ACCEPTABLE LIMITATIONS IN STRATEGIC WEAPONS

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by

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ABSTRACT

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The nuclear arms race has reached another plateau in numbers of weapons and sophistication in technology. A period of stability now exists, but unless some agreement is reached during the current SALT negotiations, it appears another expansion of US and USSR nuclear strategic forces will occur. As one traces US nuclear strategy from the post War II period to the present, it becomes obvious that there is no unilateral action the United States can now take that will restore the nuclear superiority enjoyed in the early and mid 1960s. Both the US and the Soviet Union now possess an assured destruction capability with considerable overkill available. A SALT agreement must start by limiting ABM, and then move to a limit on total number of launchers and a ban on MIRV testing. More comprehensive limitations are discussed. Data was gathered from unclassified literature sources and through discussions with individuals knowledgeable in nuclear strategic matters.

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CHAPTER I

INTRODUCTION

Since the days of Hiroshima and Nagasaki, the United States and the rest of the world have endured the numbing anxieties created and perpetuated by the awesome power and destructive force of atomic energy. Henry Kissinger expressed it this way:

> In Greek mythology, the gods sometimes punished man by fulfilling his wishes too completely. It has remained for the nuclear age to experience the full irony of this penalty. Throughout history humanity has suffered from a shortage of power and has concentrated immense efforts on developing new sources and special applications of it. It would have seemed unbelievable even fifty years ago that there could ever be an excess of power, that everything would depend on the ability to use it subtly and with discrimination. Yet this is precisely the challenge of the nuclear age.[1]

Secretary McNamara expressed the nuclear paradox in these words:

> In strategic nuclear weaponry the arms race involves a particular irony. Unlike any other era in history, a substantial numerical superiority of weapons today does not effectively translate into political control or diplomatic leverage. While thermonuclear power is almost inconceivably awesome and represents virtually unlimited potential destructiveness, it has proven to be a limited diplomatic instrument. Its uniqueness lies in the fact that it is at the same time an all-powerful weapon and a very inadequate weapon.[2]

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[1]Henry Kissinger, Nuclear Weapons and Foreign Policy (1957), p. 1.

[2]Robert S. McNamara, The Essence of Security (1968), p. 59.

As a new decade begins, the United States and the Soviet Union are faced with major decisions regarding their strategic forces and policies that will set the pattern for the 70s and the 80s. These decisions must be reached in full recognition that the United States and the Soviet Union bear the major responsibility for the fate of the world, for a thermonuclear exchange would imperil the survival of mankind.

The ideological conflict as well as the facts of power between these two super-states limits the extent to which they can be expected to resolve their differences. While their awareness of the terrible result of nuclear war tends to constrain an irrational resolution of the conflict between them, their power status in a world of sovereign states will not permit the elimination of their more or less bellicose attitude toward one another.

This is a critical time. The intense public debate concerning the development and deployment of Anti-Ballistic Missiles (ABM) and Multiple Independently Targeted Re-entry Vehicles (MIRV) has focused attention on strategic armaments to a degree not witnessed since the early days of the Kennedy Administration. From all appearances the Soviet Union is making a concerted effort to gain superiority, both quantitative and qualitative, over the United States in nuclear strategic forces. In reaction to this move by the Soviets, the United States must make some critical policy decisions concerning the structure and size of its strategic forces. Yet in a general

war scenario between the US and USSR there is scant hope of a military victory for either power. As Morton Halperin said:

> We are doomed to peaceful coexistence with our enemies because we live in a world in which war cannot be abolished, because there is no other means to settle issues that men feel are worth fighting for. But war can only lead to such complete destruction that, in the final analysis, the war could not have been worth fighting.[3]

The nuclear paradox is still with us and the anxieties and frustrations it has created are reinforced by the turmoil that also exists in our domestic affairs. In addition, people in the developed countries, particularly in the United States, are finding it more and more difficult to cope with and comprehend the ever-increasing rate of change taking place in the world, and the continuous impact of technology upon our daily lives. The uncertainty of purpose and the questioning of values that has resulted from differences over US involvement in Vietnam have further intensified this sense of frustration that is today so pronounced in the United States.

Against this background of vain expectations it is little wonder that the American people, with Presidential encouragement, look hopefully for some accommodation between the United States and the Soviet Union during the Strategic Arms Limitation Talks (SALT) that are currently underway. In this context it is useful to recall the vivid statement made by Bernard Baruch when the nuclear age was first upon us:

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[3] Morton H. Halperin, Contemporary Military Strategy (1967), p. 12.

> We are here to make a choice between the quick and the dead. . . . Behind the black portent of the new atomic age lies a hope which, seized upon with faith, can work our salvation. If we fail, then we have damned every man to be the slave of fear.[4]

The black portent of a nuclear holocaust remains with us, and once again it is a time for decision: a choice must be made at SALT.

With these thoughts in mind, it is the intention of this paper to review current US nuclear strategy, examine the options available to the US at SALT against a background of present strategic force levels and trends, discuss the key elements of the US strategic position, and finally to draw some conclusions as to the most advantageous course of action that the United States can take during the early 70s.

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[4]Dean Rusk, "Nuclear Test Ban Treaty: Symbol of a New Course," Problems of National Strategy (1965), p. 410.

CHAPTER II

U.S. NUCLEAR STRATEGY

In the immediate Post World War II period the power of destruction of the atomic bomb was a new concept and not understood. The power struggle between the United States and the Soviet Union was further complicated by the adversary relationship between them, a relationship which is a natural product of Marxist-Leninist doctrine. As a result it was extremely difficult to resolve disagreements by negotiations, a means utilized for centuries to settle conflicts between nations. These factors led to a new concept of war--strategic war--a war in which entire populations are held hostage by deterrent forces and the destruction of enemy forces becomes a secondary consideration.

As a result a new American military strategy began to evolve over the post-war period. It responded to changes in technology and it became more sophisticated in understanding the strategic questions of the day. However, from 1945-1950 the United States really had no specifically articulated military policy. There was only a general public conviction that the country was in no danger. As a nation, we possessed the vague and entirely empiric view that the atomic bomb in our arsenal solved everything. In addition, our military leaders had conflicting concepts as to future requirements in the Atomic Age. These conflicts were in themselves significant

for they were symptomatic of a society groping for an answer in an unfamiliar world--a nuclear world.[1]

In March of 1947, before a joint session of the Congress, President Truman first declared the policy of Containment--to prevent Communist expansion to the peripheries of Europe and Asia. The policy of containment was viewed largely in political and economic terms. The military implications were not given much attention.[2] The atomic bomb remained as the deterrence to war, and failing in that, promised victory over the Communists.

There were additional reasons for this lack of flexible planning during the early years of containment. Primarily, general disagreement existed between the Services as to their missions and functions in this post-World War II age. This rivalry was further sharpened by the lean post-war military budgets. Moreover, the speed and range of modern weaponry lessened the former clear service boundaries: space and time. These had previously and traditionally provided neat distinctions between ground, air, and sea warfare. The result was that each service, forced by expanding technologies and constricting budgets, found its weapons system delivery plans overlapping another Service's mission.[3]

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[1]Nathan F. Twining, Neither Liberty Nor Safety (1966), pp. 14-16.

[2]Halperin, Contemporary Military Strategy, p. 43.

[3]Twining, Neither Liberty Nor Safety, p. 31.

However, the conflict over strategic forces has more significance than an inter-service fight. It goes to the core of the conceptual difference between the advocates of nuclear superiority with a first-strike capability and those who believe national security rests with the deterrent effect provided by invulnerable second-strike capability.

Another major reason the United States proceeded slowly in developing its nuclear strategy, and in appropriating adequate funds to support the national policy of containment, was the ultra conservative estimate by its scientific and technical leadership of Soviet Russia's capability to produce nuclear weapons. It was thought that the organizational environment within the Soviet Union would make nuclear development slow and uncertain.[4] The main threat to US security was still thought to be a direct attack on Western Europe or the United States.

The onset of the Cold War required a reevaluation of US national security policy. A long-term struggle with the Soviet Union demanded long-range planning. As a result, in April 1950, President Truman was provided with a number of options documented in NSC-68. The President rejected a return to isolationism as well as a pre-emptive nuclear strike against the Soviet Union. He selected instead a policy of containment which included greater emphasis on the military forces required to support such a policy.[5]

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[4] Ibid., p. 37.
[5] Ibid., pp. 48-50.

