THE POLITICS OF RESTRAINT:
ROBERT McNAMARA AND THE
STRATEGIC NUCLEAR FORCES, 1963-1968

by

RICHARD L. KUGLER

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Signature of Author

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Certified by

Thesis Supervisor

Accepted by

Chairman, Departmental Committee on Graduate Students

Archives

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Thesis Abstract

by Richard Kugler

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One of the most difficult problems a Secretary of Defense faces is that of controlling the weapons acquisition process and, in particular, blocking the development and deployment of strategic weapons which he believes are not required for the national security and should not be procured. Indeed, a commonly accepted thesis which runs through much of the scholarly literature on defense decision making is that the Secretary of Defense labors under sharp constraints in this regard and that restraint is a difficult, if not impossible task.

This dissertation examines the issue of whether it is possible for the Secretary of Defense to exercise restraint. It attempts this task by examining a single case in which a Secretary of Defense did make a serious effort to exercise restraint and by seeking to identify the factors which enabled this Secretary to succeed up to a point and prevented him from going further. The case is the campaign which Secretary Robert S. McNamara waged during the last five years of his tenure, 1963-1968, to halt the strategic buildup and to block several strategic weapons to which he objected. By using this period as a case study the dissertation attempts to identify the factors which govern the willingness and the ability of the Secretary to exercise restraint, to determine whether and to what degree restraint is feasible, and to provide insights on the bureaucratic strategies that a Secretary of Defense can employ to achieve this goal.

The dissertation examines the determinants of both McNamara's successful efforts between 1963-1968 to block several strategic weapons, as well as his decisions to strengthen the combat capabilities of the strategic forces. In the process it examines in some detail the bureaucratic politics of defense decision-making during this period, as well as the role which strategic considerations and cost-effective analysis played in shaping the patterns of bureaucratic alignment and driving specific force posture decisions. It describes the ingredients of McNamara's political power within the Pentagon and it examines in detail the bureaucratic strategies he employed to attain his goals. It also analyzes the political pressures, analytical constraints, and strategic incentives he operated under, and attempts to determine how they drove his decisions for expansion and prevented him from exercising more restraint.
Three central theses are developed in the dissertation. The first is that, other contentions to the contrary, it is possible for the Secretary of Defense to exercise significant restraint. The Secretary of Defense does operate under major constraints which can limit his latitude. But he does not necessarily have to be politically impotent in the face of intense pressures to acquire unnecessary weapons. He can be a powerful official in his own right, an official whose ability to control the defense budget often is underestimated by contemporary theories of the weapons acquisition process which stress the bureaucratic determinants of decision-making. Restraint, of course, seldom is an easy task, and under some conditions a Secretary might not be in a position to proceed forward. But this need not always be the case, and in the right circumstances a skillful and courageous Secretary can block weapons, even weapons which enjoy solid military and Congressional support.

The second thesis is that a Secretary's bureaucratic skill and strategy within the Pentagon can be a critical determinant of the degree of his success. The extent to which restraint is feasible is governed by a large and complex set of factors, especially political variables, which can fluctuate a great deal from one period to the next. Consequently, a Secretary's latitude partially is circumscribed by the external circumstances he faces. But a Secretary need not totally be a prisoner of his environment. To some degree, a skillful Secretary can manipulate the bureaucratic structure over which he presides, and the sophistication of his strategies in part determines the degree to which he can successfully engage in manipulation.

The third thesis is that the barriers to restraint are more than just political in nature; they are also strategic. The impulse to acquire new strategic weapons is driven by more than bureaucratic momentum and technological imperatives. Strategic objectives also play an important role in driving the weapons acquisition effort, and they can lead a Secretary of Defense, quite apart from internal constraints, to favor expansion and not to prefer restraint. The multiple strategic objectives which drive force planning create powerful incentives for the deployment of a large and diverse strategic force posture and for the continued accretion of combat capabilities. Any Secretary of Defense inevitably responds to these incentives. The desire to provide adequate forces to support these objectives and the associated tendency to prefer ample margins of insurance against uncertainty can lead a Secretary of Defense, even a Secretary who favors arms control and fiscal prudence, to react favorably to proposals for costly new weapons. And even when his initial reaction is not favorable, the sense of responsibility which has a strong, sobering affect on any Secretary's judgments can lead him reluctantly to set aside his preferences and to authorize weapons about which he has personal reservations. Consequently, the ability to exercise restraint is no guarantee that individual Secretaries will want to do so; and a Secretary's failure to exercise restraint in particular cases might not be a product of his political weakness but rather the simple fact that restraint did not appear to be a desirable alternative in the first place. Indeed, restraint at best is likely to be a conditional goal in any Secretary's sense of priorities, a goal which inevitably is subordinated to the primary concern of meeting essential military requirements.

Thesis Supervisor: William Kaufmann
Professor of Political Science
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Richard L. Kugler
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A Note on Data Sources

The information used in this thesis was gathered from several sources. A large amount of data was taken from Congressional hearings and testimony on the defense budgets during 1962-1968, and on various related aspects of defense policy. In addition, such secondary sources as newspaper and magazine articles, articles appearing in scholarly journals, and other books and manuscripts were employed when appropriate.

A considerable portion of the data was gathered through personal interviews with individuals who participated in the events and decisions addressed here. In all, significant information was gathered from interviews with approximately fifty former high government officials. Included in this list were officials from the personal office of the Secretary of Defense and the Deputy Secretary of Defense; the various staffs of the Office of Secretary of Defense, including the Office of Assistant Secretary (Systems Analysis), the Office of Assistant Secretary (International Security Affairs), the Office of the Director of Defense Research and Engineering, and the Office of the Comptroller; the Office of the Joint Chiefs of Staff; the Department of the Navy, including the civilian secretariat and the uniformed staff; the Department of the Air Force, including the civilian secretariat and the uniformed staff; the Department of the Army; the Bureau of the Budget; the State Department; the Arms Control and Disarmament Agency; the Presidents' Science Advisory Committee; the White House National Security Staff; and other appropriate government agencies.

An attempt has been made to verify the information provided in interviews, and to employ only information which has been corroborated by two or more sources, is supported by information drawn from public sources, and is consistent with related, reliable information. This was particularly the case when factual events were subjects of analysis. Less corroboration has been demanded when personal attitudes, opinions, and reasons for actions were at issue; but even in these cases an attempt has been made to verify information through multiple interview sources. In some cases, of course, only a few individuals were in possession of relevant information, and their views sometimes were accepted, especially when their memory appeared to be clearly reliable and their interpretations appeared to be consistent with publicly available information. And in some cases, the author has exercised his own judgment, based on the available evidence; this particularly was the case where contradictory or inconsistent, information existed. A writer, of course, imposes his own order and structure on reality, and inevitably must make inferences in the face of uncertainty and incomplete information. Throughout the course of this study, the author has attempted to identify clearly those cases in which incomplete information exists, and conclusions are being derived partially on the basis of inference. But even where inferences have been drawn, an attempt has been made to examine the available evidence as closely and fairly as possible, and to draw only those conclusions which are obvious, logical outgrowths of the available information.
In order to encourage the interviewees to talk freely, each was promised that there would be no direct attribution of information in the written product of the research. This policy is adhered to closely throughout the manuscript. Accordingly, footnote references are made to coded research documents. Where references are made to more than one source, lower case letters are used to designate the number of individuals who provided information related to the topic under discussion. This reference system allows the reader to determine when interview material is being used and roughly what degree of corroborative information has been brought to bear from interviews to document particular points. It, of course, has the disadvantage of not letting the reader judge for himself the authoritativeness of the relevant information. The author is persuaded, however, that the candor and frankness which many interviewees showed was a direct product of the promise of anonymity, and that without it, this study would have been considerably less successful.
This study examines the issue of whether it is possible for the Secretary of Defense to exercise restraint in the acquisition of strategic nuclear forces. In particular, it focuses on the ability of the Secretary of Defense to shape the overall size and composition of the strategic force posture to his conception of national military requirements and to block the development and procurement of strategic weapons which he believes should not be deployed. It attempts this task by examining a single case in which a Secretary of Defense did make a serious effort to exercise restraint and by seeking to identify the factors which enabled this Secretary to succeed up to a point and prevented him from going further. The case is the campaign which Secretary Robert S. McNamara waged during the last five years of his tenure, 1963-1968, to halt the strategic buildup and to block several strategic weapons to which he objected. The purpose of this study is to identify the factors which govern the willingness and the ability of the Secretary of Defense to exercise restraint, to determine whether, to what degree, and under what circumstances restraint is feasible, and to provide insights on the bureaucratic strategies that a Secretary of Defense can employ to achieve this goal.

This has been a controversial and important issue for at least the past fifteen years, and it inevitably raises a host of questions which have a direct bearing on the purposes of this study. Assuming restraint sometimes
is desirable, is it possible for the Secretary of Defense to exert sufficient managerial control over the Pentagon's budget to block unnecessary weapons that are being promoted by the military services, Congress, and domestic groups? Or do the internal dynamics and structural features of the weapons acquisition process make central control and restraint difficult, if not impossible? If restraint is difficult, but still feasible, then how can it be accomplished? And if it is possible, then why do Secretaries of Defense not exercise restraint more often? Do they even want to? From the Secretary's viewpoint, is restraint only a problem of internal control, or is it also a strategic problem?

Whatever the answers, these questions are likely to remain topical for the foreseeable future. Despite the partial successes of SALT I and SALT II, recent history suggests that the SALT talks are not likely totally to regulate the strategic force postures on both sides or to remove the problem for the United States of unilaterally controlling the weapons acquisition process. This is particularly true for strategic offensive forces. Although the ABM Treaty places stringent limitations on ABM deployments, the Vladivostok accords establish high ceilings for offensive forces and provide each side considerable latitude for reconfiguring and modernizing these forces.\(^3\) Perhaps additional strictures will be added during subsequent negotiations, but the basic features of the Vladivostok accords are not likely to be changed a great deal. Consequently, the United States is going to continue to maintain a large and powerful strategic force in active service for the indefinite future. Moreover, the momentum to modernize these forces is going to continue roughly at its present pace, and innovative ideas for costly new weapons are going to emerge regularly as a result of the development of new technologies, the
appearance of new problems, and the simple fact that old, worn out weapons must be replaced. With these new weapons, and the inevitable pressures to procure many of them on a large scale, will continue to come the problem of making difficult, and often politically controversial decisions for or against deployment.

Since strategic forces have important implications for national security policy and consume substantial scarce resources (the Pentagon requested fully $7.721 billion (TOA) for FY1976 to cover costs for proposed strategic forces modernization and improvement programs), a clear need exists to control the process by which these weapons are acquired in order to insure that force posture decisions conform to national priorities.

In particular, a need exists to control the process by which aggregate force structure requirements are generated and high-level decisions are made regarding which weapons are to be developed and procured, what their performance characteristics are to be, and in what quantity they are to be deployed. To some extent the problem which has grown up in recent years of extremely high and ever-rising costs for new weapons is a product of the internal dynamics of the development process, including Pentagon R&D management practices and contracting procedures. But the problem of controlling the weapons acquisition process is a good deal more complicated than simply managing the development process from a cost-reduction viewpoint. Since the process of high-level force planning and decision-making largely determines capability requirements and which weapons are developed and deployed, it is the most important variable in driving the costs of individual weapon systems and the aggregate costs of the strategic force posture, and in shaping the impact these forces have on national security and foreign policy objectives.
The Secretary of Defense is now and will continue to be the central figure in the federal government's efforts to control the force planning process on behalf of the national interest, and to exercise restraint when appropriate. And since he is better situated than any other government official (apart from the President) to do so, the degree to which he can control this process very much determines the degree to which it can be controlled at all.

The fact that the Secretary of Defense is responsible for central control, however, does not necessarily mean that he is capable of accomplishing the task. In particular, a large amount of question and doubt has been raised about the Secretary's ability to block the acquisition of undesirable weapons which enjoy substantial political support among the military services, Congress, and domestic interests. The thesis that the Secretary of Defense is sharply constrained from exercising restraint certainly runs consistently through much of the scholarly literature which stresses the organizational, political, and technological determinants of policy choices. Moreover, this thesis has drawn support from large numbers of government officials. Indeed, several officials, past and present, publicly have expressed dismay at the difficulties inherent in trying to fight off unnecessary weapon systems and to convince the military services of the virtues of restraint.

This same viewpoint was echoed by several other former high Pentagon officials who were interviewed by the author on this topic. Indeed, some adopted the extreme position that it virtually is impossible for the Secretary of Defense to resist the pressures of the military-industrial complex.

Despite this seemingly solid consensus among government officials and scholars, there are observers, often less publicly vocal, who hold discordant views and do not paint so bleak a picture. For example, some former officials
who were interviewed argued that although many barriers to restraint do exist, a determined Secretary of Defense can be a formidable figure and often can get his way, even when the military services oppose him. These officials pointed to the legal authority and political power of the Secretary, and they noted the fact that there are cases on record of successful Secretarial attempts to block weapons (e.g. the B-70). Indeed, a few officials asserted that the academic theories which stress the limitations on the Secretary's freedom to choose as he pleases badly exaggerate the reality; they argued that restraint is considerably less difficult a problem than it is often claimed to be. Perhaps this argument is overdrawn. But the thesis that the Secretary of Defense does control the Pentagon's budget recently has drawn public support from an active Secretary of Defense, James Schlesinger. Following the failure of the June, 1974, Nixon-Brezhnev summit meeting to break the SALT II deadlock on strategic offensive forces, Secretary of State Henry Kissinger lamented publicly about how difficult it was to negotiate an agreement in the presence of two military establishments which had not become convinced of the need for restraint. Schlesinger responded publicly that the Pentagon was under firm civilian control, and thereby implied that the barrier to restraint on the United States side was not internal bureaucratic obstinacy but rather inherent strategic considerations which made restraint undesirable.

There thus exists a debate not only about the desirability of restraint (a topic which cannot be addressed here), but also about whether restraint is feasible, and significant differences of opinion do exist on this subject. The very fact that there is a debate, however, means that a knowledge gap exists here which needs to be closed; and it makes this an interesting topic for research. Perhaps an examination of history can make a contribution
to this debate. History is more than a record of past times and dead issues which is irrelevant to current problems. To some degree the past is prologue. To the extent that central problems and fundamental structural features repeat themselves from one period to the next, history can provide a rich data source from which lessons can be drawn for analysis of contemporary issues.

1. The McNamara Period as a Case Study

The McNamara period, especially his later years, is particularly well-suited for examining the feasibility of restraint. This is a case in which a powerful Secretary of Defense attempted to exercise significant restraint and was confronted with intense opposition by the military services and Congress. It provides both examples of successful efforts to block weapons and examples of cases in which McNamara, despite his preference for restraint, still made decisions to acquire costly new weapons. Consequently, it provides ideal structural features for exploring this topic fully, a good data base, and an opportunity to investigate this issue from the viewpoint of both success and apparent failure, and thus to identify the governing factors of both expansion and restraint. In particular, it provides an opportunity to determine precisely why restraint is difficult and how it can be accomplished, and to gain insights on the powers of the Secretary of Defense and the constraints and incentives he faces in dealing with the strategic forces.

Throughout his tenure McNamara made a concerted effort to exert managerial control over the defense budget, to fashion strategic concepts and a theory of requirements for sizing the strategic forces, and to base force posture decisions on careful analysis and the real security needs of the United States. Although he initially played an important role in the strategic buildup launched by President Kennedy in 1961, by 1963 he had decided that the
buildup had proceeded far enough and that it should be halted, and that much higher priority should be attached to restricting budgetary expenditures and promoting strategic arms control. Evidently by this time he had formulated in his mind a baseline force posture, which he believed to be adequate, which was composed only of offensive ballistic missiles and a modest defense force, and excluded a large strategic bomber force, a thick ABM system, and a large manned bomber defense force. Acting on the basis of his general preference for restraint and contraction, he ceased to press for a continuation of the buildup and began to exert pressure for restraint. Over the next five years or so, he continued to operate in this mode by applying a sharply critical eye to all service recommendations for costly new strategic weapons and by fighting hard against the acquisition of several systems to which he objected.

During this time, he was confronted by the full range of factors which allegedly circumscribe sharply the control, freedom, and influence of the Secretary of Defense. The military services argued vigorously for several new weapons, and Congress exerted substantial pressures on their behalf. Military technology developed at an impressively fast pace in several critical areas of weaponry, and in 1965 the Soviet Union embarked upon a major buildup of strategic offensive forces and appeared to be on the verge of deploying a large ABM system. In addition, McNamara was involved in a host of other problems and issues which occupied his time and energy. In particular, the growing military involvement in Vietnam from 1965 onward placed special demands on him.

The results of this period for the Pentagon's strategic force posture decisions are quite complex and present puzzling anomalies for which there are no simple explanations. The United States proceeded in the direction of
neither unrestricted expansion nor uniform restraint, but instead struck a balance between the two poles which fell roughly in the middle between what McNamara personally preferred and the military services wanted.

The record of budgetary expenditures provides one indicator of McNamara's impact on Pentagon priorities during this period. The program budget for strategic forces in current dollars declined from its fiscal year 1962 peak, bottomed out during fiscal years 1965-67, and then rose upward again in fiscal years 1968 and 1969 as a result of increased funding for the ABM system as well as Minuteman III and Poseidon. The significance of the decline during the middle years becomes more evident if expenditures are analyzed in terms of constant dollars, which corrects for inflation and other fluctuations in dollar value and provides a more accurate measure of changes in real purchasing power.

Department of Defense Budget Figures in Total Obligational Authority (Billions of Dollars)

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<td>Strategic Nuclear Forces Current Dollars</td>
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<td>DoD Budget in Current Dollars</td>
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The budget figure for strategic forces each year represents a level of expenditure which is substantially lower, generally about 20%, than the military services requested. The downward dip in the middle years, in particular, represents a significant reduction in obligational authority.

At the same time, however, it is important to remember that budget figures provide only one indicator of Pentagon priorities and do not
necessarily provide a clear picture of long range policy trends. Some downward dip in the strategic forces program budget would have been inevitable even if the Pentagon had fully intended to continue the strategic buildup at a fast pace. The peak which was reached in the early 1960's was a product of the very rapid offensive buildup which President Kennedy initiated, and fiscal years 1965-1968 were a transitional period during which the Nike-X ABM was being developed. Consequently the downward dip reflects the peculiar circumstances of that period as well as McNamara's conscious efforts to reduce expenditures. Moreover, even though total funding did decline, a fairly large amount, in absolute terms, still was being spent to make important qualitative improvements in the offensive missiles and bombers; and the fiscal implications of some of the most important decisions that were made to acquire new weapons, such as MIRV, were not reflected in the budget until after McNamara's departure.

A better measure of McNamara's impact is the record of force posture decisions he made and the effect they had on the combat capabilities of the strategic forces. This record shows clearly that he did make a number of important decisions to strengthen the strategic forces. The procurement of improved missiles, the Minuteman II, Minuteman III, and Poseidon, coupled with the development and later deployment of MIRV, significantly increased the number of warheads in the offensive missile force and substantially strengthened its capability to survive a surprise attack, to penetrate a thick Soviet ABM system, and to destroy Soviet urban, industrial, and military targets, including hardened missile silos. In addition, although the B-47 bombers were phased out, a substantial bomber force was retained in active service, and the major modifications which were made in the B-52 bombers
lengthened their life span and bolstered their capability to penetrate modern Soviet bomber defenses. The decision which was made to procure a large force of 210 (U.E.) FB-111 strategic bombers would have added another major weapon system to the bomber inventory had the number of aircraft scheduled for procurement not been scaled back after McNamara's departure. The decision to develop and later to deploy the SRAM missile, which was configured to fit both the B-52 and the FB-111, further bolstered the capability of these bombers to penetrate Soviet terminal defenses.

McNamara also made decisions for expansion in the strategic defense forces. The decision to deploy the limited Sentinel ABM system, had it been fully implemented, would have provided some defense protection for American urban areas in cases of limited attack. And, of course, the limited Sentinel ABM system easily could have served as a building block for the deployment of a much thicker ABM system configured to defend against a major Soviet attack. Finally, the small scale research and development program which was conducted on a new bomber defense system produced the AWACS aircraft which, after later being configured for a theater air defense role, later became an expensive and controversial weapon system.

This record of decisions to strengthen the strategic forces, however, does not mean that McNamara accomplished little on behalf of restraint. The record also shows that he made numerous decisions, often in the face of intense opposition, to block important weapon systems and to make contractions in the force posture. He halted the Minuteman buildup at 1000 missiles, some 200-300 below the minimum figure desired by the Air Force. He retired the Titan I and Atlas ICBM missiles. He cancelled the B-70 (RS-70) bomber, the Skybolt missile, and Dynasoar. He prevented the AMSA bomber from entering
into engineering development and he blocked the advanced ICBM. He made the
decisions to retire some 345 older model B-52 bombers; he initiated a very
substantial cutback in the bomber air defense force and he cancelled the
potentially costly F-12 interceptor. Perhaps most important, he delayed
the deployment of the ABM system several years, and then restricted the
1967 deployment decision to a thin system rather than the thicker system
the Joint Chiefs of Staff demanded.

McNamara's accomplishments on behalf of restraint are reflected not
only in the strategic force posture, but also in United States-Soviet
diplomacy. McNamara consistently supported the idea of strategic arms control
negotiations with the Soviet Union and he was a major force in defending the
1963 limited test ban treaty. Later, he played a significant role in starting
the SALT process in motion within the United States government. He also
made significant contributions in the domestic arena where he helped to
transform the public dialogue on the nature of nuclear war and the purposes
of strategic forces and to instruct the American public on the harsh realities
of the nuclear age.

This is an impressive record of restraint, especially in light of the
temper of the times; in his absence these decisions might well not have
been made. Perhaps McNamara achieved less than he personally would have
preferred to accomplish, but nonetheless, he still accomplished a good deal
in reducing expenditures, controlling the size of the force, and blocking
numerous unnecessary and potentially destabilizing weapons. Above all, the
United States during these years accepted the reality of mutual deterrence
and did not make a decision to deploy the very large offensive and defensive
force posture that would have been intended to provide a disarming first
strike force or a major damage limiting capability. This is the course of action which would have threatened the Soviet deterrent and might have triggered a major upward spiral of strategic weaponry in the United States-Soviet military competition. Of course, considerable controversy surrounds the issue of whether United States actions, particularly on MIRV and ABM, might have provoked Soviet counteractions. But a good deal of difference exists between the requirements for a force posture that could have posed a serious threat to the Soviet deterrent from 1965 onward and the more modest capabilities McNamara authorized. In this sense, McNamara did succeed in going a long distance towards his goal of stabilizing the strategic balance and removing incentives to the continuation of the military competition.

2. Research Puzzles

This record of McNamara's decisions presents two research puzzles which are not readily answered by the scholarly literature and contemporary models of the weapons acquisition process: why McNamara was able to exercise a substantial amount of restraint and why he did not go further. This study will attempt to accomplish its purposes by investigating these puzzles and by seeking to determine their solutions.

The former puzzle, in particular, is especially interesting in light of the focus of this study and the fact that many contemporary theories of this process call into doubt the ability of the Secretary of Defense to exert managerial control over the Pentagon and especially to frustrate the military services by turning aside their recommendations for new weapons. For example, the theories of the so-called military-industrial complex discard the Secretary of Defense as being a significant actor, except as a political lackey of the military services and the industrial corporations. The more
sober theories of bureaucratic politics, at least as expounded recently, do grant the Secretary of Defense a more prominent role, but they also assume that decisions are made largely through bargaining processes in which power is distributed relatively equitably among diverse participants. As a result, they stress the political constraints which prevent the Secretary of Defense from asserting control over decisions, and they implicitly argue that Secretaries are incapable of dealing effectively with the military services.

Why then did McNamara succeed up to a point? One can certainly discount the argument that service rivalry and overarching technological and budgetary constraints largely were responsible for these decisions and that McNamara deserves little credit. Service rivalry in itself hardly would have been a sufficiently powerful factor to produce these decisions. The military services basically were in agreement that the strategic buildup should be continued; and while differences did exist on specific weapons, in the absence of a powerful Secretary of Defense these differences almost certainly would have been resolved in a fashion to upgrade the interests of each service. Nor were technological constraints normally major impediments. On the contrary, the rapid pace of technological progress during this period normally operated against McNamara's efforts to exercise restraint in the sense that it opened new opportunities for development and procurement and played a role in increasing the pressures on McNamara to acquire new weapons. And when technological impediments existed, the military services and Congress often were prepared to proceed forward anyway. Similarly, although fiscal constraints did place a rough ceiling on the size of the defense budget and occasionally were responsible for the cancellation of specific projects, they did not place a rigid ceiling on the strategic forces program budget or automatically
dictate that the strategic buildup could not have been continued at a more vigorous pace. Some flexibility did exist in the overall ceiling which was imposed on the Pentagon each year; and McNamara, who personally determined the ceiling, was prepared to violate it if necessary. Moreover, even if a firm budget ceiling had been imposed, additional funds could have been extracted from other program elements and devoted to the strategic forces. To the extent that these two factors played a role in fostering restraint, they appear primarily to have operated not in some deterministic fashion but rather as instruments of bureaucratic argument which were employed by McNamara himself.

Since the Pentagon almost certainly would have proceeded forward in his absence, any attempt to account for these decisions for restraint must begin with McNamara, the central actor in the budget formation process. Somehow he was able to move forward despite the intense pressures he faced. Precisely how he was able to succeed in these cases, however, is not clear and the answers are not readily provided by the public record. To what degree was his success a product of the favorable circumstances he enjoyed? And what role did his own bureaucratic skill and his strategies within the Pentagon play? Whatever the reasons, an investigation into this aspect of his behavior should provide useful insights on the ingredients of a successful Secretarial campaign for restraint.

An investigation into the second puzzle, McNamara's failure to exercise restraint, also is appropriate in light of the purposes of this study. Although much of the scholarly literature on defense decision making, especially the bureaucratic politics literature, dwells on the theme that the Secretary of Defense is sharply constrained in this regard, it by no means is clear that
this literature identifies the full range and diversity of constraining factors which can affect Secretarial decision-making. Nor is it clear that it develops a balanced appraisal of the respective roles these factors play and the extent to which they are influential. By analyzing the reasons behind McNamara's decisions it should be possible to develop a more complete and better integrated understanding of the factors which can lead or drive a Secretary to acquire new weapons and can prevent him from exercising more restraint.

The hypothesis which grows directly out of the recent literature on bureaucratic politics is that political pressures and constraints, which grew out of the opposition of the military services and their Congressional allies, sharply limited McNamara's latitude. Perhaps so. One does not have to adopt the extreme versions of the bureaucratic politics thesis to recognize that in a pluralist democracy where separate institutions share powers, even powerful elected officials and senior administrators normally cannot accomplish all they wish, especially alone.

But to adapt this as a working hypothesis does not justify accepting the bureaucratic politics thesis as a fully satisfactory explanation for McNamara's decisions. Although this thesis correctly draws attention to the political constraints, it erroneously portrays the President and the Secretary of Defense as being largely paralyzed in the face of bureaucratic pressures and resistance. In reality, however, both of these officials are powerful political figures and they are capable of manipulating the bureaucracies over which they preside in order to gain their objectives. The very fact that McNamara succeeded on a number of occasions is a clear indication that he was not totally constrained. And the fact that he had the legal authority to
make decisions unilaterally (subject to Presidential approval) without prior service approval means that, in a legalistic sense at least, he did not share power with the military services and did not have to court their approval. Legal authority matters for a great deal in executive branch decision-making; it is a prime determinant of power and influence. Since the legal authority to control the budget was concentrated in McNamara's office, by definition the decision-making process structurally was highly centralized and did not conform in its central features to a legislative model of policy making in which authority is distributed relatively equitably among diverse participants and decisions are reached through a process of bargaining and coalition-building. Indeed, McNamara's legal powers in this area probably were greater than in any other area of his managerial involvement. He did not have to prod the military services into making innovations, and thus to force changes in long established traditions and procedures which often are highly resistant to change. He simply had to block them from acquiring new weapons, and for this purpose he had all the authority he needed. Nor did Presidents Kennedy and Johnson need Congressional approval for decisions for restraint. They had the authority to refuse to submit military proposals to Congress; and even if Congress appropriated funds for weapons they had not requested, they had the authority to impound them.

Consequently, in examining the effect of political constraints on McNamara's decisions, it is important to pay appropriate attention to both McNamara's manipulative powers and the political pressures he faced, and to attempt to develop a balanced account which explains not only why he failed but also why he succeeded. It also is important to go beyond the simple explanation that McNamara shared power with the military services and therefore
was incapable of frustrating their ambitions or moving forward without their approval. To the extent that political factors played a role, they operated not as a structural constraint on McNamara's authority, but rather as a psychological constraint on his willingness to use that authority, on his willingness in some cases to accept the consequences and to pay the political opportunity costs for decisions which antagonized the military services and Congress. Consequently, it is essential to probe into McNamara's motivations, calculations, and perceptions and to attempt to determine how these political considerations drove his behavior, why they inhibited him in some cases but not in others, and under what circumstances they proved sufficiently compelling to override his preferences and his demonstrated willingness to frustrate his opponents.

Perhaps most important, it is essential not simply to accept the assumption that these political considerations were solely responsible for all of his decisions for expansion. Single factor explanations seldom account for the decisions of high government officials or the complex operations of large bureaucracies. Consequently, consideration should be given to the possibility that other factors also played an important role. First, an attempt should be made to determine what other forms of constraints McNamara faced and how they affected his behavior. The bureaucratic politics thesis, especially in its earliest formulations, tends to focus almost exclusively on the political dimensions of decision-making, and tends to downgrade the important role which strategic analysis, argumentation, and information play in shaping the patterns of bureaucratic alignment and decision-making in the Pentagon. This is a mistake. Defense decision-making often is an adversary, conflictual process; but it also is a rule-bound process, and the "play of ideas" and the patterns of argumentation among competitors do play an important role in structuring this
adversary process and determining its results. Consequently, in attempting to identify the sources of McNamara's decisions it is important to examine this analytical dimension of policy making and to attempt to determine both how McNamara manipulated it in order to gain his ends, and also how it might have constrained him from moving forward.

In addition, it also is important not to assume that McNamara's decisions for expansion always were taken unwillingly and were products of the internal constraints he faced. Perhaps he made some willingly, in response to his own conception of United States military requirements. To some degree, defense decision making for strategic forces during this period can be characterized as a conflictual process, or a bureaucratic "game" which took place under nearly zero-sum conditions. McNamara and the military services held quite different conceptions of how the strategic force posture should be structured, and they engaged in a good deal of struggle and maneuver for the purpose of gaining their objectives at each other's expense. But the decision-making process was not exclusively an exercise in bureaucratic struggle, and McNamara's purpose was not solely restricted to outmaneuvering the military services. Simultaneously, he was concerned about satisfying American military requirements and protecting the security of the United States. Despite his preference for fiscal prudence and arms control, perhaps he became convinced that some new strategic weapons were desirable commodities and should be acquired. If this, in fact, was the case, then it is important to identify the strategic incentives which led him to set aside his preferences for restraint and to speculate on what significance and meaning they might have for the Secretary of Defense's willingness to exercise restraint.
Both of these puzzles are investigated at some length in the following chapters. Part One, which includes chapters two and three, examines McNamara's successful efforts to block several weapons. It discusses those contributing factors which have been analyzed in detail elsewhere and are well known to students of his era: his centralization of power in OSD, PPBS, his use of the OSD staffs, and his ability to gain Presidential support and to hold the Congress at bay. Most important, however, it pays considerable attention to the bureaucratic strategies in the Pentagon which McNamara and his aides employed, many of which have not been analyzed in print before. Part Two, which includes chapters four and five, examines the determinants of his decisions to strengthen the strategic forces. It examines the role which political considerations, especially the fear of institutional polarization and confrontation, played in partially inhibiting him. But it also examines the analytical constraints he faced and assesses the effect they had on his campaign for restraint. Finally, it also focuses on the strategic incentives he operated under and analyzes the role they played in his decisions. These two parts set the stage for the concluding chapter, which attempts to draw generalizations from McNamara's experience for the broader issue of the Secretary's willingness and ability to exercise restraint, and to evaluate the bureaucratic strategies which McNamara employed.
1. "Restraint" in this context can be defined as a decision not to develop or deploy a strategic weapon system which has been advocated by its parent military service. Thus, a Secretary's success in exercising restraint can be reflected in decisions not to develop or deploy particular systems, or to reduce substantially their costs and performance characteristics, or to scale back service proposals for the number of weapons which are to be procured. The degree to which a Secretary of Defense has successfully exercised restraint is measured by his ability to resist service pressures and to shape the strategic force posture and its capabilities to conform to his conception of national security requirements. The degree to which a Secretary has failed to exercise restraint is measured by the degree to which the strategic forces which are developed and deployed exceed his personally-preferred baseline force posture. Success and failure, therefore, are relative to the Secretary's individual standards of judgment and preference. Furthermore, it is possible for a Secretary totally to fail or succeed, or to fall somewhere in between these two poles. The critical threshold for a Secretary's ability to exercise restraint is measured by his ability to block strategic weapons which grossly violate cost-effective standards or fundamentally threaten to destabilize the strategic balance.

2. Thus focus is drawn largely on aggregate force posture sizing and weapons requirements issues. Considerably less attention is paid to the problem of effectively managing the research and development process in order to reduce the costs of individual weapon systems.

3. The Vladivostok accords allow each side 2400 offensive launchers and 1320 MIRVed missiles. Within these limits each side is allowed to change the composition of its offensive forces among long range strategic bombers, ICBM missiles, and SLBM missiles. Each side also is allowed to modernize these forces and to introduce follow-on replacements for outdated weapons, subject to the SALT I and SALT II strictures which regulate the introduction of MIRVed warheads and large ICBMs. In addition, some strategic systems, such as cruise missiles, are not yet included in the SALT provisions.

4. Since the Secretary of Defense is the President's defense advisor and direct representative in the Pentagon, the extent to which the Secretary can control the weapons acquisition process largely determines the degree to which the President can control it.

5. I. 1-1 a,b.

6. Indeed, Kanter and Thorson, in their metatheory of the weapons acquisition process, a theory composed of several distinct propositions which purports to explain this process, do not even include the Secretary of Defense as being an important factor in affecting decisions and outputs. See Arnold Kanter and Stuart Thorson, "The Weapons Procurement Process: Choosing
Among Competing Theories" (Institute of Policy Studies, the University of Michigan, 1972). See also, James Kurth, "The Logic of American Weapons Procurement" (Public Policy, Summer, 1972.) It may be noted in passing that the radical left literature by no means is unanimous in its rejection of the Secretary of Defense as a major actor. For example, Richard Barnet and Franz Schurman both attribute what they deem to be American imperialism and bureaucratic militarism to the "national security managers" (an elite group of top officials, including the President and the Secretary of Defense) rather than pressures from the military bureaucracy or profit-seeking corporations. See Richard Barnet, The Roots of War, (Atheneum, New York, 1972) and Franz Schurman, The Logic of World Power, Pantheon, New York, 1974).

7. See, for example, Graham Allison, Essence of Decision: Explaining the Cuban Missile Crisis, (Boston, Little, Brown and Company, 1971); Morton Halperin Bureaucratic Politics and Foreign Policy, (Washington D.C., The Brookings Institution, 1974).

8. I. 1-2 a,b.


10. Halperin's book, Bureaucratic Politics and Foreign Policy, op. cit. provides a more balanced and attentive treatment of these factors than have most earlier formulations of the bureaucratic politics thesis, such as the treatments presented by Allison and Roger Hilsman.
PART ONE

RESTRAINT: AN ANALYSIS OF BUREAUCRATIC STRATEGY
CHAPTER II

McNAMARA AND THE SOURCES OF RESTRAINT

1. McNamara's Strategic Perspectives: Continuity and Change

Robert McNamara occupied the position of Secretary of Defense through seven turbulent and transitional years in United States national security policy and international affairs. During this period, the basic objectives of United States foreign policy remained largely unchanged, but significant alterations and adjustments were made in the specific features of American foreign policy and defense policy in order to accommodate the substantial changes which occurred in the international arena. McNamara's perspectives regarding strategic nuclear forces, arms control, and the strategic forces program budget reflected similar patterns of continuity and change. The essential ingredients of his strategic philosophy, especially his attitude toward the role of strategic nuclear forces in United States military strategy, remained relatively constant throughout his tenure. However, his attitudes toward immediate fiscal and strategic priorities, especially his willingness to authorize substantial funds for the acquisition of new weapon systems and the degree of priority he attached to the arms control objective, did undergo significant transformations in response to the changing problems and opportunities he faced.

When he assumed office in 1961, McNamara shared President Kennedy's concern that America's relatively unprotected missiles and bombers would become exceedingly vulnerable to nuclear surprise attack once the Soviet
Union had acquired a large number of ICBM missiles; and he agreed fully with Kennedy's sense of urgency about the need to take immediate remedial measures to strengthen America's nuclear deterrent. Accordingly, he played a critically important role in the major decisions that were taken between 1961 and 1963 to accelerate the procurement of offensive missiles and to embark upon a major strategic buildup. At the same time, however, he agreed fully with the Kennedy Administration's fundamental strategic philosophy that the United States no longer should place near exclusive rhetorical reliance on strategic nuclear forces and that it should place considerably more emphasis on general purpose forces for deterrence and defense. He believed that the strategy of massive retaliation no longer was a viable option now that the Soviet Union had acquired a long range nuclear arsenal of its own, and that strategic forces could play only an intrinsically limited role in protecting the security and vital interests of the United States and its allies. In particular, he believed that the strategic forces could not be relied upon to deter limited forms of aggression and that they were not efficacious or even usable instruments for supporting United States foreign policy objectives in contingencies short of very major provocations, such as direct nuclear attack on the United States or its allies. Accordingly, he believed that the United States should deploy a balanced force posture that included a strong conventional military capability as well as a large range of military options other than nuclear attack.

On a more basic level of strategic philosophy, McNamara profoundly disliked nuclear weapons. The book which he published shortly after leaving office, The Essence of Security, shows clearly that he had a broad
conception of the real meaning of security.\textsuperscript{5} He regarded the security problem of the United States to be more than purely or even primarily military in nature. Instead, he viewed it as being largely a product of the pattern of relationships which existed among nations. Although he regarded a strong military force posture to be an essential ingredient of security in light of the dangerous forces which lurked around the world, he did not necessarily believe that security solely was a product of military strength or that the continued accretion of military power and hardware automatically brought greater security to the United States. He was acutely aware of the major threat to human existence which the rapid unchecked development of nuclear weapons had brought during recent years, and he believed that the real security of the United States had declined a great deal ever since the United States and the Soviet Union had developed the nuclear capability to destroy each other's civilizations in a single blow.\textsuperscript{6} He regarded the task of preparing for nuclear war to be the gravest problem which he faced as Secretary of Defense because it involved the very survival of the United States. He hoped that if a nuclear war did occur, it could be terminated before it had reached the stage of spasmodic destruction of cities and societies. But he was profoundly skeptical that escalation could be controlled, and he feared that at some juncture a nuclear war would occur and that the damage inflicted on both sides would far exceed any rational assessment of the political issues at stake.\textsuperscript{7}

Above all, he placed highest priority on preventing and controlling nuclear war, and he especially wanted to extinguish the notion which was held by some elements of the military services and some conservative
Congressmen that nuclear war could be viewed as a conflict which could be won in some meaningful sense. Nuclear war for McNamara inevitably meant tragedy and devastating destruction, the very antithesis of security, and he regarded it to be an option which could be entertained only in the most dire circumstances. Indeed, his hostility to nuclear weapons went a good deal beyond his desire to prevent nuclear war. His basic preference in terms of military technology was for the kind of world that existed before Hiroshima; had the choice been his to make, he would have abolished nuclear weapons entirely. In private discussions with his closest personal advisors, he steadfastly rejected the argument that nuclear weapons on balance were desirable commodities because their massive destructive power created incentives for East and West to exercise moderation and to co-exist peacefully. He argued instead that he would rather accept the risk that another world-wide conventional war might occur if nuclear weapons could be abolished entirely and their enormous destructive power could be eliminated from the world scene.

Unfortunately the nuclear genie had been let out of the bottle and it could not be forced back by unilateral American action. Nor, given the antagonisms of the Cold War, did much opportunity exist for diplomacy to accomplish the task. Prospects for arms control by no means were hopeless, but the frustrating record of arms control negotiations during recent years showed clearly that partial agreements, not comprehensive disarmament, were the best that could be accomplished. Nuclear weapons were a reality to which accommodations had to be made. Accordingly, McNamara was faced with the problem of devising a strategy that assumed the presence of nuclear weapons and the need for deterrence and defense,
and provided a coherent theory of requirements for making important managerial choices about the size and composition of the strategic force posture.

When McNamara assumed office, apparently he initially sympathized with a strategy of minimal deterrence and he speculated that a small, invulnerable force posture composed of Polaris SLBM submarines would be adequate. But his mind was not made up, and he was willing to listen to advice from several quarters. During his first few weeks in office, considerable analysis and debate took place in the Pentagon over strategy alternatives and McNamara was bombarded with a broad spectrum of advice. At one extreme was the strategy of minimal deterrence, which called only for the capability to destroy Soviet cities. At the other extreme was the existing strategy of optimum mix, which called for the capability to destroy the entire Soviet urban and military target system in a single crushing blow.

Eventually McNamara became attracted to a middle ground position, the strategy of counterforce or flexible options, which reflected his own basic bias in favor of a broad range of military options. The counterforce strategy was based on the premise that the strategic forces should be fully capable of deterring a nuclear attack upon the United States and its allies. But it also assumed that deterrence could fail, and it explicitly argued that the strategic forces should be adequately sized and sufficiently designed to permit them to operate in a fashion that would enable the United States to pursue its national objectives during a nuclear war.

Unlike some other viewpoints, the counterforce strategy viewed
nuclear war as being essentially a political process in which each side would attempt to achieve conscious political objectives, which might well be limited in nature, and would tailor its use of strategic nuclear forces to the pursuit of those objectives. Consequently, it did not assume that strategic nuclear war automatically or necessarily would take the form of a massive exchange at the outset and that each side would attempt to destroy the other's urban and industrial fabric. A wide variety of less apocalyptic scenarios existed along the ladder of escalation short of a city-busting spasm of destruction, and the strategy assumed that a nuclear war might begin with a series of limited and tightly-controlled exchanges and might be accompanied by gradual escalation intermixed with political bargaining and attempts to gain military advantages. Each side might withhold attacks on enemy urban areas in order to provide the other side an incentive to avoid direct attacks on its cities, and might instead concentrate on attacking military forces and other targets of military or political value. Consequently, the possibility existed that cities could be spared entirely, at least at the outset of war, and that escalation could be controlled and a nuclear war could be terminated short of complete destruction.

