thus, the ANP program of the 1950s called for a weight limit of a half-million pounds (the C5A will take off with a total weight in excess of 700,000 pounds; the LGX in the 900,000 to 1,200,000 pound range); also, the ANP craft was to fly supersonically. Now, there appear to be certain advantages in combining C5A technology with advanced versions of earlier ANP systems, resulting in a large capacity, ultra-long range subsonic airborne vehicle. Such an aircraft seems to

promise certain unique strategic and non-strategic deterrent possibilities. Its virtually unlimited range and endurance overcomes most geographical limitations to the most expeditious delivery of supplies and manpower. Logistical missions can be flown to areas where no fuel is available for the return journey. Loitering just outside of crisis area for long periods of time is possible, with the ability to move in rapidly if the crisis matures. Such a capability would compensate base and depot cutbacks dictated by political or budgetary considerations.

The possible strategic missions of such aircraft might include airborne missile launchers (for Poseidon), sub patrol, reconnaissance, missile-firing interception (i.e., an ABM mission), air-borne warning systems, command and control centers, etc. (Some of these missions are being contemplated for the "conventional" version of the C5A, but the advantages of incorporating nuclear power are obvious.)

The mere existence and presence (in some situations) of nuclear aircraft may impart a subtle but real deterrent effect, related to the psychological component of the deterrent effect of nuclear weapons.

The deterrent and operational values of nuclear-powered systems already in being have already been demonstrated in the 100-plus nuclear submarine fleet and nuclear surface craft. One might postulate the development of extremely large and fast nuclear cargo ships (possibly surface-hydrofoil or underwater towed hulls), but the perspective of the moment seems to give the edge (at least in the deterrent sense) to a smaller, but significant and faster, air lift capability.

Nevertheless, most advanced military systems, whether operating in space, the atmosphere, on land, or the sea, are beginning to interact and depend on one another ever increasingly. Detection and acquisition equipment will partially be operative in space systems (manned or unmanned) and in the type of aircraft postulated above. Launching of ABM vehicles may require a mix of land, sea, and air platforms. Navigation and communication aids will be based upon interconnecting systems operating in different terrestrial environments.

The environment toward which substantial research and development efforts are beginning to be devoted is the sea. More intense oceanography research efforts must be applied to the tasks of improving submerged weapon systems and defending against hostile ones. Deep-diving submarines will play an important role in anti-submarine warfare (ASW); for these, new power sources and high-strength materials are being developed. Ancillary tasks include the development of improved signal processing equipment--necessitating basic research on propagation phenomena little understood at the moment. Other equipment will have to be evolved for torpedo tracking, open-ocean and under-ice acoustic surveillance, improved sonobuoys, etc. All of these technologies, coupled with the other substantial developmental demands of delivery and ABM systems themselves will require the emergence of a large set of subsidiary technologies involving fuel cells, doppler sonar, specialized microcircuitry, etc.

Ground-based tactical systems also increasingly call for new technology in enhancing firepower and improving mobility. The role of the helicopter, both technologically and operationally, has been enhanced by the demands of the Vietnam conflict. Other tactical vehicles, such as hovercraft capable of moving over widely differing types of terrain, hybrid-powered vehicles, which for certain periods could switch to electric power--thus lessening detection vulnerability--are all in developmental stages. Communications between the entire Army command structure down to individual battlefield units will eventually be provided by an interlocking intercontinental satellite system known as Mallard and its even more highly technologically based successor, Gander.

Thus, for all missions, and in all environments, the transport, communications, firepower components all will interlock--and if any element of the total system can be said to have a deterrent effect in any situation, the deterrent credit in some measure must be allotted to the entire technological complex.

IV. The Crystal Ball (A Brief Gaze)

During the next decade and a half which this essay considers, there assuredly will be scientific and technological breakthroughs of significance to deterrence. But by their very nature, breakthroughs are not predictable in substance, nor can they be expected within a definite time period. Moreover, when one occurs, it would in all likelihood require at least a decade to exploit it for a major military system. It may be instructive, however, to consider the implications of an example breakthrough for any era in which it happens to occur.