The Korean War challenged the American containment policy. It also found the United States completely unprepared in doctrine. The Korean War also fell outside the concepts of strategy then conceived. It was not initiated by a surprise attack against Western Europe or the United States. In fact, it did not directly involve the Soviet Union. Thus the Korean War was a conflict to which an all-out strategy seemed peculiarly unsuited. It was a war for which we had not prepared.[6]

The United States strategic doctrine made it difficult to accept some position between the extremes. While she did not pursue a policy of or consider an attempt to impose unconditional surrender, the American strategic thinking was confused to a point that a cessation of hostilities at any time was interpreted as tantamount to, and would result in, a return to the status quo ante. In addition, the emphasis of American containment policy continued to be Europe.

In 1952 the incoming Eisenhower Administration promised a new approach to the subject of nuclear strategy. Three major thoughts contributed to the "New Look" of the Eisenhower Era:[7]

(1) An affinity for air power. The Administration held the overwhelming opinion that this mode of warfare could be the backbone of the American military establishment. This concept was

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[6]Kissinger, Nuclear Weapons and Foreign Policy, pp. 30-31.
[7]Halperin, Contemporary Military Strategy, pp. 46-47.

founded on the belief that technology could replace manpower--especially attractive since this is where our national strength lies. This attitude also reflected the search for a single solution to a complex problem, a typically American approach to problem solving.

(2) A desire to promote economic growth. It was felt that the United States could not withstand a higher defense budget without courting a slowdown in its economic growth. Consequently, air power offered a single and less costly way to provide for national security than a large Army and Navy. The philosophy was that the American economy must be viable and was just as vital to national security as its weapons system.

(3) A desire to utilize tactical nuclear weapons in support of ground and naval forces ringing the Communist bloc. The introduction of tactical nuclear weapons also played an important role in the new strategy. A breakthrough in technology and vast increases in the American stockpile of nuclear weapons made it possible to discuss the use of these weapons in the tactical environment. Again a contributing factor to this thinking was the implication that forces could be reduced if our ground troops relied more upon nuclear weapons. One cannot escape the influence the "balanced budget" exerted upon the strategy adopted by the Eisenhower Administration.

The characteristics of the new Administration's policy were soon apparent. The role of the Air Force became dominant and was

formalized with a commensurate de-emphasis on naval and ground forces. Additionally, NATO forces were reduced with the deployment of tactical nuclear weapons, thus supporting the Administration's economic philosophy. "Crisis year" planning was abandoned and replaced with a "long haul" concept which prescribed a lower level of spending per year over a longer period of time. Communist expansion in Europe was still considered the greatest threat to Free World security, and nuclear deterrence was given greater attention.[8]

In order to explain and justify the Eisenhower "New Look," Secretary of State John Foster Dulles pronounced the strategic theory long identified with his name: massive retaliation. The rationale to support this theory can be found in the Administration's great reluctance to become engaged in an Asian land war. The United States was still suffering from the trauma of the Korean War. Eisenhower promised that there would be "no more Koreas."[9] The Eisenhower Administration thought that local defenses could not contain Communist expansion, therefore local defenses must be reinforced by the threatened use of nuclear retaliation. Local aggression could then be deterred by means of our great nuclear capacity--to be used "massively and used instantly by means and in places of our own choosing."[10]

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[8] Ibid., p. 47.
[9] Ibid., p. 48.
[10] Seyon Brown, The Great Foreign Policy Debate, p. 3815.

Although a great furor and public outcry followed Dulles' statement, the concept was neither a major departure from previous policy nor was it clear that the policy should be interpreted as one which warned that the United States would immediately bomb Moscow in the event of a Communist attack anywhere in the world. The concept was more subtle than that, and could easily be interpreted as a form of limited retaliation which provided the United States with maximum flexibility to use its power in the exact quantity that each situation demanded and applying it where it would be most effective. Interpreted this way, the concept also presented the aggressor with a maximum number of unknowns that he had to consider in his planning.

Much of the criticism leveled at Dulles was based upon the implicit assumption that a nuclear stalemate existed, and that massive retaliation meant little more than that the United States would merely trade cities with the Soviets in a nuclear folly. It was generally accepted that deterrence was provided simply by each side possessing nuclear weapons. There was little regard for the vulnerability of strategic forces to enemy attack at this time. It was several years later that critics began to cite the need for conventional forces and well-protected strategic forces.[11]

History was made rapidly, however, and if Dulles meant his strategy to follow the more extreme approach that was so vehemently

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[11]Halperin, Contemporary Military Strategy, pp. 48-49.

criticized, this interpretation was soon overtaken by current events. Three months after its announcement, massive retaliation was not implemented to save Dien Bien Phu, nor was it even considered earlier as a reaction to the abortive revolt in East Germany in support of "rolling back the iron curtain." Although the risks were great, our nuclear superiority was never greater. While some critics maintain that Dulles' blueprint for massive retaliation was planned to be a complete atomic strategy from H-bomb to tactical nuclear weapons, it is doubtful, in theory as well as in practice, that Dulles expected to utilize massive retaliation as the only means of fulfilling his containment policy. If for no other reason, the Soviets achieving a thermonuclear capability in 1954 foreclosed this option to the United States.

The year 1954 also marked the midpoint in the postwar conflict over strategic doctrine. After a nine-year struggle for recognition, those who in the past advocated the primacy of air power and utilization of nuclear weapons, reached their zenith in influence. But even as they "arrived" their doctrine began to lose its appeal. Typically, Generals Ridgeway and Gavin were calling for flexible defense forces, and Hanson Baldwin and Walter Millis were speaking out for more rational thinking in strategic doctrine. Baldwin put it this way:

> It is one thing to recognize frankly the risk of war and another to regard it as inevitable. . . . And if war should come, its objective should be

> construction not destruction. . . . It does not mean a world crusade against communism. . . . I find myself increasingly concerned by the ideological motivation of too many of our actions. McCarthyism and the fear of a Red under every bed have confused many of us; there are too few thinking clearly in the terms of realizable goals. Passion too often holds the reins. . . . The Atomic bomb does not solve political problems; promiscuous devastation is no substitute for a valid objective. . . . Moreover, the unlimited use of atomic and hydrogen weapons by the United States . . . would certainly lead to political frustration and might lead to military defeat.[12]

Thus limited war crept back into the strategic vocabulary. Moreover Eisenhower had decided to proceed with super carriers and Polaris missile submarines. These decisions foretold of a modification in strategic doctrine.

For the military establishment the year 1955 was one of transition. The Air Force pressed for continued air supremacy and a first-strike capability. The Navy and Army emphasized the need for increased military flexibility and looked to a sea-based deterrent and a highly mobile ground force respectively. While the Strategic Air Command called for more forces, other voices, including Air Force Secretary Quarles, called for "adequacy" or "sufficiency." Early in the year, the President stated that he would not automatically and indiscriminately use atomic weapons in the case of renewed hostilities. He gave substance to his earlier statement that the United States would not rely on a single weapons system for its defense. In September

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[12]George E. Lowe, The Age of Deterrence (1964), pp. 94, 105.

of 1955, Admiral Radford reflected the President's view when he said,

> We are not attempting to match any nation, plane for plane, gun for gun, bomb for bomb, or man for man. But we are attempting to maintain a qualitative superiority in men, weapons, and equipment so as to discourage, and if need be, destroy an aggressor with convincing force. The Free World must be certain of the effectiveness of its deterrent to war.[13]

This decision ruled out the procurement of forces required for a first-strike capability necessary to implement a counter-force strategy.

By the end of 1955, the idea of depending primarily on massive retaliation was fading from the scene, and despite the Administration's dislike of the limited war that had recently ended in Korea, Eisenhower adopted a policy advocating the more traditional use of force in the conduct of the Cold War.

Four factors caused Eisenhower to move away from a pure air-atomic strategy: (1) economy, (2) unpredictable international events, (3) the President's fear of a garrison state because of the resources being devoted to military preparedness, (4) the increasing technological obsolescence of new weapons.[14] The counter-force strategy required a large budgetary expenditure--nearly 75% of the defense budget--and still it did not provide assurance that these weapons would have prevented or been the decisive factor in

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[13] Ibid., p. 122.
[14] Ibid., p. 129.

Indo-China, Korea, Tachen Islands, Hungary, or Suez. The President's fear of a garrison state was deeply rooted as early as 1953, and it found expression in his famous warning concerning the military-industrial complex in 1961.

As Eisenhower began his second term in office, phrases such as adequacy, visible deterrent, mobile carrier air bases, and sufficiency were more frequently heard in discussions concerning American nuclear strategy. The argument for strategic mobility and invulnerability became more articulate as the Soviet ICBM threat became more real. The shock of Sputnik provided additional momentum to these concepts, and it was in this environment that the development of Polaris was accelerated and the concept of mutual deterrence matured. The need for conventional forces to engage in limited war was also recognized as a necessary politico-military requirement.