The counterforce strategy envisioned three sets of objectives other than deterrence of nuclear attack. The first set of objectives included the control of escalation, the limitation of collateral damage, and the maintenance of intra-war deterrence. The second set of objectives envisaged the use of limited strategic strikes in a nuclear war for the purpose of exerting political pressures upon the Soviet Union, gaining military advantage or bargaining leverage, terminating the war on
acceptable conditions, and preserving American security in a post-war environment. The third objective was the limitation of damage inflicted upon the United States in a nuclear war. The strategy assumed that damage in a nuclear war inevitably would be quite high and that the best way to limit destruction was to control escalation and to terminate the fighting as soon as possible, especially before it had reached the stage of spasmodic city destruction. But it also assumed that fatalities, especially fatalities from radioactive fallout, could be reduced substantially by construction of a network of fallout shelters. It also assumed that damage could further be reduced by conducting second strike attacks against residual Soviet missiles, bombers, and stored nuclear weapons before they had been used against the United States.

The counterforce strategy called for a second strike offensive force posture that could absorb a surprise Soviet attack and then could launch against Soviet targets in a controlled and deliberate fashion either with a single crushing blow or in a limited, selective manner. It called for offensive forces which could destroy the Soviet urban-industrial target system, but it also called for sufficient forces to be capable of striking a large number of other targets, such as communications facilities, transportation networks, power grids, Soviet theater forces directed at West Europe, and Soviet strategic offensive and defensive forces, including hardened missile silos. It further called for offensive forces that would be adequately sized and designed to be capable of launching a broad range of different types of attacks, varying widely in size and composition. In particular, it called for the capability to withhold attacks from Soviet urban areas while simultaneously carrying
out large scale attacks against Soviet military targets and nonurban targets of value.\textsuperscript{21}

The counterforce strategy did not define precisely how large a force posture it required or when the strategic buildup could be terminated consistent with its requirements.\textsuperscript{22} Although conceptually it called for a force posture that would be sufficiently large to destroy Soviet cities and still provide flexible targeting options, such a force posture in theory could be very large or relatively modest in size, and could vary a great deal as a function of assumptions which made by force planners about the size of the Soviet target system, precise targeting requirements, and the nature of war plans.\textsuperscript{23} The counterforce strategy did not envisage any necessary one-to-one correspondence between the size of the United States forces and the size of the Soviet force posture.\textsuperscript{24} Although the strategy called upon the United States to possess at least a force posture sufficiently large to provide multiple options and to prohibit the Soviets from eroding the American deterrent capability or gaining significant bargaining advantages in a war, it did not necessarily demand that the American forces be larger in size than the Soviet forces or, for that matter, to be as large.\textsuperscript{25} Indeed, in theory the American force posture could be considerably smaller and still be adequate. In fact, the counterforce strategy was formulated during the late 1950's when many American military strategists operated on the assumption that the Soviet Union was ahead of the United States in ICBM technology and might well deploy a larger, more effective force during the coming decade.\textsuperscript{26} The concern of the analysts who formulated the counterforce strategy was not to generate a force posture that would be larger than the Soviet forces, but rather to determine the minimal
requirements for the force posture in a period of probable American numerical inferiority. As events turned out, the United States did acquire a significant numerical superiority in the early 1960's. But this state of affairs was less the result of a consciously foreordained plan embedded in the counterforce strategy and the minds of McNamara and his OSD colleagues than the unexpected failure of the Soviets promptly to deploy as large an ICBM force as the American intelligence community expected.

McNamara installed the counterforce strategy as the official strategic concept in 1961, and shortly thereafter public indications of his decision began to appear. Some of the strategy's logic and terminology was presented in the Defense Department's fiscal year 1963 posture statement published in early 1962. In May, 1962, McNamara presented the counterforce strategy to the NATO allies at the NATO defense ministers' meeting in Athens. He employed the strategy to stress the credibility of America's deterrent coverage of West Europe, and to argue against a European nuclear force or national nuclear forces. In June, McNamara delivered his famous address at Ann Arbor, where he endorsed the counterforce strategy and its associated "no cities" doctrine for fighting a nuclear war and controlling escalation. Over the next several months various Pentagon civilian officials and military officers repeated McNamara's endorsement. For example, newly-appointed JCS chairman General Maxwell Taylor approved the strategy in public testimony before Congress; while OSD aide Alain Enthoven in an early 1963 speech in California presented the strategy as a doctrinal approach for controlling escalation and tempering nuclear war with ethical, humanitarian concerns.

Once the counterforce strategy had been installed and the initial
procurement decisions had been made, McNamara, his aides, and other officials of the Kennedy Administration turned to the task of determining how large an offensive missile force posture should be programmed for the five year period and at what point the buildup of offensive missiles should be terminated. Despite the fact that the plans which were being made during this period were tentative and force posture ceilings later easily could be adjusted upwards to accommodate new requirements, the issue of the planned size of the offensive missile force posture was quite controversial and was resolved only after a great deal of debate and struggle between the Office of Secretary of Defense and the military services, especially the Air Force, and between the Pentagon and President Kennedy's national security policy and science advisors. McNamara had no interest in supporting the more ambitious plans of the Air Force and wanted to tie off the Minuteman buildup at a rather modest level consistent with the requirements of deterrence and the counterforce strategy. Although President Kennedy's advisors shared the sentiment to level off the buildup, a good deal of difference existed between their preferences and McNamara's attitude which reflected not only different assessments of force posture requirements but also basic disagreements over military strategy, especially the conflict between the counterforce strategy and the strategy of minimal deterrence.

In late 1961 President Kennedy, after having heard the full spectrum of opinions, acted upon McNamara's advice and authorized a force of 1000 Minutemen, with the option to procure 200 more if desirable, along with a force of 41 Polaris submarines. Accordingly, funds were provided in the fiscal year 1963 budget for the procurement of 200 Minutemen missiles.
beyond the 600 already funded, and the following year an additional 150 missiles were funded.

Although considerable controversy surrounds the precise set of motivations which gave rise to the decision to procure a Minuteman force of at least 1000 missiles, little doubt exists that McNamara personally felt confident that this force posture, along with the Polaris submarines, was sufficiently large to satisfy United States military requirements for strategic offensive missile forces. Although publicly McNamara continued to voice approval for a force of 1200 Minuteman missiles, and even adjusted the number upwards to 1300 in 1962 in order to provide compensation for the cancellation of Skybolt, information gathered from interviews, which corroborates the findings of other studies, suggests clearly that McNamara wanted to terminate the Minuteman buildup at the 1000 level. Accordingly, by early 1963 he had begun to initiate a series of bureaucratic maneuvers and to engage the Air Force in studies and debates which were designed to achieve this objective.37

Although McNamara's immediate concern as to the size of the Minuteman force, his long range objectives in terms of restraint extended far beyond the offensive missiles and encompassed the entire strategic force posture. Interviews with former personal advisors suggest clearly that during early-mid 1963 McNamara underwent a major transformation in his attitude toward continuing the strategic buildup and his willingness to authorize substantial funds for the acquisition of new strategic weapon systems.38 Whereas previously he had been willing to authorize funds for continuing the buildup and his decisions to exercise restraint in selected cases stemmed from specific objections to individual weapon systems, by this time
he had come to the conclusion that the strategic buildup in general should be tapered off and that the strategic forces program budget, which had soared upwards in recent years, should be reduced substantially and levelled off during the next few years. Accordingly, around mid 1963 he ceased to support a vigorously expansionist program and he began to exert substantial pressures for restraint.

McNamara's dramatic switching of gears appears to have been the product of a mixture of military, fiscal, and arms control considerations. From the standpoint of military requirements, McNamara evidently believed that the currently programmed force posture was fully adequate and that further massive investments in the strategic nuclear forces would not bring sufficiently large marginal returns to national security to justify large fiscal costs. McNamara realized, despite the charter that President Kennedy had given him to determine military requirements independently of cost constraints, that a limit existed on the amount of federal revenue that could be allocated to national defense. President Kennedy was determined that essential military requirements should not be sacrificed to some arbitrary budget ceiling or an inflexible determination to balance the federal budget. But President Kennedy was not prepared to authorize the huge force posture that would have been necessary to satisfy every plausible requirement, or to pay excessively large social opportunity costs for defense expenditures. Despite the growing American economy, federal revenues still were limited, and demands on the public sector were climbing steadily. A similar situation prevailed throughout President Johnson's administration. If anything, the fiscal constraints became tighter. Federal revenues grew substantially in this period, but the fiscal
demands of the Great Society and the Vietnam war created major pressures to stabilize the defense budget for baseline forces and to exercise considerable fiscal prudence. Accordingly, McNamara throughout his tenure realized that each scarce defense dollar would have to be stretched as far as possible, and that each weapon system proposal would have to be judged from a cost-oriented perspective. The problem he faced was not simply to determine military requirements and then to procure them at lowest cost, but rather to adjust requirements and cost constraints to each other and to allocate available fiscal resources to the areas of greatest marginal returns.

Despite these fiscal constraints, McNamara continued to be willing in principle to spend funds for the acquisition of additional strategic weapon systems and capabilities that promised to make cost-effective contributions to American military requirements. But he had no interest in deploying the large strategic force posture in the future that would have been required in order to contemplate winning a nuclear war in the traditional sense. He viewed mutual deterrence as an ineradicable, if harsh condition rather than as a problem to be eliminated; and he did not believe that the strategic superiority which the United States then enjoyed over the Soviet Union was politically meaningful. For example, he told his aides that during the Cuban missile crisis, in his estimation, America's strategic superiority, which then amounted almost to a disarming first strike capability, did not provide the United States any significant and exploitable political leverage or bargaining advantage. Although he continued for some time to pay public homage to superiority, largely for tactical political reasons, he personally believed this concept was
not particularly useful for sizing the strategic forces and that it would become even less useful in the future as the Soviets began to redress the strategic balance by deploying a larger, invulnerable ICBM force of their own. As a result, he was not prepared to spend the funds that would have been required to perpetuate massive strategic superiority indefinitely if the Soviet Union decided that it wanted to close the gap by bolstering its own forces.

Nor was McNamara by this time interested in the idea of spending the substantial sums required to deploy a large strategic defense force, especially a massive ABM system, designed to blunt a major Soviet attack in the future and to protect the United States from devastating damage in a nuclear war. During his first year in office, McNamara adopted a rather ambivalent attitude toward ballistic missile defense which reflected the many technical and strategic uncertainties which surrounded the debate over Nike-Zeus in 1961; and the Kennedy Administration decisions not to fund Nike-Zeus procurement in 1961 and 1962 reflected the technical deficiencies of Nike-Zeus technology, the greater promise of Nike-X, and pressing fiscal constraints created by the large investments which were being channeled elsewhere in the defense budget, rather than a firm strategic decision on ABM defense. But as time went by, McNamara's thinking evolved and matured as he became more familiar with the issues at stake and as systematic study and analysis shed greater light on the subject.

Although his opposition to deployment of a large Nike-X system did not crystallize and become publicly apparent until 1964, his public testimony and interviews with his former aides suggest clearly that at least as early
as mid-1963, McNamara had developed very serious reservations about the wisdom of investing in strategic defense on a large scale. To some degree, his reservations still were a product of his doubts about the technical feasibility of ballistic missile defense. The Nike-X system, with its phased array radar and Sprint missiles, however, appeared to be capable of resolving at least some of the more pressing technical problems, such as vulnerability to saturation attack and the problem of discriminating warheads from decoys. More important, however, his reservations also were a product of strategic considerations which, by this time, were playing an increasingly important role in his calculus. A large Nike X ABM system promised to cost several billion dollars for production, deployment, and operations and maintenance, and thus would either place a large burden on already strained federal revenues or consume a substantial portion of future defense budgets and thus inhibit investments in other high priority defense areas. Moreover, since no ABM system could completely protect the United States or prevent devastating damage, considerable doubt existed that the benefits of a large ABM system would be commensurate with the costs. Finally, there remained the possibility, which was recognized at this time, that the Soviet Union might react to the United States deployment by bolstering its own ICBM force posture, and as a result the United States would not have made a net gain in its security even after having made a very large investment in ABM defense.

Despite these reservations McNamara remained willing to continue providing ample funds for a full scale R&D effort, and his public testimony suggests that he recognized that a limited ABM system would provide useful
capabilities in some contingencies. But simultaneously, he wanted at least to delay a production decision until the strategic issues at stake could be investigated in more detail and, subject to the presentation of analyses which could resolve his doubts, he was prepared to fight hard against full scale deployment. And since he was not willing to deploy a large ABM system, little apparent reason existed for deploying a new, costly bomber air defense system designed to protect against Soviet bomber attack in the ICBM age. Accordingly, McNamara by this time was beginning to move to the position that the outdated and unnecessary components of the existing force should be retired, and only a very modest defense force should be retained in service.

McNamara apparently also wanted to phase out the bulk of the strategic bomber force. Unfortunately the public record does not provide a clear picture of McNamara's precise thinking on strategic bombers in 1963 or thereafter, and consequently it is not possible to make a definitive judgment. The fact that he personally was quite skeptical about the utility of strategic bombers is readily apparent. He often stated in public testimony his belief that offensive missiles could perform most of the functions of bombers at less cost; and he revealed his personal doubts that a large bomber force would be required in the future in light of the growing preponderance of missile forces in the force posture. Whether this means that he preferred to eliminate bombers entirely, however, is an open question. In his public statements he always stopped short of the bald proclamation that bombers no longer were required, and his later posture statements suggest a growing willingness to allow that a small force of strategic bombers could play a useful role in American strategy.
Moreover, the steady stream of decisions he took to modify the B-52 bombers, improve them, and extend their life spans suggests at face value that he may have seen some strategic purpose in maintaining bombers in active service. At the same time, however, senior Air Force officials believed that McNamara was scheming to eliminate bombers entirely, and this assessment was shared by some of his closest aides in OSD. They believe that McNamara's failure to act more decisively in reducing the bomber force largely was a product of his political adjustments to Air Force and Congressional opposition and that the steps he took to strengthen the bomber force primarily were products of his bureaucratic strategy to block a new bomber. They believe that his plan was to let the B-52 force decline by attrition and obsolescence. Even so, if his posture statements are to be taken at face value, perhaps McNamara still might have maintained a small bomber force in existence. Regardless of his ultimate ambitions, however, little doubt exists that McNamara throughout this period did not believe that a sufficient requirement existed to justify the spending of very large amounts of funds during the foreseeable future for the continued maintenance of a large bomber force and especially for the acquisition of a new bomber.

McNamara's desire to taper off the strategic buildup stemmed not only from a purely cost-effective military calculus, but also from broader strategic judgments regarding arms control and United States-Soviet political relations and military competition. Although previously McNamara had been willing to sacrifice the arms control objective as a price for engaging in the strategic buildup, by mid-1963 he had shifted the objective of arms control to a position of much higher priority in his strategic calculus.
and he was willing to trade off the pursuit of military objectives for progress in the arms control arena. This was a judgment which was shared by President Kennedy as well as other senior officials in his Administration. They, along with McNamara, believed that America's deterrent capability was now properly safeguarded and that now the security of the United States could be enhanced at least as much by strategic arms control agreements and limitations as by the continued accretion of nuclear weaponry. The series of crisis confrontations with the Soviet Union, especially the traumatic Cuban missile crisis, had convinced Kennedy Administration officials of the paramount necessity for tempering cold war antagonisms in order to preserve international stability and prevent nuclear war. They hoped that negotiations would produce agreements that might blunt the competition in strategic weaponry which they believed was bringing both sides no greater security at ever-increasing costs and dangers, and was contributing to the tense political relations between the two sides.

Although substantial disagreements of opinion existed throughout the Administration about the prospects for conducting effective negotiations with the Soviet Union, McNamara evidently was relatively hopeful. The Berlin crises, the Cuban crisis, and the growing conflict in Southeast Asia had left McNamara with a rather skeptical, distrustful view of the Soviet Union's political ambitions and apparent lack of willingness to adhere to respectable standards of international conduct. But he sensed also that the United States and the Soviet Union, despite their rivalry, shared some common interests and possibly could engage in some limited forms of cooperation. In particular, each seemed to perceive an interest
in preventing nuclear war and tempering the arms race and this common belief appeared to create the basic foundation of shared interests which was required for negotiating productively. 68

Moreover, McNamara had a somewhat benign view regarding Soviet intentions, objectives, and strategy for strategic nuclear forces. Although he believed that the Soviet Union was determined to preserve the credibility of its nuclear deterrent, he did not believe that the Soviets seriously aspired to or were capable of achieving any meaningful form of superiority, especially the kind of superiority that would threaten the United States deterrent force or provide Moscow significant political leverage and bargaining advantages around the globe. 69 Nor did he believe that a close connection existed between Soviet policy for strategic nuclear forces and its foreign policy objectives and behavior. 70

Although he was concerned about Soviet intentions when he first entered office, he evidently began to change his mind when he discovered that the missile gap did not exist, at least at the moment, and that the Soviets did not appear to be rushing forward to deploy a large ICBM missile force. 71 From what can be discerned on the basis of public documents and interviews, by mid-1963 McNamara evidently had decided that the Soviet Union for the moment was willing to content itself with a relatively minimal ICBM force posture. 72 This was a judgment which was shared by numerous observers, largely because the Soviets during the preceding two years had moved ahead only gradually in deploying ICBMs. 73 McNamara apparently was less certain about the future, and he evidently realized that the Soviets might change their minds and accelerate ICBM procurement. 74
He also evidently feared that the Soviets, who seemed to have a fetish about strategic defense, might deploy a very large ABM force once they had developed ballistic missile defense technology to some minimal level of acceptability. This prospect was especially troublesome for he believed that such an effort, however ill-conceived and ill-fated, could only substantially accelerate the arms race and weaken prospects for arms control.

During his later years, he continued to maintain the essential features of this viewpoint about the Soviet Union, even though ICBM buildup initiated in 1965 led him to change his mind that the Soviet Union was willing to remain in second class status in ICBMs. He publicly ascribed the Soviet buildup to an attempt to shore up their deterrent in response to the previous American buildup and at most to achieve some form of rough strategic parity. Although he was worried during this time that the Soviets still failed to grasp strategic realities, or had misperceived American intentions and were overreacting, he apparently did not believe that the Soviet Union was striving for some form of measurable superiority or that the strategic buildup might presage a more bellicose and threatening Soviet foreign policy profile.

Although McNamara publicly began to dwell on the theme that the Soviet Union was misinterpreting American intentions and overreacting only later in his tenure, this consideration was affecting his private thinking as early as 1963. He had been willing to accept the supposedly deleterious consequences for arms control of the 1961-63 buildup, but he worried that a major continuation of the buildup would trigger overcompensating Soviet counteractions and would fuel what commonly was regarded to be the "arms race." He evidently figured that since the Soviet Union apparently was
the more passive partner in this arms race, restraint by the United States might help induce the Soviets to reciprocate, or at least would remove what might be a major provocation. This clearly was a contentious subject, and McNamara apparently was well aware of the uncertainties; but at the moment the United States was sufficiently far ahead of the Soviet Union to safely contemplate restraint and to determine if mutual restraint and productive negotiations were possible.

McNamara hoped that by opening a strategic dialogue with the Soviet Union he might be able to convince Soviet political leaders and military officers of the wisdom of restraint and moderation. He apparently regarded himself as being in a teacher-pupil relationship with the Soviets. He hoped that by patiently instructing his Soviet pupils in strategic logic, he might educate them and convince them to behave decently with proper regard for strategic realities. McNamara shaped a good number of his public statements particularly with the Soviet audience in mind during 1963 and thereafter. Indeed, his civilian aides often were not sure even in private conversations whether McNamara was talking to them or to the Soviets. But he realized that the public forum was not conducive to sufficiently discriminating discourse. Accordingly, he played a significant role in establishing private, high level talks that were initiated with the Soviets in late 1963 regarding defense budget freezes and mutual example; and he looked forward to the day when formal strategic arms control negotiations could begin.

The checkered record of United States-Soviet diplomatic relations in recent years provided grounds neither for blind optimism nor for complete
gloom, and McNamara drew hope from the fact that the Soviets during 1963 apparently had begun to develop a serious interest in tempering the cold war and especially in moving forward on strategic arms control. Indeed, prospects had so improved since the Cuban missile crisis nadir that by mid-1963 the Kennedy Administration had come to the conclusion that detente in American-Soviet relations was a realistic objective and that arms control should be placed as the centerpiece of its growing interest in improved relations. This belief was reflected in President Kennedy's important American University address that spring.

The Kennedy Administration's first priority was a treaty banning or restricting the testing of nuclear weapons. The Soviet decision to resume atmospheric tests on August 30, 1961, following the collapse of the Geneva talks, had been a deep and bitter disappointment to President Kennedy. He believed that a test ban was essential for halting the arms race, fostering a climate of detente, and discouraging nuclear proliferation. Although the Soviet decision virtually forced Kennedy to resume American atmospheric tests in the spring, 1962, he and Prime Minister Harold MacMillan of Great Britain kept the idea of a treaty alive in the hope that progress could be made in the future.

Kennedy preferred a comprehensive test ban and was willing to compromise with the Soviets on the issue of on-site inspections; but in the absence of a comprehensive agreement, he was willing to accept a limited ban as a second best alternative. The Soviets initially were not forthcoming, but Khrushchev eventually agreed in December, 1962, to re-open technical discussions. Negotiations resumed the following January, and in July, Averell Harriman and a team of American officials
flew to Moscow and there hammered out an agreement with the Soviet government on a limited test ban treaty. The Limited Test Ban Treaty, which eventually was signed by over 100 nations, reflected an intense personal commitment by President Kennedy. To offer the treaty to Congress in the face of considerable domestic criticism by conservatives required personal courage, especially from a President who enjoyed a small margin of support in Congress. But President Kennedy regarded the Congressional debate as the most critical struggle he had yet faced on Capitol Hill, and he was willing to take risks and expend substantial political capital to win passage. The treaty was greeted with skepticism by numerous conservative Senators, and was opposed publicly by several scientists and retired senior military officers who enjoyed considerable prestige. Fortunately, however, McNamara, who evidently had personal doubts about the domestic acceptability of the treaty, supported it fully and battled vigorously on behalf of the President. After considerable debate, he finally managed to convince the Joint Chiefs of Staff, who had serious reservations and were reluctant, to support it as long as adequate safeguards were provided. The support of the Joint Chiefs partially reduced Congressional opposition and on September 24, the Senate passed the treaty by an 80-19 vote, thereby providing ratification by 14 votes more than the required two-thirds majority.

President Kennedy and other high administration officials were elated, and they hoped that the treaty would pave the way for further rapid progress in 1964 and thereafter, and that follow-on negotiations might produce agreements that would blunt the strategic arms competition. This sentiment
by no means was shared by the conservative opposition, which was fully prepared to fight against diplomatic steps which it believed would endanger United States security. But the passage of the Limited Test Ban Treaty suggested to the White House that it had overestimated the strength of the conservative opposition and that the American public would support further diplomatic efforts. Although he was initially fearful of adverse domestic consequences, President Kennedy now realized that the American public would support further diplomatic consequences. President Kennedy now realized that the American public was prepared to support a policy of detente and that further diplomatic efforts to relax tensions and promote arms control, if successful, would generate domestic support rather than weaken his position. Secretary McNamara, who dealt with a more narrow constituency, evidently was less optimistic and more cautious; but he was perfectly willing to support whatever steps President Kennedy made in this direction, and President Kennedy was willing to lead the way.

President Kennedy was assassinated before his plans could bear fruit or even be brought into definite form. But his successor, President Lyndon Johnson, although less preoccupied with foreign affairs, shared Kennedy's objectives and wanted to continue the momentum the late President had established. Although Johnson placed highest priority on domestic policy, from his earliest days in office, he wanted to be remembered as a President who had fostered world peace, and he sensed that international conditions were ripe for making progress. Moreover, he knew that international detente was required in order to permit him to focus on domestic policy and to promote liberal changes. As a President without an electoral mandate, he was sensitive to the Republican and the conservative
opposition, which clearly was preparing in early 1964 to launch attacks on his foreign policy, and thus he was prone to proceeding cautiously at first. 100 But he was skilled at reading domestic political trends, especially in Congress, and he was willing to act decisively in order to capitalize on opportunities which presented themselves. Like his predecessor, he quite early had come to the conclusion that a policy of wise and careful detente and arms control could help bolster his domestic support and weaken the conservative opposition. 101

Indeed, Johnson, in one of his first foreign policy addresses, proclaimed with characteristic ebullience that the cold war had come to an end and that the United States and the Soviet Union were entering into a period of more harmonious relations. Although his rhetoric was more visionary than realistic, and perhaps inexcusably premature in light of what came later, even a sober reading of American-Soviet diplomacy then did provide grounds for cautious optimism. Unfortunately, however, the momentum in early 1964 which appeared to be paving the way for rapid progress on strategic arms control shortly thereafter dissipated and was not reestablished for almost four years.

During early 1964, the United States and Soviet governments both endorsed the idea of reductions of military forces by mutual example, and some token steps were taken. 102 This idea, however, obviously had only limited potential, and formal negotiations clearly were required. Accordingly, the United States offered in January at the opening session of the Eighteen-Nation Disarmament Committee (ENDC) negotiations, as part of a four-part arms control package, a proposal to freeze the nuclear arsenals on each side at mutually agreed-upon current levels and to
prohibit the production of significantly important new strategic delivery vehicles.\textsuperscript{103} The freeze proposal was taken seriously by the American government.\textsuperscript{104} It was a product of direct prodding by President Johnson for reasonable arms control ideas as well as a considerable amount of analytical work by the Pentagon, State Department and ACDA bureaucracies.\textsuperscript{105} Despite its one-sided nature, (it would have permanently perpetuated American superiority in total numbers of launchers), it was not intended to be a totally self-serving position; and American officials, while realizing its asymmetric terms, believed that it was sufficiently forth-coming to stimulate the Soviets into thinking seriously about the subject.\textsuperscript{106} They hoped that the Soviets would look beyond the specifics, properly perceive the real intent, and respond by making a reasonable offer of their own.\textsuperscript{107} To their surprise and indignation, however, the Soviets reacted quite negatively not only to the freeze proposal but also virtually to the entire package of western arms control proposals. As a result, the ENDC negotiations bogged down into stalemate, and the two sessions that year achieved little on strategic arms control.\textsuperscript{108}

Hopes burn eternal, of course, and United States arms control advocates continued to have faith that sometime in the future a better opportunity might surface. Indeed, whatever its lack of international impact, the freeze proposal was important internally because it started the United States government down the path of thinking more seriously about the subject and formulating specific ideas about negotiating approaches.\textsuperscript{109} But for the moment, the issue had been sidetracked and it was not resurrected until almost four years later. The fact that the Soviet Union was so decisively inferior to the United States in strategic
forces probably prohibited the Soviet government from entering into negotiations, at least under conditions acceptable to the United States; and whatever chance that might have existed before 1967 to open negotiations was buried in the hostilities of the Vietnam War. Moreover, the Soviet Union evidently was unwilling to move forward on negotiations for the nonproliferation treaty and strategic arms control negotiations with the United States until the idea of a Multilateral Force had been dropped and West Germany had been barred from gaining control over long range nuclear weapons.

The demise of prospects for immediate strategic arms control negotiations deprived McNamara of support from the diplomatic arena on behalf of his efforts to level off the strategic buildup. It meant that if the United States was going to exercise restraint, it would have to do so unilaterally, without cooperation or promises of reciprocity by the Soviet Union. This did not demoralize McNamara or make him less determined to halt the buildup. But it certainly did not make his task any easier. The military services, especially the Army and the Air Force (the Navy was less of a problem for McNamara in this regard), hardly were enthusiastic about the idea of self-restraint, or sympathetic with the modest baseline force posture McNamara had in mind. Moreover the bitter struggles during the Kennedy Administration over defense decision making and several substantive issues had left a large residue of distrust and anger with McNamara among senior military officers. At the time the services still enjoyed very substantial prestige on Capitol Hill and elsewhere and, in light of the Administration's reliance on their professional expertise and its reluctance totally to ignore their advice or to provoke them too far,
they had significant political levers at their disposal for exerting influence on McNamara and Johnson as well as on Capitol Hill.

Collectively, the military services harbored plans for more Minuteman missiles, a new strategic bomber, a large scale ABM system, a new bomber defense force, a substantial investment in antisubmarine warfare forces, and a host of qualitative improvements in the forces-in-being. Despite the fact that the Johnson Administration was sending out clear signals of its intent to end the strategic buildup, the issue was far from settled as far as the military services were concerned. McNamara was a man who favored a strong defense posture and, whatever his other qualities, he would listen to reason and therefore could be persuaded. Indeed, in early 1964, no final decisions had yet been taken on the size of the defensive and offensive force posture. The issue formally still was open, and Pentagon force planners, even in the OSD, were proceeding on the assumption that major new investments might be forthcoming.

Beyond Secretary McNamara there was President Johnson, who had a mind of his own and might be persuaded to sanction new investments, even over the objections of the Secretary of Defense. And if Johnson did not prove amenable to persuasion through strategic reasoning, the possibility always existed that he might be more responsive to political pressures. Like any occupant of the White House, Johnson made adjustments to domestic realities and was prone to making compromises when necessary to advance his overall cause. The military services could not exert direct, coercive pressures on the President; but they had allies in Congress—including powerful Southern Democrats—who sat on the critical House and Senate Authorization and Appropriation Committees that dealt with the defense budget. They had
some leverage over President Johnson, and they were willing to lend their help.

2. Bureaucratic Power, Constraints, and Strategy

McNamara thus faced a tough struggle with a determined and persistent opposition. And his task was not made easier by the fact that, apart from the President, few other allies existed and were capable of lending significant support to his cause. Within the executive branch, the State Department, despite its cautious endorsement of arms control and detente, was not actively involved in the details of defense budget issues. Nor was the Arms Control Agency legally empowered or analytically capable of playing a significantly helpful role. Indeed, although McNamara personally favored the institutionalization of forces for restraint in the government, he had little respect for ACDA and preferred to keep it well out of the defense decision-making arena. Although sentiment did exist in Congress for fiscal prudence, it did not translate itself on a consistent basis into a firm determination to halt the strategic buildup. Instead, many of the conservative Republicans and Democrats who dominated the key committees basically supported the specific strategic force posture proposals of the military services. And, of course, few domestic groups at the time were lobbying for restraint, much less counterbalancing the powerful lobbying power of the aerospace corporations and the armed forces associations.

Nevertheless, McNamara's task certainly was not hopeless, for he occupied a position of considerable authority and he now was at the height of his powers. Political power in a governmental bureaucracy is a thorny concept to define; and as an empirical phenomenon, it is difficult to
measure. If political power in this context is defined in terms of legal authority to make decisions regarding the size and composition of the defense budget, by definition power was concentrated exclusively in the hands of Secretary McNamara and his Office of Secretary of Defense. However, if political power is defined as the actual ability to exert influence over specific budget and force posture decisions, especially in the face of significant opposition, then it was dispersed during this period among a large number of officials within the Office of Secretary of Defense, the Joint Chiefs of Staff, and the military departments.

Even by this latter measure, however, little doubt exists that McNamara was the dominant figure in the Pentagon's budget formation process. His friends and allies certainly saw him in this light. More important, his enemies viewed him in a similar vein; their problem was that McNamara had too much power for their tastes. Despite the fact that the military services generally were benefitting from the larger budgets which were being funded than had been the case under President Eisenhower, because of McNamara's ever-looming presence they were forced on some occasions to make downward adjustments in specific aspirations and to reconcile themselves to the presence of a Secretary of Defense who was capable of frustrating their ambitions. Indeed, what stood out as a dominant feature of the attitudes of senior military officers who were interviewed on this subject was the degree to which they believed that they lacked power over McNamara and were unable to persuade President Johnson to overrule McNamara's decisions.115

The Pentagon's budget formation process does not appear to have conformed tightly to the administrative PPBS model which postulates that
the Secretary of Defense readily is capable of exerting total managerial control over the budget and that force posture decisions are made exclusively through a centrally-managed process of systematic cost-effective analysis. The installation of Planning-Programming-Budgeting and the utilization of cost-effective analysis to examine policy alternatives did not produce a complete subordination of the clash of partisan organizational interests to rational inquiry and an overriding or Presidentially-imposed conception of national interests. The military services often continued to determine their recommendations and proposals on the basis of pragmatic organizational interests or strategic perspectives and priorities which differed markedly from those of McNamara and the Kennedy-Johnson Administrations. A good deal of struggle and political conflict took place among the military services and the Office of Secretary of Defense in which all sides engaged in a process of adversary competition. These actors regularly employed the full range of political instruments at their disposal for influencing decisions, and policy choices apparently often were made through a complex process of pulling and hauling in which accommodation and compromise played an important role along with deliberate inquiry.

But this is not to say that the budget formation process conformed neatly and regularly to the so-called bureaucratic politics thesis in all of its central features. Its major hypotheses are that conflict among competing interests is the political foundation of policy making, that political power more or less is shared equally among participants, that decisions are made through a process of reciprocal bargaining and logrolling in which rational inquiry plays a minimal role, and that decisional results
normally reflect no coherent policy viewpoint or the perspectives of any single actor. The first and last hypotheses probably are partially valid, but the applicability of the middle two hypotheses certainly is open to question. Interestingly, although no former Pentagon official interviewed on this subject contended that the budget process exclusively was one of rational inquiry, few expressed much sympathy for the major arguments of the bureaucratic politics model.

Not enough information is available to make a firm choice regarding the extent to which the process conformed to any single model. Most probably each of the various models which exist illuminates some aspects and obscures others, and therefore can serve only as a partial explanatory tool. If the process is to be discussed in terms of a single framework, perhaps it best can be characterized, as was done by several former officials who were interviewed, as a structurally centralized but adversary process of multiple advocacy and mutual adjustment in which McNamara was the central actor, and policy analysis, which was used as both a political tool and an instrument of deliberative inquiry, played a quite important role in establishing ground rules for constructive debate and affecting the patterns of political alignment and decision making.123

Regardless of which model is most appropriate, however, a central feature of this process is that McNamara by no means was at the mercy of the military services. To be sure, the military services did have important political instruments at their disposal and they were capable of exerting a good deal of leverage. But McNamara was not limited simply to striking quite unsatisfactory bargains with them. By virtue of the National Security Act, and its subsequent amendments, he had the legal
authority to make decisions regarding the size and composition of the defense budget and to turn aside the recommendations of the military services and reject their appeals. His substantial personal power combined with the strong support he received from President Kennedy and Johnson, (which he carefully cultivated), gave him the political base he needed to exercise that authority at considerable length and to contemplate taking decisive steps in the face of strong opposition by the military services and Congress. His ability to defend his decisions in Congressional testimony enabled him not only to reduce Congressional interference to minimal levels but also to win the respect and admiration, at least in the early years, from many Congressmen who disagreed sharply with his policy judgments.

Within the Pentagon, McNamara's centralization of power within the Office of Secretary of Defense and his establishment of the PPBS system provided the mechanisms he needed for exerting managerial control over the budget and linking budget decisions to strategic plans through program analysis. The details of the PPBS process and its rationale have been described elsewhere and need not be repeated here apart from mentioning the critical role which the Five Year Defense Program (FYDP) and the Draft Presidential Memoranda (DPM) played in his effort to plan coherently and to produce a balanced force posture. Prior to his tenure, the Secretary of Defense received a fixed budget ceiling from the President, and then allocated fixed percentages among the services. No central and unified plan existed for producing an integrated effort and evaluating individual service proposals. But under McNamara, the DPM, which were drafted entirely by the Office of Secretary of Defense, were employed
to analyze program force structure alternatives and to hammer out decisions, while the FYDP provided a five year projection of force structure which made long range planning possible. 128

Equally as important, McNamara was determined to be an active manager and decision-maker, and not simply an arbiter of competing military service requests. He was a logical and deductive thinker who was not inclined temperamentally or philosophically to living in an organizational atmosphere in which alternative intellectual structures clashed with each other and their competing tensions never were resolved in a final, conclusive way. 129 Since he believed that decisions for the size and composition of the strategic force posture should flow logically from coherent strategic concepts, he was opposed to addressing problems in the rather incremental, disjunctive fashion that often characterizes administrative decision-making. He felt strongly that force posture decisions should stem from something more intellectually coherent than uncoordinated service plans, or political bargains fashioned among the military services, or arbitrary budget ceilings, or an impulse to acquire whatever new technologies happened to become available. Since he doubted the managerial competence of the services and their ability to cooperate effectively, he believed that, if left to their own devices, they would not necessarily make the weapon system decisions that would produce a balanced force posture in conformity with national security requirements and cost-effective standards. 130

He believed that the Secretary of Defense should assume responsibility for producing a coherent, properly-coordinated defense budget, and that he should employ his own strategic perspectives as well as advice from civilian aides to formulate independent judgments about military
recommendations. Accordingly, he regularly became involved in the details of the strategic forces program budget, and he paid especially close attention to proposals for the acquisition of costly weapon systems which had important implications for American military and arms control objectives.

2a. Organizational Resources

McNamara's OSD staffs, especially the Office of Systems Analysis and the Office of the Defense Director for Research and Engineering (DDR&E), provided the information and analytical expertise that were required to probe deeply into the force posture recommendations of the military services and to formulate independent judgments. The Office of Systems Analysis, headed by Alain Enthoven, of course, was McNamara's primary ally and servant in his managerial efforts. Its accomplishments and failures have been analyzed in detail elsewhere and do not bear repeating here, but the central features of its role and performance should briefly be mentioned.

Systems Analysis began operation in 1961 as a small staff of professionals within the Comptroller's Office, but it quickly grew in size and importance until by 1965 it was staffed by well over 100 professionals who had become intimately involved in a broad range of budgetary and force posture issues. That year Enthoven was appointed to be an Assistant Secretary of Defense and the office acquired an independent stature. Its primary source of power was its impressive analytical ability, its close relationship with McNamara, its responsibility for drafting all but two of the critical DPMs, and its ability to block weapon systems by raising
challenges on the basis of cost and effectiveness. Although later Secretary Melvin Laird reduced its functions largely to reviewing JCS and service force posture recommendations, under McNamara it played a more active and assertive role, and often initiated its own studies and analyses of specific force structure and strategy alternatives. Acting in this capacity, it played a critically important role in McNamara's campaign for restraint by reviewing the force posture recommendations of the military services and challenging their arguments and analyses.

The Systems Analysis officials were natural allies in McNamara's campaign. In light of their managerial responsibilities, they particularly were concerned about controlling costs and evaluating weapon systems on the basis of aggregate effectiveness and cost. They placed special emphasis on investing resources on the basis of marginal productivity and on blocking the acquisition of weapon systems which did not promise to provide benefits commensurate with costs. Although the strategic perspectives of the Systems Analysis officials shifted somewhat over time and varied from person to person, basically they shared McNamara's attitudes regarding nuclear warfare, strategic forces, and the need to terminate the strategic buildup short of a major damage limiting capability and the collective demands of the military services.

The performance of Systems Analysis was somewhat uneven on the whole range of defense budget issues; but in the strategic forces program budget, its performance typically was quite high. Partially this was because the analysts who dealt with strategic forces were generally regarded to be intelligent and able. In addition, their formal training and skills in the academic disciplines of economics and managerial decision making were
well-suited for dealing with strategic forces issues, and their lack of military experience was not a major liability. In contrast to other areas the strategic force issues were thought to be relatively manageable and susceptible to mathematical modelling and quantitative analysis. And the complete lack of historical cases of nuclear warfare further simplified the problem and denied the military services opportunity to dispute their analyses and conclusions with seasoned professional judgments or hard historical data.

The DDR&E staff played a secondary but by no means insignificant role in aiding McNamara's cause. By virtue of its responsibility to manage the Defense Department's research and development effort, it regularly became involved in the task of monitoring and evaluating the progress of strategic weapon systems as they passed through the critical early stages of development. The DDR&E staff had a large reservoir of technical expertise and bureaucratic experience, and had extensive contacts with the military service staffs in the Pentagon as well as throughout the various components of their development commands. Not only did DDR&E officials have the ability to communicate directly with all elements of the development commands but they also had a number of levers at their disposal, as a result of their managerial authority, to exert pressure on the military services or offer inducements to make alterations in the specific technological components, design features, and performance characteristics of weapon systems.

Ideologically, the DDR&E staff was not predisposed to levelling off the strategic buildup; although internal differences of opinion existed, the predominant sentiment was decidedly in favor of strategic superiority,
a vigorous research and development effort to push forward the state-of-art technology as rapidly as possible, and the incorporation of new technologies into the force posture as soon as they became available. Despite its less cost-conscious orientation, however, the DDR&E staff was not prepared to support weapon systems which were not technically sound and clearly violated cost-effective standards. It was prepared to intervene in the R&D process in order to block the development of technically-deficient weapon systems or to make appropriate changes in design components. Acting in this role, the DDR&E staff provided McNamara valuable technical advice and often aided his campaign for restraint by raising technical objections to the weapon system proposals of the military services. For example, during the Kennedy Administration the DDR&E staff had played a critically-important role in blocking deployment of the Nike-Zeus ABM and the cancellation of that system in favor of the Nike-X. Later, during McNamara's latter years, it raised a host of technical objections to other systems, such as the AMSA strategic bomber and the F-12 interceptor.

2b. Political and Analytical Constraints

Despite his power and authority, McNamara, like any other Secretary of Defense, labored under significant political constraints which stemmed primarily from the pluralistic institutional structure of the federal government. Since his political capital largely was dependent upon Presidential support, he could afford to go only as far as the mandate he received from the President permitted. In addition, his own position never was permanently secure and always was contingent upon his ability to maintain a solid reputation for sound choices and effective performance
and to remain a political asset to the President. 144

There also was the problem of the negative political consequences of his decisions. Since McNamara needed productive relations with the military services to attain many other managerial objectives, a strong incentive existed to maintain a minimal level of institutional harmony within the Pentagon. 145 The danger existed that by fostering too much resentment and frustration among the military services, he might provoke a major polarization of relations that would have significant adverse effects on efficient operations within the Pentagon. 146 Similarly, the President had to maintain productive relations with Congress, and accordingly a strong incentive existed for McNamara to refrain from actions and decisions which might expose the President to political attack from the Republican Party or might threaten to provoke a deterioration in executive-congressional relations that would badly weaken his position or undermine his effectiveness. 147

Although these political constraints and considerations by no means prevented him from contemplating standing firm on several high priority weapon systems, such as the B-70, they did have a tempering effect on his willingness to exercise his authority. They led him to be selective and discriminating, and to choose his areas for involvement and to make controversial decisions in light of what realistically he could hope to accomplish, the political price he was willing to pay, and the political consequences the President was willing to accept. 148 In particular, the limited nature of his political capital and his tendency to adjust to Presidential priorities and to be concerned with preserving institutional stability impeded his willingness to provoke significant opposition simultaneously on several different controversial issues. 149 And these considerations also made him reluctant, although not necessarily unwilling, to make
decisions in isolation and to reject proposals which enjoyed the unanimous support of the military services and the Joint Chiefs of Staff, as well as substantial support in Congress. 150

McNamara also operated under significant "analytical" constraints which created more subtle, but still imposing barriers and permitted him to move forward only under special circumstances. He always needed, and always wanted, defensible reasons for rejecting the proposals of the military services, reasons which stemmed directly from in-depth analyses of national objectives, military requirements, and cost-effectiveness. Former OSD officials who were interviewed on this subject suggest that McNamara preferred to have reasons which were sufficiently compelling and obvious to be able to persuade at least disinterested senior military officers to acquiesce in his decisions. But at the very least, his reasons had to be sufficiently solid to be immune from refutation and to be able to withstand vigorous challenges by the military services and the Congress.