Let us consider the aforementioned controlled thermonuclear reactions (presently being investigated in the context of their applications to the civilian economy). If it "goes," one can then envision rocket propulsion systems using a fuel mixture of lithium and deuterium (with a small amount of tritium for start-up). The reaction "waste products," hydrogen and helium-3, would be heated by the thermonuclear reaction and expelled to create thrust. The newly created thermonuclear elements and neutrons would be used to manufacture new fuel and to participate in perpetuating the process. More than enough excess power would be available to operate on-board equipment of a large space vehicle.

This type of fueling allows prognostication of space missions, manned or unmanned, which have their parallel in the added flexibility and capability which would be given a large air-breathing craft if it were fitted with a nuclear propulsion unit. Clearly, though, this system would require a very long period of difficult R&D effort after the unpredictable breakthrough period.

Other examples of "things to come" at some indeterminate date could be cited--and their military implications considered, but such is not the purpose of this essay, which demands "harder," more certain predictions. But this single example does serve to emphasize the point that

technology is evolving at a rapid rate, and a constant requirement for the next decade and beyond is an unending awareness of the technologies which are evolving and critical evaluation of their implications for defense and deterrence posture. To shun technological innovation for fear of its "provocative" effects would perhaps be the most destabilizing posture possible for this nation to take.

CONCLUSION

THE FUTURE OF DETERRENCE

by

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In discussing the future of deterrence, as in the future of almost anything else dealing with human affairs, we are dealing with precarious predictions rendered doubly precarious because of the wide range of relevant issues. Nevertheless, prediction is not only necessary but inevitable--at least to a degree. When I say "at least to a degree," I refer to the desirability of avoiding unnecessary projections into remote futures. The number of specific decisions we have to make now to cover contingencies twenty years hence or more is minimal, and we should take advantage of that. We should seek wherever possible to keep our choices open concerning more remote futures and to limit our hard and fast decisions to contingencies closer in time.

On the other hand, when we speak of predictions being inevitable over the shorter term, we mean simply that every policy decision implies a prediction or a pattern of predictions. A decision for one kind of policy implies a prediction that the consequences of that policy will prove superior to the consequences of available alternative policies, or at least--wherever we feel oppressed with uncertainty--that the policy chosen serves better than other available policies to cover a wide array of possible contingencies.

This, of course, does not mean that we presume to predict particular events. Policy decisions concerning deterrence must take into account our prevailing uncertainty about particular events, and may indeed underline that uncertainty. Nevertheless, it is clear that some categories of contingencies are more probable than others; also, other kinds of contingencies must be provided against even when the probability of their occurring is deemed very low. Game theory has made us familiar with the "mini-max principle," which is analogous to the older idea of choosing that policy which will turn out least bad if the relevant predictions go awry.

In deterrent policy particularly, we must remember also the reactive aspects of our policy decisions. Not only our opponents but also our allies will respond to what we do, and the ability to predict these responses correctly--or at least to avoid egregious blunders--takes wisdom as well as ample and accurate knowledge. A case in point is the proposed ballistic missile defense (BMD), about which several crucial policy decisions are now pending, and the effects of which upon allies and opponents has hardly yet been explored.

It should by now be unnecessary to add that especially with respect to anything as expensive as deterrence measures are likely to be, we

are always confronted by limitations of resources. This factor affects not only our systems choices within the budgets allocated for the purpose, but on a higher level it determines what that budget should be. It is quite wrong to say, as has sometimes been said with regard to related matters of defense policy, that we will buy as much deterrence as we need and merely make sure that we spend the allocated funds as efficiently as possible. Our deterrence efforts, like our military policies generally, are made within a society which has other goals beyond military security. Excessive military costs will also be a drain on both economic and social-resource growth potentialities. It is not only the economic power but also the social and political cohesion of the U.S. that make for its present greatness and its superiority over its rivals, and these elements are not to be taken lightly in preparing for the future. In short, plans for the deterrence measures of the future must seek to avoid unnecessary impairment of investment, and that means investment not only in the economy itself but in social improvement as well. This is one respect in which longer term planning competes with and sometimes dominates over the shorter term variety.