It was during Eisenhower's second term that study groups and other elements and personalities in the academic community became more involved in the development of nuclear strategy. The Gaither Committee warned of a missile gap and urged increased defense expenditures. The conclusions reached in a study conducted by the Rockefeller Brothers Fund supported the Gaither Committee findings.[15]

Other writings were particularly influencial: Henry Kissinger's, Nuclear Weapons and Foreign Policy, published in 1957, sought

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[15]Kissinger, Nuclear Weapons and Foreign Policy, p. 109.

to take advantage of American technological superiority by proposing a limited nuclear war strategy to counter the Soviet threat. In this way a relationship could be established between force and diplomacy. Such a strategy would create a middle ground between unconditional surrender and status quo ante. Thus Kissinger clearly called for more balanced forces.[16] He held no illusions, however, that a limited nuclear war strategy would be cheap or would be less demanding in national resources. The risks involved are the penalties the world suffers for living in the nuclear age.

Another provocative article of the time was "Balance of Terror," written by Albert Wohlstetter, which appeared in the January 1959 issue of Foreign Affairs. At this time it was thought nuclear war could take only one form: an all-out cataclysmic final catastrophe, which was made unlikely by its very enormity. It was also thought that the major nuclear countries would always possess overwhelming offensive strength, regardless of the scale of the attack to which they might be exposed. Professor Wohlstetter was the first to call attention to the existence of a wide range of possible nuclear attacks and to the various thresholds that determine whether a country's nuclear power produces deterrence or constitutes an invitation to aggression. He demonstrated the delicacy in the balance of terror that existed between the major powers, and how it depended

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[16] Ibid., p. 131.

upon a subtle interplay of invulnerability and offensive power. He indicated that it was theoretically possible to eliminate an opposing striking force without unacceptable damage to the attacker. The existence of a powerful delivery capability, he contended, was not in itself an assurance of security. Its effectiveness would depend on its invulnerability as well as its striking power, and the state of opposing passive and active defenses.[17]

Wohlstetter accurately predicted that deterrence is not automatic, and that while feasible, it would be much harder to achieve in the 1960s than was then anticipated.

He criticized United States strategic planners for thinking in terms of matching numbers. To his way of thinking the problem had been erroneously conceived as more or better bombers, or rockets. This meant confusing deterrence with matching or exceeding the enemy's ability to strike first. Matching weapons, however, misconstrues the nature of the technological race--not because only a few bombs owned by the defender can make aggression fruitless, but because even many might not. To deter an attack means being able to strike back in spite of it. In other words, it means one must have an invulnerable second-strike capability to insure deterrence.[18]

Dr. Bernard Brodie's Strategy in the Missile Age was also published in 1959. It too indicated a new awareness of the need for

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[17]Albert Wohlstetter, "The Delicate Balance of Terror," Problems of National Strategy (1965), p. 34.

[18]Ibid.

invulnerable strategic forces. He felt that it was absolutely essential to defend our retaliatory forces, and that the known ability to defend our retaliatory force constitutes the only unilateral action that could provide a potentially perfect defense of the homeland. Conversely, a conspicuous inability or unreadiness to defend our retaliatory force must tend to provoke the opponent to destroy it.[19] Brodie also follows the Wohlstetter theme when he states,

> The degree to which the automaticity of our retaliation has been taken for granted by the public, unfortunately including most leaders of opinion and even military officers, is for those who have any knowledge of them, both incredible and dangerous . . . our ability to retaliate in great force to a direct Soviet attack is taken far too much for granted by almost everybody, including our highest national policy-makers.[20]

In searching for a targeting concept that suited the deterrent strategy of the United States, Dr. Brodie built a good case for

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[19] Bernard Brodie, Strategy in the Missile Age (1959), p. 185.

[20] Ibid., pp. 281-282. Dr. Brodie claimed this lack of appreciation for the true nature of the situation was the result of the conscious or unconscious rejection of retaliation as a strategy. This was so because of the traditional concept of maintaining the initiative that so dominates most war planning. Therefore, those responsible for such planning were either not interested in adjusting to a strategy of deterrence or they were convinced that a force not strong enough to win was not strong enough to deter. It follows then that money spent on protecting the retaliatory force might be better spent on expanding it. While Brodie agreed with this conviction, he conceded that since the nation was committed to a deterrence policy, the overriding consideration had to be given to the protection of the nation's second-strike capability. Due to normal fiscal restraints this could best be accomplished by identifying a hard core of the retaliatory force that must be survivable. While all systems can be protected, Dr. Brodie leaned toward missiles and away from bombers because of the environment that must be penetrated in the target area.

unleashing the United States second-strike against the urban areas of the attacker. He then, with an equally effective rationale, demonstrated how such an action would jeopardize American cities if the initial surprise attack scrupulously avoided the urban areas of the United States. Dr. Brodie concluded that before hostilities the United States must be expected to be vindictive and irrational if attacked, but once hostilities commence we should preserve the capacity to make new decisions based on the circumstances at the time.[21] We see here the forerunner of controlled nuclear response.

John F. Kennedy came into office expecting Soviet superiority in strategic weapons. Instead he found the United States still possessed an overwhelming strategic advantage.[22] The new President also found at his disposal the strategic weapons he would use to formulate his future defense and strategic policies--Polaris and Minuteman.[23]

The general thrust of the Kennedy Administration's military strategy was the development of the doctrines of "flexible response" and "multiple options"; in other words, the creation of a military force which would remain under tight civilian control at all times and which could be used in a variety of different ways to meet a

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[21] Ibid., pp. 292-294.
[22] Morton H. Halperin, Contemporary Military Strategy, p. 54.
[23] George W. Rathjens, The Future of the Strategic Arms Race: Options for the 1970's (1969), p. 3.

wide range of different threats. "Controlled response" was that part of "flexible response" that dealt with nuclear weapons. The Administration recognized that limited war could come in a variety of different forms which could demand a variety of responses, and it wanted to be in a position to deal with each of them "according to their needs." It was important for an Administration stressing options and flexible response to be able to say that even strategic forces had been brought under tight control and could be used in different ways according to appropriate policy.[24]

President Kennedy summarized it in these words:

> Our arms must be subject to ultimate civilian control and command at all times, in war as well as peace. The basic decisions of our participation in any conflict and our response to any threat--including all decisions relating to the use of nuclear weapons, or the escalation of a small war into a large one--will be made by the regularly constituted civilian authorities.[25]

The leading spokesman in defense matters for the Kennedy-Johnson Administration was, without a doubt, Robert McNamara. The articulate Defense Secretary took advantage of the abundance of intellectual efforts in strategic analysis that occurred in the 1950s to structure a foundation for "flexible response." Of great assistance to him were: the economic attitude of the new Administration--no great pressure to balance the budget; the Polaris and Minuteman missiles

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[24]Halperin, Contemporary Military Strategy, p. 81.
[25]Alain C. Enthoven, "American Deterrent Policy," Problems of National Strategy (1965), p. 123.

that he found in the beginning stages of full production; and the technological breakthroughs that were occurring with ever increasing rapidity. Additionally, the Soviet Union had made significant strides in attaining a second-strike capability. It was, therefore, in view of all these factors and Kennedy's campaign commitment, time to rethink American defense policy. The results of this review can be found in Secretary McNamara's book, Essence of Security, in which he presents the core conclusions upon which the Kennedy and Johnson Administrations based their defense decisions, and those upon which all long-range planning had been developed:

> (1) That the security of the United States must continue to rest on a firm commitment to the policy of collective security, not retreat--no matter what the provocation or what the allurement--into the futile illusion of isolationism.
> (2) That although our strategic nuclear capability is absolutely vital to our security and to that of our allies, its only realistic role is deterrence of all-out nuclear or non-nuclear attacks since it is now impossible for either the United States or the Soviet Union to achieve a meaningful victory over the other in a strategic nuclear exchange.
> (3) That the doctrine of massive retaliation is therefore useless as a guarantee of our security, and must continue to give way to both the theory and the practice of flexible response.
> (4) That the direction of the Department of Defense demands not only a strong, responsible civilian control, but a Secretary's role that consists of active, imaginative and decisive leadership of the establishment at large, and not the passive practice of simply refereeing the disputes of traditional and partisan factions.
> (5) That the dynamics of efficient management in so complex an institution as the Defense Department necessarily requires the use of modern managerial tools and increasing efforts to determine whether the cost of each major program and each new project is justified by the 'benefit' or strength it adds to our security.

> (6) That the Department's primary role of combat readiness is fully consistent with the innovative programs designed to utilize at minimal cost its potential for significantly contributing to the solution of the nation's social problems.
> (7) And that finally the security of the Republic lies not solely or even primarily in military force, but equally in developing stable patterns of economic and political growth both at home and in the developing nations throughout the world.[26]

Secretary McNamara's first public statement with regard to the new strategy came in June 1962 in an address delivered to the students of the University of Michigan at Ann Arbor.