Like any Secretary of Defense, McNamara could not afford to expose himself to serious charges that by exercising restraint he was being negligent with the nation's security; since he was Secretary of Defense, he had a special responsibility to place highest priority on safeguarding national security and therefore he had to be able to argue persuasively that the weapon systems he was not acquiring were not needed. Nor could he risk giving the appearance of rejecting sound military advice or of acting arbitrarily when important weapon systems and the vital interests of the military services, Congress, and the various industrial corporations were at stake.
Nor apparently could he afford to make decisions on the basis of personal judgments that were not grounded solidly in extensive analysis and evaluation within the Pentagon and had not been reviewed thoroughly by the military services. Perhaps his personal beliefs alone would have been sufficiently good reason for justifying restraint in the eyes of President Johnson and Pentagon aides who shared his sympathies. But they certainly would not have been accepted at face value by the military services. Indeed, the trial balloons on behalf of restraint and contraction which he sent up in late 1963-early 1964 were pounced upon and attacked severely by his critics to whom they were a warning signal and a clarion call to political battle. McNamara was quite reluctant even to reveal his personal opinions, much less publicly to employ them as the basis for his decisions; and he sought his arguments and justifications from the Pentagon's analytical process. He tended to keep his personal views to himself, and to speak candidly only to his closest personal advisors who he could trust, and only then in the strictest confidence. With others he was quite reticent about revealing his basic sentiments about the strategic forces and arms control, or even revealing his personal conclusions about the acquisition of specific weapon systems before analysis had been completed, decisions made, and Presidential approval authorized.

To some degree, McNamara thus was a prisoner of the PPBS analytical force planning process and had to respond in conformity with its rules and to live and die by its results. Just as the burden of proof for expansion was on the military services, so was the burden of proof for restraint on him. This constraint placed McNamara in a rather disadvantageous position. In recent years the military services had become somewhat more skilled.
not only in cost effective analysis but also in the political art of manipulating arguments about military requirements and cost-effectiveness to underscore the case for their proposed weapon systems. They possessed a large reservoir of technical expertise and professional experience upon which to draw. Earlier they had been caught off guard by McNamara's use of cost-effective analysis, but by now they had become more accustomed to his modus operandi. Although their failure to move more rapidly on the development of effective analytical staffs was a disappointment to McNamara, who hoped that such innovations would improve Pentagon force planning, by this time each of the service staffs had acquired a few officers who had a capability to perform cost-effective analysis and to communicate on these terms with the OSD.

Perhaps McNamara's task could have been made easier had he been willing openly and candidly to employ a budget ceiling as a device for determining the strategic forces program budget and turning aside the force posture proposals of the military services which could not have been accommodated within its limits. After all, he was employing a budget ceiling to determine the overall Pentagon budget, despite his public disclaimers, and that fact was known widely throughout the Pentagon, not only by the OSD officials but by the Joint Chiefs of Staff as well. The service chiefs deeply resented having their military strategy and force posture requirements dictated to them by a civilian official who did not have professional experience equivalent to their own. But they were well aware that national priorities placed sharp constraints on the federal funds which could be devoted to defense spending, and perhaps they would have been willing to accept with more equanimity a frank admission that simply
not enough funds existed to authorize all of their proposals. 159

But McNamara rejected this solution. He apparently believed that
the position of not using a ceiling provided a variety of managerial and
tactical advantages for exerting managerial control over the budget. Since
most of these reasons have been covered by Alain Enthoven, they need not
be repeated here. This position also prevented would-be budget cutters
in the Congress from imposing their own arbitrary budget ceilings on the
defense budget. Moreover, any ceiling he might have imposed on the
strategic forces program per se would have stemmed not from some externally-

imposed decision regarding the "Great Equation" of defense and domestic
expenditures, but rather from some implicit scheme of military priorities
for allocating budget resources between the general purpose forces and the
strategic forces. Consequently, he would have found himself back where
he had originally started: in a debate with the service chiefs over
military strategy, requirements, and priorities. Finally, he probably
was reluctant to risk the embarrassment of backtracking from a position
he once had enthusiastically endorsed and adopting, at least from surface
appearances, the precise managerial practice of the Eisenhower Administration
which had been so sharply criticized by President Kennedy.

McNamara's position perhaps would have been less tenuous had he been
willing to proclaim that the strategic force posture should be sized only
to the requirements of deterrence of massive nuclear attack and only the
capability to inflict unacceptable destruction upon Soviet urban areas.
Such an exclusive strategy of assured destruction would not have been
accepted enthusiastically by the Air Force and would have provoked a major
political battle within the Pentagon. But McNamara had the legal authority
to determine strategic concepts and, with Presidential support, perhaps he could have prevailed in a fight with the services. But he refused to adopt this position, and continued to acknowledge publicly and privately that the strategic force posture should be sized to support multiple objectives other than assured destruction. Moreover, he continued to insist that the force posture should be sized according to conservative risk-management rules and that, in the face of uncertainty, the strategic forces should provide ample margins of insurance and high-confidence capabilities.

Whatever the logic of his continued insistence that strategic force posture decisions would be based on this theory of military requirements, it placed him in a rather difficult position for sallying forth in the Pentagon on a crusade to exercise restraint. The analytical framework of multiple objectives and conservative risk management practices from which he and the military services continued to operate created a potentially open-ended requirement for strategic forces and, in the absence of a fixed budget ceiling, hardly generated unassailable reasons for restraint. On the contrary, it easily was susceptible to being manipulated for the purpose of justifying the acquisition of more strategic weapons and continuing the buildup; and the military services were not bashful about seizing upon this advantage and employing it to suit their purposes.

2c. Bureaucratic Skill and Strategy

To engage the military services in this regard on their own terrain and under conditions that conferred numerous advantages upon them was a difficult undertaking, and success in early 1964 by no means was foreordained. McNamara's position, however, differed only by degree rather than by type
from the position of most other federal bureaucrats. Since power is so dispersed in the federal bureaucracies and many diverse interests become involved almost anytime a major decision is being made, success seldom is foreordained but rather is a product of the bureaucratic skills which government officials can muster. The essence of bureaucratic skill is the ability to devise and implement a set of bureaucratic strategies and tactics in the face of substantial opposition which permit the attainment of objectives which otherwise would not be possible.

McNamara differed from many other government officials because he was bureaucratically skillful. Some critics have questioned his breadth of knowledge, and since his style was aggressive and often abrasive, he was not an effective politician in the sense of being sufficiently diplomatic and persuasive to convince others that they should sacrifice their interests on behalf of some common good which also suited his purposes. But little doubt exists that he was a clever official. During the course of his tenure he developed an impressive array of bureaucratic skills and strategies, combined of course with his legal authority and political power, which permitted him to surmount the constraints and to make several controversial decisions for restraint even while simultaneously maintaining institutional tensions at acceptable levels, preserving control within the Pentagon, and protecting his position and that of the Presidents he served.

McNamara never has commented publicly on the bureaucratic tactics he employed, nor even acknowledged that he consciously engaged in systematic bureaucratic maneuver. But information gathered from interviews suggests clearly that McNamara and his personal advisors were quite sensitive to the subtleties of Pentagon bureaucratic politics and that they consciously and adroitly employed a complex, multifaceted set of bureaucratic strategies.
These strategies can be classified into two broad categories. First, they employed \textit{analytical strategies} for shaping the conceptual and doctrinal framework for force planning, for exerting control over the critically-important strategic rationales that were erected under proposed weapon systems, and for generating defensible reasons and arguments for making controversial decisions in the face of service opposition. Second, they employed overt \textit{political strategies} in an attempt to shape the patterns of bureaucratic alignment and organizational cleavages within the Pentagon in order to foster favorable political conditions for restraint or at least to reduce political opposition to their decisions.

The following pages of this chapter discuss these two classes of strategies and the manner in which they were employed.

3. \textbf{Analytical Strategies: The Employment of Cost-Effective Analysis for Bureaucratic Political Purposes}

A good deal of controversy has surrounded the role which cost-effective analysis played during McNamara's tenure and the purposes to which it was employed by the Office of Secretary of Defense. Certainly the argument that it was employed exclusively to illuminate issues and to conduct dispassionate analysis is naive and wrong. But so also is the polar argument that it simply was a bureaucratic weapon which was employed by OSD to advance its political causes. McNamara appears to have used cost-effective analysis both as an instrument of deliberative inquiry for conducting program analysis and as a political instrument of bureaucratic argument. He placed high priority on determining optimal cost-effective solutions to military problems through systematic analysis; but he also employed it in a post-hoc fashion publicly to justify his own decisions and to argue
against the recommendations of the military services to which he disagreed. Most often this latter purpose involved simply the employment of conclusions which flowed logically from cost-effective analyses that had been conducted in a dispassionate, objective manner. But on other occasions it also apparently involved manipulating analyses in order to generate justifications for predetermined decisions. Unfortunately, the paucity of publicly-available information on the manner in which specific Pentagon studies were conducted prohibits any attempts to formulate a definitive judgment about the frequency and extent to which this practice was employed. But although almost all former OSD officials who were interviewed argued that cost-effective analysis generally was conducted in an objective manner, a few did believe that on occasion OSD studies were conducted and structured for the express purpose of providing justifications for decisions McNamara wanted to take. And it is also appropriate to point out that senior military officers who were interviewed were as suspicious about OSD analyses as OSD officials were suspicious of their analytical products.

At the same time, it is important to point out that the existence of this practice of manipulating cost-effective analysis does not necessarily mean that those decisions which were justified in this fashion automatically lacked a sound foundation in strategic logic and that the analyses presented as justification were wrong or masked real intentions. The relationship between a force planner's predispositions and the analyses he conducts often is too complex and dynamic to permit the simple conclusion that evidence of manipulation is confirmation that decisions were made without regard to strategic considerations. This can be the case, but it need not be. Much
depends in each case on the considerations which led OSD officials to formulate their policy stands in the first place. It is possible first to formulate a policy stand on the basis of objective strategic considerations and then to structure analysis in order to promote this stand. In such a case, cost-effective analysis would have functioned both as a determinant of policy conclusions and as a political instrument manipulated for the purpose of supporting those conclusions.

Without pretending to claim that analysis always was a determining factor, something of this sort appears to have happened in some cases during McNamara's tenure. On these occasions cost-effective analysis was employed, especially by McNamara and Systems Analysis, in this dual fashion. Indeed, interview information suggests that the manner in which McNamara employed systematic analysis each year was dictated partially by the sequential flow of the budgetary process. Evidently during the initial stages of each budget cycle he preferred to allow the analytical process to flow freely in order to probe deeply, in a deliberative fashion, into alternative force posture options. But around the middle of each summer, once his mind was made up and the deadline for decisions had begun to approach, he apparently began to intervene into the analytical efforts of his OSD aides and to exert pressures and provide suggestive guidance that would help shape the conclusions they were drawing and the analytical foundations they were constructing in order to provide justifications for the decisions he wanted to make.  

Regardless of the answer to the question of what role analysis played in shaping OSD's policy stands, the important point for the purposes here is that on numerous occasions, McNamara and his OSD aides employed various
forms of cost-effective analysis as instruments of argument in order to provide defensible reasons for their decisions and to argue against the recommendations of the military services. These analytical strategies included, for example, arguments about military strategy, marginal utility, comparative cost-effectiveness, technical performance characteristics, intelligence information, and the action-reaction phenomenon. In addition, they manipulated the technological and force posture alternatives at their disposal in order to generate reasons for blocking the acquisition of strategic systems to which they objected. For example, they regularly employed the tactic of authorizing the development and procurement of qualitative improvements in the forces-in-being as well as some new systems in order to provide a rationale for rejecting others. Similarly, McNamara and his OSD aides often employed the tactic of fostering competition among strategic systems in the hope that the weapon systems they wanted to block would come out on the short end of the competition. On some occasions, this practice took the form of directly prodding the services into initiating consideration of weapon systems to which they objected or at least had not previously given high priority. The manner in which they employed these analytical strategies in specific cases will be addressed in detail in the next chapter.


Of considerably greater importance for his overall campaign of restraint however, was the manner in which McNamara manipulated strategic concepts for force planning and shaped the doctrinal framework within which specific
force posture issues were addressed analytically. Since the process of cost-effective analysis in individual cases was a large and complicated endeavor in which he was the foremost but certainly not the only influential member, McNamara normally was not able to exert complete control over its procedures and products. But the legal authority he had to establish the strategic concepts that were employed in the Pentagon to determine the size, composition, and purposes of the strategic forces provided him a great deal of leverage for setting the ground rules, objectives, terms of reference, criteria, assumptions, requirements, and scenarios that played a critically important role in structuring the analytical process and shaping its results in specific cases.

This authority provides any Secretary of Defense a major wellspring of political power within the Pentagon for asserting control over the budgetary process. McNamara employed this authority with considerable skill; and by doing so, he succeeded, through a combination of sagacity and perhaps good fortune, in creating a doctrinal framework for force planning which provided not only a well-defined theory of requirements but also a set of policy insights, conclusions, and recommendations which generated powerful arguments for exercising restraint across a broad range of policy fronts. Indeed, the actions which McNamara took in installing new strategic concepts and creating a new analytic framework can be interpreted as being a centrally important aspect of his campaign for restraint. Although most often these actions did not manifest themselves directly in the specific decisions for restraint he took between 1964 and 1968, they played a critical role in creating the analytical and bureaucratic conditions which made those decisions possible.
3b. Setting Aside the Counterforce Strategy

The process by which McNamara manipulated strategic concepts and then profitted from the doctrinal framework they created was composed of several different stages which spanned roughly the early 1963 through early 1965 period. The first step he took was to set aside the counterforce strategy as the officially-sanctioned concept for sizing the strategic forces. McNamara personally believed that the counterforce strategy and its associated logic provided the most rational perspective on American objectives regarding nuclear war and the purposes of the strategic forces. Indeed, he evidently told high OSD aides at the time he informed them of his decision to drop the concept that he considered the counterforce strategy to be several years ahead of its time. But in light of his current circumstances and budgetary priorities he came to the conclusion that his public endorsement of the strategy was having several negative effects.

Accordingly, in early 1963 he issued instructions to the OSD staff that the strategy no longer was to be employed as the official Department of Defense strategic concept. This does not mean, of course, that McNamara and the OSD staff internally discarded the concept, especially for determining the precise capabilities of the strategic forces and the targets they would strike in a nuclear war. As we shall see in the next chapter, a good deal of difference existed between what they said in public and did in private. But from that point forward, McNamara and his OSD aides ceased publicly to endorse the strategy or to employ it for publicly evaluating the force posture recommendations of the military services. Within the Pentagon, they told the military services, especially the Air Force, that the strategy no longer was to be employed as a concept for generating requirements or for justifying
weapon system proposals. In public, they began to take steps progressively to drop the concept and its underlying logic from official Pentagon public documents.

The precise reasons for McNamara's decision to drop the counterforce strategy deserve to be addressed in some detail. A primary reason was that the counterforce strategy was creating public confusion regarding the most fundamental point about nuclear war: That strategic nuclear war must be viewed as a conflict which could not be won in some meaningful sense and therefore must be avoided at almost all costs. McNamara and his OSD aides did not perceive that any contradiction existed between the counterforce strategy and their fundamental assumptions regarding the catastrophic nature of nuclear war, the preeminent importance of deterrence, and the need to shift emphasis in American doctrine from strategic nuclear forces to general purpose forces. Indeed, the counterforce strategy's emphasis on firebreaks, the limiting of collateral damage, flexible options, and the control of escalation was perfectly consistent with these perspectives.

But, as they judged the public reaction, they concluded these distinctions were being lost in the public debate. As a result of the uproar that followed the Ann Arbor speech, they became aware that a major difference existed between the dialogues taking place within the Pentagon, especially the OSD, and in the public domain. Within the OSD, the strategic dialogue was focusing on firebreaks, options, target systems, and the control of escalation; but in the public domain, the debate was centered on the more basic issues of the possibility of winning a strategic nuclear war and the proper role of strategic nuclear forces in United States strategy for deterrence and defense.
McNamara and his OSD aides came to the conclusion that by publicly endorsing the counterforce strategy they were not driving home their message about flexibility and the control of escalation, and that instead their public statements were being misunderstood and perceived as an endorsement of the conservative viewpoint they were trying to discredit. They concluded that the subject of controlling escalation and multiple options, especially in the context of target doctrine and target systems, was too complicated and emotion-laden to be discussed in public with sufficient precision and discrimination. They wanted to generate a sophisticated public debate and to inform the American public. But they decided that in order to drive home the basic points they would have to cast the public debate in terms of simple fundamentals, even at the cost of setting aside public discussion for some time of the other highly-important issues. Accordingly, they elected to restrict the discussion of the counterforce strategy to the Pentagon, where it could be dealt with carefully, and simply to stress in public the paramount importance of deterrence and the fact that nuclear war inevitably would visit horrible destruction upon the United States.

A second major factor was that the counterforce strategy undermined McNamara's efforts in the Pentagon to exercise restraint. McNamara needed strategic concepts that would provide a rationale for terminating the buildup, not acquiring more strategic weapons. The counterforce strategy had precisely the opposite effect because it easily could be used to generate an open-ended requirement for nuclear weapons. McNamara and the OSD civilians originally did not view the strategy in this light and believed that a rather modest offensive missile force would meet its
requirements. But the counterforce strategy provided no obvious ceiling or definite criteria for terminating the buildup. Its methodology for generating force posture requirements largely consisted of determining how many civil and military targets were to be covered and destroyed by United States offensive forces, and then working backwards to determine the required size of the force posture. The Soviet urban target system was comparatively small and easily destroyed; but the military and industrial target systems were quite large, less vulnerable, and growing steadily. In particular, the Soviet ICBM force posture was expected to grow substantially during the next several years. If the size of the United States offensive force posture was pegged to the size of this Soviet force posture, the requirement for offensive missiles would grow substantially. And this requirement could be driven ever-larger as higher standards of efficiency were demanded, more scenarios were addressed, and more targeting options were built in.

The Air Force planners quite naturally seized upon the counterforce strategy and its open-ended requirements not only to determine desirable force levels but also to create justifications for their positions and recommendations. The counterforce strategy probably was responsible for generating few new ideas for strategic weapon systems within the Air Force. Given the Air Force's preoccupation with strategic offensive weaponry and doctrine, most of the weapon systems the Air Force was proposing either had been conceived before the counterforce strategy was installed or would have been created even in its absence. But the counterforce strategy did provide a convenient officially-sanctioned rationale for Air Force weapon systems and force levels which McNamara
was hard pressed to reject. In particular, the counterforce strategy, as employed by the Air Force as an instrument of bureaucratic argument, provided a plausible rationale and some legitimacy to the Air Force requests for a new strategic bomber and procurement of more than 1000 Minuteman missiles. 195

A third factor, less compelling but still influential, was that the counterforce strategy did appear at least to some to be provocative from an arms control viewpoint and to be an endorsement of a disarming first strike targeting doctrine. 196 This confusion arose less because of the strategy's internal logic than because the Soviets failed to deploy a large ICBM force in hardened silos as rapidly as had been expected by United States intelligence estimators. McNamara, of course, wanted to eradicate notions of a disarming first strike in the Pentagon, rather than encourage them; and he did not place much faith in mathematical analyses which suggested that the task feasibly could be accomplished. 197 Nor were McNamara and OSD civilians especially worried that the counterforce strategy had particularly upset the Soviets. After the Ann Arbor speech, some Soviet generals accused the United States of plotting a nuclear war against the Soviet Union. 198 But evidently Soviet documents were in the hands of Pentagon officials which suggested strongly that the Soviets, being largely preoccupied with Europe and confident of their ability to hold West Europe hostage and to strike the United States at least with some long-range bombers, were not particularly nervous about the counterforce strategy or the ongoing United States buildup. 199

Nevertheless, the strategic balance at the time did have some disturbing features which, if dwelt upon in public, could give rise to
misunderstandings. By early 1963, the United States had forged into a substantial lead over the Soviet Union in ICBM missiles by a margin of about 650 to 200. Moreover, Soviet ICBMs were deployed in soft site, congested configurations and were vulnerable. McNamara and the OSD civilians were worried that if the trend continued the balance would become even more lop-sided and major instabilities might emerge. They hoped that the Soviets would shore up their deterrent; indeed John McNaughton, the Assistant Secretary of Defense for International Security Affairs and a close McNamara advisor, signalled this concern in public. But until the Soviets had improved upon their vulnerable position, McNamara and his aides wanted not to make public statements that called too much attention to this issue and created the impression that the strategic imbalance offered significant benefits to the United States, or offered significant temptations to attack the Soviet Union. Given the United States responsibility for the defense of Europe, McNamara formally could not state unequivocally that under no conditions would the United States initiate the use of strategic nuclear forces. But by ceasing to discuss the counterforce strategy in public, they hoped that public attention would not be called to the strategic imbalance.

A final factor was that the counterforce strategy had alarmed the West Europeans, apparently was being misinterpreted in NATO circles, and consequently was serving to trigger the proliferation that the United States was trying to avoid. McNamara and his OSD advisors had hoped that by adopting the counterforce strategy they would signal clearly that the United States was prepared to defend West Europe with nuclear strikes should
that step become necessary. They further hoped that this assurance would help discourage proliferation. Unfortunately, many West Europeans interpreted the strategy to mean that the United States was abandoning its primary emphasis on deterrence and was contemplating fighting a nuclear war in Europe while protecting the United States from similar destruction. By de-emphasizing the counterforce strategy, McNamara and OSD officials hoped to defuse this controversy and assuage West European anxiety. Moreover, the fact that by this time the OSD analysts were becoming more confident of NATO's military capability to defend by conventional means against a Warsaw Pact military attack permitted some de-emphasis on strategic nuclear forces as the main instruments of deterrence and defense. Prior to that time, Western military strategists commonly had accepted the assumption that the Warsaw Pact was far superior to NATO in conventional armament and theater forces, and that therefore, nuclear forces had to be relied upon exclusively.

3b. Installing the Strategic Concepts of Assured Destruction and Damage Limitation

Shortly after he had dropped the counterforce strategy, McNamara installed the concept of Damage Limitation as the official Defense Department strategy for sizing the strategic nuclear forces. The concept first appeared publicly in the fiscal year 1965 Defense Department posture statement, which was issued in early 1964. Later that year, McNamara added the concept of Assured Destruction, which made its public debut in the fiscal year 1966 posture statement released in early 1965. These two concepts together provided during the remainder of McNamara's tenure the analytical framework
which was employed in the Pentagon's budget formation process to determine the size and composition of the strategic nuclear force posture and had a substantial effect on shaping the terms of debate among the Office of Secretary of Defense, the Joint Chiefs of Staff, and the military services.

The Assured Destruction concept provided a good managerial tool not only for determining the requirements for deterrence and gauging the adequacy of the programmed offensive force posture, but also for controlling the strategic forces program budget and for employing the argument of diminishing marginal productivity for turning aside the proposals of the military services and levelling off the buildup. It called only for the high-confidence capability to inflict unacceptable damages upon the Soviet Union by destroying a substantial portion of its population and industrial capacity. Given the concentration of Soviet population and industrial facilities in urban areas, analysis showed that a relatively modest delivery capability of 400 one megaton-equivalent warheads, about one-eighth of the programmed force posture, could inflict an intolerably-high level of 30% fatalities and 76% industrial destruction. Analysis further showed that diminishing marginal returns rapidly set in after this point at the knee of the curve had been reached, and that further additions to the delivery capability would yield only small and progressively shrinking diminishing returns. As a result, McNamara and the Systems Analysis staff specifically perceived the Assured Destruction concept as being an instrument in their campaign for restraint as well as a managerial tool for testing the sufficiency of the programmed force posture and explicitly employed it in this regard. And the fact that they were doing so was clearly recognized by the military services and DDR&E officials as well, who on a number of occasions submitted
position papers which attempted to criticize the concept and to call into question its appropriateness as a force planning tool. 213

The Damage Limitation concept, by contrast, had quite different implications for the strategic force posture and at face value appeared to undermine the case for restraint. Hence, McNamara's decision to install this concept appears to be puzzling and inconsistent with his determination to level off the strategic buildup. The concept called for the capability to limit, insofar as possible, the Soviet Union's ability to inflict heavy destruction upon the United States in a full scale nuclear war. Thus the concept called for a force posture optimally composed of defensive and offensive forces that could blunt a determined Soviet effort to destroy the United States urban and industrial fabric. Given the apparent Soviet determination to preserve its deterrent capability by deploying an offensive force capable of inflicting unacceptable damages upon the United States, and the demanding nature of the mission which gave many tactical advantages to the Soviet Union, the concept created an open-ended requirement for a very large and expensive force posture composed of offensive missiles and strategic defense forces, especially a large ABM system. In addition, the concept, by virtue of United States-Soviet competitive interactions, appeared to create a doctrinal framework for justifying a steady stream of investments and growth in the future even after the first wave of heavy investments had been made. Similar to its predecessor, the Damage Limiting concept pegged the required size of the United States force posture to the expected future size of the Soviet force posture, which appeared likely to grow in future years. Indeed the possibility existed that the American deployment of a damage limiting force in itself might trigger a substantial expansion of the
Soviet force posture if Soviet planners interpreted the United States action to be a challenge to their own deterrent capability and decided to react. The growth of the Soviet offensive force posture in turn would generate a requirement for a larger United States damage limiting force in order to provide compensation. At face value, the logic of this action-reaction cycle appeared to create an incentive for a major upward spiral in strategic weaponry on both sides.

Why then did McNamara install this concept? What were his calculations? Was he being foolish or shrewd? Or did he even have a choice?

Several factors appear to have been involved. First, both the Assured Destruction and Damage Limitation concepts helped serve McNamara's campaign to transform the public dialogue on strategic forces and nuclear war. McNamara wanted to drive home the message that nuclear war inevitably would visit horrible destruction upon the United States and therefore should not be viewed as being winnable in some meaningful sense. The two concepts, at the level of imagery and symbolism, helped paint a very stark picture of nuclear war: Destruction, mutual destruction, was "assured" and damage only could be "limited." Hence, mutual deterrence was a reality to which accommodations must be made, and the primary purpose of the strategic forces must be to deter nuclear attack upon the United States and its allies.

A second factor was that these two concepts together provided a formal doctrinal framework which was quite well suited for conducting analytical studies of force posture options and making decisions on the basis of cost-effective analyses which linked force posture choices to specific national objectives. The two concepts postulated central and well-defined national objectives: To deter a nuclear attack through the maintenance of
a second strike retaliatory force and to protect the United States should nuclear war occur by destroying Soviet offensive forces. From these objectives and their associated criteria, requirements could be calculated and comparative cost-effective studies done. The Damage Limiting concept, with its various apocalyptic scenarios of Soviet attacks on American cities and its precise criteria of lives-saved and fatalities inflicted, provided a manageable, mathematically precise methodological approach for comparing the performance of offensive forces, ABM defenses, and other defensive forces in terms of the same mission and for determining what combination of forces would provide an optimally balanced strategic force posture should a follow-on wave of investments be made, particularly in strategic defense forces. Although his public signals suggested clearly that he did not want to make such an investment, McNamara perhaps had not yet finally made up his mind and wanted to investigate the issue or at least felt a personal responsibility to determine on the basis of cost-effective analysis how the next wave of investments most productively could be allocated. In the event that the President and the Congress decided to proceed forward, the possibility existed that, in the absence of sophisticated analysis, the Department of Defense might plunge ahead and procure a very large quantity of offensive missiles, ABM sites, and other forces which would not even provide an optimally balanced force posture.

A third factor was that these two strategic concepts and their associated objectives and missions were able to command consensual support from the military services and the Joint Chiefs of Staff. Consequently, by installing them McNamara was able effectively to eliminate divisive
debates within the Pentagon over United States nuclear strategy. The Joint Chiefs of Staff were attracted to the concepts in 1964 because they postulated appealing objectives for the strategic nuclear forces which encompassed both deterrence and defense.\textsuperscript{220} Equally as important, the two concepts seemed at face value to preserve and protect the strategic missions which each of the services cherished and to provide each of their individual force components an important role to play in United States strategy.\textsuperscript{221} The Navy's Polaris SLBM force was given an important role to play in the assured destruction mission, while the Air Force's Minuteman missiles and strategic bombers were granted central roles in both missions. The Army's ABM system, meanwhile, was given a central role in the damage limiting mission. Finally, the damage limiting concept at least initially appeared to offer a ready-made rationale for proceeding forward to make a large wave of follow-on investments in offensive and defensive forces, and therefore appeared likely to yield substantial budgetary dividends to the Army and the Air Force.\textsuperscript{222}

Whether McNamara had a more subtle calculus in mind is difficult to determine. Some of his former aides believe that McNamara simply wanted to determine if the damage limiting mission could be performed and how the next wave of resources best could be allocated. This, of course, was the public posture he maintained; indeed, he offered precisely this reason in a letter he sent to President Kennedy in late 1963 as explanation for his decision to initiate analytical studies on this subject.\textsuperscript{223} Other aides, with access to his personal thoughts, in retrospect suspect that McNamara knew in advance that detailed investigation into the damage limitation problem ultimately would generate answers that would support his preconceived notions and bolster his position for exercising restraint, rather than undermine it.\textsuperscript{224} They
suspect that McNamara may well have been engaged in a quite subtle game of bureaucratic maneuver in which he authorized the installation of the Damage Limiting concept and detailed investigation into optimal methods for pursuing this objective for the express purpose of generating the reasons he needed to make the decisions he already favored. 225

3c. Interpreting the 1964 Damage Limitation Study

Whatever his motives, and whether by predetermined design or the analytical dynamics of the problem, the Pentagon-wide study that was conducted during the spring and summer of 1964 on the possibility and prospects for limiting damage produced results which played directly into his hands. It provided a host of good strategic and economic reasons for turning aside recommendations for more forces and thus bolstered his position for blocking the acquisition of many weapon systems. The primary reason was that the study and its central concept had postulated a mission so demanding and a requirement so costly that the large scale pursuit of the damage limitation objective became neither strategically desirable nor economically feasible. Ironically, what had started out as a massive analytical study with the stated purpose of paving the way for substantial additional investments ended up, in McNamara's hands, as being a firm, hard-headed rationale not to make those investments.

This result certainly was not foreseen in advance by the military services nor, for that matter, by the OSD officials who had primary responsibility for conducting the study. 226 The Office of Systems Analysis, which under normal circumstances would have been a likely candidate to orchestrate this result, was more preoccupied with the offensive missiles,
was not attracted to the Damage Limitation concept, and initially thought that the methodology of aggregate parametric analysis was primitive and simplistic in light of the highly detailed offensive force posture problems they then were facing. Accordingly the Systems Analysis office initially opposed the concept and the study, played little direct role in determining the methodology or terms of reference, and only reluctantly took part in the study, and even then did not play a central role.

The study was conducted under the auspices of the DDR&E, headed by Dr. Harold Brown. Whatever its other virtues and vices, the DDR&E hardly can be accused of being ideologically predisposed to terminating the strategic buildup and undercutting the rationale for the deployment of new strategic weapon technologies. Within DDR&E, the immediate director of the study, Air Force General Glenn Kent, operated on the assumption that the purpose of the study simply was to determine optimal deployment configurations for the pursuit of the damage limiting objective. General Kent and his immediate assistants, all military officers with skills in operations research, simply were attempting to determine optimal solutions by conducting mathematical cost-effective analysis in parametric fashion. The scenarios, criteria, and assumptions that they employed, which played a critically determining role in affecting its results, were selected, with McNamara's approval, in two 1963 pilot studies. They provided useful methodological tools for shifting the analysis of ABM deployment options from the level of single battery analysis to the level of resource allocation on a national scale. They also provided methodological tools for evaluating comparatively the performance of offensive missiles and ABM systems. To the extent that any bias existed, it stemmed from the fact that the scenarios of Soviet split attacks and
fast-paced exchanges necessitated time-urgent targeting and therefore worked to the advantage of ABM systems and sharply reduced the comparative advantages of offensive missiles. But there was no perceived bias against the very concept of investing in damage limitation. Although Kent had been forewarned by critics of his methodology that the study would simply have the effect of creating a major roadblock to further investments, he and his aides apparently did not begin to take this prospect seriously until the study had been about one-half completed.

The military services were less oriented objectively to finding optimal solutions and were more concerned about protecting their various weapon systems and advancing their causes and interests. But they did not perceive, until after the study had been completed, that it might endanger not only specific weapon systems but the very concept of making substantial additional investments in forces for strategic defense. At the time McNamara announced, before a combined assembly of top officials from the OSD, the Joint Chiefs of Staff, and the military departments, that the study was to be initiated, none of the service chiefs or civilian secretaries expressed major complaints or reservations. Navy Secretary Paul Nitze proposed the only change in terms of reference: to incorporate into the analysis antisubmarine warfare forces, a proposal which McNamara quickly accepted. Once the analysis had begun, a good deal of anxiety did permeate the military services; but they were not worried about the feasibility of pursuing the damage limiting objective. Nor did they doubt seriously that the study would pave the way for major investments. They were anxious in part because they were largely unfamiliar with such grandiose analytical efforts and therefore did not have a backlog of experience in order to
determine how best to protect their interests. They also were worried because the study had gathered a large number of different weapon systems together under one tent, and was attempting to compare them against one another in terms of a single mission and a common denominator of evaluation. As a result, each of the weapon systems by definition posed substantial threats to all of the others. The possibility certainly existed that each of the military services might lose a critically important weapon system because a candidate from one of the other services seemed to perform the damage limiting mission better.

The stakes thus were quite high not only for the national interest but also for the organizational interests of the three military services. The Army had its much-cherished Nike X ABM system in the damage limiting sweepstakes along with the lesser priority Hawk and SAM-D surface-to-air missiles. The Navy had the Poseidon missile, which was being pushed vigorously by the Special Projects Office, plus a host of ASW technologies which drew more support from the traditional Navy admirals. The Air Force had in the hopper its still-extant proposal for 200-300 more Minuteman missiles, a follow-on ICBM missile, MIRV, the new AMSA bomber, the B-52 bomber with the SRAM missile, the F-111 and IMI interceptors, and an entirely new bomber defense force. As a result of these competing interests, a good deal of struggle and debate took place during the course of the study among the diverse participants as the military services tried to manipulate the assumptions, scenarios, calculations, and conclusions to support their own purposes, while General Kent and his three aides struggled to maintain objectivity and to keep control.

Despite this anxiety and struggle, each of the military services felt
quite relieved immediately after the study had been completed and the analysts had set about to brief its results throughout the Pentagon. Each of the military services felt reassured that the results of the study had bolstered the case for its major weapon systems or at least had not done them serious harm. And if the study is viewed from their angle of vision, their sense of relief appears to have been justified, for the study did offer something to everyone. As they perceived things, the major conclusion of the study, which was proudly proclaimed throughout, was that the United States, by spending a reasonably large sum of money and making appropriate choices, could maintain a significant damage limiting capability even while retaining a fully-insured assured destruction capability. The number of fatalities inflicted upon the United States and conversely lives saved, of course, would vary considerably as a function of the scenario, the size and composition of the Soviet offensive forces, and the capability of United States forces. But regardless, a substantial damage-limiting force could reduce fatalities by several million; at the highest point, a fully-authorized force could reduce fatalities from a peak of 140 million to a comparatively much smaller 20-40 million. The study further showed that the United States could maintain this capability even in the face of determined Soviet opposition, provided that it was willing to use its superior economic resources, in the face of adverse cost-exchange ratios, to offset possible Soviet counteractions designed to protect its own assured destruction capability.

Equally as important from the military services' standpoint was that the results of the study showed that a number of remarkably close trade-offs existed among the diverse weapon systems and that almost all of the major
weapon systems being promoted by the military services could play an important contributing role in the damage limiting mission and therefore should be procured in quantity during follow-on investments. This result in theory gave the Secretary of Defense a very large range of discretion for selecting alternative combinations of different weapon systems, but it also meant that any decision to invest in a major damage limiting capability automatically would require the procurement of substantial quantities of ABMs, bomber defense forces, ASW, and offensive missiles. Thus, each of the services would profit handsomely.

Or so the military services thought. McNamara, however, read the results of the study from a more resource-conscious perspective and consequently arrived at quite different conclusions which crystallized firmly his hostility to making major additional investments in a large ABM system and a major damage limiting capability. He immediately drew from the study the conclusion that the purchase of a major damage limiting force would cost a great deal of money, up to $30 billion in five year investment costs above the currently-programmed force, and that the defense budget, in light of major fiscal constraints, would be quite hard pressed to provide these funds without sacrificing other high priority forces and capabilities. Second, McNamara recognized that the pursuit of the damage limiting objective would be plagued by sharply diminishing returns, and that even at the highest level of investment, the expected Soviet offensive force could inflict an intolerably high level of destruction upon the United States. Given this inescapable fact and the relatively low probability of nuclear war, considerable doubt existed, at least as far as McNamara was concerned, that the benefits of a large damage limiting force would be commensurate with the costs.
Third, McNamara recognized that the major uncertainties which United States force planners faced regarding the future composition of the Soviet threat created the extremely difficult problem of providing an optimally balanced force posture. At the least, this problem would force the sacrifice of some capabilities in high priority areas in order to provide sufficient hedges against the full spectrum of threats; and it meant, at worst, that any firmly-fixed damage limiting force could be circumvented partially by the Soviets by adjusting their offensive force posture to take advantages of its weaknesses. Finally, McNamara quickly concluded that the problem of adverse cost-exchange ratios, even taking into account the superior economic power of the United States, presented very formidable barriers to a full-scale investment. If the objective was to protect only a portion of the population, the United States could compete on a relatively equitable basis; but if the objective was to protect a very high percentage, and thus to reduce fatalities to low levels, the cost-exchange ratios would shift dramatically in favor of the Soviet Union and consequently the USSR would face a considerably less burdensome task than the United States in maintaining pace in the competition. For example, at the seventy percent level of population protection, the cost-exchange ratio would be roughly two to one in favor of the Soviet Union. Thus, if the United States were to try to assure the survival of this percentage of its population, and if the Soviets were to choose to frustrate the attempt because they perceived it as a threat to their deterrent capability, the extra cost to the Soviet Union would be substantially less than the extra cost to the United States.

McNamara thus turned the damage limiting study on its head and drew conclusions which were diametrically opposed to the conclusions the military
services had drawn. By doing so, the results of the study became not only a strong rationale for not procuring a major damage limiting package, but also for not acquiring almost any individual weapon system included under its rubric. By virtue of its single-mission orientation, the study had woven together the component weapon systems into an intertwined fabric. When McNamara and the OSD staffs proved unwilling, the military services were hard pressed to extract any of these weapon systems from the study and to justify their procurement on an individual basis rather than as part of an overall package.

The study showed that a fallout shelter program always would provide the greatest marginal returns for any given level of investment and desired population protection. Since Congress was hostile to authorizing a full fallout shelter system in any single fiscal year, a fully-justifiable reason existed, at least for a few years, not to procure any of the other weapons individually, including the Nike-X ABM system. The study further showed that a large ABM system would be the second highest priority investment, as well as the costliest component at any aggregate expenditure level; thus, so long as no decision was made to produce an ABM system, a strong rationale automatically existed for not procuring any of the other systems which followed the ABM in order of priority, such as a new bomber defense force, or more offensive missiles, or more antisubmarine warfare forces.

As a result of its scenarios of Soviet split attacks and fast-paced exchanges, the study showed that strategic defensive forces could produce the greatest marginal returns and that few additional offensive forces should be purchased in the next wave of investments. Consequently, the study also undercut the Air Force's proposal for the procurement of an additional
200-300 Minuteman ICBM missiles. The study showed that offensive missiles, by launching strikes against Soviet offensive strategic forces, could play a role in reducing damage to the United States, particularly if they arrived at their targets before the Soviets had launched a massive attack. The study further showed that for modest levels of investment in damage limiting forces, an optimally-sized United States offensive missile force would provide one fairly effective warhead for each Soviet missile silo; and that for a very large investment, two warheads per target would be optimal. At the time, the United States intelligence community was forecasting that the Soviet offensive missile force over the next five years would grow to a size of about 600 ICBM's. Since the United States, with its programmed force of 1000 Minuteman and 656 Polaris SLBM, already had sufficient warheads to cover the entire expected Soviet missile target system with one warhead per silo, and simultaneously to hold an assured destruction damage capability in reserve, little reason existed to procure more missiles in the immediate future, at least until a decision had been made to procure a very large damage limiting force.

The study also deprived the strategic bombers of a meaningful, cost-effective role to play in United States strategy for nuclear warfare either in the assured destruction mission or the damage limiting mission. The strategic bombers of course did provide a high confidence force for performing the assured destruction mission; but in light of the large offensive missile force already programmed and the intelligence estimates which then were projecting a modest Soviet damage limiting capability, the strategic bombers clearly were redundant and did not provide incremental benefits to justify their large costs. And since the strategic bombers
could not promptly reach the Soviet missile fields, they could not play a useful role in the damage limiting mission, especially in the fast-paced scenarios which called for counterforce targeting on a time-urgent basis.\textsuperscript{271}

The study provided not only good reasons for not making substantial additional investments in a major damage limiting force or individual component weapon systems, but also for promoting strategic arms control negotiations with the Soviet Union.\textsuperscript{272} Indeed, the study, when interpreted from a resource-conserving angle of vision, provided one of the most powerful arms control documents ever written within the United States government.\textsuperscript{273} The study showed that neither side feasibly could eradicate the other's assured destruction capability and consequently, a strong mutual incentive existed to taper off the strategic buildup short of a major strategic defensive capability and to cooperate through formal negotiations to stabilize the strategic balance at the level of mutual deterrence, and to refrain from further competition which would bring both sides no net gain, indeed probably a net loss, to their security.\textsuperscript{274} The study generated this critically-important conclusion because it postulated an interactive competitive relationship in which the United States and the Soviet Union, each operating on the basis of assured destruction and damage limiting objectives, attempted as a first priority to secure its deterrent capability and only thereafter attempted to deny the other the capability to inflict unacceptable damages. Since both sides were capable economically and technically of achieving the first objective with very high levels of confidence, by definition neither side was capable within realistic feasible limits of achieving the latter.

Ironically then, a group of conservatively-inclined civilian strategists
and military officers, who started out to determine optimal alternatives for continuing the strategic buildup, culminated their efforts by producing a compelling reason for strategic arms control which even tough-minded military strategists were hard pressed to dispute. Prior to this time, the Arms Control and Disarmament Agency had not been able to achieve this result; indeed, the ACDA officials thus far only had managed to alienate even sympathetic Pentagon officials who demanded mathematical analysis rather than emotional preaching as the basis for policy decisions. But where the ACDA officials thus far had failed, the Pentagon officials who conducted the damage limiting study succeeded.