In connection with deterrence it is important also to review critically the usual distinction between the opponent's capabilities and his intentions. The stereotyped assertion, familiar in the defense community, is that since we cannot know the enemy's real intentions, which may in any case change, our forces must be geared to his capabilities rather than to his intentions. Presumably his capabilities are more tangible, and subject to being viewed more completely and with greater objectivity. The only thing wrong with this principle is that we cannot possibly live by it. Today, even with the Vietnam war going on, this country is spending about 9 per cent of its GNP on its defense budget. Such a level of military activity can only mean that we really do not expect the Soviet Union to launch a war against us soon. If we did, the level of expenditure would obviously be higher by a considerable factor. One could argue that the opponent's relatively pacific intentions are in fact signalled by his thus-far-limited capabilities, but in that respect we must take into account two important factors: (a) his military preparations are only one among several categories of behavior by which he signals his intentions, and possibly not the most revealing; and (b) his military activities are inevitably to some degree responsive to our own. The latter remark is only another way of saying that if we force an arms race, we should not thereafter fix our gaze upon the opponent's military activities while shielding our own with blinkers.

In all these matters we have undoubtedly, by means of the various axioms to which we have become addicted since World War II, grossly overlooked the fact that on most relevant issues we have rather wide areas of choice. We are familiar with the methods and advantages of making intelligent choices among weapons systems, and to a lesser degree among strategies, but choice figures also in the national policies which dominate those strategies. As a result of World War II, stimulated

also by the advent of nuclear weapons, this nation shifted from a pattern of foreign policy generally known as isolationism to something which has been to a radical degree the direct reverse. The question is already being asked, with increasing intensity, whether we have gone too far--whether we have in fact been too prodigal in our commitments. The current debate over our involvement in Vietnam is a crucial case in point.

From the point of view of the military community, the important thing to remember about the Vietnam debate is that its outcome will be mainly determined by others. In other words, the provident military leader has to be aware of deep currents of change affecting our national policy, where his own role is perforce largely passive. Whenever one hears anyone expressing strongly the view that "the public needs to be educated" to something or other, one can usually set that person down as having limited political sensitivity. The many forces acting to educate the public speak with conflicting voices, and most of them are generated within the public itself. They are subject to some influence but certainly nothing resembling control from the defense community. Out of Congress and out of the electorate are presently emanating statements concerning Vietnam which indicate a very deep disenchantment with the policy that committed our forces there, and this disenchantment is not markedly less characteristic of the so-called hawks than it is of the doves.⁷⁰ These views naturally reflect in large degree the views of the wider public.

President Johnson's successors for some time to come will be impressed by what Vietnam did to his presidency. Any future president will, at least for a time, be more limited in his responses, and also more closely watched by the Congress.

All this adds up simply to the fact that whether we like it or not, the authoritative determination of what constitutes the nation's vital interests--always a flexible and ambiguous concept--is clearly undergoing change in a manner that will profoundly affect our whole national security policy. Our national response to the Pueblo incident is perhaps sufficiently indicative of that. It is most unlikely that this nation will within the time period we are considering go isolationist to the extent of abandoning or terminating its commitments to those of its European allies which want that commitment sufficiently to cooperate in a meaningful manner (which is not to say in a manner necessarily determined by us) and the same is no doubt true of Japan and other nations in the Western Pacific. Perhaps it is even rash to say that this country will be more isolationist than it has been over the past twenty years. But it is hard, and wrong, not to notice that our exuberance

⁷⁰ See William P. Gerberding, "Vietnam and the Future of United States Foreign Policy;" The Virginia Quarterly Review, vol. 43, no. 1, Winter 1967.

about commitments is undergoing some very rude shocks, which can hardly be expected not to leave a deep impression.