> The U.S. has come to the conclusion that to the extent feasible, basic military strategy on a possible general nuclear war should be approached much the same way that more conventional military operations have been regarded in the past. That is to say, principal military objectives, in the event of a nuclear war stemming from a major attack on the Alliance, should be the destruction of the enemy's military forces, not his civilian population. The very strength and nature of the Alliance forces make it possible for us to retain, even in the face of massive surprise attack, sufficient reserve striking power to destroy an enemy society if driven to it. In other words, we are giving a possible opponent the strongest imaginable incentive to refrain from striking our own cities.[27]

The components required to implement the controlled response strategy included: protected strategic systems capable of surviving a surprise attack, tight command and control of the weapons systems, and a high state of readiness--easily moved to highest alert status. In addition, the strategic force must be capable of assured destruction and be effective in a damage-limiting role.

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[26]Robert S. McNamara, The Essence of Security (1968), pp. x-xi.
[27]Alain C. Enthoven, "American Deterrent Policy," Problems of National Strategy (1965), p. 131.

Objections to the new Secretary's policy announcement came quickly. The strategy was cited as nothing more than one of counter-force based on the superiority of the American position. Its only value would be in a first-strike situation, and it would quickly lose its effectiveness if both sides to the conflict enjoy well-protected second-strike forces. The strategy was also criticized for increasing the danger of an inadvertent nuclear war and accelerating the arms race. In fact, the Soviets claimed the new strategy was merely a poorly veiled threat meant to conceal a first-strike strategy, and while they were in their inferior military position there was no advantage to their accepting the strategy.[28]

It is also difficult to accept McNamara's rationale that his new strategy gave the Soviets "the strongest possible incentive to refrain from striking our cities." One would think the opposition's most urgent incentive would be an announcement that, should he strike, the United States would eliminate the "culture of the Soviet Union" from the face of the earth. Otherwise we make ourselves hostage by our legitimate concern over limiting damage. There appears here some confusion between deterrence and waging war--the two are not always compatible. Another aspect that invites pessimism is the assertion for command and control even after a nuclear exchange, this is tantamount to a strategy based upon a most illusive unknown.

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[28]Halperin, Contemporary Military Strategy, p. 84.

Another section of McNamara's Ann Arbor address said:

> We are convinced that a general nuclear war target system is indivisible, and if, despite all other efforts, nuclear war should occur, our best hope lies in conducting a centrally controlled campaign against all of the enemies' vital nuclear capabilities, while retaining reserve forces, all centrally controlled.[29]

While flexible response was logical and coherent from an American point of view, it suffered the serious defect of being conceived entirely outside the Atlantic Alliance with absolutely no consultation. The desire for central control also ran counter to French and English national aspirations. In addition, the counter-force capability was seriously questioned after so much propaganda and publicity about the missile gap and the push to have IREMs based in Europe. Finally, Europeans viewed the strategy as a subtle attempt to "disatomize" Europe and reduce the risk of involving the US mainland while at the same time exposing Europe to conventional destruction.[30]

Furthermore, our NATO allies did not feel the major threat in Europe was a direct attack by the Soviets. Therefore, they were unwilling to contribute the conventional forces implicit in the doctrine McNamara announced. Also, if they were to accept the United States strategy, there was a good chance that a sizeable chunk of Europe could be lost during the pause in which Washington would be determining the legitimacy of the attack. This European attitude

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[29]Henry Kissinger, The Troubled Partnership (1966), p. 103.
[30]Raymond Aron, The Great Debate (1965), p. 67.

was stimulated by the American claim that nothing had changed in Europe, yet the United States seemed to take every opportunity for bilateral accommodations with the Soviets--a situation that concerns Europeans lest their fate be determined by an agreement between the Superpowers.[31]

While the supporting rationale for the entire theory of flexible response is to prevent a spasm attack, the situation has been complicated because there has been an unfortunate confusion between doctrines of deterrence and doctrines of response. There is an important conceptual difference: the purpose of deterrence is to prevent attack; response aims to defeat it.[32] The purpose of the military establishment is to achieve the highest degree of deterrence, but it must also effectively minimize the risk of escalation should deterrence fail. Therefore, we find a continuity between conventional armaments and nuclear weapons with maximum national security represented by the sum total of these arms and their capabilities. Neither the majority of Americans nor Europeans, or for that matter, the formulators of the flexible response strategy seemed to recognize the difference between deterrence and response.

Secretary McNamara's strategic doctrine, like that of John Foster Dulles, went through several mutations. In late 1962 he expressed himself in these definitive words:

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[31]Charles O. Lerche, Last Chance in Europe (1967), p. 74.
[32]Ibid., p. 72.

> We deter the Soviets from using their growing nuclear force by maintaining a nuclear force strong enough and survivable enough to ride out any conceivable nuclear attack, and to survive with sufficient power to cause unacceptable damage to the attacker.[33]

The Defense Secretary acknowledged that both the United States and Russia desired to prevent nuclear wars not "win" them; although he recognized that the Soviet Union had not abandoned their enthusiastic support of "wars of national liberation." Thus, during the course of the year, Mr. McNamara, as he recognized the need for both strategic deterrent forces and the infantry soldier, became a zealous supporter of balanced forces.

One can probably attribute this firm commitment to balanced forces expressed by McNamara to the Kennedy Administration's experience during the Cuban missile crisis. While no one can present a definitive answer as to the crucial element of force that determined the course and final outcome of that face-to-face confrontation with the Soviet Union, no one can dismiss the indispensible role of General Purpose Forces. The unique quality and utility of conventional forces was vividly demonstrated to the President and Defense Secretary alike as they personally manipulated and directed the tactical employment of naval units on the high seas as they were ordered to intercept and confront Soviet naval and merchant ships bound for Cuba.

It has been suggested by George Lowe that the Cuban experience led directly to the reversal of our NATO "Sword and Shield" theory.[34]

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[33] George E. Lowe, The Age of Deterrence (1964), p. 252.
[34] Ibid., p. 256.

No longer would conventional ground forces be considered a "trip-wire" or "plate-glass shield" behind which our great strategic arsenal waited, poised for immediate retaliation. Henceforth thermonuclear weapons would act as an "umbrella of protection" under which conventional forces would act as the sword. This shift in strategy was "announced" to our Allies at the NATO ministerial meeting in mid-December of 1962 by Secretary McNamara.

This sudden and dramatic shift in strategic concept coming on the heels of the Ann Arbor speech, made sharp debate inevitable. To the European, the decision cast doubt on our willingness to come to the defense of the Continent. American strategic forces were now based in the United States or in the ocean's depths and would, therefore, be less likely to be called upon to meet aggression on the Central European front. This rationale was given greater weight when McNamara called upon Europe to contribute larger conventional forces to NATO. Europeans could envision another World War I or II with their countries overrun by the Soviet Union. This raised the issue of command and control of nuclear forces assigned to NATO, an item never far below the surface, but one that had been restrained as long as the use of American retaliatory power had been considered automatic.[35]

While the Cuban experience had an effect on the NATO Alliance, its greater significance rests with the fact that the incident foreshadowed the key concept of deterrence in the 1960s: mutual

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[35]Henry Kissinger, The Troubled Partnership (1966), p. 106.

invulnerable deterrent systems deployed by the United States and the Soviet Union. It also gave great impetus to the balanced forces concept within the American Defense Establishment, as well as shifts in our strategic weapons procurement policy.

As a result of Cuba, the only strategic systems considered to justify budget expenditures were invulnerable weapons. It is significant that the Kennedy-McNamara-Johnson years did not produce a single new strategic weapons system, although modifications to Polaris and Minuteman missiles inherited from the Eisenhower Administration were initiated during the 1960s.

With the turmoil of the Cuban crisis and two years of policy formulation behind him, Robert McNamara, in a speech delivered to the Economic Club of New York on 18 November 1963, presented an excellent statement of the basic objective of American national security policy as President Kennedy defined it. Although succeeding pronouncements by the Secretary indicated a somewhat tempered attitude toward the amount of control a decision-maker can exercise during increased stages of violence, this speech represents American strategy through the remainder of the Kennedy-Johnson years.