3d. Exploiting the Damage Limiting Study and Forging Consensus Against Further Procurements

Shortly after the results of the study had become available in the fall, 1964, McNamara began to argue within the Pentagon against the procurement of a major damage limiting force and vigorously employed the study as an instrument of bureaucratic argument to forge consensus at high government levels on behalf of his position. The results of the study promptly were sent to the White House and were briefed to President Johnson and Special Assistant for National Security Affairs McGeorge Bundy. Johnson agreed with McNamara's interpretation of the results, and consequently McNamara's sentiments were incorporated into President Johnson's defense message to Congress, which was released in mid-January 1965. Despite the stress that the message placed on United States military superiority over the Soviet Union, it also spoke in a quite reserved fashion about the wisdom of investing in a major damage limiting force. This statement was interpreted by some military officers to be a White House signal to the
Pentagon bureaucracy that President Johnson fully accepted McNamara's recommendation and that he was prepared to support McNamara's decisions not to authorize further procurements. 279

Although the military services did not agree, some other Pentagon officials did support McNamara's interpretations and were willing to provide assistance to this aspect of his campaign for restraint. Within the Office of Systems Analysis, whatever support once had existed for a major damage limiting capability quickly vanished and a solid consensus emerged against further massive investments. Although Systems Analysis officials originally had adopted a cool attitude toward the damage limiting study and did not lend their full support, once it had been published they quickly became attracted to its methodological elegance and the insights it provided for optimally allocating fiscal resources on the basis of marginal productivity. 280 Moreover, Systems Analysis officials immediately recognized that the strategic concepts and the study could be employed in their campaign to control costs and to block the acquisition of unnecessary strategic weapon systems. 281 They had been hampered by the inability to employ publicly a budget ceiling to size the strategic forces, and accordingly they enthusiastically seized upon the concepts and the study and began vigorously to employ them to launch analytical attacks against the recommendations of the military services.

In addition, Harold Brown and other high DDR&E officials also recognized that the pursuit of the damage limiting objective would be too costly, difficult, and probably counterproductive; accordingly, sentiment quickly vanished at high DDR&E levels for a major investment in a large ABM system and associated offensive and defensive forces. 282 Although its position
changed somewhat after Brown had departed and Dr. John Foster had assumed command, the DDR&E throughout the remainder of McNamara's tenure still remained opposed to the Army's plans for a thick ABM system.

Despite the fact that the military services realized shortly afterwards that McNamara was interpreting the results of the study to be a justification for wide-ranging restraint, they did not launch a serious, carefully-orchestrated effort to overturn the concepts or the study.283 Ironically, they continued to support the concepts, their associated analytical framework, and the analysis that had been generated by the damage limiting study. The primary reason appears to be that they continued to perceive that the study provided good analytical arguments for advancing their causes.284 Thus, while McNamara perceived the study to be a rationale for restraint, the services continued to perceive it as a rationale for expansion.

The Army, in particular, continued to support the study because it provided a rationale to justify the procurement of a large ABM system.285 The Air Force initially was a good deal less enthusiastic. General LeMay in particular was quite upset about the fate which the strategic bombers and his proposal for more Minuteman ICBMs had suffered, and at one juncture threatened to demote General Kent to the rank of Colonel for his complicity in the damage limiting study.286 LeMay contained his anger, but the Air Staff did raise formal objections to the damage limiting concept and especially the scenarios of spasm attack employed in the study.287 But the Army was not sympathetic, Air Force Secretary Eugene Zuckert was persuaded by the OSD to drop his support for General LeMay's complaints, and McNamara was not interested in making any changes.288 As a result, the Air Force was forced to reconcile itself to the situation, and a short time later began to change its
attitude and to support the concepts and the study.\textsuperscript{289} Evidently the Air Staff decided that a plausible case could be made for retaining the strategic bombers under the assured destruction rubric and that the best strategy for gaining authorization for more ICBM missiles was to wait until McNamara had decided to authorize procurement of a full damage limiting force.\textsuperscript{290}

The two sides were able to read entirely different meanings into the damage limiting study because the conclusions which it offered were contingent almost totally upon critical assumptions which the reader made about the availability of fiscal resources and the probability that the Soviet Union would react to the American procurement of a major damage limiting force by bolstering its own offensive forces.\textsuperscript{291} Since McNamara assumed that fiscal resources were scarce and that the Soviets would react, he drew quite negative conclusions about the wisdom of pursuing the damage limiting objective. But since the military services made quite different assumptions, they drew precisely the opposite conclusions. The study thus was sufficiently ambiguous and susceptible to being interpreted in multiple fashions to bridge a major gap between conflicting sides and mutually-exclusive objectives.

Since the strategic concepts and the damage limiting study thus suited the purposes of McNamara and the military services for opposite and conflicting reasons, basic strategy was not a subject of intense debate throughout the remainder of McNamara's tenure; the concepts and the study continued to play a significant role in structuring the Pentagon's debate about strategic forces and in creating a commonly accepted currency for conducting a highly-focused, analytically-based dialogue about the purposes of strategic forces and the comparative cost-effectiveness of alternative weapon systems. Consequently, McNamara got the best of all worlds. He got a set of strategic concepts and
a thorough analytical study prepared with full cooperation by the military services which generated a long list of highly defensible reasons for halting the strategic buildup and provided the arguments which he needed to forge a solid consensus at the top levels of government on behalf of his position. Simultaneously, he also got solid consensual support for the continued maintenance of the very doctrinal framework which generated those reasons and arguments. By installing these strategic concepts, and by initiating the damage limiting study and then interpreting its results to suit his purposes, McNamara thus was able to create a doctrinal framework which substantially strengthened his position.

4. Political Strategies: Gaining Service Acquiescence, Recruiting Allies and Splitting the Service Chiefs

Although the doctrinal framework which emerged in 1964 as a result of the damage limiting study bolstered McNamara's position and made his task easier, it by no means ended his problem of dealing with the military services. The Army and the Air Force in particular continued to advocate their causes and to exert substantial pressures on McNamara to authorize the acquisition of their favorite weapon systems. As a result, McNamara continued to have an adversary relationship with the services and the Joint Chiefs of Staff across a broad spectrum of policy fronts within the strategic forces program budget.

In dealing with the military services and their recommendations, McNamara also employed a variety of political strategies in an effort to shape the patterns of bureaucratic alignment within the Pentagon and to create favorable political conditions for the decisions he wanted to make. One
strategy was to attempt to gain the active support or at least the acquiescence of the military service which was being directly victimized by his decisions for restraint. The historical record shows clearly that McNamara was willing to make critically important decisions in the face of substantial opposition within the Pentagon, even in the face of unanimous recommendations by the Joint Chiefs of Staff. But like any Secretary of Defense, he preferred not to take decisions in isolation in the Pentagon, and, for quite valid reasons, he felt a good deal more comfortable when other officials, especially senior military officers, agreed with his opinions. The more service support he had, the less political capital he had to pay for controversial decisions and the less risk he took that he would be subjected to damaging political charges that he was acting arbitrarily or ignoring the professional advice of the military services.

The best state of affairs, of course, occurred when the victimized military service itself either actively supported McNamara or at least did not publicly oppose his decisions. A strategy which McNamara often employed to gain a service's support was to use his persuasive talents in an effort to convince its senior officials that his decisions were wisely taken and were based on solid strategic reasoning; ideally, McNamara evidently wanted to induce the service officials themselves to cancel their weapon systems and to scale back their force plans.\(^{292}\) Obviously, this strategy of attempting to convince the service to make unilateral sacrifices had severe limitations, especially when the service at question solidly supported a strategic system and had substantial vested interests at stake. Accordingly, McNamara employed a second strategy for gaining service support. In some circumstances he was prepared to offer compensation as an inducement to cooperation or at
least as a device to reduce service opposition. Sometimes, this strategy took the form of tacitly bargaining with the military services and engaging in indirect reciprocal exchanges. On other occasions, however, McNamara apparently was prepared to engage in overt reciprocal bargaining and horse trading with the service chiefs. The specific cases in which he employed these bargaining tactics will be addressed in some detail in the next chapter.

Despite these efforts, however, McNamara sometimes still was confronted with adamant opposition from a particular service and was unwilling to make the kind of concessions that were required to mollify it. On these occasions, McNamara attempted to gain support elsewhere in the Pentagon, especially from the other service chiefs, for his decisions. By recruiting allies, an opportunity existed for bringing additional pressure to bear on the military service to fall into line. But even failing this, the ability to recruit allies at least had the advantage of isolating the service and denying it support. The more he could isolate a service, the less leverage it had for calling public attention to the issue and for bringing political pressure to bear on him.

Although he did not have the legal authority to compel the Joint Chiefs of Staff or the civilian secretaries to agree with his decisions, he did have the power of persuasion at his disposal, and accordingly he regularly attempted to employ his persuasive talents in an effort to divide and conquer. In employing these political tactics, McNamara certainly did nothing that differed markedly from the techniques employed by other Secretaries of Defense. The strategy of recruiting allies and splitting the service chiefs was employed by Secretaries before McNamara and has been employed since, and will continue to be a major bureaucratic weapon in the political arsenals.
of Secretaries of Defense for many years to come. McNamara in particular most successfully employed these political tactics during 1963-65, when internal disagreements among the military services were especially strong and the Joint Chiefs of Staff submitted over 100 split decisions on major issues. During his last two years, McNamara was considerably less successful as the Joint Chiefs of Staff began to band together and evidently adopted the practice of logrolling and reciprocal bargaining in order to form a common front against him. As a result, the incidence of JCS split opinions dropped off markedly. But although McNamara was less able to split the Joint Chiefs, he still enjoyed some success in persuading the civilian secretaries to support his positions. For example, in the critical late 1966-early 1967 debate over the ABM deployment issue, all three civilian secretaries publicly supported McNamara's decision to delay deployment pending the results of President Johnson's effort to initiate SALT negotiations with the Soviet Union, even while they all publicly opposed him by recommending a limited deployment if the SALT demarche failed.

4a. The Sources of Conflict and Consensus Among the Joint Chiefs of Staff

Even apart from their shared strategic perspectives regarding the desirability of continuing the strategic buildup, other powerful incentives existed for the Joint Chiefs of Staff to unite together in common cause and alliance against McNamara. By banding together, some possibility existed that they could bring enough political pressures to bear against McNamara to force him to make concessions or at least deny him the opportunity to play divide and conquer. In addition, the JCS format and procedures were specifically established to produce integrated decisions and therefore created a forum which made consensus possible; indeed, the pressures for consensus evidently were so strong that they often stifled innovative thought.
Furthermore, McNamara's centralization of power within the Pentagon and installation of PPBS had challenged collectively their sense of professional pride and their institutional prerogatives, and thus had given them grounds for allying together against the common enemy. Also, the damage limiting study had the unfortunate effect, from McNamara's viewpoint, of stimulating a de-facto alliance among the military services. Since the study packaged together a number of weapon systems and made their deployment contingent upon each other, it thus made the military services dependent upon each other and created substantial reasons for them to unite together. Finally, the departure of such antagonistic personalities as General Maxwell Taylor and General LeMay removed the personal frictions which before had helped to divide the Joint Chiefs amongst themselves.

Despite these incentives for consensus, however, the Joint Chiefs of Staff by no means presented a monolithic facade and substantial incentives still existed for the services to bicker amongst themselves and even to commit bureaucratic fratricide. First, traditional interservice rivalries and animosities still were strong despite the fact that conflicts over roles and missions were less intense during this period than had been the case in the 1950's. Second, some competition still existed among the various weapon systems in the strategic force posture. McNamara's insistence on forsaking departmental budget ceilings and basing his decisions exclusively on mission-oriented program analysis almost automatically bred competition when the weapon systems of two or more of the military services fell into the same program category and performed essentially the same mission. The damage limiting study essentially had eliminated competition among weapon systems in the damage limiting mission, but substantial competition still did exist.
among the ICBM missiles, the strategic bombers, and the SLBM missiles in
dformance of the assured destruction mission. Consequently, budgetary
success for one weapon system and military service possibly could have
meant another's failure and a significant downward dip in its share of the
program budget. Third, the services were motivated not entirely by purely
partisan interests, and they often were willing to respond to persuasive
arguments, and to base some of their opinions on strategic and analytical
judgments rather than self-interested political calculations. Each of the
services, of course, was quite concerned about protecting its interests
and advancing its causes, and hardly was prone to responding favorably when
criticisms were directed by McNamara and the OSD staffs at its favorite
weapon systems. But each of the services in principle was a good deal more
willing, and sometimes eager, to respond to OSD's persuasive efforts and to
adopt critical positions regarding the weapon system recommendations of
the other services.

In particular, McNamara was most able to persuade the Chairman of the
Joint Chiefs of Staff to split ranks from the other service chiefs or at
least to listen sympathetically to OSD's positions and communicate its
thoughts to the individual services. The Chairman of the JCS occupied
a unique position which forced him to make a balanced appraisal of the force
posture and budget recommendations submitted by the military services.
Consequently, the Chairman operated under a strong incentive to be more
dispassionate and objective than the individual service chiefs who, despite
their two hats, basically were concerned with their respective military
departments. General Maxwell Taylor enjoyed a close relationship with
the Kennedy Administration and was sufficiently sympathetic to McNamara's
strategic perspectives and managerial objectives to side with him on occasion and to serve as a general conduit to the service chiefs. General Earl Wheeler, who assumed the chairmanship in 1966, did not have a similarly close relationship with the Johnson Administration. But he did attempt to remain unbiased and objective. While he normally sided with the service chiefs on major controversies, he did lend McNamara considerable help by helping explain the OSD positions to the service chiefs and generally by fostering productive communications between the military services and the civilian leadership.

Although the service chiefs most often forged consensus, especially in 1966-67, they occasionally did part ranks and openly oppose one another. For example, the Army and the Navy both publicly abandoned their support for the Air Force's plans for the B-70 strategic bomber, and thus helped McNamara persuade the Congress to acquiesce in his decision to cancel the aircraft. The Air Force steadfastly refused to support the Army's Nike-X ABM system until the Army had agreed to reconfigure the system to provide protection for the Minuteman sites by emplacing Sprint missiles in the vicinity of Minuteman silos. Similarly, the Army and the Navy service chiefs decided not to associate themselves on several occasions with the Air Force's proposals for the prompt engineering development of the AMSA strategic bomber and the F-12 interceptor.

4b. Recruiting Allies from Within the Service Departments

Nor did each of the individual military services always present a monolithic facade of total support for each of the controversial weapon systems that were being advocated by various internal subcomponents. Each
of the military services internally was composed of a complex organizational structure filled with competing factions and conflicting priorities, and thus ridden with exploitable cleavages.

The major internal cleavage within each service normally was between the civilian secretariats and the uniformed senior military officers. The civilian secretaries occupied positions which were suspended midway between the Secretary of Defense and their respective military departments and tended to produce dual loyalties. By virtue of their responsibility to manage their military departments, they tended naturally to view priorities from its perspectives and interests, and to advocate its causes, including the acquisition of major weapon systems that promised to bolster the combat capability of its forces. But they also were civilian members of a Presidential administration, and as political appointees they were expected to provide assistance to the Secretary of Defense in his efforts to manage the defense budget and to forge a coherent relationship between national strategy and the military force posture independently of the interests of the individual military departments.

These two responsibilities were not necessarily in conflict and did not always give rise to split loyalties. Often, they were complementary and mutually supporting. But in regard to the strategic forces program budget, the civilian secretaries often found themselves caught between McNamara's aspirations and the demands of the uniformed officers. Evidently their tendency, as a general rule, was to side exclusively with neither side, but rather to stake out a middle ground position and to respond flexibly in light of their own perceptions, strategic perspectives, interests, and priorities. Consequently, in each case they were capable in principle of siding with either side. Since their allegiance and support often were
critically important to the political strategies of both sides, they regularly became targets of the persuasive efforts of both the Office of Secretary of Defense and the uniformed service staffs. McNamara and the OSD staff often were able to court their approval and to secure their assistance in dealing with the military services and the service chiefs. Navy Secretary Paul Nitze, who occupied that position from 1963-1968, often acted as a stubborn advocate of the Navy's causes, but he maintained a close relationship with McNamara and, when persuaded, was willing to fight the OSD's battles with the Navy admirals. The OSD's major problem regarding the SLBM forces was not to block the Navy's excessively expansionist ambitions, but rather to foster innovations in the Polaris submarine force which did not appeal to the surface admirals and, in some cases, to the Special Projects Office. Nitze provided valuable help, especially in convincing Chief of Naval Operations Admiral McDonald to accept the Poseidon missile and to forge a consensus among the other surface admirals. Prior to Nitze's intervention, the surface admirals, who feared that the expensive Poseidon would consume a substantial portion of the Navy's budget, had resisted McNamara's persuasive efforts, reassurances, and even threats to give the Poseidon funds to the Air Force.

Within the Army, a strong consensus existed on behalf of deployment of the Nike-X ABM system. The Army had no other strategic forces under its control, apart from the surface-to-air missiles that provided terminal defense against bomber attack, and the Nike-X ABM system offered an opportunity to gain access to the strategic forces program budget and to play a prestigious role in the important mission of strategic defense. Whatever reservations which once had existed among Army officers apparently had dissipated when
they were given assurances that the funds expended on the ABM system would not be subtracted from elsewhere in the Army budget. Nevertheless, evidently the Army civilian secretariat did share some of McNamara's reservations about the wisdom of deploying a large ABM system configured to provide defense against a massive missile attack and was willing to lend McNamara some support on this issue. For example, during the critical late 1966-early 1967 debate over deployment in the fiscal year 1968 budget, Army Secretary Stanley Resor publicly backed McNamara's decision to defer deployment while an attempt was made to initiate SALT negotiations with the Soviet Union; and he further recommended that a deployment decision, should one be made, be confined initially to a thin ABM system rather than the thicker 25 city system recommended by Army chief of staff General Johnson. In response to Congressional inquiry about his opinions regarding McNamara's decisions, Resor replied:

I fully agree with the Secretary of Defense's proposal that before commencing deployment of an ABM system, we should attempt, through negotiations with the Soviets, to curb the strategic arms race. If these negotiations do not lead to a significant change in our current estimate of the Soviet threat or a satisfactory agreement my present view is that I would then favor deployment of a light ABM system.....(however) the decision on greater levels of defense may safely be and should be deferred.

Air Force Secretary Harold Brown, who succeeded Eugene Zuckert in 1965, also tended to occupy a middle ground position and flexibly to side either with McNamara or the Air Staff in light of his personal perspectives and opinions. He enjoyed a close relationship with McNamara, and sympathized with his determination to assert civilian managerial control over the defense budget. But he also was sympathetic to the Air Force's concern for maintaining a large, technologically advanced strategic offensive force
posture composed of ICBM missiles and strategic bombers. Moreover, as a result of his professional technical background and his experience in DDR&E, he evidently looked with favor upon the development and deployment of new technologies which brought significantly improved combat capabilities. Accordingly, he supported a number of the weapon system proposals which were being advocated by the Air Staff. For example, he began to support the development of the AMSA strategic bomber, and gave the Air Staff substantial help, after he had become convinced that a force of heavy strategic bombers was preferrable to a force of smaller FB-111 bombers. Likewise, he supported fully the long list of qualitative improvements that were made in the offensive missiles, including MIRV, and the strategic bombers. Brown, however, was an economically-oriented manager who was willing to oppose specific weapon systems that did not make cost-effective sense and in these cases was willing to support the OSD's positions. For example, Brown and the civilian secretariat publicly did not lend full support on selected occasions to the specific design features of the AMSA that were being promoted by the Air Staff, and were not particularly enthusiastic about the F-12 interceptor or the WS-120A ICBM.

Within the uniformed Air Force itself, important cleavages existed which the Office of Secretary of Defense occasionally was able to exploit. Most important, the Air Staff in the Pentagon by no means always was in sympathy with the Strategic Air Command, the Air Force Systems Command, and the Air Defense Command. The Air Staff had the responsibility for producing a balanced posture of strategic, tactical, and airlift forces, and therefore was forced to adopt a somewhat even-handed approach in dealing with the demands and recommendations of the various Air Force commands.
Staff also was acutely aware of the OSD's attitudes and therefore realized that in making adjustments to fiscal realities and the OSD's strategic perspectives some weapon systems that were being promoted by the Strategic Air Command and the Systems Command would have to be downgraded in priority. The Air Staff at senior levels was dominated by general officers who had spent a substantial portion of their careers in the Strategic Air Command, and reflected its sense of perspectives, interests, and priorities. General LeMay, of course, was a particularly vocal advocate of SAC, and his successor, General McConnell, also believed firmly in strategic air power. But the Air Staff internally certainly was not a monolithic organization in its attitudes and predispositions. Differences of opinion and priorities often existed between the technically-trained and operationally-trained officers. Perhaps more important, as time passed by, a larger number of more junior officers who had risen through the ranks of the Tactical Air Command began to assume positions on the Air Staff and to make their presence felt.

As a result of these countervailing forces, the Air Staff vigorously advocated the prompt development and deployment of the AMSA bomber and other qualitative improvements in the strategic bomber force; and once it had become reconciled to a force only of 1000 Minuteman missiles, it transferred its priorities to the making of qualitative improvements in the Minuteman force, including MIRV. But it also adopted a more reserved and lukewarm attitude to other weapon systems which it did not regard to be high priority items or considered to be hopeless causes in light of OSD opposition. For example, the Air Staff did not give full support to the F-12 interceptor or complain
vigorously when it was cancelled. In addition, the Air Staff basically was satisfied with the Minuteman missile and, in light of OSD indifference, never did attach high priority or aggressively advocate the WS-120A ICBM to replace the Minuteman. 337

2. Ibid. McNamara also, of course, played an important role in blocking several strategic weapons during the Kennedy Administration, such as the B-70 and Skybolt.


4. II.1-1.


6. Ibid, Chapter 4, p. 67. During the 1963 Test Ban Treaty Hearings, McNamara made the following comment: "Yet, and this is a key point, I cannot allege that the vast increase in our nuclear forces, accompanied as it was by large increases in Soviet nuclear stockpiles, has produced a comparable enhancement in our security." Hearing Before the Senate Foreign Relations Committee, August, 1963, p. 108-109.

7. II.1-2.

8. II.1-3a,b,c.

9. II.1-4.

10. II.1-5.

11. II.1-6.


14. Proponents of this strategy included several of McNamara's advisors within OSD, a number of whom had played an important role in developing the counterforce strategy at the Rand Corporation during the 1950's, as well as senior Air Force generals, including General Thomas D. White, Air Force Chief of Staff. See Desmond J. Ball, The Strategic Missile Program of the Kennedy Administration. Unpublished Ph.D. dissertation, Australian National University, 1972.
15. II.1-7.

16. Whether nuclear war, in fact, would be controlled if once initiated, of course, is another matter. Indeed, a number of high Pentagon officials who supported the counterforce strategy harbored personal doubts about the probability of controlling escalation. The admittedly grim prospects for limiting escalation, however, in no way obviated the counterforce strategy. The strategy was based on the assumption that spasmodic destruction was not inevitable, that some probability existed that nuclear war could be controlled, and that a force posture which provided options for limited attacks could increase that probability by some measurable amount.

17. "Intra-war deterrence," refers to the objective of deterring attack on United States cities even while other American targets are being struck.

18. In this sense, the presence of the damage limiting objective in the counterforce strategy should not be confused with the Damage Limiting concept which later was installed as a replacement for this strategy. The Damage Limiting Concept was based on the assumption that nuclear war had escalated to an unlimited exchange and that the chief objective of using Strategic Forces was to destroy as many Soviet offensive nuclear launchers as possible in order to reduce insofar as possible damage inflicted upon the United States. It did not see damage limitation as largely being a function of the control of escalation.

19. See McNamara's Fiscal Year 1964 Posture Statement, which presents an argument for flexibility and options, especially the capability to strike military targets and to withhold attacks on urban areas. Department of Defense Appropriations for 1964, Hearings Before the Subcommittee of the Committee on Appropriations, United States Senate, eighty-eighth Congress, first session on H.R. 7179, p. 41.

20. It is important to remember, when discussing targeting doctrine and target systems, that the strategic nuclear forces also play a role in United States strategy for deterrence and defense in Europe, and therefore are targeted on Soviet theater nuclear forces and general purpose forces which would attack West Europe in the event of a NATO-Warsaw Pact war.


22. As we shall see later, this aspect of the strategy ultimately posed considerable problems for McNamara's efforts to level off the Minuteman buildup.

23. II.1-8a,b,c.
24. II.1-9a,b.
25. II.1-10a,b.
26. II.1-11a,b.
27. II.1-12a,b.
28. Despite the fact that fear of the alleged "missile gap" had dissipated by late February, 1961, a good deal of concern still existed about the future, and evidently senior Pentagon and intelligence community officials still expected the Soviet Union to embark upon a significant IBCM buildup at some juncture in the near future. Accordingly Pentagon force plans in 1961 still were based on the assumption that Soviet forces would grow over the next several years. Only later were those intelligence projections adjusted downwards.
32. Enthoven's speech before the Loyola University Forum, Los Angeles, California on Feb. 11, 1963, is reprinted in Department of Defense Appropriations for 1964 (Senate) op. cit., p. 167.
33. Ball, op. cit. Ball discusses the events leading up to Kennedy's offensive missile force posture decision in 1961-63.
34. II.1-13a,b.
35. Ball, op. cit.
36. Thus, a final official decision had not been made regarding the alternate size of the Minuteman force, and was not made until 1964.
37. II.1-14a,b,c.
38. II.1-15a,b,c,d.
40. It should be noted here that the Congress at this time was becoming increasingly restive about the rising overall level of defense expenditures; accordingly, cuts in the strategic forces budget promised to reduce overall expenditures and thus to lessen Congressional interference in other areas of the defense budget where McNamara did not want to slash expenditures.

41. II.1-17.

42. II.1-18.

43. President Johnson, of course, launched a major economy drive shortly after he took office, but indications that the strategic forces budget would be pared down began to appear several months before Kennedy's assassination.

44. II.1-19.

45. II.1-20.

46. II.1-21a,b,c.


48. Ibid, chap. 6 and 7, p. 192-263.


50. Ibid, p. 106.


54. At that time, Pentagon force planners were just beginning to develop an analytical methodology for determining whether an ABM system could provide effective defense and how resources for strategic defense best could be allocated. Accordingly, a good deal of uncertainty still existed in the Pentagon about these issues.

55. II.1-22a,b.

56. His doubts about the requirement for bombers run consistently through all of his posture statements and Congressional testimony from 1961-1968.
57. See McNamara's Fiscal Year 1967 Posture Statement. Department of Defense Appropriations for Fiscal Year 1967, Hearings Before the Subcommittee on Department of Defense of the Committee on Appropriations and the Committee on Armed Services United States Senate, Eighty-Ninth Congress, second session, on H.R. 15941, p. 54-56.

58. II.1-23a,b,c.

59. II.1-24a,b.

60. II.1-25a,b.

61. II.1-26.

62. In addition to McNamara, high State Department officials as well as Kennedy's White House Advisors held this view.

63. See Jayne, op. cit., p. 196-200.


65. II.1-27.

66. This sentiment certainly is expressed in his posture statements. And his former advisors who were interviewed confirmed that McNamara in fact did perceive the Soviet Union's political ambitions in distrustful terms. See also McNamara, The Essence of Security, op. cit., p. 14-18.

67. II.1-28.

68. Evidently McNamara on more than one occasion tasked his foreign policy advisors in the OSD's Office of International Security Affairs (ISA) to prepare analytical papers which explored the issue of whether and to what degree the United States and the Soviet Union shared common interests. The prevailing judgment among high ISA officials was that a commonality of interests did exist in some areas, including arms control negotiations; this judgment was expressed in the papers that were sent to McNamara.

69. II.1-29a,b,c.

70. This aspect of his beliefs regarding the Soviet Union became increasingly apparent in the later years of his tenure, but information gathered from interviews suggests that he held these attitudes in his earlier years as well.

71. II.1-30a,b,c.

72. II.1-31a,b.

74. Indeed, apparently a number of OSD force planners regarded the sluggish Soviet response in the early 1960's to be a temporary phenomenon and fully expected that the Soviets would embark upon a significant buildup some time in the future. This, at least, is the impression which grows out of interviews with former Systems Analysis officers.

75. Prior to the mid 1960's, the Soviet Union had placed primary emphasis on strategic defense and theater offensive nuclear forces, to the exclusion of long range forces for intercontinental attack. The large Soviet bomber defensive force (PVO Strany), the legacy of doctrinal emphasis in strategic defense, and the ongoing R&D program for ballistic missile defense all suggested that the Soviet Union might proceed forward to deploy a thick ABM system.

76. II.1-32.

77. Running consistently through McNamara's public testimony on Soviet intentions in regard to the buildup is the theme that the Soviet Union largely was responding to the previous United States buildup.

78. The following testimony provides a clear picture of McNamara's views in 1967 regarding the ongoing Soviet buildup. Department of Defense Appropriations for 1968, Hearing Before the Subcommittee of the Committee on Appropriations, House of Representatives, Ninetieth Congress, first session, p. 267.

Mr. Long. Is the increase in the Soviet offensive and defensive forces, which seems to be underway, an indication of their possible intentions to launch new adventures, or is this merely an attempt on their part to keep up with our own growing power? Secretary McNamara. I think almost surely it is an attempt only to keep up with our own growing power. It is not in any way an indication of their plan to launch new adventures.

Mr. Long. I really meant by an adventure some plan or program in a quasi-war area, perhaps in central Europe or Asia, with which they thought they could bluff us if they had more power.

Secretary McNamara. Exactly.

Mr. Long. It would not help them in bluffing.

Secretary McNamara. It would not. -----

Mr. Lipscomb. Would the gentleman yield?

Mr. Long. Yes.

Mr. Lipscomb. Mr. Secretary, in your statement you point out a very dramatic increase in Soviet help and aid both in military and other ways to Algeria. Isn't this an indication of the Soviet aggressive foreign policy which might fit into the doctor's interpretation of adventure?
Secretary McNamara. No I do not.
I do not believe there is any connection whatsoever between their
support of regimes such as that in Algeria on the one hand and the
increase in their nuclear force on the other. No connection whatsoever.
Mr. Lipscomb. They are pursuing for one reason or another a very
aggressive foreign policy.
Secretary McNamara. I mentioned yesterday and again this morning that
they have given no indication that they have ceased their efforts to
subvert the established regimes in many independent nations of the
world.
They are making every effort they can to increase their influence in
those nations and where possible to transfer their loyalties to the
East and to the Soviet Union. But I do not think that has any connect-
ion with their increase in nuclear forces. The increase in nuclear
forces almost surely is a reaction to our very, very strong force of
today, and the very large force they know we are planning on for the
future.

80. II.1-33.
81. This at least is the impression which grows out of interviews with
former close OSD aides; and it is a logical outgrowth of McNamara's
later statements which attributed the Soviet ICBM buildup partially
to a response to the early 1960's United States buildup. See
McNamara, The Essence of Security, op. cit., p. 60-62. See also
Rosswell Gilpatric's article, "Our Defense Needs, the Long View,"
Foreign Affairs, April, 1964, for an analysis by one of McNamara's
closest former aides of the concept of mutual restraint as a vehicle
for controlling the arms race.
82. II.1-34.
83. II.1-35.
84. II.1-36.
85. II.1-37a,b,c.
86. II.1-38a,b.
87. See Arthur M. Schlesinger, Jr., op. cit., ch. 34, "The Pursuit of
Peace."

Childs, op. cit., p. 3-17.

II.1-44.


II.1-45a,b,c,d.

II.1-46.

II.1-47.

II.1-48.
108. Soviet ENDC negotiator Tsarapkin charged that the verified freeze proposal would legalize espionage and would enable aggressors to gather enough information to launch a surprise attack on the Soviet Union. Foreign Minister Andrei Gromyko charged that the freeze proposal was simply propaganda.


110. II.1-49.


112. As will be discussed later, at the time a series of major analytical studies were underway in the Pentagon to determine optimal force posture configurations for providing effective strategic defense.

113. II.2-1a,b.


115. This state of affairs continued throughout the Johnson Administration. Even during McNamara's last year, when his relations with President Johnson deteriorated, the service chiefs apparently still did not believe that they had much influence over Johnson's opinions on strategic forces when McNamara expressed views contrary to the Joint Chiefs of Staff.


117. II.2-3a,b,c,d,e,f.

118. II.2-4a,b,c,d,e,f.

119. II.2-5a,b,c,d,e,f.

120. II.2-6a,b,c,d,e,f.

121. See Allison, op. cit. for a formal description of this model.
122. As Graham Allison has written, research paradigms serve as conceptual filtering tools, or lenses, which permit the analyst to focus on certain aspects of a political phenomenon. Therefore, no one research paradigm in itself can be relied upon to bring into focus all of the central features of a policy process. See Allison, Essence of Decision, op. cit., Chap. 1, p. 1-9, Ch. 7, p. 245-263.

123. II.2-7a,b,c,d,e,f.


125. The subject of McNamara's influence in the White House has been covered and therefore will not be analyzed in detail here. See, for example, Henry L. Trewhitt, McNamara, New York, Harper and Row, 1971. A more critical account is presented in David Halberstam, The Best and the Brightest, New York, Random House, 1972, Ch. 13, p. 241-265.

126. McNamara's dealings with Congress also have been described elsewhere, and do not require elaboration here. See Trewhitt, op. cit. Paul Y. Hammond has aptly characterized McNamara's strategy for dealing with Congress as being one of "aggressive defensiveness." See Paul Y. Hammond, "A Functional Analysis of Department of Defense Decision Making in the McNamara Administration." American Political Science Review, March, 1968.


128. Enthoven and Smith, op. cit., Ch. 2, p. 31-72.

129. Kaufmann, op. cit., Trewhitt, op. cit.

130. II.2-8.

131. There were, of course, ample historical grounds for doubting the ability of the services to produce a coherent and properly-balanced force posture.
132. It should be noted that two other OSD staffs, the Comptroller's Office, which handled the budget phase of the PPBS process, and the Office of International Security Affairs (ISA), which dealt with the foreign policy aspects of defense policy, also played a helpful, although largely secondary role in dealing with the strategic forces program budget and related arms control issues. ISA head John McNaughton (until his death in 1967) and Deputy Assistant Secretary Morton Halperin, in particular, played an important role in the arms control area. The role of these staffs, however, will not be addressed here. See John Newhouse, Cold Dawn: The Story of SALT (New York, Holt Rhinehart, and Winston, 1973), esp. Chap. 2, p. 66-102, for a discussion of ISA and the SALT talks in the McNamara period, and Murdoch op. cit. for an analysis of the Comptroller's role in OSD decision making under McNamara.


134. It should be noted here that systems analysis did not write the important R&D DPM, which was controlled by DDR&E.


136. As we shall see in Chapter Five, occasionally Systems Analysis did hold policy views which differed from McNamara's orientations.


139. In this regard, DDR&E had more functional levers at its disposal for exerting influence over the characteristics of weapons systems under development than did Systems Analysis.

140. II.2-9a,b,c,d,e.

141. This was especially true when DDR&E was directed by Herbert York, before McNamara's tenure. But it also remained true, albeit to lesser degrees, under Harold Brown and, after 1965, under John Foster. See Greenwood op. cit., Ch. 2.
As we shall see later, DDR&E played a dual role in the AMSA debate. It first sided with McNamara, but later became attracted to this bomber and lent its support on behalf of Air Force plans for AMSA contract definition.

This obviously is the case for any Secretary of Defense. While McNamara had a larger mandate than most Secretaries, however, it is important to point out that even his mandate was not unlimited.

One of the most interesting trial balloons was former Deputy Secretary Rosswell Gilpatrick's Foreign Affairs article, "Our Defense Needs, The Long View," (April 1964), which outlined the case for a stabilization of defense expenditures, a baseline strategic force posture composed only of offensive missiles, and arms control through mutual restraint.

That is, McNamara drew his arguments from conclusions and analyses which had been produced through the combined analytic efforts of his OSD staffs and the military services, and had been subjected to thorough review and appraisal, including coordination with the military services.

See Greenwood op. cit. for an analysis of the military services use of strategy as an instrument of bureaucratic argument, Chap. 3, p. 145-187.
157. Later, the services were to add, after McNamara's prodding, cost-effective analysis staffs of their own. The Secretary of the Navy established the Office of Program Appraisal (OPA), while the Chief of Naval Operations in 1966 set up a Systems Analysis Division to evaluate alternative Navy programs. The Air Force Chief of Staff in 1965 created the Studies and Analysis group, while the Army somewhat later established its own Office of Planning and Programming Analysis. See Sanders, op. cit., p. 51-57.

158. II.2-20.

159. This, at least, is the belief which some of McNamara's former advisors hold. Evidently Deputy Secretary Paul Nitze, who basically managed the fiscal year 1970 defense in 1968 while Secretary Clifford concentrated on Vietnam, did make more vigorous use of the budget ceiling and did encounter fewer difficulties than McNamara in dealing with the service chiefs.

160. Enthoven and Smith argue that a) the budget ceiling approach unwisely ignores issues of need and requirements, b) that leaving the allocation of funds within the budget ceiling to the military services produces serious force posture imbalances, and c) there is no discernible "optimum percentage" of GNP for defense spending. Op. cit., p. 203. It might also be pointed out that the practice of not announcing earlier that a ceiling existed provided a tactical advantage in the sense that it enabled McNamara, rather than the JCS, to make judgments about fiscal priorities and which weapons should be chosen over others.

161. II.2-21.

162. A budget ceiling provides no guidance on how defense funds should be allocated nor any guarantee that they will be allocated intelligently. As a result, a decision to allocate funds within a given budget ceiling between strategic forces and general purpose forces must be based either on some arbitrary division or on some assessment of military strategy and the requirements it dictates.

163. As we shall see later, after 1964 the damage limiting objective was used for planning purposes to determine requirements for strategic forces beyond the assured destruction objective.

164. The priority he attached to having a heavily-insured, high confident deterrent force is reflected in all of his posture statements, especially from 1964 onwards.

165. II.2-22.
166. As we shall see later, they did in fact attempt to use this analytical framework to generate arguments for justifying their proposals.

167. For example, Halberstam, op. cit., p. 241-265.

168. See Trewhitt, op. cit.

169. "Bureaucratic Strategies" is used here as an overarching term to describe two sub-categories of strategies McNamara employed in the Pentagon: analytical strategies and political strategies.

170. See Jackson Subcommittee Hearings, op. cit., p. 12, p. 220.

171. This charge also implicitly has been made by McNamara's critics. See Jackson Subcommittee Hearings, op. cit., p. 220.

172. This was especially the case with regard to the debate over the AMSA bomber, where the OSD-Air Staff analytical studies of the requirement for AMSA became a key focal point of McNamara's struggle with the Air Force on this issue.

173. II.3-1.

174. II.3-2.

175. Throughout this period, strategic concepts were employed in the program budget process for the purpose of examining force structure alternatives. In this sense, then, military strategy forced "inward," it was used to make budget and force posture decisions. These concepts provided a set of national objectives and a theory of requirements for evaluating force posture options, and they had a significant bearing on the foundation of strategic arguments which were erected under proposed weapon systems. Consequently, they had enormously important implications for the budgetary process, the OSD-military competition, and the fate of many weapons systems.

176. II.3-3.

177. See Sanders, op. cit., Ch. 8, 9.

178. Thus, McNamara's employment of these strategic concepts performed two internal control functions. First, it rationalized the process of program analysis and provided explicit analytical grounds for evaluating force structure alternatives in light of the national interest. Second, it strengthened McNamara's position for exercising restraint.
The fiscal year 1965 posture statement marked the first major conceptual step away from the counterforce strategy in force planning.
202. II.3-24.


204. II.3-25.

205. II.3-26.

206. II.3-27.

207. II.3-28.

208. See Enthoven and Smith, op. cit., Ch. 4.

209. Fiscal Year 1966 Posture Statement, Department of Defense Appropriations, 1966; Hearings Before the Subcommittee on Department of Defense of the Committee on Appropriations and the Committee on Armed Services, United States Senate, eighty-ninth Congress, first session, on H.R. 9221.

210. McNamara presented the following table in his fiscal year 1969 posture statement:

Soviet Population and Industry Destroyed (Assumed 1972 total population of 247 million; urban population of 116 million)

<table>
<thead>
<tr>
<th>1 Megaton-Equivalent, Delivered Warheads</th>
<th>Total Population Killed Millions</th>
<th>Percent</th>
<th>Percent Industrial Capacity Destroyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>37</td>
<td>15</td>
<td>59</td>
</tr>
<tr>
<td>200</td>
<td>52</td>
<td>21</td>
<td>72</td>
</tr>
<tr>
<td>400</td>
<td>74</td>
<td>30</td>
<td>76</td>
</tr>
<tr>
<td>800</td>
<td>96</td>
<td>39</td>
<td>77</td>
</tr>
<tr>
<td>1,200</td>
<td>109</td>
<td>44</td>
<td>77</td>
</tr>
<tr>
<td>1,600</td>
<td>116</td>
<td>47</td>
<td>77</td>
</tr>
</tbody>
</table>

Department of Defense Appropriations for 1969, Hearings Before a Subcommittee on the Committee on Appropriations, House of Representatives, ninetieth Congress, second session, p. 49.

211. Ibid, p. 149.

212. II.3-29.

213. II.3-30.
214. II.3-31.
215. II.3-32.
216. See Enthoven and Smith, op. cit., Ch. 5, p. 165-196.
217. II.3-33a,b,c,d.
218. A number of former OSD officers and military officers who were interrogated believed this to be the case.
219. McNamara's dropping of the counterforce strategy was protested by the Air Force Association, and senior Air Force generals were known to be unhappy with this decision as well. But the two concepts of Assured Destruction and Damage Limitation were not criticized publicly by the military services or their congressional allies. Nor did senior military officers express much unhappiness with these concepts during the course of interviews.
220. II.3-34.
221. II.3-35.
222. II.3-36.
223. II.3-37.
224. II.3-38.
225. II.3-39.
226. II.3-40a,b,c.
227. II.3-41a,b,c.
228. There was a Systems Analysis representative on the study, but he was a junior official who recently had been recruited from Kent's DDR&E staff.
229. II.3-42a,b,c.
230. II.3-43a,b,c.
231. Initially the terms of reference for the study were regarded to be in favor of ABM defenses, and certainly not structured against the very concept of damage limitation.
Anticipated casualty figures changed somewhat over the course of the next few years, but the basic results generated by the study were not changed. The following tables were presented in the posture statements for fiscal years 1966-1969. The fiscal year 1966 figures represent the direct products of the Damage Limiting study:

In order to assess the potentials of various Damage Limiting programs we have examined a number of "balanced" defense postures at different budget levels. These postures are designed to defend against the assumed threat in the early 1970's. To illustrate the critical nature of the timing of the attack, we used two limiting cases. First, we assumed that the enemy would initiate nuclear war with a simultaneous attack against our cities and military targets. Second, we assumed that the attack against our cities would be delayed long enough for us to retaliate against the aggressor's military targets with our missiles. In both cases, we assumed that
all new systems will perform essentially as estimated since our main purpose here was to gain an insight into the overall problem of limiting damage. The results of this analysis are summarized in the table below.