II

I return now to the subject of deterrence more narrowly considered. In the introductory chapter of our study we recalled various events partly triggered by the advent of nuclear weapons, and we recalled also the changing climate of attitudes concerning the meaning of those weapons and of those events. Let me recapitulate very briefly. The nuclear weapon was in 1945 at once recognized to be a strong deterrent, but there was nevertheless a notable lack of confidence in its reliability. This reflected the fact that for the first time in the history of warfare we were demanding a kind of deterrence that would work 100 per cent of the time. Later on, due to a number of changes, which included the mere passage of time without war but which more importantly involved other factors including a clearer perception of the nature of the major opponent, we tended to become much more confident about the capability of our nuclear weapons to deter a general war, or at least one which would start full blown as a general war. At the same time we became less confident in our ability to deter lesser aggressions through our nuclear threat. We tended, to a degree that was certainly not matched in the Soviet Union, to distinguish sharply between general war and limited war. With time, we developed increasing confidence that we knew how to keep wars limited, but the idea became dominant in Administration circles that keeping war limited depended above all on avoidance or rejection of nuclear weapons. This kind of thinking is more or less summed up in a term "firebreak," which is now extremely familiar in this context.

Looking back we can see that this kind of thinking helped produce a conspicuous success, that of the Cuban Missile Crisis of 1962, which one British writer has called the "Cuban Trafalgar." It is clear that the fact that President Kennedy and his entourage had by that time become accustomed to differentiating fairly sharply between general and limited war enabled them to "keep their cool" in their manipulation of this crisis. They may not have had high confidence in their ability to avoid direct military action altogether, but they appeared to have high (though not complete) confidence in their ability to accomplish their goals without precipitating general war with the Soviet Union. It was not at all expected that the outcome would prove as favorable as it in fact turned out to be--over a whole range of issues, including Soviet behavior concerning Berlin.

On the other hand, there can be no doubt that our limited war thinking which enabled us to envisage fighting a war against the Viet Cong and possibly also Hanoi without necessarily becoming involved with China and the Soviet Union, also played a very considerable part in our letting ourselves become involved in Vietnam. But now we were treated to an unpleasant surprise: our forces, operating in a conventional manner and restrained by the considerations considered to be necessary

to keep the war limited, are not nearly as effective as we had hoped. We must notice the pattern that is involved in Vietnam: first, in order to refrain from provoking the intervention of China, we have refrained from invading North Vietnam, which has meant leaving the military initiative almost entirely to the opponent; second, we have refrained from using nuclear weapons of any kind, which in that terrain might not be particularly useful anyway; third, partly because we have already thus limited our options, the number of troops committed is not readily permitted to go much above half a million--which is already far above the level that must have been anticipated two and three years earlier. The public, despite its griping and frustration, has been remarkably tolerant of a war which seems to drag on too long and the purpose of which it cannot clearly understand. But this tolerance is partly because direct involvement is on the part of only a very small proportion of the national community.

The combination seems on the whole to be without profit, at least in this terrain. We have already partly reviewed the question whether the net conclusion for occasions that will follow will be that wars of this sort must be fought differently or that they must not be engaged in at all. It is quite possible, indeed likely, that the answer may fall somewhere between these divergent possibilities. We may henceforward be much less ready to commit ourselves to actions in distant lands where the payoff to be expected, even with the most optimistic prognosis of success, is on the whole small, and on the other hand we may be quite ready to use our power to a much fuller extent in those areas where commitment seems to our national leaders to be inescapable.

Whether using our power to a fuller extent will include the use of the threat of nuclear weapons, at least against tactical targets, is a question for which the answer is far from being fully determined. The fervent expression of and adherence to the firebreak principle has been largely an act of faith, but despite the logical fallacies inherent in so much of the argumentation for it,⁷¹ it has certain self-fulfilling properties. For one thing, what someone has called the "tradition of non-use" of nuclear weapons tends to become increasingly strong as a guiding or operational principle the more it is adhered to over time. From the end of World War II the United States has engaged in two wars which have resulted in relatively heavy casualties and other costs, and has nevertheless refrained from using nuclear weapons. In the first of these wars, in Korea we suffered some heavy defeats in the process. In the latter of these wars, still going on, we have not had the restraining factor of very limited nuclear stockpiles, which certainly helped restrain us in the earlier war. Nevertheless we have continued to refrain from using the bomb. There can be no question that the threshold of crisis above which use of nuclear weapons seems appropriate has moved

⁷¹I have explored these logical fallacies in my Escalation and the Nuclear Option, (Princeton, 1967), especially Chapter 10.

gradually upward over the last score of years.