In this speech, McNamara stressed the changing relationship between the strategic capabilities of the United States vis-a-vis the Soviet Union, and the unchanging attitude of so many who continued to see this comparison in terms similar to those that existed in 1950. The US monopoly of nuclear power and the Sino-Soviet monopoly in conventional forces were matters of past history, and the Secretary

accused those who continued in this mental folly of seeking short-cut aids to thinking on policy issues. Even as these notions of monopolies grew obsolete, ideas about the feasibility of alternative policies continued to reflect them. Nuclear operations, both strategic and tactical, by the United States in response to aggression against our Allies were considered to be virtually unilateral--the capability of the United States to deter and oppose a nonnuclear attack was thought to be not only unique, but also unique in its adequacy.[36]

Mr. McNamara claimed it was time to change the maps "by which policy is charted and justified." The old guides were too far removed from reality to serve any useful purpose. "What most needs changing," said the Secretary "is the picture of ourselves and of the Western Alliance as essentially at bay, outmanned and outgunned except for nuclear arms no longer exclusively ours. We should not think of ourselves as forced by limitations of resources to rely upon strategies of desperation and threats of massive and immediate challenges, letting lesser ones go by default."[37]

The Secretary did not underestimate the destructive capacity of the Soviet Union, even with their inferior forces. And he recognized there was little the United States could do to inhibit or retard Soviet expansion in strategic weapons. In fact to him the Russian capabilities merely illustrated that strategic nuclear war would be

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[36]Robert S. McNamara, "The Spectrum of Defense," Problems of National Strategy (1965), p. 109.

[37]Ibid., p. 111.

bi-lateral, and extremely destructive to both sides--a situation no longer governable by an increase in our budget for strategic forces. "In short, we cannot buy the capability to make a strategic bombing campaign once again a unilateral prospect. That must, I suggest, be accepted as one of the determinants affecting policy." Thus the brilliant Secretary of Defense sounded "Taps" for the preventive war enthusiasts. Mr. McNamara obviously felt that the relative strategic situation then in existence would endure for some time for he stated that US spending for strategic forces would level off below the 1963 budget; and the Soviets gave no indication of increasing their expenditures to challenge the posture of the United States. Unfortunately, the Soviet Union did increase its striking force dramatically. It now matches American land ICBM forces and, in the early 1970s will gain parity with the Polaris forces of the United States.[38]

McNamara did not see an all-out Soviet nonnuclear attack as the most likely contingency. Such an attack would mean total war affecting the future of the United States, Europe, and the Soviet Union. He put it this way:

> If we were to consider a spectrum of the possible cases of Communist aggression, then, ranging from harrassment, covert aggression, and indirect challenge at one end of the scale to the massive invasion to Western Europe or a full-scale nuclear strike against the West at the other end, it is clear that our nuclear superiority has been and should continue to be an effective deterrent to aggression at the high end of the spectrum. It is equally clear, on the

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[38] Ibid., p. 113.

> other hand, that at the very low end of the spectrum, a nuclear response may not be fully credible and that nuclear power alone cannot be an effective deterrent at this level in the future any more than it has been in the past.
>
> The fact is that at every level of force, the Alliance in general and the U. S. Armed Forces in particular have greater and more effective strength than we are in the habit of thinking we have--and with reasonable continued effort we can have whatever strength we need.[39]

Thus McNamara pointed out the clear superiority of the United States and NATO Alliance in strategic and tactical nuclear forces, and our adequacy in conventional forces; and indicated that the United States needed strong and ready conventional forces to answer aggression at the "lower end of the spectrum." A failure on our part to adequately meet a challenge of this type would most likely lead to an escalating situation which could result in miscalculation and nuclear war.

The Soviet impulse to expand has consistently given way to doctrinaire caution when confronted with adequate resistance. Therefore, the Secretary stated that the United States needed the right combination of forward deployment and highly mobile combat-ready ground, sea, and air units capable of prompt and effective commitment to actual combat--a "lean and fit" military establishment. If judicious choices were made in weapons systems development, the increasing productivity and gross national product of the United States should permit adequate military budgets.[40]

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[39] Ibid., p. 116.
[40] Ibid., p. 118.

A few days after Secretary McNamara's speech, President Kennedy was assassinated. However, his untimely death did not signal a shift in the strategic doctrine of the United States. Quite the contrary. Balanced forces continued as the keystone of American policy under President Johnson, and, in fact, grew in importance as American involvement in Vietnam increased.

The Kennedy years were tumultuous and significant ones in matters of defense policy and planning. The Pentagon reeled from the impact of McNamara and his Whiz Kids. There was a proliferation of new terms and "buzz phrases" within the hectic walls of the Pentagon: flexible response, controlled response, damage limiting, negotiated threshold, war termination capability, survivability, multiple options, "fire break" theory, etc.--and each new idea had several articulate spokesmen who had done their homework.

To summarize, President Kennedy's basic military policy included these elements: (1) maintain the stability of the power balance between East and West; (2) exercise at the White House level a precisely controlled military response to any circumstance; (3) establish a series of negotiating thresholds in event of limited or general war; (4) establish war termination capabilities, including the necessary communications with the enemy; and (5) pursue disarmament negotiations. These characteristics of Kennedy's defense policy spawned military forces characterized by flexibility and multiple options. In strategic forces survivability was the crucial element, and parity rather than superiority was considered a satisfactory goal. There was great

emphasis on conventional forces which resulted in a commensurate improvement in the limited war capability of the United States. Finally, highly effective military systems were decided upon by using cost-effectiveness management methods.

Through these policies and the military forces created by them, the Kennedy Administration sought to avoid: (1) escalation of any military action; (2) proliferation of nuclear weapons; (3) the use of nuclear weapons; (4) destabilization of the power relationships then in effect; (5) creation of any weapon system that could be considered provocative; and (6) deployments, programs or forces which could contribute to our balance of payments problem.[41]

As Richard Nixon assumed the responsibilities of the presidency, America's willingness to continue its role as leader of the Free World was being challenged as never before. Nor could history reveal a more demanding time for testing the vitality of the American Dream: anti-war demonstrations, inflation, racial confrontations, campus disorders, a recalcitrant Congress, and a frustrated and confused public all challenged the leadership and capabilities of the new President and his administration.

It became more apparent as the new administration began organizing itself that the early years of the Nixon presidency would be ones of transition; that a new era had begun and that the postwar period of international relations had ended. Nevertheless, while

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[41]Nathan F. Twining, Neither Liberty Nor Safety (1966), p. 154.

the President, in the doctrine that bears his name, called for a reduced US involvement in the affairs of other nations, he also recognized that world peace and progress would be impossible without a major American role.[42]

In nuclear strategic matters, President Nixon restated the truism that "both the Soviet Union and the United States have acquired the ability to inflict unacceptable damage on the other, no matter which strikes first. . . ." and that "both sides have recognized a vital mutual interest in halting the dangerous momentum of the nuclear arms race."[43] However, the President did not hesitate to make important decisions which impact heavily upon strategic matters: continued development and initial deployment of the Safeguard ABM system and the deployment of MIRVs in Minuteman and Poseidon missiles. In view of the increasing Soviet threat, it is difficult to question the President's sense of urgency in proceeding with these two decisions. In MIRV, the nation is provided with the means of partially off-setting the advantage gained by Soviet offensive forces due to the increased megatonnage of their SS-9 missile. MIRV also improves the US ability to penetrate Soviet ABM defenses. In proceeding with ABM deployment, the United States can gain significant technical knowledge in defensive strategic systems,,improve its bargaining position at SALT, and reduce the offensive threat of the Soviets and Chinese.

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[42]Richard M. Nixon, U.S. Foreign Policy for the 1970's (1970), p. 2.

[43]Ibid., p. 3.

The transitional character of the early Nixon years was further substantiated by the strategic goal established by the President--"sufficiency." Two factors were taken into consideration in making this policy decision. First, the Soviets' build-up of strategic forces raised serious questions as to their ultimate goal. Second, the growing strategic forces of the US and Soviet Union posed new and disturbing problems.[44] In assessing the utility of strategic forces, the President conceded their value rested solely upon their ability to deter nuclear war. While he questioned the wisdom of an assured destruction strategy, he failed to provide an alternative. Nor could he find a satisfactory option in selecting either a strategy of minimum deterrence or in pursuing a strategy that depended upon recapturing nuclear superiority. Therefore, he rejected both.[45]

Throughout the President's "Foreign Policy for the 1970's" and Secretary Laird's Posture Statement for Fiscal Year 1971, there are repeated references to SALT: the significance of these negotiations, and the impact they will have upon US offensive and defensive strategic forces. From these references, it is clear that the United States and Soviet Union have reached a watershed in their post-World War II relations, and that the SALT negotiations will result in either some agreement or initiate another round in the arms race.

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[44] Ibid., p. 121.
[45] Ibid., pp. 122, 123.

CHAPTER III

THE STRATEGIC THREAT

Over the past several years, particularly in 1969 and 1970, the Soviet Union has exerted every effort to overcome and surpass the strategic advantages of the United States in nuclear weapons and command of the seas. As the United States has emphasized limited withdrawals from what were felt to be over-extended commitments abroad, the Soviet Union has extended its strategic and diplomatic power in several directions.[1]

The Soviet Union now exceeds the United States in the number of land-based missiles deployed, and current indications are that they intend to attain a similar position with their submarine-launched missile system. The following table vividly presents Soviet expansion in strategic offensive forces during the past five years.