**Estimated Effect on U.S. Fatalities of Additions to the Approved Damage Limiting Program (Based on 1970 population of 210 million)**

<table>
<thead>
<tr>
<th>Additional Investment</th>
<th>Millions of U.S. Fatalities</th>
<th>Early Urban Attack</th>
<th>Delayed Urban Attack</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 0 billion</td>
<td></td>
<td>149</td>
<td>122</td>
</tr>
<tr>
<td>5 billion</td>
<td></td>
<td>120</td>
<td>90</td>
</tr>
<tr>
<td>15 billion</td>
<td></td>
<td>96</td>
<td>59</td>
</tr>
<tr>
<td>25 billion</td>
<td></td>
<td>78</td>
<td>41</td>
</tr>
</tbody>
</table>

The $5 billion of additional investment (of which about $2 billion would come from non-Federal sources) would provide a full fallout shelter program for the entire population. The $15 billion level would add about 8½ billion for a limited deployment of a low cost configuration of a missile defense system, plus about $1-½ billion for new manned bomber defenses. The $25 billion level would provide an additional $8-½ billion for anti-missile defenses (for a total of about $17 billion) and another $1-½ billion for improved manned bomber defenses (for a total of $3 billion).
### COSTS OF U.S. DAMAGE LIMITING POSTURES AND SOVIET DAMAGE POTENTIAL

<table>
<thead>
<tr>
<th>Program Costs – FY 1966-75</th>
<th>Soviet Damage Potential in Terms of Millions of U.S. Fatalities a/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Attributed Damage to Assured De- Limiting U.S. First Posture Strike</td>
<td>Soviet U.S. First Strike</td>
</tr>
<tr>
<td>(Billions of Dollars)</td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td></td>
</tr>
<tr>
<td>USSR Expected Threat</td>
<td></td>
</tr>
<tr>
<td>U.S. Approved Program</td>
<td>130-135</td>
</tr>
<tr>
<td></td>
<td>90-95</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td></td>
</tr>
<tr>
<td>USSR Threat I</td>
<td></td>
</tr>
<tr>
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<tr>
<td>U.S. DL Posture D 28.5 32.3 60.8 75-100 25-40</td>
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</tbody>
</table>

The program costs shown on the table represent the value of the resources required for each of the alternative postures. The costs attributed to Assured Destruction represent the resources required to ensure that we can, in each case, deliver and detonate at least the *AD is Assured Destruction; DL is Damage Limiting.

a/ Rounded to the nearest five million.

b/ The Assured Destruction posture designed against Threat I is more than just a minimal capability; it is designed to provide insurance against unexpected changes in the threat. In Postures C and D a larger strategic missile force is provided for Assured Destruction to counter the increased Soviet offensive threat and the much more extensive ABM defense. (Threat II requires about three times as much surviving, deliverable payload than Threat I, just to maintain our Assured Destruction capability.)
minimum essential number of warheads over Soviet cities, even after a surprise Soviet attack. The costs for Damage Limitation represent the value of the additional resources required to achieve the various postures shown on the table. The last two columns of the table show the U.S. fatalities which would result under two alternative forms of nuclear war outbreak. In the Soviet first strike case, we assumed that the Soviets initiate nuclear war with a simultaneous attack against our cities and military targets, and with the weight of their attack directed at our cities. In the other case, we have examined a hypothetical situation in which the events leading up to the nuclear exchange developed in such a way that the United States struck at the Soviet offensive forces before they could be launched at our urban targets.

249. II.3-60a,b.
250. II.3-61a,b.
251. This was because the mission could be performed only with a force of several weapons, not just with ABMs.
252. II.3-62a,b.
253. II.3-63.
254. II.3-64.
255. The problems associated with efforts to provide an optimally balanced force posture are discussed in McNamara's fiscal years 1966 and 1967 posture statements.
256. See Fiscal Year 1966 and 1967 Posture Statements, op. cit.
257. II.3-65.
259. The following table, presented in McNamara's 1968 Posture Statement presents the US-Soviet cost-exchange ratios as a function of level of US fatalities.

If the Soviets are determined to maintain an Assured Destruction Capability against us and they believe that our deployment of an ABM Defense would reduce our fatalities in the "U.S. Strikes First, Soviets Retaliate" case to the levels shown in the table above, they would have no alternative but to increase the second strike damage potential of their offensive forces. They could do so in several different ways. Shown in the table below are the relative costs to the Soviet Union of responding to a U.S. ABM deployment in one of these possible ways:
<table>
<thead>
<tr>
<th>Level of U.S. Fatalities Which Soviets Believe Will Provide Deterrence a/</th>
<th>Cost to the Soviets of Offsetting U.S. Cost to Deploy an ABM (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>$1 Soviet cost to $4 U.S. cost</td>
</tr>
<tr>
<td>60</td>
<td>$1 Soviet cost to $2 U.S. cost</td>
</tr>
<tr>
<td>90</td>
<td>$1 Soviet cost to $1 U.S. cost</td>
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</table>

260. II.3-66.

261. II.3-67.

262. II.3-68.


264. Indeed, in the absence of an ABM system, little purpose could be served by acquiring these weapon systems.

265. See 1966 and 1967 posture statements.

266. II.3-70.

267. II.3-71. Ironically, then, the offensive missile force already programmed turned out to be almost optimally-sized in terms of total numbers of launches for performing the assured destruction and damage limiting missions.

268. II.3-72.

269. II.3-73.

270. II.3-74. The fiscal year 1966 posture statement further suggests that even ignoring the bombers' slower speed, offensive missiles provide a cheaper, more cost-effective way to destroy enemy missile silos than strategic bombers.
277. II.3-80.


279. II.3-81.

280. II.3-82.

281. II.3-83.

282. II.3-84.

283. II.3-85.

284. II.3-86.

285. II.3-87.

286. II.3-88a,b.

287. II.3-89.

288. II.3-81.

289. II.3-82.

290. II.3-83.

291. Substantial disagreement existed within the Pentagon over whether the Soviet Union would react. McNamara insisted that the Soviets almost certainly would react to protect their deterrent, while the JCS argued otherwise.

292. II.3-84.

293. II.4-1a,b,c,d.

294. II.4-2a,b,c,d.

295. II.4-3.

296. II.4-4. The service chiefs and civilian secretaries retained the right to submit dissenting opinions to the President.
297. II.4-5.


300. II.4-6.

301. II.4-7.

302. General Taylor, of course, had been identified closely with the Kennedy Administration.

303. II.4-8.

304. II.4-9.

305. II.4-10.


307. Jayne, op. cit., Ch. 9, 298-332.

308. The other chiefs did support contract definition for AMSA, but they stipulated that the AMSA should then be closely studied and reviewed before an engineering development decision was made. See United States House of Representatives, Subcommittee for the Committee on Appropriations, Department of Defense Appropriations for 1968, ninetyeth Congress, first session.

309. II.4-11.

310. II.4-12.

311. II.4-13.

312. See Eugene M. Zuckert, "The Service Secretary: Has He a Useful Role," Foreign Affairs, April, 1966. Zuckert characterizes the Service Secretary as the "man in the middle," who is caught between the Secretary of Defense and the military departments.

313. II.4-14.

314. II.4-15.
315. II.4-16.
316. II.4-17.
317. II.4-18.
319. Ibid, p. 35.
320. Ibid, p. 35.
321. See testimony of Army Secretary Stanley Resor, Department of Defense Appropriations for 1968, Hearings Before a Subcommittee for the Committee on Appropriations, House of Representatives, ninetieth Congress, first session.
322. II.4-19.
323. II.4-20.
324. II.4-21.
325. II.4-22.
326. II-423a,b,c.
327. II.4-24.
328. II.4-25.
329. II.4-26.
330. II.4-27.
331. II.4-28.
332. II.4-29.
333. Greenwood op. cit., Ch. II. Greenwood discusses in some detail the Air Force's organizational structure and internal divisions, and their impact on Air Force policy.
335. II.4-30.
336. II.4-31.
337. II.4-32.
McNamara and his top OSD aides effectively employed both analytical and political strategies in several successful efforts between 1963-68 to exercise restraint and to make contractions in the strategic force posture. This chapter examines the manner in which they combined these political and analytical strategies in six major cases of restraint and contraction. These cases include McNamara's campaigns: 1) to halt the Minuteman buildup, 2) to block the new ICBM, 3) to prevent the AMSA bomber from entering into contact definition and engineering development, 4) to block the Army's plans for a thick ABM system, 5) to retire some 345 older model B-52 bombers, 6) to block the F-12 interceptor and to make substantial contractions in the bomber air defense force. Although each of these cases involved different issues and circumstances, several common threads run through them. All six actions were quite politically controversial and were taken in the face of substantial political pressure. But in each case McNamara and his aides were able to marshall good analytically-based reasons for their actions and consequently were able to turn aside service arguments without exposing themselves to charges that they were acting arbitrarily or were failing to acquire necessary weapon systems and to heed sound professional military advice. Simultaneously they were able either to gain the support or acquiescence of the military services by providing compensation or, failing this, generally at least were able to recruit allies from within the Pentagon and thus avoided being isolated.
1. The Minuteman Freeze and the Blocking of the New ICBM

One of McNamara's major accomplishments on behalf of restraint was his success in halting the Minuteman buildup at 1000 missiles and maintaining this lid on the Minuteman force throughout the last four years of his tenure. During 1963-64, McNamara was confronted by strong pressures from the Air Force to approve the funding of 200-300 more Minuteman missiles. McNamara and the OSD, however, turned aside the Air Force recommendations by marshalling a complex set of arguments to justify their decision not to acquire more missiles. A key analytical strategy in the early stages of his campaign to halt the Minuteman buildup was the manner in which he and his aides manipulated intelligence information on the Soviet threat and arguments about the action-reaction phenomenon to justify their positions. A very large amount of debate has surrounded the role which the action-reaction phenomenon actually plays in American and Soviet decision making. Although considerable disagreement exists about its precise influence as a triggering mechanism, a commonly argued interpretation is that it has been a major stimulant of the arms race. Proponents of this thesis hold that each side tends to react to the other's activities and initiatives, and indeed normally tends to overcompensate as a result of intelligence uncertainties, the need to plan for the future, and conservative design philosophies. As a result, a process of competitive interactions presumably takes place which creates strong incentives for a destabilizing upward spiral in the arms race, crisis instability, the initiation of nuclear war, and rapid escalation.

Without questioning the validity of this argument as a partial explanation, it is important to point out that it tends to discount factors, such as economic scarcity and technological constraints, which can have a dampening effect
on the arms race. Unfortunately insufficient research has been carried out to date to demonstrate precisely how the action-reaction phenomenon actually operates and the relative potency of factors which trigger or dampen the arms race. In the case of the McNamara period, the action-reaction phenomenon appears to have operated in dual fashion, sometimes partially triggering American decisions for expansion and sometimes creating important incentives for restraint.

As we shall see in the following pages, McNamara and Systems Analysis often employed arguments about intelligence uncertainly and the action-reaction phenomenon to justify their decisions for not authorizing the requests of the military services. In the case of the early Minuteman debate, they argued that the continued accretion of Minuteman missiles was undesirable in light of the likely future growth of the Soviet ICBM force posture and the likelihood that the Soviets would harden their ICBM missiles and improve their command & control and launch capabilities substantially. Apparently the Air Force had based its demands for more Minuteman missiles partially on the argument that a larger force posture could provide a full counterforce hard target kill capability that would enable the United States virtually to destroy a very high percentage of the Soviet Union's retaliatory forces and thus prevent them from attacking American targets and inflicting devastating destruction upon the United States.

The Systems Analysis officials investigated the Air Force's arguments and discovered that they were based on the assumption that the Soviet ICBM force posture would remain relatively constant in size over the next several years, would not be significantly hardened, and that the overall composition of the Soviet long range retaliatory forces would not change
significantly. They compared this assumption to the intelligence community's forecasts, which at the time were projecting that the Soviet ICBM force posture would grow steadily over the next four years and would be placed in hardened missile silos. They applied the Air Force's calculations to this different intelligence base and reached quite negative conclusions about the wisdom of pursuing this targeting objective. They concluded and argued to the Air Force that, given the likely future growth of the Soviet forces, the Minuteman force would have to be doubled or tripled to provide any reasonable degree of assurance that all or almost all of the Soviet Union's hardened missile silos could be destroyed, and still considerable doubt would exist that the United States could totally eliminate the Soviet force and completely protect itself. They argued that in light of the Minuteman's modest hard target kill capabilities, the United States would have to compete on the basis of quite adverse cost-exchange ratios should the Soviets decide to respond to American actions by further enlarging the size of their missile force in order to protect their deterrent capability. Finally, they argued that since the United States could not possibly hope to destroy in one quick strike all of the SLBM submarines which the Soviets were expected to deploy in the fairly near future, the Soviet Union still would be capable of inflicting devastating damage upon the United States with SLBM missiles and residual bombers and land based missiles. As a result, a full counterforce capability, if intended to protect the United States from damage, would have to be accompanied by a vast program of antimissile, antibomber, and civil defenses, and even with these substantial investments, complete protection would be impossible and the best that could be accomplished would be to reduce the amount of devastating destruction
that was inflicted upon the United States. Given this reality and the requirement for a diverse set of different strategic defense forces, it was not clear that the acquisition of more offensive missiles would provide the greater increment of damage limiting capabilities than defensive forces and therefore would be the highest priority investment. A second analytical strategy which McNamara and Systems Analysis employed at considerable length in their campaign to level off the Minuteman buildup was to use qualitative improvements in the offensive missile force as a device to argue against the acquisition of more Minuteman missiles. This strategy also played a significant role in their campaign against the AMSA bomber, and in general constitutes one of a Secretary of Defense's most important levers for blocking the acquisition of new weapon systems or the expansion of the strategic force posture. This strategy was particularly useful in the Minuteman debate because McNamara and Systems Analysis were able to argue that the installation of qualitative improvements provided a more cost-effective alternative for strengthening the combat capabilities of the offensive missile forces and therefore should take precedence over the acquisition of more Minuteman missiles. This argument provided virtually unassailable reasons for the decisions they took, and it enabled them to halt the buildup of the size of the Minuteman force without stirring up a major debate over national objectives or military strategy, or calling into question the Air Force's argument that decisive steps should be taken to bolster the combat capabilities of the Minuteman force, or denying plausibly legitimate Air Force concerns. Politically, this strategy had the virtue of providing the Air Force adequate compensation and actually strengthened its overall combat capabilities; consequently, it helped reduce Air Force
and Congressional opposition to the Minuteman freeze. 18

They first employed this argument during the 1963 preparations for the fiscal year 1965 budget when they took the first step forward toward levelling off the buildup by authorizing the funding only of fifty more Minutemen rather than the 250 missiles requested by the Air Force and by initiating the phase out of Atlas and Titan I ICBMs. The Air Force was disgruntled with both decisions, especially McNamara's refusal to authorize more Minutemen. But it was hard pressed to overturn the OSD's arguments. McNamara did not publicly tamper with official force plans which still envisioned the deployment of 1200 missiles over the five year period, a figure that was being protected jealously by the Air Force. 19 He publicly maintained that the additional 200 missiles would be procured in future years. 20 He and the Systems Analysis staff simply argued that the desirability of promptly installing and retrofitting a large number of new Minuteman II missiles into the force posture justified and made necessary a decision to proceed at a slower pace in the procurement of additional missiles and not immediately to enlarge the overall size of the Minuteman force posture. 21

Strictly speaking, little reason existed why both avenues could not have been pursued simultaneously provided the administration was willing to spend the required funds. Quantitative additions did not have to be traded off for qualitative improvements. But McNamara and the Systems Analysis staff argued that they faced the problem of choosing between two alternatives: 1) a faster buildup with a slower rate of Minuteman II retrofit into the first five wings, or 2) a slower buildup rate with a faster retrofit rate. They maintained that their decision to pursue that latter alternative was justifiable because it offered a more cost-effective alternative. 22
The following year McNamara took the major step of foreclosing for
the five year planning period the procurement of the additional 200
Minutemen and by freezing the force posture at the 1000 level. The damage
limiting study provided the specific rationale for freezing the force
posture and McNamara employed it to justify his decision. The study had
concluded that once enough offensive missiles had been procured to provide
one good warhead per enemy silo, the combat capability of the offensive
missile forces for assured penetration and target destruction could best
be enhanced in terms of marginal returns by concentrating the next wave
of investments in such qualitative improvements as Minuteman II, Poseidon,
MIRV, and the development of better guidance, warhead, propulsion, and
penetration technology. The Air Force attempted to overturn this rationale
by arguing that the utilization of a higher single shot probability of kill
than the 0.6 SSPK employed in the study would generate a requirement for
more Minuteman missiles. But General Kent defeated this argument in an
emotion-laden confrontation with General LeMay's aides before a gathering
of senior Air Force generals. With no valid arguments at its disposal and
with McNamara and Systems Analysis turning aside protests by arguing that
qualitative improvements would enhance the overall kill capability of the
Minuteman force by 300-400%, the equivalent of adding 300-400 more missiles
(or more missiles than the Air Force was requesting) the Air Force had little
choice but to acquiesce and to acknowledge publicly that McNamara was making
a strong effort to strengthen the Minuteman force posture even while he
froze its overall size. Although the Joint Chiefs of Staff initially
supported the Air Force's request for more missiles, by 1965 they had become
reconciled to McNamara's decision and were sufficiently satisfied with the
long list of qualitative improvements which had been authorized to unanimously endorse McNamara's decision. 29

Over the next three years, McNamara and Systems Analysis continued to employ this analytical strategy to reject Air Force arguments that more missiles were needed for assured destruction and damage limitation, and to provide the Air Force adequate compensation, and thus reduced its opposition. 30 In 1965 McNamara authorized development funding for Poseidon, Minuteman III, and MIRV. In 1966 and 1967, he made decisions to increase the planned proportion of MIRVed Minuteman III missiles in the force from 350 to 550, to commit the Poseidon missile to accelerated development, production, and deployment, to plan a full scale retrofit of Poseidon missiles into the maximum number of 31 Polaris submarines, and to provide R&D funding for the development of improved penetration aids and guidance technology. Whatever their other purely strategic purposes, these decisions fitted directly into McNamara's campaign for holding a lid on the missile force. The freezing of the Minuteman force perhaps had a disadvantageous effect in the sense that it provided the Air Force with a plausible rationale for the acquisition of a larger ICBM missile to replace the Minuteman. 31 But McNamara and the OSD staffs placed highest priority on controlling the size of the ICBM force, and apparently were willing to take the risk that the attainment of this objective might undermine their ability to block a new missile.

With the Minuteman force frozen at 1000 missiles, some elements within the Air Force began to advocate the development and procurement of a new ICBM, with considerably larger throw weight, to replace the Minuteman. 32 In the campaign which McNamara and Systems Analysis waged against this missile, the WS-120A ICBM, they employed arguments about the evolving Soviet threat
and strategies for counteracting it in order to aid their cause. At the
time, the Soviets were in the initial stages of their large ICBM buildup
and fear began to mount within the Pentagon that the Soviets eventually
would acquire a significant counterforce hard target kill capability. Systems Analysis officials argued that the Minuteman missile provided a more
highly guaranteed assured destruction force because, for each given level
of fiscal investment, it offered more missiles (by virtue of a lower unit
cost than the WS-120A), and thus more aiming points and a more survivable
force. This argument gained some support among the Air Force Staff,
which placed highest priority in protecting the Minuteman force and was
not particularly enthusiastic about a new missile. From its vantage point,
the case for a new missile would have had to be based on the argument that
the Minuteman force was being endangered by the Soviet ICBM buildup. This
argument was dangerous because it also provided a rationale for abandoning
land-based missiles altogether. Since the Air Staff feared that the OSD
was beginning to think seriously about such a course of action, it was
reluctant to press this argument too vigorously. Joint OSD-Air Force
analysis further showed that since the only major difference which existed
between the WS-120A and the Minuteman was that the former provided only a
greater counterforce kill capability and a harder silo, the same benefits
could be gained in a less costly fashion by hardening the Minuteman silos
and by improving the accuracy of the Minuteman missiles. Hence the new
missile was not a cost-effective alternative when compared to options for
improving the Minuteman force.

The Systems Analysis officials also employed the tactic of fostering
competition among weapon systems in order to block the WS-120A ICBM. This
was a strategy which played an important role in their bureaucratic campaign for restraint on several different occasions. For example, they employed it in their efforts to cancel the B-70 and Skybolt, to block AMSA, and to block the F-12. By fostering competition and juxtaposing weapon systems against each other in competitive fashion, they often were able to argue that other weapon systems could perform the required combat missions in a more cost-effective manner than the candidates which were being promoted by the military services. The ability to demonstrate that the services' candidate weapon systems were not comparatively cost-effective and that better alternatives existed to attain the same objective obviously provided McNamara very powerful arguments for rejecting their requests and recommendations.

When indications began to appear in 1966 that the Systems Command, the Strategic Air Command, and some elements of the Air Staff might launch an intensive drive for a new ICBM emplaced in hard rock silos, the DDR&E staff, with support from Systems Analysis, initiated the Strat-X study, which ostensibly was established to investigate alternative ideas for protecting the assured destruction capability of the offensive missile force, but in reality also had the bureaucratic purpose of generating competitors which could be employed to block the Air Force's plans. In the course of that study, they explicitly encouraged the Navy to initiate design development of the ULMS submarine as a direct competitor to the new ICBM, and also began to consider the Nike-X ABM system as an alternative avenue and competitor to hard rock silos and other basing schemes to protect the assured destruction capability of the land-based missile force. This tactic was successful in the sense that the ULMS system as well as Nike-X proved to be more cost-
effective choices, but it also had the effect of setting the ULMS development process in motion which some time later culminated in the expensive Trident submarine. Nevertheless, the STRAT-X study did show that little purpose would be served by acquiring a new ICBM and sentiment on its behalf quickly died. At one juncture the Air Force proposed to support other Navy projects in exchange for Navy support for the WS-120A, but the Navy analysts on STRAT-X sensed that they did not need Air Force support and instead concentrated their efforts on blocking the new ICBM. In the face of this negative consensus in the Pentagon, interest in the Air Staff for the new missile and hard rock silos began to fade and they soon were downgraded substantially on the Air Force's list of priorities.

2. Blocking Engineering Development of AMSA

Once McNamara had halted procurement of additional B-52's, frozen the B-52 force at 14 wings, and cancelled the B-70 and Skybolt, the Air Force immediately set about to initiate studies for another strategic bomber to substitute for the B-70 as a replacement for the B-52. Senior Air Force generals sensed that McNamara wanted to eliminate bombers from active service and was prepared to let the B-52 force decline naturally by attrition. Accordingly, they placed special priority on gaining authorization for the development when the B-52's began to be retired in large numbers.

The Air Force initially considered several different bomber alternatives, including a high altitude bomber similar in design to the B-70, a heavy bomber carrying air-to-surface missiles and configured primarily for low altitude attack, a long endurance standoff bomber, and a stretched version of the TFX fighter-bomber. By early 1964 a consensus had formed within the Air Force
in favor of a long range, heavy strategic bomber designed to penetrate modern Soviet defenses. Although a number of questions remained about precise design details and performance characteristics, and several different alternatives existed, agreement had been forged that the bomber should be designed primarily for stable, high speed low-altitude penetration and still be capable of effective high altitude penetration with only a small degradation of performance. The bomber was to be quite large, in the area of 300,000 lbs. and thus much bigger than the FB-111 bomber. Its primary armament was to be air-to-surface missiles, but it also was to be capable of laydown delivery of nuclear and conventional warheads.

In light of these demanding performance characteristics, the new bomber required the development and incorporation of entirely new technological components, including the propulsion system, the avionics, and the airframe, that were more modern and sophisticated than the components of the B-52 and B-58 bombers. The development of these technological components and their integration together necessitated a large and costly research and development effort, which initially was estimated to cost about $1.8 billion. The Air Force envisioned the production of 200 bombers; total costs for the entire development and production program were estimated to be between $9.0 and $11.5 billion.

With internal consensus formed, the Air Force began the process of seeking authorization for full scale development by requesting $53 million in the fiscal year 1965 budget for project definition and for the initial design of critical long-lead-time propulsion and avionics systems. The Air Force based its justification for AMSA by arguing that a mixed force of bombers and missiles was required for effective deterrence and defense, that
strategic bombers provided useful flexibility and special combat capabilities in contingencies of limited war, and that a follow-on heavy bomber was required because the B-52 bombers were aging and would not effectively be able to penetrate the sophisticated bomber air defense systems the Soviet Union was expected to deploy during the 1970's. 54

McNamara and Systems Analysis were well aware that if the AMSA was allowed to enter into engineering development and if a large amount of money was invested and actual prototypes were produced, a powerful political lobby composed of the Air Force, the aerospace corporations with contracts at stake, and numerous Congressmen would gather behind the aircraft and exert substantial political pressures for prompt deployment. 55 As a result, the danger would exist that he would lose political control of the ability to block deployment. Since they had greatest control and faced fewest intense pressures at the early stages of development, they were determined to prevent the AMSA from entering into contract definition and engineering development, even though the cost of contract definition in itself was quite small. 56

Once again, McNamara and Systems Analysis employed the strategy of authorizing qualitative improvements to block the acquisition of a new weapon system. 57 They quickly recognized that a critical linchpin in the Air Force's argument was its contention that the B-52 bombers, which incorporated relatively dated technological components, were wearing out structurally and would not be able to provide a sufficiently stable platform for the high speed, low altitude attack profiles that were necessary to penetrate Soviet defenses. Accordingly, they set about to remedy the deficiencies of the B-52s and to improve their capability to perform safely and efficiently and
especially to conduct low altitude attack missions.\textsuperscript{58} By authorizing qualitative improvements and modifications, especially in the later model B-52 G and H's, they lengthened the life spans of these bombers well into the 1970's and thus undercut the requirement to proceed forward promptly on contract definition and full scale engineering development of the AMSA.\textsuperscript{59} In the fiscal year 1965 budget, McNamara authorized $306 million for modifications of the B-52 bombers, including structural strengthening and procurement of newly-developed equipment designed to enhance the bomber's capability to perform low altitude combat missions and to adopt new tactical concepts. The following year, McNamara authorized an additional $339 million for further modifications. These included the strengthening of the fuselage and tail structures, the provision of structural wing fasteners, flight safety modifications, and capability improvements such as new radars, ECM equipment, and better depot maintenance.\textsuperscript{60}

Their decision to authorize development and procurement funding for the short range attack missile (SRAM) also fitted into this bureaucratic strategy. The SRAM enabled parent strategic bombers, including the B-52's and FB-111's, to stand off some 40 miles from their targets and to penetrate heavily concentrated Soviet terminal air defenses. In late 1964, McNamara authorized $37 million for initial development of SRAM, but made no decision for production and deployment. The next year, he authorized $40 million for reorientation of SRAM to fit the FB-111 bombers.\textsuperscript{61} In 1966, he made the decision to procure SRAM for the FB-111's, and the following year he provided funds to modify the SRAM to fit aboard the B-52's.\textsuperscript{62} The B-52's were capable of carrying eight SRAMs; the AMSA was designed to carry 24.\textsuperscript{63} Ironically, the SRAM was supported by the Office of Secretary of Defense and
the Air Force for quite countervailing reasons. The OSD argued that the critical factors in determining bomber survivability were penetration aids and standoff missiles rather than the airframe itself; the SRAM thus improved the penetration capabilities of the B-52 and thus undercut the rationale for AMSA. Simultaneously, SRAM also enabled the Air Staff to attack the argument which was being raised by the OSD, especially Systems Analysis, that strategic bombers could not effectively penetrate highly-concentrated Soviet terminal air defenses, while still being sufficiently short-ranged not to challenge the requirement for a deep-penetrating bomber.

While McNamara and the Systems Analysis staff were lengthening the life span of the B-52 bombers, they simultaneously embarked upon a campaign to raise critical questions about the requirement for strategic bombers and especially AMSA. They prosecuted this bureaucratic campaign by engaging the Air Force in a long series of debates, studies, and analyses on the full array of topics which had important implications for the AMSA. As a result, numerous analytical duels and arguments took place between the Air Staff and the OSD in which Air Staff analysts attempted the frustrating task of presenting a compelling case for AMSA and beating down the multiple objections raised by Systems Analysis. Although the Air Staff analysts did succeed in making some headway, they never did succeed in undercutting the full array of arguments which Systems Analysis presented against AMSA and consequently never were able to dislodge McNamara from his adamant refusal to authorize the AMSA, despite the substantial political pressures which the Air Force and the Congress placed on him. By bogging down the Air Force in these debates, McNamara and Systems Analysis effectively fought a delaying action which helped them to push back from one year to the next the
Air Force's argument that a requirement existed for immediate authorization for AMSA contract definition and engineering development. 70

A central feature of McNamara's strategy was his juxtaposition of offensive missiles against the bombers. He contended that, in light of the growing predominance of offensive missiles in the force posture and American strategy and the fact that bombers at best could play only a supplementary role, he was not convinced that a long-term requirement existed for strategic bombers which was sufficiently important to justify the acquisition of AMSA. 71 He stubbornly refused to be dislodged from this position throughout his tenure and the Air Force was never able to disprove his logic. McNamara argued that offensive missile alone could perform the assured destruction mission, that bombers could provide only a small and unnecessary increment of destructive capability, and that offensive missiles could perform all other essential strategic combat missions better than bombers.

He turned aside arguments raised by Congressmen during 1963-65 for a large bomber force that were based on the contention that the offensive missiles were unreliable by pointing out that when all important factors of readiness, survivability, reliability, and penetration capability were considered, the Minuteman force offered fully adequate dependability rates, indeed higher rates than bombers. 72 The major point of his argument was that the lower survivability and penetration rates of the strategic bombers more than compensated for possible uncertainties in Minuteman reliability rates. 73 As time passed by and confidence in the reliability of Minuteman and Polaris grew, this issue progressively faded into the background.

In a similar fashion, McNamara turned aside the argument that strategic
bombers could perform the assured destruction mission more efficiently than missiles by producing calculations which showed that in an examination of comparative cost-effectiveness of alternative missile and bomber systems for the 1970's, the Minuteman missile force could perform this mission most cheaply and that the cost of an AMSA force would be roughly four times greater than the cost of a Minuteman force. During 1966 and 1967 the debate shifted to the issue of whether strategic bombers provided a good cost-effective assured destruction capability in light of the possible performance degradation of the Minuteman missile force. McNamara and the Systems Analysis officials turned aside challenges on this score by presenting analyses which showed that only in the event of very high degradation rates did the acquisition of more bombers become a cheaper alternative for shoring up the assured destruction capability than the acquisition of more Minuteman missiles. Their calculations are reflected in a table which McNamara presented in the fiscal year 1967 posture statement that showed alternative system costs as a function of Minuteman degradation rates.

### Cost to Hedge Against Lower than Expected Missile Effectiveness
(Ten Year Systems Cost in Billions of Dollars)

<table>
<thead>
<tr>
<th>Assumed Degradation of Missile Effectiveness (Realized/Planned)</th>
<th>Additional Missiles</th>
<th>B-52 Gravity Bombs (Against Improved Soviet Anti-Bomber Defense)</th>
<th>FB-111/SRAM (Against Improved Soviet Anti-Bomber Defense)</th>
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<td>.2</td>
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</table>
McNamara and the Systems Analysis officials were willing to concede that strategic bombers provided useful leverage for complicating the enemy's defensive problem, forcing the Soviets into higher levels of defense expenditure, and thus preventing them from concentrating their investments more heavily on ABM defenses or offensive missiles. But they argued that this leverage could be provided by a small bomber force and thus did not necessitate a large force. They maintained that most of the elements of cost in Soviet anti-aircraft defense systems were quite insensitive to the size of the opposing United States bomber force. They argued that the requirement for air defense is more sensitive to the number of targets being defended than to the number of attacking bombers, and that since the Soviets would not know in advance which targets the bombers were going to strike, they would have to defend all of their potential targets. Accordingly, their defense expenditures likely would be about the same size regardless of whether the United States had a relatively small bomber force or a large one.

While the debate was in progress over the requirement for strategic bombers, McNamara and the Systems Analysis officials simultaneously engaged the Air Force in a debate regarding the relative cost-effectiveness of the AMSA as compared to the B-52 bombers and the FB-111. The Air Force justified its argument for AMSA with the contention that it provided a cost-effective choice in light of the anticipated improvements that were expected to take place in Soviet bomber defenses, including the development of better low-altitude area defense capabilities based on AWACS technology and better terminal defense systems based on SAM-D equivalent technology. Although the projected unit cost of AMSA was considerably higher than unit
costs for the B-52 and FB-111, the AMSA was envisioned to offer several improved performance capabilities, including better armament delivery systems, greater nuclear and conventional ordinance capacities, a lower radar and infrared return, better resistance to nuclear blast effects, faster penetration speeds, improved ECM capabilities, better ground dispersal, a more stable platform at low altitudes and faster ground reaction time. These capabilities were intended to provide improved prelaunch survivability, improved penetration, and greater versatility in nuclear war and limited conflict missions.81

Although McNamara and Systems Analysis acknowledged that the AMSA would be a better bomber than the B-52 in several respects, they argued that the B-52 airframe, when equipped with SRAM, SCAD, improved ECM, and other qualitative improvements still could perform adequately the full range of bomber missions and that the incrementally better performance capabilities of AMSA would not be worth the large cost of the system in light of the marginal contribution it could make to United States security requirements.82 They also disputed the Air Force's assumptions about the future growth of the Soviet threat. The Air Force's case, as Secretary Harold Brown admitted in Congressional testimony, was based on the assumption that the Soviet threat in the 1970's would assume proportions of the "greater than expected threat."83 Against a lesser threat, the AMSA was not required and the B-52's and FB-111's could be expected to be capable of performing their missions. McNamara and the Systems Analysis officials argued that the Soviet threat probably would not exceed expected levels, and that adjustments could be made in the B-52 and FB-111 bombers in order to compensate for gradual Soviet gains and accordingly that no immediate requirement existed
to proceed forward with AMSA. 84

Although the Air Force was not able to overturn McNamara's logic, indeed Brown publicly acknowledged the merits of McNamara's position, it still maintained that AMSA was a preferable alternative and that, regardless of the intelligence uncertainties, contract definition should be initiated immediately in order to have an initial operational capability within the nine-ten year time frame which then was estimated for development and production. 85 One of the Air Force's arguments was that AMSA, despite its projected $35 million cost per airplane, was becoming a more cost-effective choice than the B-52's because within the time span required for development and deployment, the overall annual system cost of AMSA would fall below the rapidly rising operations and maintenance costs of the aging B-52's. 86 The Systems Analysis officials disputed this argument by attacking the Air Force's assumptions about discount and interest rates. 87 By adopting higher discount rate assumptions, they stretched out the crossover point at which B-52 costs began to exceed AMSA costs far beyond the time period required to develop and procure AMSA. 87 By doing so, they were able to undercut this Air Force argument.

Finally, the Systems Analysis and DDR&E officials engaged the Air Force in a long series of studies and debates regarding the specific design features of AMSA. Immediately after the Air Force had submitted its request for contract definition in late 1963, the Systems Analysis and DDR&E officials raised a host of questions, criticisms, and objections about the requirement for some of its costly performance capabilities and such design and material components, the conventional ordnance capacity, the air frame, and especially the requirement for a costly supersonic low-altitude penetration capability. As a result of these debates, the DDR&E, the Joint Chiefs of Staff, and even Secretaries Zuckert and Brown initially withheld support for contract definition and full scale engineering development. 88
Moreover, the Air Force itself became divided internally on AMSA design features and performance characteristics and was willing to accept a two year delay in order to iron out details and to push forward the state of art technology on the propulsion system, which was the critical pacing component for AMSA development. Only by early 1967, after a series of changes, adjustments, and compromises, had the disagreements over these critically-important details been settled and consensus formed within the technical community and the Air Force. What emerged from this process was a swing-wing bomber with range and nuclear payload equivalent to the B-52, but with double the nonnuclear payload. The bomber was conceived to weigh about 350,000 lbs., about three times the weight of the FB-111, and to carry five times the FB-111's payload; it was to carry more avionics, to have a higher thrust-weight ratio, to have a lower operational fuel consumption rate, to have a lower radar cross section, and to have better dispersal and improved launch capabilities. Although the bomber, which later became the B-1, still was envisaged to have a supersonic high altitude capability, it no longer was conceptualized as having a costly low altitude supersonic capability.

While these debates were in progress, McNamara, citing his doubt about the requirement for AMSA, the lack of internal consensus on AMSA characteristics, and the support of the Joint Chiefs of Staff and the Air Force Secretary, steadfastly refused to authorize contract definition or engineering development, despite public protests by Air Force generals and intense Congressional pressures from the House and the Senate. In the fiscal year 1965 budget, he slashed the Air Force's request for study of AMSA alternatives, and he denied funds for contract definition and for development of long lead time items. The following year, he provided funds for initial development of the...
propulsion and avionics systems, which were necessary to provide a procurement option for the mid-1970's, as well as funds for the development of SRAM. All but $15 million of these funds were taken from the funds which Congress had appropriated the previous year over McNamara's objections. But he still refused to authorize contract definition, and he scaled back sharply the funds requested by the Air Force for airframe development. In his final three budgets, he continued to provide a small amount of money to maintain pace in the development of the propulsion and avionics systems and the airframe, but he still continued to turn aside all recommendations for contract definition, even in the fiscal year 1968 and 1969 budgets when the Air Force's recommendation was supported unanimously by Secretary Brown and the Joint Chiefs of Staff.

3. Blocking Deployment of the Nike-X ABM

The Johnson Administration's decision-making for ballistic missile defense has been analyzed elsewhere, most notably by Edward R. Jayne, and therefore the details will not be addressed here. However, it is essential that a brief examination be conducted of the factors which enabled McNamara to block the deployment of a large scale ABM system configured to provide defense against a massive Soviet missile attack.

The ABM case commonly has been interpreted as being a prime example of the inability of a Secretary of Defense to exercise restraint and to exert sufficient control over the weapon system acquisition process. The reason for this interpretation is obvious. Despite McNamara's vigorous efforts to block deployment, the Johnson Administration finally was compelled to bow to political pressures by deciding to authorize deployment of the
limited Sentinel system and thus opened the faucets for deployment of a much thicker and more costly anti-Soviet system.95

However, in light of what has transpired since McNamara's departure the ABM case also can be interpreted as being a partial, indeed perhaps major victory and can be examined from this perspective. Although the Sentinel decision was made only with considerable reluctance, it subsequently did not, as McNamara originally feared, lead to the deployment of a thicker ABM system and trigger a major round in the United States-Soviet strategic arms competition. Indeed, the Sentinel decision never has been fully implemented, nor was its successor, the Nixon’s Administration's Safeguard ABM system, deployed fully.96 Instead, the United States and the Soviet Union successfully negotiated the SALT I ABM Treaty, which places very sharp limits on the deployment of ABM systems, and thus effectively ended the arms race and stabilized the strategic competition at least temporarily at the plateau of mutual deterrence.97 This is a most remarkable turn of events in light of the strategic circumstances of the mid-1960's and the dire predictions and pessimistic forecasts that were being made then about the ability of the two sides to contain their competition, and it sheds a quite different evaluative light on the events of McNamara's tenure. Indeed, the argument plausibly can be made that what now stands out as being the most dominant and important feature of McNamara's tenure is not the fact that he partially failed but rather that he succeeded to a very substantial degree in attaining his objectives.

McNamara certainly does not deserve full credit for decisions that were made subsequent to his departure by a different Presidential Administration. But a number of his former advisors believe that without
his path-breaking efforts neither the subsequent decision to refrain from deploying a thick ABM system nor the SALT negotiations would have been possible. Whatever his precise contributions to later decisions, McNamara certainly does deserve credit for delaying a procurement decision and then restricting deployment to a limited ABM system despite the demands of the Joint Chiefs of Staff and many Congressmen for a large ABM system. And by publicly voicing the reasons for his objections to a large ABM system, he helped to transform the strategic dialogue and to create the domestic and international conditions which started the SALT process in motion and made productive negotiations possible.

McNamara achieved this success despite enormous pressures, especially from 1966 onward, to deploy the Nike-X on a large scale. Indeed, the ABM case provides the quintessential example of a situation in which all of the factors which are commonly thought to drive the weapon system acquisition process and to limit the powers of the Secretary of Defense were operating at their fullest. ABM technology, of course, developed at a very rapid pace. Politically, the Army engaged in an intensive lobbying campaign and employed a substantial array of strategic and technical arguments to buttress its recommendations. Although the Air Force initially was not enthusiastic about ballistic missile defense, the Army finally succeeded in convincing the service chiefs to support its position, and in late 1964 the entire Joint Chiefs of Staff unanimously recommended preproduction funding for Nike X. Over the following two years support amongst the military services continued to solidify, and in mid-1966 the Joint Chiefs of Staff unanimously recommended to McNamara and Johnson the immediate initiation of deployment of a 25-city ABM system as an initial step toward deployment of a full nation-wide Nike X ABM. Outside the Pentagon, Congressional
support for a deployment decision also grew steadily. Beginning as early as 1963, when Senator Strom Thurmond convened the Senate in secret session to discuss classified information on Soviet ABM technology and to criticize the Kennedy Administration's policies, Congressional activity on behalf of ABM deployment began to grow. Although the Congress was relatively quiescent during 1964 and 1965, it began to exert very substantial political pressures on Johnson and McNamara in 1966. During the Spring, 1966, an increasingly rebellious Senate and House authorized $167.9 million for preproduction funding, which the Johnson Administration did not request, and over the course of the following fifteen months a large number of Republican and Democratic Congressmen publicly demanded immediate deployment and sharply criticized Johnson's failure to comply.

Several factors appear to account for McNamara's success in delaying deployment until 1967 and then confining the deployment decision to a thin ABM system. First, McNamara regarded the decision not to deploy on a large scale to be a matter of such paramount priority that he was willing to exercise his legal powers to their fullest and to spend substantial political capital and provoke considerable opposition in order to get his way. Although as early as 1964 McNamara apparently was beginning to envision a limited ABM system as being a political compromise, he was not willing to concede a large scale ABM system and he stubbornly refused to be dislodged from this position despite pressures from the military services and the Congress. Even during the last two years of his tenure, when the Vietnam war increasingly demanded his attention, he continued to place high priority on the ABM issue and to devote substantial time and energy to it. As a result, he still was able to maintain very substantial control
over developments in the ABM arena despite the fact that the demands of the Vietnam War forced him to taper off his involvement in other areas of the defense budget.