There is, however, equally no question that the nuclear weapon remains forever in the background, an object of felt presence even when unused, and that given sufficient motivation we will in fact use it. Where the threshold will be between use and non-use, or between non-use and threat of use, is something upon which dogmatism is not warranted. However, it must be added that it is difficult to see any advantage to the national interest by a constant reiteration of the promise that we will not use nuclear weapons even under a wide variety of quite serious circumstances. It may be that the retirement of Mr. Robert S. McNamara as Secretary of Defense and his replacement by Mr. Clark Clifford will have a very substantial effect in this regard. If so, we are about to witness a dramatic change in the atmosphere that surrounds policy decisions.

III

One of the most significant yet little noticed revolutions in defense strategy and policies since the end of World War II has been the development of techniques, including the submarine launcher and the underground silo, for giving a high degree of security to the retaliatory forces. The specter of surprise attack wiping out such forces appears far less grim than it did a decade ago, when Mr. Albert Wohlstetter, for example, published his well-known article "The Delicate Balance of Terror." The fact that retaliatory forces can be made secure, at least under present technologies, has had a profound effect on both our strategies and the national policies which interact with those strategies. The specter of surprise attack wiping out the retaliatory force has, at least for the time being, vanished. This change makes it possible to withhold attack until the circumstances and evidence warranting that attack become overwhelming. An even more revolutionary result is that it enormously diminishes the advantage, and thus the incentive, of going first in any strategic exchange. Until the early or middle '60s the advantage of striking first in such an exchange promised to be so huge and so obviously decisive that it was probably the chief factor that would have made for rapid escalation to general war following the outbreak of hostilities between the two major superpowers.

An important side-effect of this change has been to create a targeting dilemma for our strategic retaliatory forces. The general consensus approving the no-cities targeting philosophy--resulting partly from the conviction that in a swift-moving war there is no strategic utility in destroying cities ("hostages are better than corpses") and partly from the positive incentive for mutually avoiding such destruction--has now become overlaid with disbelief in counterforce targets, simply because destruction of a sufficient proportion of the latter to achieve significant "damage limiting" cannot be relied upon. The strong moral and political inhibitions that Americans have consistently felt in the

nuclear era against hitting first with nuclear weapons will now be supported on the strategic level by cold calculations which will impress one with the lack of urgency for doing so. The same disincentives will be even more obvious on the Soviet side.

The vast implications of such a change on future strategies and even more on crisis politics remains to be explored, but what we should now ask is whether this change promises to be permanent, or whether on the contrary it may be overturned by some change in missile technology. It has already been asserted that the MIRV threatens (or promises) to overcome the value of hardening and to restore the advantages of a first strike. Such a result would, however, depend on at least three things: first, the accuracy of each re-entry body; second, the effectiveness of ballistic missile defense (BMD) against each re-entry vehicle; and third and most important, the alternative means of defending retaliatory forces in the event that ICBMs in their present underground configuration become excessively vulnerable. We have plenty of experience from the past to remind us that technology always moves along a broad front, and if there is a new trick or two available for the offense, the same is likely to be true of the defense. Particularly for the time period we have been discussing in this study, that is, the next fifteen years or so, it seems in the net fairly safe to predict that the advantages once thought to be inherent in a strategic first strike--where the side launching it could hope to wipe out the retaliatory force of the opponent with near impunity--is gone, and is most unlikely to return among opponents no more disparate in power than the United States and the Soviet Union. More to the point, it is not easy to imagine the future government being confident that it can make so effectively one-sided an attack, especially since this kind of confidence has not been conspicuous in the past, even under circumstances when it was much more warranted than it is now or is likely to be again. It should be noticed also that with time the number of missiles and other vehicles on both sides capable of retaliation tends to increase, and this increase itself appears to diminish the chances of achieving an acceptable first-strike coup.