US and Soviet Union Strategic Nuclear Offensive Forces 1966-1970[2]

	US					USSR				
Category	66	67	68	69	70	66	67	68	69	70
ICBM	904	1054	1054	1054	1054	300	460	800	1050	1300
SLBM	592	656	656	656	656	125	130	130	160	280
Strategic Bombers	680	620	520	510	540	155	155	155	150	140

Note 1: The above figures do not include the following Soviet forces which should be considered in evaluating the overall nuclear threat: (1) 700 MRBM/IRBM, (2) 700 medium range bombers, (3) 49 cruise missile firing submarines that employ six to eight launchers each (missile range about 300 nautical miles), (4) Fractional Orbital Bombardment System (FOBS).

Note 2: Other sources, including Secretary Laird's 1970 Posture Statement, were consulted in an effort to determine the most authoritative unclassified version of the Soviet threat. The Military Balance was chosen because of the reputation of The Institute of Strategic Studies, and the consistency of the Institute in the manner, means, and time frame utilized in making their evaluations.

[1] Strategic Survey 1969 (1970), pp. 3, 6.
[2] The Military Balance 1970-1971 (1970), p. 106.

The table above clearly illustrates the trend of the Soviet Union in the development and deployment of strategic nuclear weapons. In addition to a quantitative buildup, the Soviets are actively working on qualitative improvements, such as multiple reentry vehicles with the SS-9 missile.

Perhaps the most significant action taken by the Soviet Union in their effort to reach parity or achieve superiority in nuclear weaponry is in the priority production of the new "Y" class ballistic missile firing submarine. This Polaris-like submarine carries 16 missiles, as compared to three missiles in earlier classes of Soviet submarines. The "Y" class unit was first deployed in 1969. The Soviet Union now has ten operational units with the industrial capacity to build as many as eight submarines per year. It is anticipated the Soviets will have a force of 35-50 "Y" units by 1974-75.[3]

It is clear that the United States and the Soviet Union have reached a point where it is their mutual interest to limit the risks and costs, and declining returns, of the strategic arms race. Improvements in missile accuracy, the introduction of multiple warheads, and the deployment of antimissile defenses have raised the possibility, for the first time, that either the US or USSR might attain a first strike capability, and that one nation might find it politically acceptable to launch a surprise attack in a major crisis. While the risk of such an event occurring is low, it was, and still

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[3]Melvin R. Laird, Defense Program and Budget for Fiscal Year 1971 (1970), pp. 35-36.

is, sufficient to provide the impetus required to initiate and sustain negotiations in arms limitation talks.[4]

As one views the adversary relationship that exists between the United States and Soviet Union within the context of their respective strategic nuclear capabilities, it is sobering to recall the statement made by Albert Einstein when he appeared on television to discuss the decision to produce the hydrogen bomb. He said:

> If these efforts should prove successful, radioactive poisoning of the atmosphere, and, hence, annihilation of all life on earth, will have been brought within the range of what is technically possible.
>
> A weird aspect of this development lies in its apparently inexorable character. Each step appears as the inevitable consequence of the one that went before.
>
> And at the end, looming ever clearer, lies general annihilation.[5]

The sense of foreboding that Einstein expressed remains with us today. While some progress has been made in arms limitation measures, the central issue of the arms race remains unsolved: can SALT eliminate, or at least reduce, the risk of nuclear war that has been created by more effective and increased numbers of nuclear weapons?

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[4] Strategic Survey, p. 8.
[5] Chalmers M. Roberts, The Nuclear Years (1970), p. 8.

CHAPTER IV

OPTIONS FOR ARMS LIMITATION

We have examined the strategy of the Nixon Administration as announced in early 1970, and we have reviewed briefly the strategic threat with special attention to recent trends. From these observations there can be little doubt that the United States and the Soviet Union have a great common interest in reaching agreement with regard to arms control.[1]

Many problems and complexities exist, however, not the least of which is the question, "Can an intelligent and substantive dialogue actually be established between two adversary nations with different attitudes, policies and force postures?" From the results of the first three SALT sessions, it appears these arms control discussions have been impressively free of the polemics and propaganda that have come to be identified with US-USSR negotiations. While this serious and businesslike conduct of both delegations provides some encouragement, it does not in itself solve the many problems that persist. These problem areas will become more apparent as specific strategic arms limitation options are examined.

President Nixon's approach to SALT negotiations was unique in that the US government selected a "building block" technique rather

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[1]Richard M. Nixon, U.S. Foreign Policy for the 1970's (1970), p. 142.

than an agreed upon position or proposal with little or no flexibility. This tactic permitted the analysis of various limitations and combinations in three broad categories, each with its own verification requirements:

1. Limitations on the number of missiles. A ceiling would be placed on numbers of missiles without an attempt to restrain qualitative improvements like MIRV.

2. Limitations on the numbers and capabilities of missiles. These options would not only limit the numbers of missiles but also their capabilities, including such things as MIRV.

3. Reduce offensive forces. This approach would attempt to reduce offensive forces quantitatively with no regard to qualitative improvements on the theory that at fixed and lower levels of armaments the risks of technological surprise would be reduced.

The options generated by the Nixon Administration took into account the impact each position would have upon NATO and Japan, and in this instance, the United States has consulted fully with its allies.[2]

Although the SALT talks have been conducted with scrupulous attention to security, there are some sources that can be considered sufficiently authoritative to be used with some confidence in a theoretical discussion of the subject.

As indicated by the abbreviated alternatives outlined by President Nixon, the simplest type of arms agreement to limit offensive

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[2] Ibid., pp. 144-146.

strategic weapons would be one in which both nations agreed to a common ceiling on the total number of deployed launchers or delivery vehicles without stipulating what types would be included within the total. Replacement of existing units by new models of the same type or by substitution with a different type would be permitted provided that the total number of operational weapons at any given time did not exceed the agreed number. No restrictions would be placed on qualitative improvements or on the number of warheads or bombs that could be carried by any given delivery vehicle. In the case of missiles it would be assumed that each operational launcher contained one delivery vehicle, and no restrictions would be placed on missiles that were not associated with a launching platform. In the case of bombers each aircraft would be regarded as a single delivery vehicle.

If such an agreement were reached with forces as of January 1, 1971, the US would have a total operational force of about 2,260 delivery vehicles and the USSR about 1,720. This disparity results from the larger US bomber and SLBM forces, which outweigh the numerical advantage that the USSR has in land-based ICBMs. In addition, the USSR would also have approximately 400 missile launchers under construction. It is conceivable that the Soviets might be willing to agree that the allowed numbers should be at the existing operational levels since a rough parity in force strength does exist. The larger payload capacity of the Russian land-based missiles might be considered sufficient to compensate for the US advantage in number of SLBMs. The Russians might worry, however, that the number of their currently deployed and least vulnerable sea-based missiles would be dangerously low.

This would take on added significance if there were no restrictions on MIRVs since land-based systems would become increasingly vulnerable to a counterforce attack. Furthermore, under such an agreement there would be nothing to prevent the US, if it chose, from replacing its present small missiles with those of larger and more accurate payload.

As a variation, the agreement could require that both nations have an equal number of delivery vehicles. Since the relative Russian inferiority in numbers would be largely alleviated if the USSR were allowed to complete those launchers now under construction, curtailment on new starts might be the simplest way to achieve equality.

None of these schemes presents any real risk to US security, particularly if ABM systems are simultaneously limited to low levels. Even if the Russians developed MIRVs with sufficient accuracy to provide a high probability of eliminating US land-based missiles, the US would still have available 656 submarine launchers, almost 500 of which would be capable of firing Poseidon missiles, each with ten warheads. Such a weapons system could fulfill the strategic criteria of assured destruction even if the Russians had deployed a very large ABM force. Furthermore, the US would have a large bomber force, which could not be destroyed simultaneously with the ICBM force. The deterrent should therefore remain secure. If concern for security developed, the US would always have the option to replace its fixed land-based systems with less vulnerable mobile or sea-based ones.