Second, McNamara employed his substantial political power and his persuasive talents to persuade President Johnson to support him on this issue and to resist political pressures for a large scale deployment. Although Johnson shared McNamara's concern for stabilizing the arms race, and readily supported McNamara in 1964-65, he also was prone to making compromises on defense issues in order to protect his political flanks and to head off confrontation with Congress and the military services. Consequently he began to waver in 1966 and 1967 under the intense political pressures he was receiving. Despite the fact that McNamara's own personal position with Johnson was deteriorating during this period, he still continued to wield substantial influence over Johnson's opinions on defense issues, and he exerted a very substantial effort, especially during the critical weeks of late 1966-early 1967, to convince Johnson to stand firm. As a result of his persuasive advocacy and an intricate series of maneuvers he made to shore up Johnson's support and to provide a viable rationale for not making an immediate deployment decision, McNamara was able to convince Johnson to defer deployment pending an attempt to initiate SALT negotiations with the Soviet Union. Although several months later Johnson decided to go ahead with an initial deployment, McNamara persuaded Johnson to limit the deployment to the thin Sentinel system and to allow him to shape the public rationale for justifying the decision. By announcing the deployment decision in the context of the San Francisco speech, McNamara was able to stress the fact that the Sentinel system was not intended to provide defense against a Soviet attack and that any attempt to provide a full scale defense would
be strategically unproductive and economically wasteful. 111

Third, McNamara was able to recruit important allies for his decisions, apart from the President, and benefitted from the active support of others. Within the Pentagon, McNamara was able to maintain a solid consensus among top civilian leaders against deployment of a large ABM system. Although both the DDR&E and Systems Analysis staffs favored a limited ABM system, they agreed with McNamara's stand against a thick system and willingly supported his cause on this issue. 112 In addition, McNamara also received support from the civilian service secretaries. Although Secretaries Resor, Nitze, and Brown favored a limited deployment during the critical late 1966-early 1967 debates, they also all supported McNamara's decision to defer deployment pending the outcome of the SALT initiative and publicly opposed the JCS recommendation for immediate deployment of the 25 city ABM system. 113 Finally, McNamara also received valuable support from numerous civilian defense scientists who opposed deployment of Nike-X. For example, in early January, 1967, McNamara invited to a meeting with Johnson at the White House seven scientists who were past or present occupants of the positions of Special Assistant to the President for Science and Technology or the DDR&E. These scientists, who included Drs. Killian, Kistiakowsky, Wiesner, Hornig, York, Brown, and Foster all supported McNamara's argument against deployment of a large Nike X system. 114

The fourth reason was that McNamara, with the assistance of his OSD staffs, was able to marshall defensible reasons and strong arguments which enabled him to stand firm against the pressures of the military services, to recruit allies within the Pentagon, and to secure President Johnson's support. During the course of his first four years, from 1961-1964, McNamara primarily
employed technical reasons to turn aside the Army's recommendations for an initial, small scale deployment of the Nike-Zeus ABM and, after 1962, the Nike-X system. Although McNamara evidently was attracted in 1961 to the idea of deploying a small Nike Zeus ABM system to support his strategy of flexibility and multiple options, he soon became convinced by scientific advisors that the Nike-Zeus system suffered from too many technical deficiencies and therefore should not be deployed. The Nike-Zeus was composed of mechanically-steered radars and the low-acceleration Zeus missile and therefore was quite vulnerable to saturation attacks which employed multiple warheads and penetration aids. Accordingly, the Kennedy Administration in late 1961 rejected the Army's proposal for $100 million for preproduction tooling and the authorization of $3 billion for procurement of a twelve battery system over a five year period.

In 1962 the Army once more began to lobby for deployment of an intermediate Nike-Zeus ABM system which was to provide a relatively immediate initial operational capability and would be supplemented in succeeding years by new radars and interceptors. But the technical community still opposed deployment of the Nike-Zeus system because of its inability successfully to handle the saturation problem and preferred instead the prompt development of new radar and interceptor technological components which had become available that year. Accordingly, McNamara and the DDR&E staff argued that first priority should be placed on the development of the new technology and that deployment of the Nike-Zeus system should be set aside. Evidently three options were considered: a) to continue research and development on the Nike-Zeus system as constituted as a first priority and to pursue a separate, limited development of the new technology, b) to proceed
simultaneously on development of both the Nike Zeus and the new technology
and to deploy an initial modified Nike-Zeus system, c) to set aside the Nike
Zeus system entirely and urgently to pursue development of the Nike-X ABM
system with its phased array radar, Sprint missile, and hardened components.
Although the Army preferred to deploy immediately, McNamara selected the
third alternative and argued that the small marginal advantages of a limited
system would not justify the cost. 119

During the next two years, McNamara deferred deployment of the Nike-X ABM
system with the argument that development work had not yet progressed far
enough to justify a deployment decision. 120 Although the Army initially
was prepared to accept this argument, by 1965 the development effort had
progressed to the point where technical factors were a less compelling
consideration in deferring deployment; and accordingly the Army began to
lobby again for the authorization of preproduction funds and prompt deployment. 121
In contrast to previous years, the Army now enjoyed greater support from the
other service chiefs as well as the support of large segments of the Pentagon's
technical community, which by now had become satisfied with the main
technological components of Nike-X. 122

Although McNamara was able to gain JCS acquiescence for deferral of
deployment in 1965 with the argument that the funding requirements of the
Vietnam War necessitated fiscal prudence elsewhere, he primarily relied on
broad-gauged strategic arguments during his last three years to wage his
campaign against Nike-X. 123 The bulk of these arguments were drawn directly
from the damage limiting study. 124 He vigorously employed the concept of
diminishing marginal returns and arguments about the action-reaction phenomenon
and adverse cost-exchange ratios to contend that a large ABM system could
not possibly provide near complete protection or reduce damage in a nuclear war to some acceptable level, and that the Soviet Union almost certainly would react to a United States deployment decision by strengthening its own offensive forces. As a result, in his estimation, the United States would make no gain and easily could suffer a net loss to its security. These arguments formed the basis of the positions he presented to the Joint Chiefs of Staff as well as the analyses which were presented each year between 1964 and 1968 in the strategic force DPM's and the annual posture statements.

McNamara rejected the argument that the United States should deploy an ABM system simply because the Soviet Union appeared to be on the verge of a deployment decision. He insisted that the sole objective of an ABM system was to provide strategic defense and that the United States should not attempt to match the Soviet Union in every area of military technology. When the Joint Chiefs of Staff asserted that the Soviets might not take counteractions to a United States ABM system, McNamara responded by pointing to the ongoing Soviet ICBM buildup, the important role which deterrence played in their strategic doctrine, their technical capability to produce MIRV technology, and the fact that United States itself was responding precisely in this fashion to the Soviet ABM effort. In this regard, the ongoing Soviet buildup actually helped McNamara to block the acquisition of the Nike X ABM. Had the Soviets not been engaged in their buildup, his argument that inevitably they would respond to an American ABM decision probably would have been less convincing and the incentives to deploy would have been stronger.

While the Army continued to lobby for a large ABM system, it attempted to get its foot in the door by recommending the initial deployment of a
limited ABM system to provide defense against Chinese attacks, to protect the Minuteman force, and to provide protection against accidental or unauthorized Soviet launches, or other small scale Soviet ICBM attacks. Although the Army envisioned the limited ABM as being only an initial step toward the deployment of a much larger system, it recommended an initial small scale deployment in part because the OSD staffs were positively oriented to this idea and therefore it stood a better chance of being accepted by McNamara.

The Army was able to build alliances of support within the OSD, but it never was able to create the compelling case for immediate deployment which would have been necessary to dislodge McNamara. Secretary McNamara and Systems Analysis readily acknowledged that a limited ABM system probably could provide quite effective protection against the rather modest ICBM attack which the Chinese might be capable of mounting during the 1970's. But once intelligence information had become available that the Chinese were not making rapid progress and therefore would not be able to deploy an ICBM force for several years, McNamara argued than an immediate deployment decision was not necessary. He argued that since the United States could deploy a limited ABM system more promptly than the Chinese could deploy a sizable ICBM force, the United States could afford to wait until the Chinese had made considerably more progress. The Army and the Joint Chiefs of Staff also were able to convince McNamara that hardpoint ABM defense could provide cost-effective protection for the Minuteman ICBM force against a Soviet disarming first strike attack with offensive missiles. But McNamara argued that the Soviets would not attain a significant counterforce hard target kill capability for several years, and therefore an immediate deployment decision was not necessary.
In 1966 the Joint Chiefs of Staff intensified their attacks on McNamara's position and brought to bear a broad range of strategic arguments which, in their estimation, justified ABM deployment on a large scale. In addition to their argument that the Soviet Union might not respond to an American deployment in the manner predicted by McNamara, they contended that such a Soviet response, if it was forthcoming, would be to the advantage of the United States because it would strain the Soviet economy and would divert resources from other high priority programs. The centerpiece of their argument, however, was their contention that a large ABM system would preserve the strategic superiority of the United States over the Soviet Union and therefore should be deployed on that basis alone. In their view American strategic superiority had to be unmistakable and the failure to deploy an ABM system would create:

"... a strategic imbalance both within our forces and between the United States and the Soviet forces. It could lead to Soviet and allied belief that we are interested only in the offensive, that is a first strike, or that our technology is deficient, or that we will not pay to maintain our strategic superiority." 134

In the formal position he submitted to Congress in early 1967 explaining JCS differences with McNamara, JCS Chairman General Earl Wheeler summarized the JCS assessment of the benefits which an ABM system would provide:

"Specifically, we believe that a deployed Nike-X would do one or more of the following. First, provide a damage limiting capability by attrition of a Soviet attack. Second, introduce uncertainties which would inhibit Soviet leaders from concluding that the United States could not survive a Soviet first strike or that the United States would not preempt under any circumstances. Third, stabilize the nuclear balance. Fourth, demonstrate to the Soviets and our allies that the United States is not first strike minded; in other words, that we don't put all our eggs in the offensive basket. Fifth, continue to deny the Soviets an exploitable capability. By this I mean to continue the Cuba power environment in the world." 135
During the tumultuous weeks of late 1966 and early 1967, the debate between McNamara and the Joint Chiefs of Staff increasingly became focused on the issue of superiority vs. parity, and whether the benefits of superiority justified a major expenditure on an ABM system. McNamara argued that the United States already was superior to the Soviet Union in total offensive warheads, which in his estimation was the most meaningful measure of superiority, but that in any case superiority was not a particularly meaningful concept. He maintained that the strategic forces should be sized according to concepts that were based on specific objectives and military requirements rather than a concept that called for numerical advantages for its own sake. He further argued that the superiority which the United States then enjoyed over the Soviet Union was not particularly significant because the Soviet Union already possessed an assured destruction capability, and therefore few significant strategic benefits flowed from the continued pursuit of strategic superiority.

Despite his efforts to beat down the JCS arguments for strategic superiority and immediate deployment, political pressures in late 1966 built to the point where the Johnson Administration found itself in a major confrontation with the military services and Congress. It was in this atmosphere of impending polarization and the need to find a viable solution short of capitulation that McNamara seized upon the idea of employing SALT negotiations as a device to win an additional deferral. In the December 6 meeting at Austin, Texas, with Johnson and the Joint Chiefs, McNamara proposed to defer a deployment decision until such time as a diplomatic attempt could be made to initiate negotiations on a possible mutual freeze in ABM deployments with the Soviet Union. At the same time, McNamara
proposed to include $375 million in the FY68 budget for preproduction tooling and procurement of long lead time items should the demarche fail and a decision to deploy an ABM system subsequently be taken. This tied the President to no fixed timetable for procurement or to any type of ABM system, nor did it foreclose the possibility that a deployment decision still might not be made if the negotiation attempt failed. President Johnson accepted this plan and the Joint Chiefs of Staff acquiesced; and accordingly, a few days later the State Department and the Administration began to send signals to the Soviet government in the hope of prodding it into negotiations.

McNamara hoped that the demarche would be productive and that serious negotiations might soon be initiated. Despite the complete lack of progress on this front since 1964, McNamara never had abandoned hope for eventual strategic arms negotiations and, in anticipation of future progress, earlier that year had instructed some aides to begin preparing analyses of possible negotiating approaches. Although strategic circumstances during recent years had made negotiations impossible, prospects by this time appeared to have improved considerably. The Soviets rapidly were approaching strategic parity and thus a condition was emerging in which both sides would have incentives to negotiate together. By that time, the NPT negotiations also had advanced to the point where a treaty appeared possible and the Soviets could feel more confident that the West Germans would not gain independent access to nuclear weapons. Finally, both sides had reached a de facto modus vivendi not to let their differences over Vietnam bar progress in other areas.

McNamara's ploy for SALT negotiations did not succeed immediately, and as a result the Sentinel decision was made that summer. Indeed, Johnson's desire to prod the Soviets into negotiations in itself partially was
responsible for his decision to deploy Sentinel. But despite this initial failure, of course, the demarche later did bear fruit and SALT negotiations finally were initiated in November, 1969.

Considerable uncertainty exists regarding the precise reasons why the Soviets, despite their initial reservations, finally consented to open negotiations. In particular, little information exists regarding the precise role which United States actions played in Soviet decision-making. Within the United States, however, McNamara's efforts clearly helped to create conditions which were favorable to the SALT talks. Of course, his efforts for negotiations were greeted enthusiastically by arms control advocates. In addition, his staunch refusal to continue the strategic buildup helped create incentives for the Joint Chiefs of Staff as well as conservatively-inclined State Department officials to see possible benefit in the SALT process. Whereas otherwise they would have had little interest in SALT, and even still were unenthusiastic, they now started to perceive SALT, in light of McNamara's firm stance, as an avenue for tempering the Soviet buildup and thus preserving the American position in the strategic balance. Ironically, then, McNamara needed SALT because he was finding it increasingly difficult to resist JCS pressures in the absence of a negotiating forum and some international accords, while the JCS needed SALT precisely because in their estimation McNamara still was able to resist their pressures.

Domestically, McNamara's constant public hammering helped mobilize a good deal of domestic political pressure against deployment of a thick ABM system. Throughout this period, McNamara generally had fought his battles for restraint without a significant amount of help from allies outside the Pentagon. But by stimulating a major public debate on the ABM system,
McNamara was able to convince a large number of political actors, such as arms control advocates and public groups, to become vocally active. Although this support did not manifest itself until after he had left office, it certainly did play a significant role in lobbying against deployment during the 1969-70 debates over the Safeguard system. 150

4. The Politics of Contraction: Forging Package Deals with the Air Force

Perhaps more than any other Secretary of Defense, McNamara had a special distaste for reaching budgetary decisions through explicitly extra-rational bargaining mechanisms, such as log-rolling and the forging of package deals with the service chiefs. Since he placed highest priority on forging a coherent relationship between national objectives and the force structure, he explicitly intended that the use of program analysis would diminish the importance of political factors in defense decision-making and would provide a sound analytical foundation for tailoring the force posture to conform to national military strategy. 151 Political factors, of course, did continue to play a role in his decisional calculus; but they normally did not manifest themselves in an overt fashion. McNamara recognized the necessity of making adjustments to political realities and he was willing to make compromises, especially when his concessions had positive political consequences and did not fundamentally violate cost-effective standards. But he normally made his adjustments and concessions tacitly and in private, and did not acknowledge them as such to the military services; and, for a host of sound reasons, he shied away from overt horse-trading with the service chiefs. 152

Despite his dislike of open bargaining, however, McNamara apparently was willing to make special exceptions when necessity demanded. The public
record, of course, provides no firm evidence that McNamara ever did make explicit deals. But interviews with former high officials of the Office of Secretary of Defense and the Air Force suggest strongly that two explicit package deals were forged between McNamara and the Air Force. The first package deal was forged in 1965 and incorporated the older model B-52 bombers, the AMSA, the FB-111 bombers, SRAM, the Minuteman III, and MIRV. The second package deal, which apparently was repeated several times in succeeding years, involved the bomber air defense forces and stretched out over the period from 1965 through 1967. While no precise information exists to demonstrate why package deals were forged in these two cases and not in others, it is interesting to note that both of these cases involved substantial contractions in the strategic force posture and had very significant implications for the Air Force's organizational interests and its perceived capability to perform its assigned combat missions. Quite possibly McNamara recognized that any attempts to make significant contractions in the force posture which harmed the interests of the victimized military service would have provoked fierce resentment and a storm of outcry unless they were placed explicitly in the context of an overall arrangement which provided minimally adequate compensation. Accordingly, he might have been willing in such cases to engage in open reciprocal bargaining in order to accomplish his objectives while gaining the acquiescence of the Air Force. Regardless of his precise calculus, however, McNamara in both these cases did succeed in gaining the Air Force's public approval for these decisions for contraction, and this approval proved to be helpful in explaining and justifying his decisions to Congress.
4a. The 1965 Bomber Package Deal

During 1965, McNamara and Systems Analysis had been engaged in a long and arduous debate with the Air Force regarding the future size and composition of the strategic bomber force, which then was composed of 600 B-52's and 70 B-58's. McNamara and Systems Analysis wanted to pare down that force by phasing out over the five year planning period the 345 older model B-52 C-F bombers and by initiating at some future juncture the phase down of the two B-58 wings. This step would have reduced the manned bomber force to only 255 B-52 G & H newer model bombers. The Air Force hardly was enthusiastic about this idea of reducing the active bomber force. First, the Strategic Air Command was deeply concerned that the retirement of many strategic bombers would erode sharply its ability to carry out the SIOP war plan by depriving it of sufficient nuclear warheads to strike all of the required targets. Second, the retirement of so many bombers would have been a severe blow to the organizational self-image of the Strategic Air Command, which was deeply suspicious of McNamara's intentions and did not want to be transformed into an exclusively land-based ICBM command. Senior Air Force generals also were worried that the retirement of these bombers before the introduction of AMSA would deprive the Strategic Air Command of a sufficient number of strategic bombers to maintain a large complement of bomber pilots on active flying status, and thus erode its prestige and operational effectiveness.

The Air Force, however, did realize that the B-52 C-F older models would increasingly suffer structural deterioration and could not be extended for many years on active service without an expensive modification program.
Accordingly, the Air Force became attracted to the idea of procuring a stretched version of the F-111 fighter-bomber, the FB-111, and introducing it into the Strategic Air Command inventory. The Air Force never regarded the FB-111, with its range and ordnance limitations, to be anything more than an interim strategic bomber to replace temporarily the B-52 C-F's until the AMSA had been introduced. Indeed, senior Air Force generals privately planned to turn the FB-111s into heavy fighter-bombers for the Tactical Air Command at the earliest possible juncture. But the FB-111 did offer a temporary replacement to fill an important vacuum until AMSA was available as well as a short range strategic bomber. Accordingly, the Air Force in April, 1965, made an informal proposal to McNamara to replace the B-52 C-F's with some 490 FB-111 bombers; and in June, the Air Force submitted a formal proposal to the Office of Secretary of Defense. McNamara and the Systems Analysis had little taste for deploying the full 490 bombers which SAC had requested, but they were not hostile to the idea of procuring some number of FB-111 bombers. Evidently in their view, the FB-111 constituted a useful political sop to the Air Force, as well as another potential use for the F-111 TFX and a modestly useful strategic bomber, at least as a theater-based weapon system.

While Systems Analysis and the Air Force were conducting negotiations regarding the FB-111 force, they simultaneously were engaged in a long series of debates over four other weapon systems which were entered into the force posture sweepstakes that year: The AMSA strategic bomber, the SRAM, and the Minuteman III and MIRV. The Air Force wanted to press forward on all of these weapon system fronts simultaneously. The Systems Analysis staff was quite hostile to AMSA, but it regarded favorably the other four weapon systems. However, it apparently did not want to spend the fiscal resources which would have been
required to move forward on all weapon systems at the same time. Throughout the summer, Systems Analysis maintained a rather firm, uncompromising position with the Air Force and refused to recommend the authorization of the complete package desired by the Air Force. In late summer, Systems Analysis evidently submitted a set of alternative decision options to McNamara which dealt with possible tradeoffs among the different candidate weapon systems and their relative cost-effectiveness for the assured destruction mission. The options submitted by Systems Analysis ranged a great deal in composition, but even the most generous option called for a rather stringent policy. Evidently it envisioned the retirement of the B-52 C-F's, the development of SRAM, and the installation of MIRV on the Minuteman III. Apparently none of the separate options envisioned the simultaneous acquisition of the FB-111's, SRAM, MIRV, and Minuteman III.

McNamara, however, apparently elected to set aside the advice of Systems Analysis, and in a late fall meeting with senior Air Force generals, he apparently forged the package deal. Although the decision was not announced as such, the fact that it was made suddenly and that it departed from the recommendations made by Systems Analysis led several high Systems Analysis officials to conclude that an explicit deal in fact had been forged. Whatever the precise decision mechanism, the terms of the arrangement were explicit and mutually satisfactory, even though they perhaps exceeded the cost-conscious standards of the Systems Analysis staff. The Air Force acquiesced in the retirement of the B-52 C-F's and also a one year delay in the engineering development of the AMSA, which provided time to square away disputes with the DDR&E regarding its design characteristics.

McNamara, in turn, agreed to procure 210 (U.E.) FB-111 bombers configured
with SRAM missiles for a total five year system cost of $2.540 billion, roughly $450 million more than the $2.089 billion generated by the phase-out of the B-52 C-F's. In addition, McNamara approved the installation of the Mark 12 MIRV on the Minuteman III and funds for the prompt development of both weapon systems. McNamara thus had succeeded in getting Air Force support for the retirement of the 350 B-52's, which helped improve his position for dealing with the protests of outraged Congressmen. The Air Force in turn had managed to retain a large bomber force in active service and to maintain its capability to meet the SIOP requirements.

4b. The Bomber Air Defense Package Deal

Although the terms of the bomber air defense package deal initially appeared to be equitable, ultimately the results benefited primarily the Office of Secretary of Defense at the expense of the Air Force. McNamara and Systems Analysis gained Air Force acquiescence in their decisions during 1964-1968 substantially to pare down the size of the outdated bomber air defense system. In return, they promised to provide funds for the prompt development and, when feasible, the deployment of a new system composed of AWACS aircraft and modern interceptors which would be configured to provide highly effective defense against a Soviet strategic bomber attack during the 1970's. Although they did provide adequate development funds, they never delivered fully on the remainder of their end of the bargain. They cancelled the F-12 interceptor that was being advocated by the Air Force, and instead of authorizing deployment of a new system, they launched a major analytical attack against the requirement for having large scale bomber defense force in active service that began to pave the way for
the decisions that subsequently were taken to pare down the bomber defense system and to deploy only a modest force capable of operating effectively in only limited contingencies. 180

When McNamara entered office, he was confronted with a large and sophisticated bomber air defense system whose operations and maintenance costs were totalling about $2 billion per year. 181 This system was composed of a large number of surveillance radars, a warning and control network, and a substantial number of manned fighter-interceptors and surface-to-air missile batteries for area and terminal defense. 182 This costly force was capable of providing a reasonably effective defense against the modest attack of Bear and Bison bombers which the Soviets then appeared to be capable of mounting. 183 But the system was soft and vulnerable to destruction by ICBM attack, and therefore it was not capable of operating effectively in the nuclear war environment of the missile age. 184 In addition, the system was configured primarily to provide defense against subsonic, high altitude bombers carrying short-range air-to-surface missiles and therefore was not capable adequately of defending against attacks by Soviet supersonic bombers or bombers carrying long range air-to-surface missiles. 185

McNamara and the OSD staffs recognized these serious deficiencies, but they took few major steps during the Kennedy Administration, apart from reducing its vulnerability by providing a manual backup for SAGE, establishing NORAD control centers, and providing better dispersal for the interceptors. By 1963 pressures were beginning to build for deployment of a new system better configured for the missile age. The damage limiting study showed that a new system could make a marginally useful contribution to the damage limiting mission, and accordingly the Air Force began to submit proposals to the
Office of Secretary of Defense for development of a new fighter interceptor, an airborne command post, and a long range overland radar system capable of detecting low-flying aircraft against ground clutter. The Air Force envisioned deploying this system during the 1970's to provide large scale area defense, especially against possible Soviet supersonic bombers.

Systems Analysis apparently expressed strong reservations about the very high development and initial investment costs of the new system. But joint OSD-Air Force analysis showed that the new system actually would be marginally less expensive than the old system in terms of overall ten year system costs. Despite the heavy initial outlays, the planned new system appeared to require relatively modest operations and maintenance costs by virtue of its small numbers of AWACS aircraft and fighter interceptors; this contrasted sharply with the higher operations and maintenance costs of the old system, which incorporated more aircraft, radar sites, and control facilities. Accordingly, McNamara decided to proceed forward in providing initial development funds for the AWACS, the OTH radar, and the F-12 interceptor. But in return, the OSD demanded that steps be taken promptly to begin the phasing out of redundant and non-cost effective elements of the old system. The Air Force agreed to this proposal on the condition that the OSD would proceed with development of the new system and later deployment. The OSD provided assurances to the Air Force, but explained that deployment would be conditional upon a parallel decision to proceed forward on deploying a large ABM system and to invest in a significant damage limiting capability. The Air Force, apparently calculating that an ABM deployment decision would be forthcoming, agreed to this proviso.
With the terms of agreement thus sealed, McNamara proceeded forward with Air Force public acquiescence to make significant contractions in the active force posture. In the fiscal year 1966 defense budget the BUIC II system was cancelled, and decisions were made to phase out four SAGE direction centers, sixteen search radar facilities, eight gap filler radars, and a large number of Dewline aircraft and offshore radar ships. In the fiscal year 1967 budget, decisions were made to continue the phasedown of radar coverage, to phase down 22 Nike-Hercules SAM batteries which had been providing defense coverage for soft SAC bases, and to plan for a partial phase down of the fighter interceptor force. Few major changes were made the next year, although the pace of phase downs was continued roughly on schedule. In the fiscal year 1969 budget, the decision was made to initiate the phase down of the large fighter interceptor force of century series fighters, which then numbered about 900 aircraft, and contingent upon introduction of AWACS, to phase out all but one SAGE center and many remaining search radars, Dewline and gap filler radars, nine BUIC centers, and all the AEW/ALRI aircraft.

The collective effect of these decisions left the Air Force with a declining fighter interceptor force and a modest surveillance, warning, and control network programmed to include only the NORAD Cheyenne mountain facility, one SAGE center, ten BUIC III sites, and a small number of search radars. Additional future radar coverage was to be provided by the OTH back-scatter radar, AWACS, and FAA radars integrated into the Defense Department control network.

Meanwhile, a modest amount of funds was provided each year for the development of AWACS and its associated overland radar; and the Air Force
signed several contracts with various aerospace corporations for development of radar, command & control, and airframe alternatives. The AWACS was a central component of the new bomber defense system, and could also be employed for tactical air operations overseas. The AWACS was designed to be a highly survivable system that would be capable of quick reaction and rapid deployment, and therefore could operate from degraded bases and independently from the vulnerable fixed ground facilities. Once airborne, the AWACS was designed to provide the capability to track enemy bomber aircraft at low altitudes, to detect approaching enemy aircraft far beyond the borders of the continental United States, and to control interception operations. Initially, the technical problem of overcoming severe ground clutter hampered the development of effective overland radar, but intensive R&D work produced important technical breakthroughs in 1967 which reduced the problem to manageable proportions and no longer necessitated delay of the AWACS program. Accordingly, the decision was made in the fiscal year 1969 budget to authorize engineering development of AWACS.

The authorization of AWACS removed a major barrier to the development and procurement of a modern interceptor to be integrated into the new bomber air defense system, and thus confronted the OSD with the problem finally of making a decision regarding full development of the highly-expensive F-12 interceptor. The Air Force for several years had been advocating the prompt development and production of the F-12, which was a technological offshoot of the SR-71 reconnaissance aircraft and could attain high altitude speeds of mach 3.2 and above. By virtue of its advanced ASG-18/ADM-47 fire control and missile system as well as its long range and high cruise and dash speeds, the F-12 technically was far superior to other United States or Soviet fighter interceptors, especially against supersonic bombers. But it was an enormously costly aircraft, and consequently McNamara and the Systems Analysis staff were not enthusiastic about it.
Originally Systems Analysis had attempted to foster competition among the F-111, the F-4, and the F-12 in the hopes that one of the two other lower cost models might prove to be more cost-effective than the F-12. But this attempt failed, and by 1967 even McNamara publicly was willing to concede that the F-12 appeared to be more attractive. However, later that year the F-12 was compared analytically to a modified, upgraded version of the already-deployed F-106 fighter. As a result of intensive analysis against a variety of projected Soviet bomber threats, the F-106X appeared to be a more cost-effective choice in light of the apparent Soviet failure to deploy a supersonic bomber or a bomber equipped with long range air-to-surface missiles. Accordingly, in 1967 McNamara and the OSD staffs proceeded to cancel entirely the F-12, thus leaving the Air Force entirely without a new interceptor.

The F-106X was conceptualized as incorporating several modifications which promised to provide a greatly enlarged missile launch envelope and enhanced combat effectiveness. Included in the modified version were a new fire control and missile system, a new radome to make room for a longer range antenna, a more sophisticated radar to provide increased detection range, miniaturized components for the fire control system, and modified missile bays to accommodate the new missile. Despite these improvements, the F-106X was not equal to the F-12 in technological sophistication and combat effectiveness. But the F-106X was less costly, and it offered adequate range, dash speed, and maneuverability characteristics for most intercept missions. By virtue of lower unit cost, more F-106X's could be procured than F-12's for each dollar investment. A larger force of F-106X's could provide a superior capability than a small F-12 force to cover multiple avenues of attack and to defend against a mass attack of Soviet subsonic bombers. A smaller force of F-12's by contrast would be able
to protect only some high priority targets, and would be capable only of launching a minimal number of sorties and intercept passes against incoming bombers. Analysis suggested that a mixed force of F-106X and F-12, although more expensive than a pure F-106X force, would provide somewhat greater combat capability but was desirable only in the unlikely event that the Soviets deployed a supersonic bomber and long range air-to-surface missiles. Here again arguments about the alleged action-reaction phenomenon helped trigger a United States decision not to acquire a new weapon system. The Air Force had built its case for the F-12 on the assumption that the Soviet Union soon would replace its aging Bison and Bear strategic bombers with a new supersonic strategic bomber armed with long range air-to-surface missiles that would be quite capable of penetrating current American air defenses and only could be intercepted effectively by an interceptor with the speed, range, and performance of the F-12. However, information gathered by the United States intelligence community showed that the Soviets had not yet successfully produced a prototype supersonic bomber and did not appear to be in the advanced stages of developing one. By all indicators, they appeared to have set aside any plans to deploy a new bomber in the immediate future and to have concentrated their fiscal resources on the buildup of offensive missiles. They appeared to have decided to retain the Bears and Bisons in active service for some time, and these bombers could be intercepted effectively by current American fighters. Accordingly, the Air Force's case for acquiring the F-12 dissipated.

Despite the cancellation of the F-12, Pentagon force plans still envisioned a ten-year expenditure of over $12 billion for a large AWACS-F106X system. However, McNamara and Systems Analysis now began to back away from
their commitment to deploy an entirely new system configured for full scale bomber air defense. They had always maintained to the Air Force that a new system would be deployed only in the context of a decision to acquire a large ABM system and a major damage limiting force.\textsuperscript{218} Although the limited Sentinel ABM decision recently had been made, they still had no intention of authorizing the full damaging limiting force and accordingly, in their estimation, little justification existed for proceeding forward immediately at full speed on the development and deployment of the new bomber air defense system.\textsuperscript{219} During the last few months of McNamara's tenure, the OSD initiated a series of studies with the Air Force which investigated the requirement for bomber air defense forces in the future.\textsuperscript{220} Although these studies suggested that a modest force could serve useful purposes, such as providing peacetime identification of overhead flights, providing defense against small scale Nth country attacks, discouraging new Soviet bomber threats, precluding serial Soviet bomber attacks on withheld Minuteman ICBM missiles, and providing a mobile air defense package for flexible overseas deployment, they also called into question the requirement for having a fully modern and large bomber air defense system in the absence of a large ABM system and a major capability to blunt Soviet ICBM attacks.\textsuperscript{221}
FOOTNOTES FOR CHAPTER THREE


3. Ibid, McNamara, p. 57-59.


6. III.1-1.

7. III.1-2.

8. III.1-3.


11. III.1-5a,b.

12. III.1-6.

13. Fiscal Year 1964 Posture Statement, Department of Defense Appropriations for 1964 (Senate), op. cit., p. 32.

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15. III.1-7a,b,c,d.
16. III.1-8a,b.
17. III.1-9a,b.
18. See Greenwood, op. cit., Ch. III, p. 92-144.

19. He did, however, reduce the planned figure from 1300 to 1200. The previous year, the planned force size had been adjusted upwards to 1300 to accommodate the cancellation of Skybolt. By late 1963, the figure had been adjusted back downward to 1200; reportedly, the OSD employed the argument that the Soviet ICBM force posture had not grown as rapidly as expected and that 1200 Minutemen were sufficient to cover this target system.

20. See Department of Defense Appropriations for 1965 (Senate), op. cit. p. 35.
21. III.1-10.
22. See Department of Defense Appropriations for 1965 (Senate), op. cit., p. 35.

23. Department of Defense Appropriations, 1966; Hearings Before the Subcommittee on Department of Defense of the Committee on Appropriations and the Committee on Armed Services, United States Senate, eighty-eighth Congress, first session on H.R. 9221, p. 60.

24. III.1-11.
25. III.1-12.
27. III.1-14.

28. In 1964, however, the Air Force still continued to disagree with McNamara's decision not to acquire the 200 additional Minuteman missiles, and the Joint Chiefs supported the Air Force's position. Department of Defense Hearings for 1966 (Senate) op. cit. p. 385 and p. 1033.

29. Department of Defense Appropriations for Fiscal Year 1967, Hearings Before the Subcommittee on Department of Defense of the Committee on Appropriations and the Committee on Armed Services, United States Senate, eighty-ninth Congress, second session on H.R. 15941, p. 252.
30. III.1-15a,b,c.
31. III.1-16.
32. III.1-17.
33. III.1-18a,b,c.
34. III.1-19a,b.
35. III.1-20.
36. III.1-21.
37. III.1-22.
38. III.1-23a,b.
39. III.1-24a,b,c,d.
40. III.1-25a,b.
41. III.1-26a,b.

42. A small amount of money was provided in the Fiscal Year 1969 budget for study of the ULMS system.

43. III.1-27.
44. III.1-28.
45. III.2-1a,b,c.


47. III.2-2.


52. Department of Defense Appropriations for 1966 (House) op. cit., p. 131-142.
54. Ibid, p. 536.
55. III.2-3a,b,c,d.
56. III.2-4a,b,c,d.
57. III.2-5a,b,c.
58. III.2-6a,b,c.
59. III.2-7a,b,c.
60. See Fiscal Year 1966 Posture Statement, Department of Defense Appropriations for 1966 (Senate) op. cit., p. 57.
61. See Fiscal Year 1967 Posture Statement, Department of Defense Appropriations for 1967 (Senate) op. cit., p. 67.
63. III.2-8.
64. III.2-9a,b,c.
65. III.2-10.
66. III.2-11.
67. III.2-12.
68. III.2-13a,b.
69. III.2-14a,b,c.
70. III.2-15a,b.
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71. This argument is presented each year in McNamara's public testimony to Congress. See, for example, Department of Defense Appropriations for 1967 (House) op. cit., p. 289, 291.


73. Ibid, p. 39.

74. See Fiscal Year 1967 Posture Statement, Department of Defense Appropriations for 1967 (Senate) op. cit., p. 55.

75. III.216.

76. Ibid, p. 55.

77. Ibid, p. 55.

78. Ibid, p. 55.


80. III.2-17.

81. Air Force Chief of Staff General John P. McConnell argued that the AMSA might be useful in operations on a limited scale, including limited nuclear operations, in 1966 testimony. See House Appropriations Hearings for Fiscal Year 1967, op. cit., p. 542-543.

82. See Fiscal Year 1966 Posture Statement, Department of Defense Appropriations for 1966 (House), op. cit., p. 45. See also testimony of Air Force Secretary Harold Brown, op. cit., p. 527-528.

83. See Brown's testimony, Department of Defense Appropriations for 1968 (Senate), op. cit., p. 812-813.

84. See Brown's testimony on differences between Air Force and OSD position on AMSA in Department of Defense Appropriations for 1968 (House), op. cit., p. 722-727.

85. III.2-19.

86. III.2-20.

87. III.2-21.
88. III.2-22a,b.
89. III.2-23a,b.
90. III.2-24a,b.
92. III.2-25a,b.
94. See McNamara testimony, Department of Defense Appropriations for 1967, (House) op. cit., p. 108-110.
95. The Sentinel decision was announced publicly by McNamara in his Sept. 18, 1967, San Francisco speech. Despite the announcement, McNamara's main purpose in this speech was to argue against deployment of a thick ABM system; and the very structure of the speech made clear McNamara's strong personal reservations about the Sentinel decision and his fear that the Sentinel system would later grow into a much larger, destabilizing deployment. The bulk of the speech discussed the triggering effects of action-reaction phenomenon on the arms race and the folly of deploying a thick ABM system. The announcement of the Sentinel decision and the discussion of its public rationale as an anti-China system were presented only at the end of the speech.

96. The Sentinel system was publicly justified as an anti-China area defense system. The Safeguard system, presented by the Nixon Administration in 1969 and funded by Congress that summer after an intensive debate, was justified as a system designed to protect the Minuteman missile silos from Soviet ICBM attack. The Sentinel system was designed to be composed of fourteen major defense sites, which would have provided a thin area defense for almost the entire continental United States. The main defense would have been provided by long-range Spartan missiles; short-range Sprint missiles would have been deployed at only five of the sites to defend the perimeter acquisition radars (PAR) which were to be deployed across the northern part of the country. The Safeguard system included twelve sites, each of which was to have both Spartan and Sprint missiles. It also included two new PAR sites to observe submarine-launched missiles coming from directions other than due north. See Herbert F. York, "Military Technology and National Security," Scientific American, August, 1969.
97. See Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems May 29, 1972, signed in Moscow by President Richard M. Nixon and General Secretary Leonid I. Brezhnev. The treaty allows each nation one ABM site, with no more than one-hundred launches, to protect the nation's capital and one ABM site, with no more than one-hundred launches, to protect ICBM silos.

98. III.3-1.

99. See Jayne, op. cit., Ch. 5 and 8, for a discussion of the emergence of the Nike-X system, the Spring and Spartan missiles, the phased array radar and associated computer data processing equipment, and the Perimeter Acquisition radars and Missle-site radars (MSR's).


101. See Jayne, op. cit., Ch. 9, p. 298-329.

102. The 25-city system was conceived by the JCS to be an interim step toward the deployment of a 52-city system.


104. Ibid, p. 312-316.


106. Thus, from 1964 onward he did regard a thin system to be a fall-back position to which he could retreat if forced by political circumstances. It should also be pointed out here that there were more than one variations of a "thin" ABM system which were under consideration by the Pentagon, and they varied in size and cost. The Sentinel system, with its fourteen sites and projected $5 billion cost, was the smallest and least expressive of these options.


111. Ibid, p. 395.

112. Systems Analysis, in particular, sided with McNamara on this issue, but DDR&E, despite its general bias in favor of new technologies, also was not sympathetic to the Army's grandiose plans.

113. Thus they in effect staked out a middle ground in this controversy.


115. Jayne, op. cit., Ch. 4, p. 128-150.

116. Jayne writes than in late October 1961, McNamara was willing to support limited production funding for Nike Zeus.

117. At a Nov. 24 meeting at Hyannisport, President Kennedy apparently gave verbal tentative approval for the provision of about $100 million for Nike-Zeus pre-production funding, but no funding for the Army's actual twelve-battery plan. These funds later were deleted in December when the Bureau of the Budget convinced Kennedy to drop them. Ibid, p. 150-151.

118. Ibid.

119. See McNamara's Fiscal Year 1963 Posture Statement, Department of Defense Appropriations for 1963 (House), op. cit.


121. Ibid, Ch. 9, p. 298-332.


123. Indeed, McNamara did not discuss a great deal in Congressional testimony the technical performance characteristics of the Nike X and its main components, and did not address the issue of whether the Nike X, in fact, would be technically proficient. Nonetheless, a substantial debate did exist on this subject, and a number of Nike-X's critics, especially from the outside technical community, did harbor doubts about its ability to meet its technical performance specifications.

124. As was mentioned in Chap. 2, the strategic arguments which were presented in the final four posture statements all were based on McNamara's interpretation of the damage limiting study.
125. The highly-classified DPM's, which were prepared by Systems Analysis, were used as the basis for preparing the posture statements. Hence, the posture statements do reflect rather consistently official OSD thinking.

126. Thus, once again, the close observer of the interaction phenomenon finds expansion by one side (i.e. the Soviet Union) being a partial triggering factor in the other side's (i.e. the United States) decision to exercise restraint.

127. See Jayne, op. cit., p. 304-312.

128. III.3-3.


130. See Department of Defense Appropriations for 1968 (House) op. cit., p. 163.

131. Ibid, p. 162.


133. Ibid, p. 178.

134. Ibid, p. 178.

135. Ibid, p. 179.


137. Interestingly, McNamara in earlier years had pointed publicly to the substantial superiority in total numbers of launches which the United States then enjoyed over the Soviet Union, and had used this superiority as a tactical device for argumentation to beat off criticisms that he was accepting a condition of strategic stalemate and was not doing enough to keep the United States ahead of the Soviet Union in strategic weaponry. Indeed, at one juncture in 1963, he proclaimed that the United States' lead over the Soviet Union would endure virtually for a lifetime. Although McNamara's use of superiority at that time was tactically advantageous, it subsequently backfired in 1966-67 when the Joint Chiefs picked up this concept and began to use it for their own purposes. Ironically, McNamara, by using "superiority" for his own tactical purposes publicly gave this concept a certain aura of legitimacy and strategic meaning which later strengthened the Joint Chiefs' arguments and weakened McNamara's own refutation of their contentions.
The SALT initiative, however, was more than a tactical device to head off the Joint Chiefs in the ABM arena. Long before the ABM issue came to a peak, McNamara had wanted to start a meaningful dialogue with the Soviet Union of negotiations to stabilize the strategic arms balance. SALT was necessary because McNamara in late 1966 was in danger of losing his battle with the Chiefs on ABM, but it also was desirable from a broader strategic viewpoint. Even in the absence of internal political difficulties, uncertainty about the future course of the Soviet buildup was creating substantial strategic incentive for the United States to react by substantially bolstering its own force, an act which could have created incentive for the Soviets to do likewise. Hence, the dynamics of this strategic interaction alone created incentives for the United States to seek SALT negotiations, and for the Soviet Union to show a parallel interest. SALT, then, has both strategic and internal political origins.

Other accounts of the December 6 Austin meeting are presented by Jayne, op. cit., Halperin, op. cit.