Bearing heavily on this question is, of course, the future of the BMD. Here again we must bear in mind at least two of the vital considerations already mentioned in this chapter: first, we operate in a world of limited resources, and any kind of effective BMD system must inevitably be exceedingly expensive because effectiveness implies large numbers of deployed defensive installations, and second, advances in technology affect both the offense as well as the defense. The revival of interest in BMD some six or seven years ago was sparked by the discovery that above the atmosphere RVs are vulnerable to past X-rays at considerable ranges from the defensive nuclear explosions. However, there is no question that changes in the design of the RV can radically reduce the kill radius of the defending missile. One must take into account also decoys and other techniques for confounding the defense. It is quite possible, indeed even probable, that enormous sums could be spent on developing and deploying a BMD, which, while affecting marginally the opponent's capability to penetrate, affects not at all the

real deterrence value of the combined systems on each side--except that the net cost of these is likely to be greatly increased. The idea that the provision of effective BMDs will create a strong incentive towards decreasing the number of offensive missiles--which has been argued in at least one well-known instance--seems bizarre except as one of a number of possibilities to be considered, and certainly not the most likely one. One could well argue that if there is a place to push for arms control or limitation, the BMD area is the place to do it. This seems to have been intuitively felt by both of the superpowers, but one hears arguments to the contrary, at least in the United States, which unless they are satisfactorily answered, may prevail. There is always the dream of providing a total umbrella against enemy nuclear weapons, and pressures from Congress and elsewhere are likely to seek fulfillment of that dream, especially if triggered by the knowledge that the opponent is attempting the same. The United States already appears committed, or almost committed, to the idea of a "thin" BMD against China, which is supposed to be advertised as being not intended against the Soviet Union at all. Whether the Soviet Union will believe the advertising--or can even afford to believe it--is extremely dubious. At any rate, this commitment to the "China only" BMD has not by any means been objectively examined, in terms of real need or strategic value. The whole idea seems certainly to underrate the capacity for reasoning which the Chinese leaders have shown in all other respects, and one notices among the advocates of the "thin" BMD a notable lack of experts on Chinese politics and strategy--who, of course, are not too plentiful anyway.

A final point to be considered is the proliferation of nuclear weapons, the non-proliferation treaty initial between the United States and the Soviet Union has aroused a good deal of resentment among our allies and third parties, some of whom are likely not to sign it in its present form. In any case, the legal obligation to refrain from building nuclear weapons must, in order to be effective, be strongly buttressed by the existence of disincentives to build such weapons. It is well-known that several countries could easily produce nuclear weapons if their governments elected to, but that thus far they have chosen not to do so. In the future, the number of nations capable of building nuclear weapons will inevitably increase. Whether or not the disinclination to convert capability into reality will continue depends on a number of circumstances and will certainly vary among individual nations. Israel will no doubt have a considerably higher incentive than Switzerland. The three major disincentives for building nuclear weapons for nations that have a capability to do so are: (a) cost of the entire system; (b) provocativeness of such a capability; and (c) lack of a felt need. The cost is not likely to diminish with time for any nation, especially when we are considering whole systems, but we should bear in mind that it is easy to exaggerate the costliness of nuclear retaliatory capabilities. American minds tend to be fixed in the framework of the peculiarly extravagant and enormous American capability, with all the sophisticated equipment bound into it. To an Israeli defense minister, a few nuclear weapons capable of being carried with the same aircraft that are now available for carrying conventional weapons would

seem to be an important capability for deterrence of the hostile Arab states.

The tendency to withhold the development of nuclear weapons on the grounds that they might be provocative could decay if a movement towards the building of such capabilities suddenly became widespread. It would then appear to be the normal rather than the special and provocative thing to do. This in turn depends heavily on what we have called "lack of a felt need." Perhaps the best reason for the United States avoiding the use of nuclear weapons as much as possible in the future is in order to continue, for the purpose chiefly of avoiding incentives to proliferation, the so-called "tradition of non-use."

However, careful avoidance of the use of nuclear weapons is not by any means summed up in the usual firebreak theories. Firebreak theories tolerate unnecessary commitments to unnecessary wars, so long as they are conventional. Stressing readiness to rely on nuclear deterrence wherever commitments are important and unavoidable might be at least as effective in avoiding the actual use of nuclear weapons in military action by the United States. Thus far, the articulation of the case for non-threat as well as non-use has been overwhelmingly one-sided. However, new opportunities are unquestionably arising for redressing that situation.

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