It becomes apparent, however, that an agreement along these lines would have only minor effects in curbing the offensive-arms

race and would only redirect it toward a qualitative rather than quantitative competition. Since at present the US has no plans for increasing the total number of its delivery vehicles, it would unilaterally affect the USSR. Although the US is investigating the possibility of new systems in all categories, no decisions have been made for the production and deployment of any of these systems, and it is probable that any new deployment would replace older systems. On the other hand, such an agreement would have considerable effect on current Soviet programs since the USSR is continuing to deploy both land-based ICBMs and new Polaris-type submarines. In spite of this asymmetry the Soviets might be willing to negotiate such a ceiling, since they may now be almost at the point of completing their deployments. If the total number of Russian delivery vehicles were to be kept at the January 1971 level, it is likely that the USSR would decide to replace some of their 220 older ICBMs with SLBMs in order to remedy their inferior position in this area. They could also substitute SS-9s for some of these old missiles, thus eliminating one of the chief US aims at SALT.[3]

However, it is unlikely that the action-reaction phenomenon would be curtailed at this point. One could logically expect the US to continue its MIRV deployment, followed by a similar strategic decision by the Soviets. Each contestant would continue to seek qualitative improvements in MIRV systems, each looking for the

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[3]Herbert Scoville, Jr., "The Limitation of Offensive Weapons," Scientific American, (January 1971), pp. 17-19.

ultimate in system accuracy. If MIRVs threatened the survivability of land-based systems, regardless of the restrictions on ABM defenses, there would be a great sense of urgency to replace fixed systems with less vulnerable sea-based missiles, or to create a new mobile land-based system. The expense involved would be immense for both countries.

Under this form of agreement, the US and the USSR also have the option of replacing their bombers with new bombers or substituting missiles. This decision would have an impact on air defense systems, as well as special civilian and military interest groups. There are current indications that both nations may be moving toward the development of new bomber forces.

Verification of an agreement limiting strategic delivery systems to a given fixed total would create a number of difficulties. While new construction of missile launchers or of submarines carrying ballistic missiles could be observed by national means well in advance of completion, an accurate count of the total number of operational missiles at a specific time would be difficult to obtain if substitutions were permitted. This would be particularly difficult if mobile land-based missiles were deployed. Moreover, there would be some difficulty in ascertaining when a new missile system that was being constructed to replace an old one had reached operational status. It is unlikely, however, that the new construction would be so extensive that such a violation would represent a real threat to anyone's security in view of the already large number of missiles available to both sides. Procedures for replacements could be negotiated to reduce

the risks from a violation, but such a situation is likely to create a climate for accusations of bad faith and to increase tensions, which is the exact opposite of what a well-designed agreement should provide.

A final difficulty might arise in proving a violation. It would not be enough to point to a new site; it would also be necessary to present evidence that the total number of sites at a given time exceeded the agreed number. This would be difficult to do and would lead to charges and countercharges. The problem would be even more onerous if missiles were allowed to be substituted for bombers, since determining the operational status of the entire bomber force at any one time is a formidable task.[4]

Clearly, it appears there is great risk that a SALT agreement of the form just discussed would accelerate a qualitative arms race. We have already seen where SALT has been used to justify present programs in order to be able to "negotiate from strength." Nevertheless, even with the shortcomings enumerated above, there is the other view that a limitation on the total number of strategic delivery systems could stifle the arms race by providing an outer limit on the number of weapons and establishing the basis for further negotiations.

On balance, an agreement to limit strategic delivery systems would be better than no agreement, but at a minimum some additional restrictions on the replacement of existing systems should be added to this approach. It would be far better for both sides to agree to

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[4] Ibid., pp. 19-20.

phase out their fixed, land-based missiles as they became vulnerable than to allow their replacement with new weapons.

The simplest alternative to the scheme just discussed would involve an agreement on specific numbers of aircraft and specific numbers of missiles. This would be a considerable improvement since it would permit separating the less significant bomber situation from the more critical missile problem. Separating these two elements of the strategic force for negotiating purposes would also help avoid many of the difficulties in reaching agreement on a total number of delivery vehicles.

However, many of the same disadvantages that were identified with a simple agreement persist. There would be strong pressures within the Soviet Union to replace older missiles with the SS-9, particularly in view of the Soviets' deficiency in SLBMs. In the US a "sense of urgency" would call for continued MIRVing, and probably a new system to replace the increasingly vulnerable Minuteman force. There is a possibility that some agreement could be developed that would relate a limitation of the SS-9 deployment to a restriction on Poseidon, although such a restriction would meet great opposition in the US since the Poseidon system is considered the most critical element in the US deterrent.[5] However, Poseidon and MIRV are directly related to penetrability and therefore ABM. If ABM levels were kept low, the avowed requirement for MIRV would be somewhat dissipated.

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[5] Ibid., p. 21.

This could have some ameliorating effect of US attitudes.

Another difficult but somewhat less critical point of conflict is the US advantage in strategic bombers. While the US position is, to a degree, compensated for by the medium range bomber force the Soviet Union has deployed in Eastern Europe, this asymetrical situation logically leads to a discussion of US carrier and land-based aircraft in the European theater. While negotiations effecting bomber forces do not appear insuperable, it is important to remember that the largest part of the total nuclear yield that can be delivered by the US on the USSR comes from the US bomber force, and that the Soviet Union has expended a significant share of its defense funds on anti-aircraft defenses.

From this limited discussion it becomes apparent that unless some qualitative controls can be agreed upon, the arms race will probably continue almost unabated with no commensurate improvement in US security.

One proposal that has been suggested as a means to limit qualitative improvements on existing strategic systems would be an agreement which would restrict each nation to a total payload that could be delivered on the other nation.

An agreement of this type would prevent the replacement of existing small missiles with much larger ones, but it would not prevent replacing a single warhead by a MIRV. If current forces were frozen, the resultant effect would be a two to one advantage for the Soviet Union. While some trade-offs which could rectify this disparity are feasible, they do not appear politically acceptable.

A more attractive arrangement might be to combine the payload limitation with one on total number. This would tend to freeze forces at their current strength. However, this would still not control MIRV deployment. In addition, the question of verifying a limitation on payload remains. It appears that for a deployment ban alone, it would be necessary to conduct extensive on-site inspections. While observations of Soviet tests could normally be expected to provide the US with sufficient information on the yields of new systems, it is possible that the Soviet Union could deny the US this intelligence by implementing new test procedures.[6]

Another approach to limiting the deployment of strategic arms would be an agreement that froze existing delivery systems at their current status. This proposal would emphasize restricting levels to the existing balance not specific numbers. The most effective prohibition would be an all-inclusive bid that would ban substituting one launcher for another and also forbid replacing present missiles and aircraft. Such an agreement would enhance mutual security, halt the arms race and provide economic savings, but the verification requirements would be extremely difficult and demanding. Verification could be partially satisfied by restricting the launchers to those now in existence, by not allowing their replacement by new systems and by restricting any modifications to these launchers and their missiles to those that did not change their external configuration or that of the missiles they contained.

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[6] Ibid., pp. 22-23.

Under this arrangement MIRVs could replace single warheads, but other qualitative improvements to MIRV would, at least, be partially constrained. Large-scale changes in the force structure would be prohibited. Fixed systems could not be replaced by submarine systems or land mobile ones. Although land-based ICBMs would become more vulnerable, the deterrent posture of the US would not be threatened, provided ABMs remained at a low level. The conversion from Polaris to Poseidon would be halted, as would Soviet "Y" class SLBM submarine production. This would probably be a serious and difficult position for the Soviet Union to accept, although approximate parity between the US and USSR exists at the present time.

Verifying this rather far-reaching proposal would be relatively easy, and a violation could be substantiated by presenting evidence that a change had taken place--a far simpler task than proving a change in total numbers. This would avoid extensive disclosure of privileged information and would simplify making a case for a violation before the world forum. Furthermore, since no new missile site construction would be permitted, misunderstanding and confusion would be much reduced.[7]

None of the proposals thus far discussed has provided for a limitation on the deployment of MIRV. Yet even a cursory analysis of these alternatives indicates clearly and persuasively that the most destabilizing element would in all cases be the ability to obtain a MIRV capability. Additionally, the Soviet-MIRV capability

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[7] Ibid., p. 23.

presents, in relative terms, a much greater potential threat to the United States because of the greater payloads of the Russian missiles. Although it does not necessarily follow that the deployment of the MIRV makes a preemptive strike more likely, it is the ambiguous nature of this strategic system that makes it so troublesome. While the development of MIRV can facilitate an assured destruction capability because it can penetrate ABM defenses, the system, given sufficient accuracy and yield, warns of a counterforce strategic weapon.