Thus, Johnson's Sentinel decision does not appear to be a product solely of domestic political considerations, although they certainly did play an important role. It should be remembered that the Sentinel decision was taken shortly after the failure of the Glassboro Summit on June 23-25 and Kosygin's June 25 press conference at the United Nations, in which he expressed a lack of interest in negotiating on ABM limitations. Evidently, Johnson hoped that a United States decision to initiate ABM deployment might convince the Soviet Union that it was in their interest to enter formal negotiations and that, in the absence of Soviet cooperation, the United States at least was going to keep pace in the strategic competition and might deploy a thick ABM system.
147. III.3-6.
148. III.3-7.
149. III.3-8.
150. The Nixon Administration's Safeguard system became an object of considerable controversy and public opposition; during the summer 1969 Congressional Hearings, the Safeguard system was publicly opposed by a number of scientists who formerly had been closely involved in ballistic missile defense while in the government.
151. See Enthoven and Smith, op. cit., Ch. 1 and 2.
152. McNamara evidently specifically instructed Systems Analysis to confine its efforts to conducting cost effectiveness studies and to avoid becoming entangled in political bargaining with the military services. He evidently told high Systems Analysis that if deals were to be made, he would be the one to make them.
153. III.4-2a,b,c,d.
154. III.4-3a,b.
155. III.4-4a,b,c.
156. III.4-5.
157. III.4-6.
158. III.4-7a,b.
159. III.4-8a,b.
160. III.4-9a,b.
161. III.4-10. See testimony by Air Force Secretary Harold Brown, Chief of Staff and General John P. McConnell, Department of Defense Decision to Reduce the Number and Types of Manned Bombers in the Strategic Air Command, House Armed Services Committee, Hearings Before Subcommittee Number Two, Jan. 25-Feb. 2, 1966.
162. III.4-11.
163. III.4-12.
164. III.4-13.
Evidently, the Strategic Air Command originally recommended the phasing out of the B52C-F and the procurement of the 490FB-111 as an interim replacement. Air Force Chief of Staff General John P. McConnell then discussed the situation with McNamara in April, and at that time made the informal proposal. See Military Procurement Authorization (House) op. cit., p. 6177.

The OSD evidently drove down the original SAC request for 490 FB-111s to the more modest 210 figure by arguing that the procurement of MIRV would provide sufficient additional warheads for covering the SIOP target list and thus removed the requirement for the additional 280 bombers. See testimony of General John Ryan, Commander in Chief SAC, Military Procurement Authorizations for 1967, (House) Armed Services Committee, op. cit., p. 6177. General McConnell then proposed a two to three trade basis (to procure two FB-111's for every three B-52's retired), and thus to procure 210 new bombers. The OSD accepted this proposal. Ibid, p. 481. Cost figures are taken from Department of Defense Decision to Reduce the Number and Types of Manned Bombers in the Strategic Air Command. op. cit., See Testimony of McNamara and Brown.

McNamara's projected cost figures (in $ billion)

<table>
<thead>
<tr>
<th></th>
<th>1971</th>
<th>1975</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Force extended (B52 and B58)</td>
<td>8.6</td>
<td>17</td>
</tr>
<tr>
<td>Proposed Force (B52, B58, FB111)</td>
<td>8.4</td>
<td>14</td>
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</tbody>
</table>
177. This action quickly led to the special House Armed Services Sub-
committee Hearings during late December and early January which in-
vestigated the background to the decisions.

178. III.4-24a,b.

179. III.4-25a,b.

180. III.4-26.

181. Department of Defense Appropriations for 1963, Hearings Before the
Subcommittee of the Committee on Appropriations, United States Senate,

182. Ibid, p. 15.

183. Ibid, p. 15.

184. Ibid, p. 15.

185. Ibid, p. 16.

186. See Fiscal Year 1966 Posture Statement, Department of Defense Appropri-
ations for 1966 (House), op. cit., p. 50-52.

187. The Soviets at the time were thought likely to deploy a supersonic bomber
in the 1970's.

188. See testimony of Air Force Secretary Harold Brown, Department of De-
fense Appropriations for 1968 (Senate), p. 675, 739-744.

189. Ibid, p. 739, See McNamara testimony, p. 82.

190. III.4-27.

191. III.4-28a,b.

192. See Fiscal Year 1966 Posture Statement, Department of Defense Appropri-
ations for 1966 (House), op. cit., p. 49-50.

193. See Fiscal Year 1967 Posture Statement, Department of Defense Appropria-
tions for 1967 (House), op. cit., p. 58.

194. See Fiscal Year 1969 Posture Statement, Department of Defense Appropria-

196. See testimony of Air Force Secretary Harold Brown, Department of Defense Appropriations for 1968 (House), op. cit., p. 675-676.

197. Ibid, p. 676.

198. Ibid, p. 676.


203. Brown testimony, Ibid, p. 730. Brown reported that the F-12 alone cost about ten times as much as the F-106X competitor.


205. See McNamara's testimony, Department of Defense Authorizations for 1968, Senate Armed Services Committee, op. cit. p. 82.


208. The F-12 was cancelled on the authority of the Secretary of Defense, but against the recommendation of the Chief of Staff, Air Force. See McConnell testimony, Department of Defense Appropriations for 1969, op. cit. p. 730.

209. See McConnell testimony, Department of Defense Appropriations for 1969, (Senate) op. cit., p. 92.

211. Ibid, p. 92.

212. McNamara's 1969 Posture Statement presented a table which showed that an F-12 force (along with AWACS and FAA radars) would cost $13.7 billion, along with a $750 million annual level off cost, while an F-106X force would cost $12.3 billion and $690 million annually. op. cit. p. 155.


215. See testimony of Air Force Secretary Harold Brown, Department of Defense Appropriations for 1969 (House) op. cit, p. 730-733.


218. This caveat was presented in McNamara's Fiscal Year 1967 and 1968 Posture Statements. III.4-30.

219. III.4-31.

220. These results are presented in the Fiscal Year 1969 Posture Statement. See Department of Defense Appropriations for 1969, (House) p. 154.

221. Ibid, p. 154.
PART TWO

EXPANSION: THE TRIGGERING FACTORS
CHAPTER IV

THE STRATEGIC INCENTIVES TO ACQUIRE NEW WEAPONS

Secretary McNamara, like any Secretary of Defense, operated in an extraordinarily complicated and dynamic environment, and was forced to respond to a broad range of pressures and considerations. As a cabinet member of two Presidential Administrations, he advised Presidents Kennedy and Johnson on defense matters, and was expected to adjust his actions in the Pentagon to their priorities and goals as well as to the fluctuating nature of their relationships along several policy fronts with the federal bureaucracies, the Congress, the domestic body politic, and foreign nations. Within the Pentagon, he dealt with a large number of different bureaucratic organizations, each of which had its own priorities and interests to serve, and he presided over a multifaceted weapon system acquisition process that operated partially on the basis of its own dynamics and was driven by the complex interactions of many structural, fiscal, strategic, procedural, and technological factors. Finally, he was charged with the responsibility of providing military defense against foreign threats, and therefore he was faced with the problem of meeting essential military requirements and adjusting the strategic force posture to the evolving character of the Soviet military threat.

Defense decision-making during McNamara's tenure was strongly influenced by these diverse situational factors. The international and domestic political arenas provided the basic setting for policy formation, and
technological progress created new opportunities and new problems. Within the Department of Defense, the complicated process of technical innovation and consensus formation determined the menu of strategic weapon system alternatives and the pattern of bureaucratic alignments McNamara faced each year at budget time. These factors helped shape McNamara's decisions for expansion by circumscribing the range of choice that was open to him, and by creating substantial pressures and incentives to select some options and reject others.

At the same time, however, particular decisions to acquire new strategic systems and to retain unessential forces in active service were not foreordained or predetermined by this environment in any sense. The option to reject or scale back the proposals of the military services always was available and, as the preceding chapter analyzed in some detail, McNamara often successfully resisted intense pressures and manipulated the bureaucratic levers at his disposal to block undesirable strategic weapon systems, to control the size of the strategic force posture, and to make substantial contractions.

Accordingly, the following two chapters, in seeking to identify and to examine the reasons why McNamara made several decisions for expansion and failed to make more contractions, focuses on the motivational and situational factors which arose out of these circumstances and appear to have played consistently powerful roles on overriding his preference for restraint and his power and triggered his behavior. Consequently, variables which were of indirect, secondary, or peripheral importance are not investigated in detail. This focus on direct triggering factors rather than the full dynamics of the weapon system acquisition process not only promises to bring
into sharp focus the immediate causes of McNamara's behavior, but it also might help to fill an important gap which exists in the scholarly literature on defense decision-making. The literature offers a wide variety of theoretical explanations for the processes of technical innovation, consensus building, and budget formation within the Department of Defense, but it does not provide a clear and complete picture of the factors which directly determine the actions of the most important participant in the decision process, the Secretary of Defense. Indeed, one is struck by the extent to which the Secretary of Defense, as well as the President, are ignored or are relegated to positions of insignificance by a substantial portion of this literature, especially the theories of technological determinism and the more recent expositions of the bureaucratic politics thesis.

Although numerous motivational and situational factors normally influenced McNamara's judgments and calculations, three general factors, each of which can be broken down into several subcategories, stand out and regularly were cited by former Pentagon officials as being the most important and consistently prevailing triggers of McNamara's behavior. The first factor is McNamara's own strategic perspectives and role conceptions. Despite his preference for restraint, evidently McNamara on some occasions personally favored or at least felt a role-induced sense of obligation to acquire new strategic systems and capabilities. The second factor is the Pentagon's analytical force planning process, which placed constraints on his freedom of maneuver and occasionally blocked him from rejecting the proposals of the military services and making contractions in the force posture. Sometimes McNamara was placed in a position by the arguments of the military services and the advice of his own OSD staffs which inhibited
him from moving forward or turning aside the recommendations of the services. The third factor is the set of political pressures and constraints he faced, and the manner in which he tended to respond to them. Despite his ability to withstand intense pressures on several occasions, bureaucratic and domestic political considerations apparently did lead him to temper his ambitions in some cases, to engage in diverse bureaucratic maneuvers which produced several decisions for expansion, and to make some outright compromises and concessions to the military services and Congress. The following two chapters examine the manner in which each of these factors manifested themselves in McNamara's failure to make more contractions and in his decisions to authorize major qualitative improvements in the offensive missile and bomber forces and to acquire such new systems as MIRV, the FB-111, SRAM, and the Sentinel ABM. This chapter focuses on the first factor, McNamara's strategic preferences, while chapter five examines the inhibiting effects of political pressures and analytical constraints.

1. McNamara's Strategic Perspectives as a Policy Determinant

A number of McNamara's decisions to acquire new strategic weapon systems were taken reluctantly and were products, either largely or partially, of pressures and constraints he faced; and some decisions were affected or circumscribed, to greater or lesser degrees, by such indirect factors as the rapid pace of technological change. Nevertheless, it would be erroneous to ascribe all of these decisions and the activities that flowed from them to uncontrolled bureaucratic momentum or to irresistible technological imperatives. Since McNamara was able to exert substantial managerial control over the Pentagon's budget and the weapon system acquisition process,
virtually all of the major strategic force posture decisions made during his tenure reflect his presence and his influence. Despite his preference for wide-ranging restraint, in several cases he favored the acquisition of new strategic weapon systems and gave his personal support and encouragement to their development and procurement. Indeed, in some instances, such as Poseidon, he directly prodded the military services into making important innovations. Just as he was able to block numerous weapon systems, so also was he able to use the legal authority and bureaucratic levers at his disposal to acquire the military forces and capabilities he personally preferred.

1A. Restraint as a Conditional Goal

Although McNamara preferred a modest baseline force posture and spent a large portion of his time fighting off the appeals of the military services, like any Secretary of Defense he did not want to bring the weapons acquisition process to a grinding halt. His primary goal was to provide a powerful, properly-balanced force posture; and consequently, his central concern was to channel the productive activities of the military services and the technical community in the proper directions, not totally to prevent the accretion of combat capabilities.1 Self restraint thus was not an end in itself, but rather always was a conditional goal. He made decisions pragmatically on a case-by-case basis rather than programmatically, and the position he adopted in each instance depended a great deal upon the individual weapon system at stake, its cost-effectiveness, the contribution it promised to make to United States military strategy, and its implications for the arms control objective.2
He was determined to block strategic weapon systems whose benefits were not commensurate with their costs, as well as weapon systems which threatened, in a fundamental sense, to undermine the stability of mutual deterrence, to foster a counterproductive arms race, to increase significantly the probability of war, and to weaken rather than strengthen American security. But the historical record demonstrates clearly that he simultaneously remained willing, even after 1963, to acquire non-destabilizing weapon systems which made cost-effective contributions to United States military strategy or were made necessary by the changing character of the Soviet military threat. Accordingly, he readily authorized substantial funds each year for a vigorous R&D effort which explored promising new technological opportunities, and he took out a wide variety of R&D hedges against the uncertain future. When new technologies had passed successfully through the development process to the point where they were technically proficient and capable of providing useful additional capabilities, remedying deficiencies, or compensating for actual or anticipated Soviet gains, he was prepared to authorize their production and procurement.

1B. Incentives Arising from the Multiple Objective Nature of Force Planning and Decision-Making

One factor which created powerful incentives for McNamara to acquire new strategic weapon systems despite his preference for fiscal prudence and his sensitivity toward arms control was the fact that the strategic nuclear force planning process involved the consideration of multiple strategic objectives. Although McNamara was not interested in making substantial additional investments on behalf of the damage limiting objective, he remained willing actively to pursue a number of other objectives which were
affected by decisions for the strategic nuclear forces. These objectives created a requirement for a large and quite diverse force posture, especially for offensive forces, that would be capable of responding flexibly to a large number of different enemy provocations and destroying efficiently a broad spectrum of enemy military and civil targets. They also created strong and mutually-supporting reasons for the acquisition of additional combat capabilities even after the major 1961-63 Minuteman and Polaris procurement decision had been made.

The paramount objective, of course, was the deterrence of nuclear attack upon the United States. But the combat capabilities of the strategic nuclear force posture also had an important bearing on the ability of the United States to pursue a host of wartime objectives, such as the maintenance of intra-war deterrence, the control of escalation, the limitation of collateral damage, the preservation of wartime and postwar bargaining advantages, and the termination of war under acceptable conditions. The strategic nuclear forces also contributed to the important objective of deterring nuclear attack upon American allies, especially West European nations, and provided one means of defense in Europe against a Soviet-Warsaw Pact military assault. Although the United States in this period increasingly placed emphasis on conventional defense in Europe, it never abandoned partial reliance on nuclear deterrence or the option of employing the strategic nuclear forces for theater defense in the event that NATO's defenses collapsed in the face of a substantial Warsaw Pact assault or that the destruction of USSR-based MR/IRBM sites and medium bomber airfields became necessary.

Moreover, the strategic nuclear forces played an important role in the American foreign policy efforts to preserve alliance cohesion and to discourage
nuclear proliferation. Since the West European allies continued to place primary emphasis on nuclear deterrence and defense, the ability of the strategic nuclear forces to strike Soviet theater targets and the American option to employ them if necessary were essential instruments for quelling growing West European doubts during the fractious 1960's debates about the credibility of the United States commitment. A decision to rule out this option or the inability of the strategic forces to carry out NATO war plans would have weakened the American argument against national nuclear forces, especially after the MLF was scuttled, would have caused severe strains in Alliance relationships, and could have led West European nations, especially West Germany, to acquire their own national nuclear forces. 10

1 C. The Inhibiting Effects of Role Conceptions and Conservative Risk-Management Practices

A second factor which created powerful incentives was McNamara's sense of role conception and the obligations which he believed his position imposed upon him. 11 The position of Secretary of Defense imposes upon its occupant the major responsibility of protecting the United States against foreign military threats. This is a responsibility which he shares in such a unique and personal sense only with the President; and consequently the blame for military defeat or diplomatic setback which arises from military weakness falls squarely upon his shoulders. It automatically colors his perceptions and influences his sense of priorities. 12 More than any other official, the Secretary of Defense is preoccupied with the task of preparing for disastrous contingencies in which low probability events occur and chance factors operate against the United States. This preoccupation quite naturally creates powerful reasons to place first priority on providing a strong military posture
McNamara in particular took his role of Secretary of Defense quite seriously and he placed special emphasis on discharging the responsibilities which he believed the position conferred upon him. He apparently felt a personal sense of obligation to insure that the United States would not fall hostage to adversary powers and to provide a fully adequate and properly balanced force posture. And as the Johnson Administration's chief spokesman for defense preparedness, he tailored his public statements to conform to the dictates of his position, and seldom revealed his personal doubts about the wisdom of relying so heavily upon military power and neglecting underlying political and social issues. The Montreal speech in 1966 was an exception to this pattern, but he later privately expressed doubts that a Secretary of Defense should say such things in public.

Although the public record does not provide clear indications of the manner in which this role conception affected his strategic force posture decisions, information gathered during interviews with his former personal advisors suggests it manifested itself in several different ways. First, it apparently played an important role in making him reluctant to base United States strategy exclusively on minimum deterrence and to ignore other objectives which called for more strategic forces even though such a step greatly would have alleviated his problem of controlling costs in the strategic forces budget. Although he was profoundly skeptical about the prospects for controlling escalation, he still felt a strong responsibility at least to provide the options and the military flexibility that made control feasible.

Second, his role conception played a significant role in leading
McNamara to adopt risk-avoidance practices and to plan conservatively. He tended to act cautiously and prudently in the face of uncertainty and risk. When critically important objectives were at stake and the imponderables were large, he apparently felt a responsibility to purchase high confidence capabilities and large margins of insurance against improbable but highly dangerous contingencies. As a result, he employed very demanding tests of sufficiency and conservative assumptions for determining strategic force posture requirements, especially for deterrence. This practice created substantial reasons for favoring a large and diverse force posture and for spending large amounts of money in R&D as well as procurement.

Third, his role conception apparently had a temporizing effect on the manner in which he approached critical strategic force posture issues and on his willingness to exercise restraint. Of course, it did not undermine his determination to block clearly unnecessary and allegedly provocative strategic systems. But it often left him divided in his assessments, especially when the service proposals clearly had some merits, and made him reluctant to block weapon systems which might prove to be advantageous under unforeseen circumstances. As a result, apparently he often was hesitant about rejecting service recommendations, and in such circumstances he was more susceptible to being persuaded and more willing to accommodate the services. And occasionally he apparently decided to set aside his personal beliefs and reluctantly to authorize technologies and weapon systems about which he had reservations. Although the historical record provides no clear indications of such instances, some of his former aides remarked that this aspect of his behavior might have manifested itself in his decisions for the R&D budget, MIRV ballistic missile defense, and the strategic bomber force.
ID. The Assured Destruction Capability: Reactions to the Soviet Threat

Despite his refusal to acquire a large ABM system and additional damage limiting capabilities, McNamara remained willing to expend resources for the preservation of the strategic force posture's assured destruction capability and for the acquisition of improved capabilities to destroy Soviet military targets and other non-urban targets. Since McNamara regarded a high confidence assured destruction capability to be the keystone of nuclear deterrence, it received first priority in his budgetary calculus and he consistently maintained that it must be purchased regardless of fiscal costs. Although the Minuteman and Polaris buildup undertaken during the Kennedy Administration temporarily had alleviated official worry about America's deterrent, by 1964 concern once more had begun to grow as indications began to appear that the Soviet Union might deploy a large ABM system. As uncertainties and concern about the future Soviet threat mounted steadily during the next four years the assured destruction mission became increasingly important in OSD's planning efforts as well as the R&D efforts of the military services and the technical community.

Although the currently deployed force posture throughout this period easily was capable of performing the assured destruction mission, OSD force planners were concerned about the relatively distant future and a potentially different strategic situation in which a significantly greater Soviet threat might pose more serious challenges. The long life cycles of strategic weapon systems and the substantial lead times between initial deployment and full operating capability necessitated a long range focus in force planning, and raised the difficult task of making determinations about alternative weapon systems which were only in the initial stages of development. But
the most troublesome problem was that of anticipating the future Soviet threat and adjusting the offensive force posture to circumvent it.

Contemporary theories of the arms race exaggerate the role which the interaction process plays in triggering force posture decisions on each side and ascribe too much importance to uncertainty as a policy determinant. The United States-Soviet competition during this period, to the extent competition existed, certainly was not neat and symmetrical. It was highly complex, and internal dynamics played a preponderant role in driving United States decisions and almost certainly Soviet decisions as well. Consequently, the momentum to acquire new weapons on each side probably would have continued forward in many cases even in the absence of external stimulation. Indeed, as was pointed out in the preceding chapters, the interaction process often had the effect of leading both sides to halt major projects rather than triggering an upward spiral of strategic weaponry. And to the extent an arms race did exist, it by no means is clear that uncertainty was the primary cause. Uncertainty is but one consideration in force planning, and its removal is no guarantee that force planners no longer will perceive a need for improved combat capabilities. Accurate information about future enemy force plans might confirm the worst expectations, rather than remove cause for worry, and might galvanize force planners into taking more dramatic actions than might otherwise have been the case. And regardless of enemy intentions, inherent strategic objectives still might create compelling reasons for moving forward.

To say that the classic arms control model is not universally applicable, however, is not to argue that it never applies. In some cases the two sides have competed, and the interaction process, fueled by uncertainty, has played an important role in leading one side or the other to acquire new weapons.
In the case of Pentagon efforts to safeguard the assured destruction capability, OSD force planners did react to anticipated changes in the future Soviet threat, and uncertainty did play a significant role in triggering McNamara's decisions to strengthen the strategic offensive forces.

Despite the fact that excellent intelligence information was available on currently-deployed Soviet strategic forces, considerable uncertainty existed about future Soviet capabilities, including the size and composition of the Soviet force posture as well as the performance characteristics of individual weapon systems. To some degree this uncertainty was a product of a lack of intelligence data on Soviet weapon systems which were still in the initial stages of development and had not yet undergone testing, as well as uncertainty about the future progress of Soviet research and development in military technology. The most important cause, however, was the uncertainty which existed about Soviet intentions and objectives, which were primary determinants of major trends in Soviet military policy. Since solid intelligence information normally was not available on Soviet intentions, and often probably was not attainable because the Soviets had not yet made final plans, no firm ground existed for knowing with high confidence which deployment option the Soviets would select from a broad range of options open to them.³¹

The problem of anticipating future Soviet ABM deployments and designing the offensive force posture to penetrate them loomed particularly large in OSD's force planning efforts, especially from 1964 onward.³² That year information became available that the Soviet Union was constructing ABM radars and launchers around Moscow, was conducting high altitude intercept tests at the Shary Shagran ABM test site, and had initiated construction of the Tallinn system in northwest USSR, astride the Minuteman corridors.³³
A large amount of debate existed within the intelligence community at the
time, and continued to exist during succeeding years, about the capabilities
of the Moscow and Tallinn systems, the prospects for upgrades, the extent
of Soviet commitment to ABM defense, its deployment plans, and the future
development of Soviet ABM technology. McNamara and several other OSD
officials apparently shared the skepticism of some elements of the intelligence
community that the Soviet Union was fully committed to nation-wide defense of
its principal cities or that it would be capable of deploying an ABM system,
at least within the planning period, that could pose a serious threat to the
offensive missile forces. Nonetheless, indications that the USSR might
proceed forward were sufficiently compelling to lead the OSD conservatively
to assume in force planning that it would deploy a nation-wide ABM system by
the mid-1970's. OSD planners also assumed that Soviet ABM technology would
develop rapidly in the near future, despite the fact that the Soviet Union
was behind the United States in interceptor and radar technology, and that
future Soviet ABM systems would achieve rough equality with Nike-X in
performance and therefore could be expected to achieve at least modest kill
probabilities against incoming missiles. 

By adopting these conservative assumptions and planning the strategic forces accordingly, OSD force planners
attempted to guarantee that the offensive missiles would continue to be
capable of reaching their targets even if the Soviet Union did deploy on a
large scale. Secondly, McNamara and other OSD officials hoped that by taking
prompt actions to bolster the assured penetration capability of the offensive
missile forces they could provide the Soviet Union a powerful incentive not
to deploy on a large scale.

The Pentagon's reaction to anticipated Soviet ABM deployments had a
large effect on specific force plans and the fate of individual weapon systems during 1964-65. Support grew quickly for the prompt development of improved penetration aide technology for offensive missiles, including decoys, chaff, and multiple warheads. In 1964 a major study, called Pen-X, was initiated by the Institute for Defense Analyses which involved representatives from the entire defense community and investigated the penetration problem in-depth. This study, which received high-level attention, helped to establish penetration as a central strategic issue of the mid-1960's and provided considerable support to the idea of installing multiple warheads atop Minuteman and Poseidon. As a result of Pen-X and the overriding concern for penetration, the MIRV system was given substantial impetus at a critical period in the early stages of its life cycle, as were the Poseidon missile and the Mark 12 and Mark 3 warheads.

While McNamara and the OSD force planners devoted a good deal of attention in 1963-65 to the problem of penetrating Soviet ABM systems, little official concern then appears to have existed that the land-based ICBM force soon would become vulnerable to Soviet ICBM surprise attack; nor were extensive efforts made to examine the implications of a possible Soviet ICBM buildup for the force posture. Although Pentagon officials had recognized years before that the Minuteman force eventually might become vulnerable, little cause existed for immediate concern since the Soviet Union did not appear to be in the process of deploying a large ICBM force posture with significant hard target kill capabilities. During this period the Soviet ICBM force grew only at a slow pace, and the intelligence community estimated in 1964 that by 1968-70 it would expand only to a modest size of 300-700 missiles. Moreover, the Soviet Union did not appear to be capable of developing in the
near future the guidance, warhead, and re-entry technology that were required to provide the accuracy characteristics necessary for an efficient capability to destroy hardened missile silos.\textsuperscript{44}

By early 1965, however, indications began to appear that the Soviet Union was on the verge of accelerating its ICBM program. Khrushchev's departure in late 1964 had brought into office a new set of leaders who appeared willing to make significant policy innovations, and the legacy of the Khrushchev era seemed to provide powerful incentives for the new leadership to embark upon a substantial strategic buildup in order to rectify the USSR's second class status in strategic weaponry.\textsuperscript{45} Moreover, information almost certainly was available to the United States government that the Soviet Union was engaged in flight tests of advanced ICBM's, which were intended to replace the older, more primitive models.\textsuperscript{46} Apparently in 1964 production of the advanced, storable liquid-fueled SS-11 ICBM was initiated and in the succeeding months the construction rate grew steadily; several months later, production was started on the huge liquid-fueled SS-9 ICBM.\textsuperscript{47} This missile made its first public appearance in the May, 1965 Moscow parade.\textsuperscript{48} By mid-1964 Soviet ICBM deployments had grown to 188-191 missiles, as compared to about 91 missiles in mid-1963.\textsuperscript{49} One year later the production of new ICBM's had begun increasingly to be reflected in the force posture, which by now had risen to 224 missiles. During the course of the following year, the number rose to 292, and after mid-1966 the deployment rate accelerated rapidly. By mid-1967, the ICBM force posture reached the 570 level, a figure which reflected an ongoing deployment rate of about three missiles every four days. This high rate was maintained throughout the following year and by mid-1968 the Soviet force posture had grown to 858 missiles.

Despite the mounting indications of the accelerating buildup and the
ambitious nature of Soviet force posture objectives, the United States intelligence community, especially the Central Intelligence Agency which primarily was responsible for NIE and NIPP forecasts, initially failed to anticipate the sharp rise in Soviet production and deployment, and then consistently underestimated how far the buildup would proceed even after it became aware that the Soviet Union had embarked upon a major policy departure. For example, the 1964 five-year NIPP forecast underestimated Soviet ICBM deployments in 1969 by fully 328-628 missiles; this error represents a fundamental misjudgment of Soviet intentions rather than marginal miscalculations. By 1965 the NIPP again forecasted that the Soviet ICBM force would grow to 400-700 missiles by 1970; actual realized deployment was 1299 missiles. Thus, the NIPP underestimated Soviet deployments by at least 599 missiles, or by 46%. Although the following year the intelligence community began to adjust its forecasts upward, it still continued badly to underestimate future Soviet deployments. For example, the 1966 and 1967 forecasts fell over 500 missiles short, and the 1968 forecast for the four year period fell some 300 missiles short. Not until 1971 did the intelligence community begin to approximate the mark in its forecasts, and by that time the Soviet deployment rate already had begun to level off.

US Projections of Soviet ICBM Launchers Compared to Number Realized

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*This year there was no agreed figure for the upper level of the range of
estimates. 1300 was the minimum level.

Apparently the OSD force planners also lagged somewhat in anticipating the Soviet ICBM buildup and then reacting to it. By late 1965, however, concern had begun to grow. 52 Although considerable uncertainty existed about Soviet intentions, numerous OSD officials, especially in DDR&E, were skeptical about the rather sanguine estimates that were being produced by the intelligence community and were worried that Soviet ICBM deployments might well reach the upper levels of the NIPP projections or even go considerably beyond. 53 Quite apart from the question of the accuracy of the intelligence projections, prudence dictated that close attention be paid to Soviet capabilities as well as possible intentions. Although the Soviet ICBM force at that time did not possess a significant hard target kill capability, the possibility existed that the Soviet government could acquire a substantially improved capability if it elected to spend the required resources and to continue the momentum of its ongoing ICBM buildup and substantial R&D effort. 54 The SS-9 ICBM posed a significant threat because its larger throw weight enabled it to carry the massive payload necessary to compensate for the relatively poor Soviet missile targeting accuracies. However, the SS-11 missile, which was being produced in much larger numbers, also posed a potential threat. Although it was smaller than the SS-9, it still carried a fairly large payload and its technical characteristics and design features were better-suited for the hard target kill role than the SS-9. 55 Furthermore, there existed the distinct possibility that the Soviet Union not only would deploy a large ICBM missile force of SS-9 and SS-11's, but might also modernize this force in the future by developing qualitatively improved models, better guidance and re-entry technology, and the MIRV technology which would permit Soviet forces
Accordingly, Systems Analysis and DDR&E officials began to pay growing attention to this potential threat and to examine the implications it posed for the offensive force posture.\textsuperscript{56} Scenarios increasingly were examined which incorporated massive Soviet ICBM attacks on the Minuteman force in order to test the adequacy of the programmed force posture to perform the assured destruction mission and to determine how the size and composition of the force posture might have to be adjusted in the future to compensate for the Soviet buildup.\textsuperscript{57} Moreover, the DDR&E and the service development commands increasingly began to generate ideas for new weapon systems which could provide an improved capability to survive a Soviet ICBM attack and to provide a high-confidence deterrent even if the Soviet Union did develop a significant hard target kill capability.\textsuperscript{58}

The growing attention that was given to the accelerating Soviet ICBM buildup did not lead to any diminution of concern for the Soviet Union's on-going ABM program. The emergence of the former problem supplemented rather than replaced the latter, and as a result OSD force planners devoted considerable analytical effort to both problems of surviving a Soviet ICBM attack and penetrating a Soviet thick ABM system. Moreover, their conservative risk-management practices led OSD force planners to assume that the Soviet Union not only might deploy either a large ICBM force or a thick ABM system, but that it might deploy both components together. Consequently, they also became preoccupied with the task of sizing and designing the strategic offensive force posture so that it could provide a high confidence assured destruction capability even in the face of a Soviet capability to destroy large numbers of Minuteman missiles in a surprise counterforce attack and
then to intercept many surviving missiles with ABM interceptors before they had reached their urban targets. 59

This practice of hedging against uncertainty by adopting conservative assumptions about the Soviet threat culminated in the adoption of the "greater than expected threat" planning tool to determine which R&D hedges should be taken out. 60 This tool was installed in late 1965, and was employed by OSD during preparations for the fiscal year 1967, 1968, and 1969 budgets. Prior to 1965, force plans had been based on the assumption that the Soviet threat would fall within the range for offensive and defensive forces that was projected by the NIPP planning document. This concept, however, postulated a Soviet military threat, either in offensive forces, defensive forces, or both, which exceeded by a considerable margin the NIPP upper range. 61 The most severe greater than expected threat was a substantial hard target kill capability in the form of highly accurate small ICBMs or MIRVed large ICBMs, coupled together with an extensive, effective ABM system; both components of this threat were quantitatively greater than those projected in the intelligence estimates. 62

To some degree, OSD's adoption of these conservative intelligence assumptions and associated force plan calculations were products of McNamara's efforts to beat off challenges to his decisions which were based on the argument that he was not responding adequately to the growing Soviet threat. 63 And, as we shall see later, they also were products of the peculiar patterns of argumentation that took place between the military services and Systems Analysis. But they also reflected real concerns about the Soviet buildup as well as a natural tendency to act prudently in the face of major uncertainties. Although fiscal constraints appeared likely to inhibit the
Soviet Union from deploying both a large ICBM force and a thick ABM system, the possibility did exist that the Soviet Union might elect to spend the resources required to deploy a major damage limiting force. Similarly, the possibility also existed that the Soviet Union might make unexpected progress in developing improved technical capabilities in both areas.

The employment of these conservative assumptions did not lead to decisions to enlarge the number of launchers in the offensive force. But it did play an important, although by no means exclusive, role in driving McNamara's decisions to modernize the offensive forces, to deploy Poseidon, Minuteman III, and MIRV, to enlarge the planned proportion of Minuteman III in the force posture, and to develop improved penetration aids. In addition, it led to decisions to expend small amounts of money for such R&D hedges as superhard silos, a new land-based ICBM, a mobile ICBM, the ULMS submarine, and improved bomber penetration aids. 64

1E. Multiple Options and the Countermilitary Target Destruction Capability

Although the assured destruction capability rose to a position of primary importance in response to the growing Soviet threat, the historical record shows that McNamara and the OSD staffs remained willing to acquire cost-effective technologies and new weapon systems which provided improved capabilities to destroy Soviet military targets, including hardened missile silos, and other non-urban targets of value.

Evidently the acquisition of additional countermilitary target destruction capabilities was subjected to several constraints during this period. First, McNamara after 1964 was not willing to increase the number of launchers in the offensive missile and strategic bomber force postures. A predominant belief existed in OSD that a lid should be maintained on the overall size
of the offensive force posture and that the acquisition of additional missiles and bombers would not provide benefits commensurate with their large costs. Second, fiscal constraints placed sharp limitations on costly investments in new technologies and weapon systems. For example, when the sharp Vietnam War budget crunch occurred in 1967-68, DDR&E cancelled the Mark 17 warhead and cut back funds for stellar inertial guidance. Third, the OSD was willing, when necessary, to make trade-offs between assured penetration and target destruction capabilities, and sometimes sacrificed the former on behalf of the latter. For example, the decision to install the Mark 3 warhead atop Poseidon rather than Mark 12 or Mark 17 (when coupled with the failure to improve Poseidon's accuracy) represents a trade-off. Fourth, organizational constraints, such as Special Project's reluctance to allow the SLEM force to assume missions other than assured destruction, inhibited OSD's efforts. Finally, existing technological constraints placed limitations on what could be accomplished, especially in improving the accuracy of ballistic missiles.

Despite these constraints, two factors created major incentives for the acquisition of improved capabilities. First, virtually all of United States strategic objectives required a significant capability to attack Soviet nonurban and military targets, including hardened missile silos. The assured destruction objective required that defense-suppression attacks be carried out by the offensive missiles against Soviet bomber defense forces and vulnerable AEM facilities, such as radars, in order to pave the way for missile and bomber attacks on Soviet cities at reduced costs. The war-fighting objectives of exerting political pressure, gaining bargaining leverage, and controlling escalation required the capability to launch precision
attacks against a broad spectrum of nonurban targets while limiting collateral
damage. The objective of providing defense protection for West Europe
required the capability to attack USSR-based theater nuclear forces as well
as Warsaw Pact ground and tactical air forces, military installations,
support facilities, and the logistics and communications networks. Finally, the objective of limiting damage to the United States required
the capability to destroy residual missile silos, long range bomber bases,
and nuclear storage facilities. Although the absence of a thick ABM system
and other strategic defense forces placed sharp limits on the extent to which
damage could be limited, the possibility did exist that the offensive missile
forces could reduce damage to some degree and accordingly, the OSD remained
willing to incorporate whatever cost-effective modernizations which promised
to strengthen their capability in this regard.

Second, the programmed offensive force posture did not provide an
efficient or fully satisfactory capability to destroy Soviet military targets,
especially during McNamara's earlier years, and a good deal of room always
existed for improvement. Although the programmed force posture of 1963
provided a large number of launchers, Air Force officials and numerous other
force planners still believed that an insufficient number of warheads
existed for covering the entire Soviet target system and carrying out the
SIOP war plans. Once the decision had been made to install MIRVed warheads
atop Minuteman and Poseidon, this problem became less pressing. Since the
force posture now provided a much larger number of warheads for attacking
time-urgent Soviet military targets, including the capability to strike each
missile silo with at least one fairly effective warhead, an immediate need
did not exist to enlarge further the size of the missile force posture.
Nonetheless, the Minuteman missiles did not possess particularly impressive kill probabilities against hardened missile silos, and considerable room existed for improving targeting efficiency by incorporating better guidance, re-entry, and warhead technologies. Likewise, the SLBM force did not provide adequate targeting flexibility to support the full spectrum of wartime objectives and targeting requirements, even after the Poseidon had been introduced. Throughout this period, OSD officials remained worried that the SLBM force was so exclusively designed to attack Soviet cities that it could not provide adequate targeting options, and as a result they looked with favor upon any technologies and weapon systems, especially Poseidon, which promised to strengthen its capability to destroy military targets and other nonurban targets.

IF. The Distinction Between Strategic Concepts and Operative Military Strategy

In attempting to ascertain the motivations of McNamara and the OSD staffs a careful distinction must be made between the analytical framework they employed to size the strategic offensive forces and the strategic perspectives they employed to determine their combat capabilities and target assignments. Similarly a distinction must be made between the misleading impressions created by their public rhetoric, which was selected for the express purpose of stressing simple fundamentals in public, and the complex nature of their real views about nuclear war, target doctrine, and war plans. The failure to make these distinctions can lead to confusion about the strategy and objectives which drove the force planning process.

The managerial practice which McNamara and Systems Analysis employed from 1964 onwards was first to size the strategic offensive forces according
to the assured destruction concept and then to determine their combat capabilities and associated war plans according to the requirements of the counterforce strategy and multiple American wartime strategic objectives. The major distinction which thus existed between strategic concepts for force sizing and the theory of requirements which was employed to determine combat capabilities was well known and candidly acknowledged within Systems Analysis and by McNamara himself. The fact that this practice was being employed, however, was not dwelt upon in public. Whenever McNamara and Systems Analysis sought Congressional approval for technologies which provided improved capabilities for destroying military targets, they justified their recommendation to Congress with the simple argument that all new cost-effective technologies automatically should be procured. This was an argument which the Congress generally was willing to accept. At the same time, however, no attempt was made to conceal this distinction from inquiring Congressmen. For example, Alain Enthoven, in 1968 Congressional testimony, explicitly said that the surplus of offensive forces which was generated by the Assured Destruction concept could be employed in a nuclear war to attack Soviet military targets.

Evidently McNamara himself was the source of this managerial practice; and he explicitly instructed Systems Analysis officials that it was to be employed at the same time that he informed them of his decision to set aside the counterforce strategy for force-sizing purposes. This practice, of course, facilitated his efforts to hold a lid on the size of the force posture and to cast the public dialogue in terms more conducive to the pursuit of arms control. Since the offensive force posture already was adequately large to provide enough launchers to meet essential military requirements,
little concern existed within OSD that the use of the Assured Destruction concept might lead to a significant underestimation of force posture requirements. Moreover, the conservative assumptions that were employed to determine assured destruction requirements generated a large surplus of warheads which, under normal circumstances, could be employed to attack military targets. And since further efforts to improve the countermilitary targeting combat capabilities of the offensive forces were being concentrated in the incorporation of qualitative improvements and force modernizations little need was perceived to exist to employ concepts for force-sizing purposes which created requirements for these capabilities.

Consequently, the fact that McNamara increasingly placed emphasis on the Assured Destruction concept and downgraded Damage Limitation as a viable objective does not mean that he decided to rely exclusively on a strategy of minimal deterrence; nor does it mean that he abandoned as hopeless any concern for controlling escalation or believed that any attempt to provide flexibility and options would have overriding negative destabilizing consequences or significantly would increase the probability of war. Nor does it mean that he adopted the targeting doctrine associated with the Assured Destruction concept. Throughout this period the offensive missiles and the strategic bombers continued to be aimed at a broad spectrum of Soviet military targets, and the SIOP war plans continued to provide options for attacking Soviet military targets while simultaneously withholding attacks on Soviet cities. The fact that targeting doctrine and war plans never were changed to conform exclusively to the dictates of the Assured Destruction concept was revealed with considerable public fanfare in early 1974 by Secretary of Defense James Schlesinger as part of his effort to
But long before Schlesinger's announcement, the Department of Defense publicly acknowledged this fact. In mid-January 1968, Assistant Secretary of Defense for Public Affairs Phillip C. Goulding, in disparaging a recent Washington Post article which said that American missiles no longer were being aimed at Soviet military bases, publicly announced that United States strategy options for general nuclear war had not been changed since 1962, that the missiles continued to be aimed at Soviet military targets, that an attempt would be made to control escalation should war occur, and therefore that flexible targeting options continued to be an essential part of United States military strategy for nuclear war. Moreover, McNamara himself publicly made this admission in Congressional testimony. In responding to a question in 1968 about United States targeting doctrine and war plans, McNamara responded:

"No, we have had at least since 1962 (deleted) a series of options that the Commander in Chief would select from in the event of need, and they have always included city target systems and non-city target systems."

Although McNamara personally did not place a great deal of faith in the scenarios of tightly-controlled exchanges which were concocted within the Pentagon, he evidently did not abandon personal commitment to the counterforce strategy. As the Soviet Union expanded and diversified its ICBM force posture prospects diminished for gaining significant military advantages during a counterforce war; but McNamara still remained in agreement with the counterforce strategy's emphasis on providing flexibility, preserving intra-war deterrence and the American bargaining position, and controlling escalation.

This at least is the conclusion which grows out of interviews with his former OSD aides. Indeed, at the time he informed Systems Analysis officials of his decision to set aside the counterforce strategy, he apparently explicitly
informed them of his continuing commitment to it. As time went by and other issues became especially pressing, McNamara became preoccupied elsewhere and lost interest in becoming involved in the details of designing the combat capabilities of the offensive missile forces. But he continued to support the analytical efforts of his OSD staffs in this area and to respond favorably to recommendations they offered for incorporating cost-effective qualitative improvements. Within OSD, planning activity in this area was concentrated within the DDR&E, which had the responsibility and the expertise to become involved deeply in the technical specifics of ballistic missile technologies, propulsion, guidance, and warhead systems. The Systems Analysis staff tended to concentrate more on aggregate force sizing issues and tended to pay more detailed attention to the specifics of ABM penetration technology. But it did maintain an interest and awareness of technologies that were being developed in the area of countermilitary target destruction capabilities, consistently remained willing to support acquisition of cost-effective items, and occasionally took actions to initiate changes or to lend direct support to systems when necessary. For example, the Systems Analysis staff purposely supported stellar inertial guidance and other systems that would have given the Poseidon missiles a more impressive counterforce target capability.

1G. Counterforce Capabilities and Strategic Stability

A number of commentators have argued that the acquisition of a significant capability to destroy Soviet hardened missile silos is inimical to arms race stability because it poses a provocative threat to the Soviet deterrent and invites counterreaction, and also is detrimental to crisis stability because it provides an incentive to initiate nuclear war. For those who accept
this argument as being valid, at face value a contradiction would appear to exist between McNamara's willingness to acquire improved counterforce capabilities and his concern for arms control and stability.