Although Soviet ABM defenses provided the initial impetus to US MIRV development, the system has now acquired a life of its own. Additionally, the technology has now reached a point where the US is reluctant to conclude an agreement with the Soviet Union that cannot be precisely verified. While there is little likelihood that adequate verification procedures can be developed for MIRV systems already deployed, even with on-site inspections, there is the possibility that sufficient safeguards can be introduced by verifying a ban on all tests for new systems. Although there are differences of opinion on the adequacy of unilateral verification techniques, a strong case can be made that it is technologically possible to verify a MIRV test ban by national means without on-site inspections.[8]

Another key element to any SALT agreement is ABM deployment. The adequacy of offensive strategic forces is highly dependent upon

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[8] Ibid., p. 24.

the extent to which defensive systems are deployed. However, ABM limitations would be desirable even if no controls could be placed on offensive weapons. This action would lessen the pressure for the development of new offensive systems, and significantly reduce the need to continue the current MIRV deployments. Any useful long-term limitation on offensive forces requires a simultaneous ban or extensive limitation on ABM systems.[9]

The table, on the following page, summarizes in very simplified form the options that have been discussed.[10]

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[9] G. B. Kistiakowsky and G. W. Rathjens, "A Chance to Freeze ABM's," New York Times, January 27, 1971.

[10] Scoville, p. 24.

POSSIBLE SALT AGREEMENT	EFFECT ON U.S. SECURITY	ECONOMIC SAVINGS FOR U.S.	EFFECT ON ARMS RACE	NEGOTIABILITY
1 Ceiling on Numbers of Delivery Vehicles				
a No limitation on Replacement	Little, if any, improvement	None (Might increase military expenditures)	Little, if any (Might accelerate)	Very easy (Verification complicated)
b Separate ceilings on Missiles and Bombers	Slightly better than 1a	Little, if any	Slightly better than 1a	Easy (Verification complicated)
c Limitation on large ICBMs	Some improvement	Little, if any	Better than 1b but limits only one system	Hard (unless US is also willing to halt Poseidon)
2 Freeze on Deployed payload	No improvement (Freezes US inferiority)	Some	Good but does not halt MIRVs	Hard (Verification hard)
3 Freeze on Delivery Vehicles				
a No replacement	Significant improvement	Very large	Excellent	Possible (Verification marginal
b No change in external characteristics	Significant improvement (less than 3a)	Large (less than 3a)	Very good	Easier than 3a (Verification easy)
4 Limitation on MIRVs				
a Ban on deployment	Improvement	Significant	Very good	Hard (Verification almost impossible)
b Ban on production testings and deployment	Great improvement	Significant	Very good	Easier than 4a (Verification possible)
5 Limitation on ABMs				
a Ban on new deployment	Significant improvement	Significant	Excellent	Easy (verification possible)
b Very limited deployment	Significant improvement	Significant, but less than 5a	Excellent (essential for any limitation on offensive systems)	Easy (Verification possible)

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

While it is a truism that political differences not weapons are responsible for the conflicts that erupt between nations, it must be recognized that nuclear weapons create in themselves a certain amount of tension and fear. Although arms control is inseparable from political issues, its attainment is not dependent on the elimination of the struggle and conflict that exist between nations. Conversely, successful arms control measures may make some contribution to improving the general political climate.

It is clear that it is in the national self-interest of the United States and the Soviet Union to halt, or at least slow down, the nuclear arms race through some mutually acceptable agreement. It is also clear that arms limitation decisions must enhance national security not detract from it, and that these decisions must be based upon the known and verified capabilities of one's potential adversaries and not his presumed intentions. Nevertheless, in making a decision for or against certain arms limitation agreements, the relative risk to national security that results from no agreement must be considered with the same thoroughness as the risk inherent in accepting the proposal being reviewed. In view of these facts and recognizing the political tension, mistrust, and lack of common purpose that dominate the relations between the United States and the Soviet Union, one might consider it remarkable if SALT culminates in some meaningful agreement.

This situation is aggravated by pressure from special interest groups, both US and USSR, who influence defense policy extensively in their respective countries. This leverage is exercised by the military planners and like-thinking civilians, both in government and industry, who analyze the military capabilities of the other country in "worst-case" terms, and persist in behaving as if a thermo-nuclear war can be won.[1] This situation is exacerbated by the competition between the military services for defense resources. Taking the hypothetical case: If it were conclusively proven that nuclear war could be deterred more effectively by eliminating land-based ICBMs and air defense systems in the United States and the Soviet Union, and the SALT negotiators agreed to this proposal, it is extremely doubtful if either head of government could wield sufficient domestic political power to bring such a proposal into being.

Nevertheless, all of the difficulties and complexities previously discussed notwithstanding, President Nixon has a unique opportunity to conclude an arms limitation agreement with the Soviet Union which can stifle the nuclear arms race, and at the same time enhance national security. This opportunity stems not only from US-Soviet interests being in juxtaposition, but from the fact that a Republican president can do things in this field that a liberal democrat cannot. Further, the President has a compelling personal incentive for concluding a meaningful SALT agreement, which becomes more obvious and more attractive as the 1972 election draws near.

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[1] G. W. Rathjens and G. B. Kistiakowsky, "The Limitation of Strategic Arms," Scientific American, (January 1970), p. 20.

Given the momentous difficulties to be overcome and the opportunities to be grasped, what can one conclude as to the possibility of a SALT agreement, and, if concluded, what form it might take?

At this writing, it appears that the chance of some SALT agreement is good. Public statements by President Nixon and Premier Kosygin indicate a more than superficial desire on the part of both governments to achieve some settlement which will contribute directly to lessening the chance of a nuclear war and to reducing the burden of an accelerating nuclear arms race.[2]

While the chance of a SALT understanding is likely, the form it might take is still a matter of considerable speculation. From the previous chapter we have seen that the best agreement possible under the present circumstances appears to be one in which strategic forces would be frozen at their current levels, ABM systems would be banned, and further production, testing, and deployment of MIRVs would be terminated. Practically speaking this proposal would ban the construction of new launchers and restrict changes in deployed systems to those that do not change their external characteristics. It would also restrict ABMs to very low levels, perhaps a Washington-Moscow defense system, although this an assymetrical situation. Limitations on MIRV are now increasingly difficult to achieve because of the verification problems and the present US technological lead. Nevertheless, the risks this system presents when calculating the strategic balance make it mandatory that every avenue of potential agreement be

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[2]Benjamin Wells, "Ban on Atomic Arms on Seabed Signed in Three Capitals," New York Times, February 12, 1971.

thoroughly explored. It appears that the risks from no limitation surpass, significantly, the risks that would result from our inability to monitor any covert MIRV production, testing, and deployment that the Soviets might undertake.

It is doubtful that the SALT discussions scheduled for 15 March 1971 will attain an agreement as comprehensive as the one outlined above. It is more likely to result only in an agreement limiting ABM, but such an achievement should not be treated derisively, for an ABM limitation is a key factor in any more inclusive arrangement that might be considered by the US and USSR.

Some agreement may be forthcoming on the total number of land-based ICBMs. However, the Soviets are naturally suspicious, considering the differences in geography, of any limitation on land systems that does not include a similar restriction on sea-based systems. There is always the possibility that some arrangement could be worked out that would consider, in conjunction with one another, a restriction on SS-9 and Poseidon deployments, thus arresting to some degree the race toward MIRV. However, the US would probably want some limitation on how many Y class submarines the Soviets could deploy, lest the United States finds itself enjoying the worst of both worlds. Of course, one major stumbling block to any agreement, depending on Soviet negotiating tactics and attitude, is the problem of US carrier and land-based aircraft located in Europe. Clearly, the US cannot unilaterally negotiate on this matter without destroying NATO. The international politics involved places this situation in a unique category better negotiated during a European Security Conference.

In summary, one can postulate what will probably result from the forthcoming SALT talks and, with some license, develop a scenario that could provide the required national security yet subdue the strategic nuclear arms race.

As mentioned, an agreement to severely limit ABM deployments is a prerequisite for more comprehensive arms limitations. If ABMs are limited, the need and arguments for MIRV are reduced or eliminated. The next logical step is to limit land-based systems with no new construction permitted and changes to existing systems restricted to those that do not alter their external launcher and missile configuration. This should be followed by a ban on the testing of MIRVs.

To further stabilize the strategic balance, a limit to SLBMs could be negotiated, perhaps 40-50 submarines of the Polaris/Yankee configuration would be an appropriate figure. To insure the invulnerability of the SLBM deterrent, thereby encouraging the US and USSR to accept the measures enumerated above, a limit to the total number of nuclear attack submarines could also be negotiated. A figure to 125-140 would be satisfactory. Since the useful life of a submarine is about 20-25 years, some agreement on a one for one replacement at specified periods would be a suitable item for agreement. While this scenario does not provide for all possible variations that SALT could develop, it gives a general proposal that covers the major areas of concern.

It is a conspicuous time in history. There is an urgent need to control the nuclear arms race. It remains to be seen if the political leadership in the United States and the Soviet Union have

the strength and determination to reach a meaningful agreement during SALT negotiations. Hopefully, even a modest accord could help reduce east-west tensions and encourage the settlement of other political issues. This could also create an atmosphere in which an institutionalized SALT conference might conclude more comprehensive agreements. The world would welcome such a development.

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