Unfortunately, not enough information is available to know confidently how McNamara perceived this issue. Since his departure from office, he has not commented publicly in enough detail to provide firm insights into his thinking; and he never addressed this subject in his testimony to Congress. The fact that he publicly stated his belief that the United States strategic buildup in the early 1960's probably played an important role in triggering the Soviet ICBM buildup suggests clearly that he believed that strategic forces which posed a serious threat to the Soviet deterrent could have significant destabilizing effects on the competition. However, the fact that he personally favored and consistently approved the acquisition of numerous qualitative improvements and new weapon systems which provided enhanced hard target kill capabilities suggests strongly that he was not concerned that these capabilities would have overwhelmingly negative consequences for arms control and crisis stability.

Within Systems Analysis there appears to have existed a dominant consensus that the acquisition of the limited hard target kill capabilities which were being contemplated during this period was not inconsistent with the concern for stability. And from what can be gathered on the basis of interviews with former OSD officials, there does not appear to have been significant disagreements in views between Systems Analysis and McNamara on this subject. Between 1963-65, some concern did arise among a few Systems Analysis officials that MIRV and other technologies which might provide improved counterforce capabilities might have destabilizing effects
and could accelerate the arms race. But this viewpoint did not gain high level acceptance. Later these officials departed office and were replaced by individuals who did not share their sympathies. A consensus, of course, did exist throughout this period that the deployment of a major ABM system coupled with the other ingredients of a full damage limiting force could pose a significant threat to the Soviet deterrent and would have inimical effects on stability. But in the absence of a large ABM system, to which they remained adamantly opposed, most Systems Analysis officials from 1965 onward appear to have believed that the acquisition of additional counter-force capabilities would not threaten the Soviet deterrent and would not have particularly significant destabilizing effects. Nor do the Systems Analysis officials appear to have believed that compelling reasons stemming from the arms control objective existed for the United States to exercise restraint in this regard.

Several reasons account for this attitude. First, the improved hard target kill capabilities that were being contemplated by the technical community did not promise to provide the United States anything closely approximating the capability to destroy virtually the entire Soviet land-based ICBM force from 1965 onward. Although the improvements that were being contemplated did offer significantly-improved capabilities, the offensive missile forces still were not programmed to have the highly-efficient silo-destroying capability against a large ICBM force that might have alarmed the Soviet Union. In 1962-63 the United States probably did possess virtually a disarming first strike capability, largely because the Soviet Union thus far had deployed only a small ICBM force which was not dispersed or deployed in hardened silos. But the vulnerability of the Soviet forces began to
decline sharply in 1964 when the Soviet Union began to install hardened missile silos, to disperse the forces, and to step up ICBM production and deployment. By 1964 the technical community was projecting that Minuteman accuracy would improve to a 1,000 foot C.E.P. over the next five years, and that a Minuteman missile, if fitted with a single Mark 17 warhead, would acquire a modestly effective kill capability against missile silos. 108 The Poseidon missile also was envisioned as having a significant counterforce capability. 109 But even so, the 1964 damage limiting study, which examined the performance of offensive missiles in the counterforce role, concluded that counterforce strikes would destroy only a relatively small portion of the 600 land based ICBM missiles the Soviet Union was projected to possess in 1969. 110

During the next four years, progress was made in the development of improved inertial guidance technology and the refinement of geodetic data which led to expected improvement's in Minuteman's accuracy and therefore in its expected single shot probability of kill against a hardened missile silo. In addition, the decisions to install the Mark 12 MIRV warhead atop Minuteman III and to increase the proportion of Minuteman III's in the force posture further contributed to this trend. Although the Mark 12 MIRV originally was envisioned primarily as an ABM penetrator, analysis of its performance characteristics showed that it could compete about equally with the Mark 11 and Mark 17 in the mission of attacking hardened missile silos and that in operations against the large Soviet target system a 1000 missile Minuteman force equipped with Mark 12 MIRVs could destroy more silos than a force equipped entirely with single warhead Mark 11s and Mark 17s. 111 Despite these improvements, however, the United States was not making headway toward acquiring a full counterforce capability. Since the Soviet
Union had embarked upon its massive ICBM buildup, the United States if anything was suffering a net loss in its net capability to destroy all Soviet silos. What mattered in this calculus was not the absolute hard target kill capabilities of the Minuteman force, but rather the ratio of its capabilities to the size of the Soviet missile force. During this period, the ratio was changing steadily in favor of the Soviet Union. Only by substantially improving missile accuracy and warhead technology or by bolstering total missile throw weight through the deployment of more and/or larger missiles could the United States have hoped to shift the ratio in its favor enough to acquire a disarming capability. The latter course was not being contemplated seriously by the OSD, and technological and fiscal constraints prevented the acquisition of the former during the foreseeable future. An additional factor was that the Poseidon missile's counterforce capability turned out to be considerably less impressive than originally was anticipated as a result of the installation of the Mark 3 MIRV and OSD's failure to provide complete funding for the development of required guidance, navigational, and fire control systems and the construction of down-range test facilities.

Moreover, the Systems Analysis officials suspected strongly that a great deal of difference existed between the counterforce exchange scenarios that were being drawn up in Pentagon studies and the real-world capability of the offensive missile forces to launch a highly-coordinated and operationally-efficient surprise counterforce attack. They were highly skeptical about the accuracy and kill probability projections that were being offered by the technical community and the DDR&E staff, and they figured that the Minuteman missiles individually might not be able to achieve
even the modest standards of efficiency that appeared in technical performance specifications or were attained in actual missile test firings. Indeed, some belief existed within Systems Analysis that the DDR&E staff and the technical community regularly inflated their technical forecasts in order to bolster the case for acquiring new weapons, and consequently some Systems Analysis officials tended to have a skeptical attitude toward these forecasts. There also remained a great deal of uncertainty regarding the overall performance standards of the entire missile force in the intense, unpredictable, and demanding environment of a strategic nuclear war. No backlog of experience existed and the missile forces never had been employed under actual combat conditions. Systems Analysis force planners recognized that a long list of completely unforeseen problems could occur and that, in light of the long historical record of cases in which technologically advanced and thoroughly-tested weapon systems had failed to function properly when first employed on a large scale, the performance standards of the Minuteman force easily could fall far below Pentagon estimates.

Quite apart from specific calculations regarding performance characteristics of the offensive missiles, there also was the overriding consideration that the United States could not possibly hope to destroy simultaneously in one stroke the entire triad of ICBM missiles, SLBM submarines, and heavy strategic bombers that the Soviet Union was expected to deploy during the 1970's. Hence, little ground existed for concern that the counterforce capabilities that were planned for the missile force would pose a serious threat to the Soviet Union's counter-city capability. Firm indications began to appear in the mid-1960's that the Soviets were making rapid progress in developing modern, long range SLBM submarines that
could operate far beyond off-shore Soviet waters and could launch missile strikes on American soil from the North Atlantic and Pacific Oceans. Initial deployment appeared imminent, and all indications suggested that the Soviets probably would deploy a very substantial SLBM force. Given the relatively modest nature of United States ASW capabilities and the marked technological barriers, little hope existed that the United States could develop the capability simultaneously to detect, track, and destroy a large number of Soviet SLBM submarines scattered across a large ocean. Thus even if the United States did successfully launch a disarming first strike that destroyed the Soviet ICBM and bomber force, a sufficiently large SLBM force would remain available for the Soviet leaders to launch a devastating retaliatory strike on American cities.

Apparently Systems Analysis officials also did not believe that United States self-restraint in this regard would be reciprocated by Soviet self-restraint. In contrast to McNamara, the belief that the Soviet Union was a passive participant in the arms race does not appear to have been widely accepted within Systems Analysis. Instead, most Systems Analysis officials apparently believed that the Soviet strategic weapons acquisition process operated largely on the basis of its own internal dynamics and that the United States played only a very secondary and indirect role in triggering Soviet decisions to acquire new weapon systems. Although uncertainty existed within Systems Analysis about precise Soviet objectives, once the Soviets had embarked upon their major buildup a general consensus appears to have emerged that the buildup probably was being driven by objectives more ambitious than minimal deterrence and a simple desire to counteract United States innovations. In addition, they also figured that internal and
bureaucratic factors probably played a significant role in Soviet decision-making. At one juncture, one high Systems Analysis official examined Soviet decision making and was able to gain some evidence that a substantial number of major Soviet military innovations during recent years possibly could be traced directly to the ladder-climbing maneuverings of a small clique of careerist-minded Soviet bureaucrats. Consequently, he and other Systems Analysis officials figured that the Soviet buildup largely was not a product of American actions, and that it would not be particularly sensitive to United States self-restraint. They expected the Soviet buildup to continue upward to some indeterminant level, probably strategic parity or even beyond, regardless of what the United States elected to do.

Nor, for that matter, did the more pragmatic Systems Analysis officials react negatively to the idea that these qualitative improvements might have an impact on Soviet decision making; some sentiment existed that the impact, however marginal, might provide the United States useful leverage over Soviet force plans and therefore could have some positive effects. Although most Systems Analysis officials evidently were not attracted to the idea of military superiority and comparative military advantages as were the military services and even the DDR&E staff, apparently some belief did exist that the United States should remain at least equal in major areas and preferably should maintain, or at least not sacrifice readily, leads in any area of flexibility and targeting capabilities that might be politically or militarily useful. In addition, a belief existed that a significant hard target kill capability would force the Soviet Union into taking the expensive step of dispersing and hardening its strategic missile silos. This in turn might be expected to reduce, for the same budget outlay, the
amount of money the USSR could invest in missile payloads and other hard
target kill capabilities and thus foreclose a cheap path to the development
of both an assured destruction capability and a significant counterforce
capability. As a result, an improved United States hard target kill capability
might, though a process of virtual attrition, have a blunting effect on the
time and extent to which the Soviet Union could pose a significant threat to
the Minuteman force. 130

2. Strategic Objectives and Decisions for the Offensive Missile Forces

Although not all of McNamara's decisions for expansion were products
primarily of his determination to provide an assured destruction capability
and his willingness to acquire additional countermilitary target destruction
capabilities, certainly a direct linkage does exist between his strategic
perspectives and the decisions he made to incorporate a steady stream of
costly qualitative improvements into the offensive missile forces. Despite
the fact that these decisions also played a central role in his bureaucratic
strategy for dealing with the military services, they simultaneously were
perceived by McNamara and the OSD staffs as making cost-effective contributions
to the force posture.

The primary strategic reason behind the decision to develop and procure
the Minuteman II missile, which was installed in Wing 6 and was scheduled to
be retrofitted into Wings 1-5, was that it promised to provide significantly
improved performance characteristics and combat capabilities over the
Minuteman I missile. 131 Although the Minuteman I was a good missile in the
sense that it achieved its technical performance specifications, it suffered
from significant deficiencies in range, payload, and target flexibility, which
placed limitations on its ability to cover the entire Soviet target system and to carry out United States war plans.\(^{132}\) The Minuteman II missile (LGM-30F), which first was funded in the fiscal year 1964 budget, incorporated new lightweight structural components which offered longer range or greater payload, and thus provided an improved capability for reaching and destroying a broader range of targets.\(^{133}\) It had the capability to be launched by signal from an airborne command post, incorporated important missile away indicators, and carried a hardened power supply that permitted greater post-attack sustainability.\(^{134}\) As a result, it offered greater survivability and improved responsiveness to command and control. It also carried a new Autonetics guidance system, including an on-board lightweight digital computer which provided a two-fold increase in performance and storage capacity over its Minuteman I predecessor.\(^{135}\) This computer provided the Minuteman II an increased capability not only to perform routine self-monitoring and self-maintenance tasks but also to store more targets and to perform such bread-and-butter duties as solving complex guidance equations, generating steering and thrust termination commands, and providing arming signals to the warhead.\(^{136}\)

As far as the Office of Secretary of Defense was concerned, the primary purpose of the Minuteman III missile, especially the wider and more powerful third stage that was authorized in early 1966, was the installation of the Post Boost Control System, or MIRV bus, and the Mark 12 warhead.\(^{137}\) But the Minuteman III also incorporated several other technological components which provided improved performance characteristics over the Minuteman II. Despite the OSD's initial enthusiasm for Minuteman II, several major problems began to appear once production had been initiated and the missile had begun to enter
active service. As these problems mounted up, several high officials in
the Office of Secretary of Defense and the Air Force came to the conclusion
that the Pentagon might have made a mistake by rushing rapidly into Minuteman
II production, and that the decision had been based on several superficial
studies and poor technological forecasts that hastily were lumped together.139
A major problem was that the bulk of the digital computer's capacity was
taken up with monitoring and maintenance tasks and therefore insufficient
storage space was left over for dealing with complex targeting problems and
storing multiple target assignments.140 In addition, operational experience
revealed that Minuteman II also was plagued with the very dangerous problem
of being operationally unreliable; it tended to arm itself independently of
authorized commands.141 Third, the Minuteman II was composed of relatively
weak structural components and had an inadequately hardened warhead, and
therefore was vulnerable to destruction by proximate nuclear detonations
either as it left its own silo or after it had re-entered the atmosphere.142

Despite these problems, little thought was given within the Office of
Secretary of Defense to cancelling the Minuteman II entirely and waiting for
a better design.143 OSD officials primarily conceived their task to be one
of living with the Minuteman II and progressively eliminating deficiencies as
time went by.144 Nevertheless dissatisfaction remained strong and consequently
the Minuteman III, which was a technically sound weapon system, appeared to
be quite attractive.145 It incorporated increased target storage capacity
and flexibility, as well as improved guidance technology for greater accuracy.146
It also incorporated hardened structural components, a hardened warhead, and
a flatter re-entry trajectory which bolstered its capability to resist nuclear
blast effects and to penetrate Soviet ABM defenses. Hardened silo components
also were acquired along with Minuteman III.
The Office of Secretary of Defense was attracted to the Poseidon missile, and virtually foisted it upon reluctant Navy admirals who were trying to limit SPO's budget, because it offered significant performance improvements over its predecessor, the A-3, for penetrating Soviet defenses and destroying Soviet targets, including military targets and hardened missile silos. The Poseidon was longer than the A-3 (34.3' vs. 32.32'), wider (74" vs. 54"), weighed more, and carried a more powerful engine with a greater propulsion. Its greater range than the A-3 (3,000 nm. vs. 2500nm.) provided either a greater standoff capability, and thus reduced vulnerability to Soviet ASW defenses, or the capability at equivalent ranges for covering a larger target area and reaching more targets. Its greater throw weight also enabled it to carry a much larger payload. Consequently, Poseidon had the capability to be equipped with a larger number of decoys, penetration aids, and multiple warheads for penetrating Soviet ABM systems through either deception or saturation techniques. Alternatively, its larger payload offered the advantage of carrying more warheads, and thus the capability to destroy more targets, or, by carrying sufficiently large single warheads or optimally designed MIRVed warheads, to achieve significantly high kill capabilities against hardened silos.

The MIRV warhead and its associated Post Boost Control System, or MIRV bus, was perceived within OSD as offering highly desirable strategic advantages and consequently continued to enjoy strong support from top Pentagon officials as it progressively was funded for the successive stages of development, flight testing, and later procurement. McNamara and the OSD staffs particularly were attracted to MIRV because it substantially bolstered the capability of the offensive missile forces to perform the
assured destruction mission and provided adequate compensation for the changes that were anticipated in the Soviet threat. MIRV offered a greatly enhanced capability to penetrate Soviet ABM defenses by the brute force saturation technique. It also strengthened the capability of the land based ICBM force to survive a Soviet first strike attack and to retaliate with ample numbers of warheads. In addition, MIRV provided a good vehicle for convincing the Soviet Union that any attempt to deploy a large ABM system would be fruitless and counterproductive; in this sense it fitted directly into McNamara's arms control strategy. Since MIRV provided large numbers of warheads, it also offered significant countermilitary target destruction advantages. It offered the capability to cover larger numbers of targets and to improve reliability through cross-targeting tactics. Although the ability of MIRV warheads to destroy hardened missile silos varied a great deal as a function of the yield and accuracy characteristics of the different types of warheads which were fitted atop Minuteman and Poseidon, analysis suggested that MIRVed warheads could provide at least equal and in some cases considerably better counterforce targeting capabilities as compared to larger single warheads.

Since differences exist in the implications which the MIRVed warheads on the Minuteman and Poseidon had for these two combat capabilities, they should briefly be mentioned. The Mark 12 MIRVed warhead, which carried three approximately 200 kiloton warheads and was installed on the Minuteman III missile, optimized both strategic objectives simultaneously; consequently, the decisions to install the Mark 12 MIRV and then to increase the proportion of Minuteman III in the force from 350 to 450 and finally to 550 resulted in improved assured destruction and countermilitary target destruction
capabilities. It provided ample warheads for penetrating Soviet ABM defenses and for covering more military targets; as mentioned above, it also traded off at least equally with the Mark 11 and Mark 17 warheads in the hard target kill role and actually performed better in a target rich environment.\(^{152}\)

By contrast, the Mark 3 MIRV Poseidon warhead, which carried about 10, fifty kiloton warheads, provided a vastly improved ABM penetrating capability, but it had a less impressive hard target kill capability as compared to the Mark 12 and Mark 17.\(^{153}\) This trade-off, however, was less a product of OSD's strategic perspectives than of pressing fiscal constraints and SPO's reluctance to become involved too closely in the countermilitary targeting mission.\(^{154}\) The OSD staffs originally envisioned the Poseidon missile as playing a significant role in the counterforce mission, and accordingly exerted substantial pressure on SPO to install the Mark 12, and later the Mark 17, and to develop stellar inertial guidance and other components that would provide improved accuracy.\(^{155}\) But SPO's reluctance partially was responsible for the cancellation of the Mark 12 MIRV for Poseidon and the decision to install the Mark 3 instead; and the budget crunch of 1967-68 led to sharp cutbacks in funding for stellar inertial guidance and for new navigational and fire control systems, as well as the failure to construct new test range facilities that were necessary for improving Poseidon's accuracy.\(^ {156}\)

2 A. The Strat-X Study: ULMS and ABM Hard Point Defense

Despite the fact that the MIRV system substantially bolstered the capability of the offensive missile forces to survive a surprise Soviet attack and to penetrate Soviet ABM defenses, the Pentagon's growing concern about the ongoing Soviet buildup led directly to the Strat-X study of 1966-67.\(^ {157}\)
Although Strat-X was commissioned by DDR&E partially out of an explicit political motivation, to block the Air Force's plans for a new ICBM missile and hard rock silos, it also was a product of a strategic motivation to examine the variety of new weapon system proposals that were being generated by the military services and to determine which weapon systems provided the most cost-effective alternatives in highly demanding future threat environments.

The Strat-X study considered around 100 separate weapon systems, many of which were exotic ideas concocted by the civilian technical community and the aerospace corporations. But the study's director, Fred Payne, insisted on examining seriously and in detail only those weapon systems which enjoyed the firm support of their parent services. As a result, the list of serious candidates narrowed considerably, and the study examined intensively only some ten different weapon systems. Included in this list were several different basing schemes for the land based missile forces, such as deceptive sheltering systems, hard rock silos, mountain tunnels, and a land mobile missile. Each of these basing alternatives also included the production of a new ICBM missile which was to provide significantly greater throw weight and to carry more warheads than the Minuteman III missile. The study also examined the option of procuring an ABM defense overlay to protect the Minuteman missiles, as well as a Sea Launch Missile System (a surface naval ship that would carry ICBM missiles) and a new SLBM submarine, the Undersea Long Range Missile System (ULMS).

The study specifically focused on the capability of each of these highly expensive weapon systems to perform the assured destruction mission and examined their comparative cost-effectiveness in this role. The study, which encompassed some twenty volumes in its final version, was completed
in mid-1967 and was briefed to McNamara, the JCS, the service staffs, and the industrial contractors.

With regard to the land based missile alternatives, the Strat-X study produced results which showed that the most cost-effective alternatives were the least politically acceptable and that the most politically palatable alternatives were the least desirable by cost-effective standards. On a narrow cost-effective basis, the mobile ICBM was the preferred option, the deceptive basing schemes ranked second, the hard rock silo ranked third, and the ABM defense overlay appeared the least attractive. Despite its large maintenance and operations costs the land mobile ICBM system was the most cost-effective because it was not especially vulnerable to Soviet ICBM attack provided it was allowed to travel freely and widely over a large landmass area. Its political liability was obvious, however. In order to have an adequate landmass, it would have had to roam across the six state region of Nevada, Wyoming, New Mexico, Colorado, Oregon, and Arizona, thus bringing extremely powerful nuclear warheads virtually into the back yards of numerous communities throughout this region and possibly exposing these communities to direct Soviet missile attacks in a nuclear war. As a result, the officials who conducted Strat-X concluded that the land mobile ICBM system probably would touch off a storm of political opposition and protest.

The deceptive sheltering systems also were politically offensive because they would have necessitated the purchase of large tracts of land in the western United States. This would have required a fairly substantial dislocation of populated areas at government expense and might well have provoked the irate opposition of politically active ecology groups who were interested in preserving the western landscape and would not have taken
kindly to the proliferation of multiple missile silos. Similarly the hard rock silo system, which did not compete well on a cost-effectiveness basis, also had political liabilities. Analysis showed that the ICBM missiles would have to be embedded into the Rocky mountains, the only place where adequate rock with sufficient size and density was available. Consequently, it too would have necessitated the purchase of large tracts of land, some population dislocations, and probably would have provoked substantial political opposition. Since all of these alternatives were ruled out either exclusively on political grounds or a combination of cost-effective and political grounds, the only viable option that remained was the ABM defense overlay.

A roughly similar situation prevailed with regard to the different naval systems that were under consideration. The Sea Launch Missile System (SLMS) appeared to be more attractive from a strategic and cost-effective perspective than the ULMS submarine system. It was less costly, it offered a good deal of flexibility, and by travelling open ocean waters and disguising itself as a commercial vessel, it had a good chance of surviving at least during the initial stages of a nuclear war. Unfortunately, the SLMS ship had severe negative political implications, at least in the eyes of senior Strat-X officials. Since it would have travelled waters near foreign nations and perhaps even docked in foreign ports, the possibility existed that its presence would have touched off anti-American political activity in such nations as Japan and caused a deterioration in United States diplomatic relations with these nations. In addition, since the SLMS would have disguised themselves as commercial vessels, the argument was made that real commercial vessels might be mistaken by the Soviet Union to be United
States nuclear weapon carriers and thus would become candidates for quick
destruction in a war. Such a state of affairs, at least according to
this argument, could be counted upon to produce considerable resentment and
opposition from the domestic and foreign commercial ship companies that
could fall victim to such mistaken identity.

The demise of the SLMS left the ULMS submarine system as the Navy's
viable candidate. It was politically acceptable, and by virtue of its longer
range, greater payload per missile, flexibility, and high survivability, it appeared to provide benefits commensurate with its costs. Consequently, it received a favorable review in Strat-X. The study, however, envisioned a smaller, more modest, and less expensive system than what ultimately became the Trident submarine several years later. Despite its original intentions and conceptions, however, the Strat-X study still had the major effect of starting the ULMS development process in motion; later the ULMS concept was changed, and eventually Trident emerged.

2B. Command and Control Decisions

Finally, the decisions McNamara made to improve the survivability of the command and control system and to institute significant changes in the SIOP war plans were also a direct product of his strategic perspectives and priorities. One of McNamara's most important accomplishments was his success in improving the ability of the command and control system to survive a nuclear attack and to operate effectively in a nuclear war. Although McNamara's early attempts to build an underground national command center in Washington D.C. were blocked by Air Force opposition, he did succeed in establishing multiple underground command posts in outlying areas, in establishing an airborne command post, and in integrating these facilities into a single
National Military Command System (NMCS) which was centered in the nation's capitol. 174

In addition, McNamara and the OSD staffs introduced several new procedures, equipment, and command arrangements to insure that all nuclear weapons could be released only on the positive command of national authorities, and thus provided greater assurances that unauthorized or accidental launchings would not take place. 175 An example of their efforts to build in greater controls and delays was their advocacy of the launch enable control system, which was based on the concept that each launch control center would have to receive a coded message directly from Strategic Air Command headquarters before mechanically it could be capable of launching any of its missiles. 176 Evidently this concept was opposed strongly by SAC and the Systems Command because they worried that such rigid control mechanisms in a wartime environment might impede the prompt launching of the Minuteman force, even after Presidential orders had been given, and thus expose it to destruction by Soviet attacks. 177 Apparently a good deal of struggle took place between the Office of Secretary of Defense and the Air Force on this issue, in which the Air Force civilian secretariat acted as an intermediary, and after several compromises had been made the OSD-sponsored system was installed in a somewhat watered-down version. 178

McNamara also succeeded in building greater options into the SIOP war plans. Shortly after assuming office he and OSD aides discovered that the SIOP, which was administered by the Joint Strategic Target Planning Staff (JSTPS) under SAC and ultimately JCS direction, included only one option: a massive nuclear blitzkrieg on the Soviet Union and Communist China as well. 179 This situation clearly was intolerable in light of the growing concern for
options. Accordingly, during the summer of 1961, OSD and White House officials began to review the SIOP, and shortly thereafter recommended significant revisions. That fall, McNamara apparently issued new SIOP guidelines, and the revised SIOP that subsequently was drawn up won JCS approval shortly thereafter and formally was adopted by the JSTPS the following June. The most basic change in the new SIOP was the separation of the Soviet Union and Communist China as targets so that an initial attack on the Soviet Union need not automatically be accompanied by an attack on China. In addition, according to Desmond Ball, the new SIOP separated Soviet military forces from cities, called for the withholding of reserve forces for intra-war deterrence, and provided for the preservation of Soviet command and control facilities at least in the early stages of a nuclear war. Evidently the new SIOP provided five major targeting options and several suboptions which ranged in size and focus across a wide spectrum stretching from counterforce attacks on Soviet retaliatory forces, to attacks on other military targets, to an all-out spasm attack on Soviet cities.

Although this innovation constituted a major step forward in providing the organizational procedures necessary to implement the flexible response strategy, it did not provide the complete range of options that would have been necessary to provide a totally satisfactory range of choices. In particular, the new SIOP still did not provide options for launching very small nuclear attacks for political purposes; evidently the smallest option it provided was an attack composed of well over 1000 warheads. Apparently little progress was made during the remainder of McNamara's tenure in providing more options and further changing the SIOP. This failure stemmed not from any shift in targeting doctrine away from options, but rather
from a host of political and organizational constraints. McNamara largely was preoccupied with other problems and evidently did not want to stir up another hornet's nest of difficulty with the Joint Chiefs of Staff by tackling them on this issue.\textsuperscript{187} Although interest remained alive within the OSD and the Air Staff as well, opposition by the JSTPS and the Strategic Air Command created major impediments and prevented much progress from being made.\textsuperscript{188} Evidently SAC and JSTPS were worried that the creation of more options might erode the ability of the offensive forces to conduct the full scale massive attack which they still regarded as being highest priority in the SIOP plan.\textsuperscript{189} Paradoxically, SAC also was worried that further reforms in the SIOP might drive down the requirement for nuclear weapons and thus undercut its demands for more missiles and bombers.\textsuperscript{190} An additional factor was that the JSTPS was worried that the installation of more options would have greatly complicated the many operational and procedural tasks required to keep the SIOP up-to-date.\textsuperscript{191} Finally, SAC and JSTPS evidently regarded the SIOP to be their special preserve and purely for reasons of institutional prerogatives resented the intrusion of reform-minded civilians or even military officers from outside.\textsuperscript{192}
FOOTNOTES FOR CHAPTER IV

1. IV.1-1a,b,c,d,e.
2. IV.1-2a,b,c,d,e.
3. IV.1-3a,b,c,d,e.
4. This particularly was true with regard for qualitative improvements and modernization in the strategic offensive forces. It might also be added that high OSD officials also held this perception of McNamara's attitudes.
5. IV.1-4a,b,c.
6. IV.1-5a,b,c,d,e.
7. IV.1-6a,b,c,d,e.
8. The fact that the strategic forces also play a role in European defense was acknowledged in McNamara's posture statements. But it often is overlooked in public discussions and debates about the force posture issues and options, especially debates which focus exclusively on the US-Soviet interaction and ignore the extent to which European concerns affect that interaction.
9. NATO's strategy of flexible response, which formally was adopted in 1967, does call for a conventional forward defense capability, but it still also calls for a theater nuclear and strategic nuclear option, and leaves open the issue of which options would be selected under specific circumstances.
10. During this period, several Polaris submarines were allocated to the NATO Command for targeting purposes during wartime, and the United States took steps to establish joint procedures with the NATO allies for coordinating and integrating certain aspects of its strategic targeting plans with NATO war plans.
11. IV.1-7a,b.
12. This of course applied for other Pentagon officials as well.
13. IV.1-8a,b.
14. IV.1-9a,b.
18. The nature of the risk-avoidance and uncertainty management practices which are adopted by the Pentagon can have a very large impact on the force posture requirements which are generated by the planning process. The size of the force posture calculated to be required is highly sensitive to assumptions which are made about acceptable risks and confidence levels. The more conservative these assumptions become, the larger the force posture is required.

19. This practice certainly is reflected in his posture statements, especially those sections which deal with the requirements for deterrence.

21. IV.1-14a,b.

22. IV.1-15a,b.

23. IV.1-16a,b.

24. IV.-17a,b.


27. Ibid, p. 166-172.

28. In examining OSD analyses about the Soviet threat and the requirements for deterrence, it is essential to remember that the Pentagon force planners were concerned about the future and thus were not focused on the present situation. Throughout this period, the United States possessed very substantial strategic superiority over the Soviet Union and had a heavily insured, high confidence deterrent capability. But the future was another matter and, given the substantial uncertainties which bedevilled force planners, the possibility did exist that the strategic situation ten years hence might be a good deal more threatening.
29. For a criticism of the action-reaction thesis see Wohlstetter, "Is There a Strategic Arms Race?" *Foreign Policy*, Summer 1974, p. 3-20.

30. Indeed, the major effect of this process probably was that if effectively halted the arms race, rather than accelerated it.


34. In particular, disagreements evidently existed between the CIA and the Defense Department intelligence agencies, which included the Defense Intelligence Agency, the National Security Agency, and the military service intelligence staffs. These agencies split along predictable lines, with the CIA arguing the more sanguine viewpoint and the Defense Department agencies taking a more alarmist and pessimistic stance.

35. IV.1-17a,b.

36. IV.1-18a,b.

37. IV.1-19a,b.


42. IV.1-20a,b.

43. See Defense Department Tables on Soviet Weapon System Inventories. *Information Released by Department of Defense, June 4, 1974*.

44. At the time, the Soviet Union was estimated to be several years behind the United States in missile technology, especially in the development of guidance and warhead technology.
50. *Ibid.* Although no public information is available regarding the reasons why the intelligence community made the underestimations, some speculations can be offered. First, the Soviet buildup constituted a very major, sudden, and decisive innovation; and American intelligence estimators, who made their judgments largely on the basis of historical precedence and therefore were prone to projecting continuity and incremental change, simply were caught unexpecting. As a result, they erred in their initial judgments and even after initial evidence of the buildup became available, they did not change their original views, and therefore they continued to make such judgments in succeeding years. Only after the evidence had become sufficiently unmistakable to be a clear refutation of their original views were these views discarded and new opinions adopted. Second, the intelligence community's internal political dynamics also probably played a role. Evidently, the CIA was so dedicated to the cause of counterbalancing the more conservative views of the Defense Department agencies that it adopted and rigidly adhered to a moderate interpretation of Soviet objectives, an interpretation which generated predictions that badly underestimated Soviet force plans and missile production rates.

51. This and the following Soviet force projections and estimates were declassified and released by the Department of Defense in June, 1974. Evidently they are drawn from the Secretary of Defense's Posture Statements, and JSOP and NIPP-DIPP intelligence projections.

**SOVIET ICBM LAUNCHERS -- A POSTERIORI ESTIMATES (U)**

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</tr>
<tr>
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¹ Excluding test-site and training launchers.

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## SOVIET SLCM AND SLBM LAUNCHERS --
### A POSTERIORI ESTIMATES

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SOVIET HEAVY AND MEDIUM BOMBERS --

A POSTERIORI ESTIMATES

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U.S. PROJECTIONS APPEARING IN POSTURE STATEMENTS OF FUTURE SOVIET
SLBM AND SLCM LAUNCHERS COMPARED TO THE NUMBER REALIZED

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<th>Date Projection was Made (1st Qtr.)</th>
<th>Date Projection was For (Mid-Yr.)</th>
<th>System(s)</th>
<th>Projected Inventory</th>
<th>Estimated Actual Inv.</th>
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<td>1966</td>
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(U) a Excluding projections for 2½ years or less from the date projections were made. Such projections are primarily estimates of the rate of completion of launchers already started at the time projections were made.

(U) b In those cases where the estimated actual inventory is a range, the mid-point of this range has been used in computing the ratios of projected to estimated actual inventories.

(U) c SLBMs on nuclear powered submarines.

(U) d Currently estimated for mid-1974.
U.S. PROJECTORS APPEARING IN POSTURE STATEMENTS OF FUTURE SOVIET HEAVY AND MEDIUM BOMBERS/TANKERS

COMPAoured TO THE NUMBER REALIZED (U)

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<td>Total</td>
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<td></td>
<td>Medium</td>
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<td>Medium</td>
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<td>300-425</td>
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<td>Total</td>
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<td>1968</td>
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<td>Heavy</td>
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<td>Total</td>
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<tr>
<td>1972</td>
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<td>Heavy</td>
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<td>Medium</td>
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<td></td>
<td>Total</td>
<td>530-680</td>
<td>780-835 (^a)</td>
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52. IV.1-21a,b,c.
53. IV.1-22a,b,c.
54. This was a possibility for the future, but the Pentagon was concerned about the future as well as the present.
55. Despite the large amount of public attention which was given to the huge SS-9, the SS-11 also was a matter of significant concern to force planners who were familiar with the detailed characteristics of both missiles.
56. IV.1-23a,b.
57. IV.1-24a,b.
58. IV.1-25a,b,c.
60. See McNamara's Fiscal Year 1967 Posture Statement, Department of Defense Appropriations for 1967 (House) op. cit.
63. IV.1-26a,b,c.
64. See McNamara's Fiscal Year 1969 Posture Statement, Defense Department Appropriations for 1969, p. 150.
65. IV.1-27.
67. IV.1-29.
68. In theory, the Poseidon Mark 3 could provide better counterforce capabilities than a single warhead Mark 12. But the failure to provide the Poseidon missile with high accuracy targeting capabilities very dramatically reduced its utility in this role. See Greenwood, op. cit. p. 97-101.
This fact often is forgotten by commentators who argue that the United States should concentrate exclusively on deterrence and therefore should not maintain a capability to destroy Soviet military targets.

These nonurban targets could be military targets or other targets of value, such as power dams and communication facilities.

Thus, in theory, the strategic nuclear forces could be employed to strike military targets in the rear areas of East European nations.

This was true for both Systems Analysis and DDR&E.

See Enthoven's testimony, United States Senate Preparedness Investigating Subcommittee of the Committee on Armed Services. Status of U.S. Strategic Power, ninetieth Congress, second session, p. 135-140.


89. See McNamara's testimony, Authorization for Military Procurement, Research and Development, Fiscal Year 1969 and Reserve Strength, Hearings Before the Committee on Armed Services, United States Senate, ninetyeth Congress, second session, on 5:3293 (2), p. 153.

90. IV.1-40a,b,c.

91. IV.1-41a,b,c.

92. IV.1-42.

93. See Greenwood, op. cit. p. 113-117, who offers a similar interpretation.

94. IV.1-43.

95. IV.1-44.

96. IV.1-45a,b,c.

97. IV.1-46.


99. Indeed, he said in Congressional testimony that Soviet Union probably misunderstood United States intentions and feared a United States first strike attack.

100. No former OSD official who was interviewed claimed that McNamara himself ever raised an objection to cost effective proposals to improve the counterforce targeting capabilities of the programmed offensive missiles.

101. IV.1-47a,b,c,d.

102. IV.1-48a,b,c,d.

103. IV.1-49a,b.

104. IV.1-50a,b.

105. IV.1-51.

106. IV.1-52a,b.

107. IV.1-53a,b,c.
108. IV.1-54.


110. IV.1-55.


112. Given the very rapid growth of the Soviet ICBM force, this would have required a very substantial expansion of United States programmed missile force plans.

113. IV.1-56.


115. IV.1-57.

116. IV.1-58.

117. IV.1-59.

118. IV.1-60.

119. IV.1-61.

120. Nor was there any significant hope of reducing the capability of the surviving elements of this force to destroy in a retaliatory attack large numbers of United States urban areas. This was the case even with a thick ABM system, and certainly was true for a force posture which locked an ABM.

121. The Soviet "Y" class, long range ICBM submarine was first introduced in 1968; initial construction rate was seven to eight submarines per year.

122. IV.1-62a,b,c.

123. IV.1-63a,b,c.

124. IV.1-64a,b.

125. IV.1-65.

126. IV.1-66.
See McNamara's 1965 Posture Statement and his Congressional testimony that year. Department of Defense Appropriations for 1965 (House and Senate) op. cit.

See "Fires Planned for Minuteman Deficiencies," Aviation Week, Feb. 3, 1964. Evidently the initial Minuteman I model, LGM-30A, suffered from significant range limitations. The range of later models was increased by incorporating lighter weight structural components.

See McNamara's 1965 Posture Statement, Department of Defense Appropriations for 1965 (House) op. cit.

Ibid. See testimony of McNamara and DDR&E Harold Brown.


Ibid.

IV.1-67a,b,c.

IV.1-68.

IV.1-69.

IV.1-70.

IV.2-1a,b.

IV.2-2.

IV.2-3a,b.

IV.2-4a,b.

IV.2-5a,b.

IV.2-6.

IV.2-7a,b.

IV.2-8.

IV.2-9.

IV.2-10a,b.


149. A solid consensus existed in both Systems Analysis and DDR&E on behalf of MIRV.

150. Greenwood, *op. cit.* p. 103-109, p. 120.


152. IV.2-11.


154. IV.2-12a,b,c.

155. IV.2-13a,b.


158. IV.2-13a,b,c.

159. IV.2-14.

160. IV.2-15.

161. IV.2-16.

162. IV.2-17.

163. IV.2-18.

164. IV.2-19.

165. IV.2-20.

166. IV.2-21.

167. IV.2-22.

168. IV.2-23.

169. IV.2-24.
The Trident submarine, of course, is a quite large and expensive weapon.

Although some of McNamara's decisions to acquire new weapons were logical outgrowths of his own strategic perspectives and were taken willingly, others were made more reluctantly and were products primarily of internal constraints which placed limits on his freedom of action and presented him from using his legal authority to its fullest. As we shall see later, these constraints to some degree were purely political in nature. However, the barriers to restraint were not exclusively political but also were analytical.

The Pentagon's budget formation process was not purely an exercise in deliberative strategic analysis, but neither was it exclusively a political process of bureaucratic struggle in which interests, power, and bargains, totally shaped policy decisions. The PPBS process established procedural rules for structuring the dialogue between OSD and the military services as well as substantive criteria for governing the justification and selection of weapon systems. Since the central participants had to operate within the bounds of these rules and criteria, the Pentagon's analytical process played an important role in determining their fates and in shaping the bureaucratic alignments and strategic rationales which affected budgetary decisions. Since McNamara too was dependent upon this process to provide and to legitimate the defensible reasons he needed to stand firm against service demands and to recruit allies within the Pentagon, he was quite vulnerable to its results.

Although McNamara was able to structure the terms of debate and to wield considerable influence over the planning process, other Pentagon
civilian officials and military officers, with perspectives and interests of their own, also were influential participants. They were capable of formulating independent positions and exerting influence over the results by skillfully presenting arguments and interpretations to bolster their cases. Since the force planning process responded to the arguments and maneuvers of its diverse participants, it developed a momentum of its own and occasionally followed paths and produced conclusions which none of its participants, including McNamara, originally intended or anticipated.

Sometimes it produced conclusions and recommendations which supported the proposals of the military services or at least did not undercut them. In these cases it denied McNamara defensible reasons and helped produce a pattern of bureaucratic alignments which left him isolated in the Pentagon, or at least created strong political pressures to approve their proposals. While it is impossible to measure precisely how large a role analytical constraints played in limiting his latitude, it is insightful to note that in cases of intense political controversy where he had solid, defensible reasons at his disposal, he did stand firm against political pressures; but in parallel cases where the results of the analytical process did not operate in his favor, he capitulated. The presence of analytical constraints thus appears often to have been a necessary condition, along with intense political pressures, for dislodging McNamara.


An excellent example of a case in which the military services skillfully presented persuasive arguments and employed cost-effective analysis effectively
to suit their purposes was the debate which took place between 1963–67 over deployment of a thin ABM system. Although the Army never did build Pentagon-wide support for deployment of a large ABM system, it did present a persuasive case for deploying a thin system and succeeded in gaining strong support not only from the Joint Chiefs of Staff but also from the civilian service secretaries and the two OSD staffs as well. Consequently, McNamara by late 1966 found himself faced with a solid bureaucratic consensus in favor of a limited ABM system. Since McNamara and President Johnson were reluctant to make decisions in isolation in the face of such solid opposition, this bureaucratic alignment helped create the political conditions for President Johnson's decision to deploy the Sentinel ABM system.

The process by which the Army succeeded in building this strong bureaucratic support illustrates the manner in which different arguments can be employed selectively to persuade different actors and offices. The Army was able to gain the support of large elements of the Pentagon's technical community, including the DDR&E staff, by demonstrating that the Nike-X system had been developed to the point of adequate technical proficiency and that an initial, limited deployment would facilitate further progress in developing ballistic missile defense technology. The Army succeeded in gaining the support of the Air Force by arguing that a Nike X ABM system could provide defense protection for the Minuteman force; and it succeeded in gaining support for a large ABM system from the entire Joint Chiefs of Staff by arguing that a large system would provide strategic superiority over the Soviet Union and would pave the way for acquisition of Air Force and Navy strategic weapon systems. Finally, the Army was able to persuade Systems
Analysis and the service secretaries to support a limited ABM system by arguing that it could provide effective area defense against a Chinese ICBM attack during the mid-1970's or in contingencies of limited Soviet attacks, such as accidental or unauthorized launchings. Although all of these arguments were not accepted by each of these individuals and offices, at least some were sufficiently persuasive to convince each of them to support the Army's position, albeit for somewhat different reasons in each case.

1A. The Assured Destruction Debate

An equally illustrative example is the manner in which the military services, especially the Air Force, manipulated the Assured Destruction concept and its theory of requirements to protect and advance their interests during the 1966-68 debates over the offensive force posture. By arguing that a large and diverse force posture was required to provide a high confidence assured destruction capability, they succeeded in erecting a protective umbrella over the triad of missiles and bombers, thus denying OSD the opportunity to make significant contractions or changes, and also created a persuasive rationale for the acquisition of new weapon systems and the modernization of existing forces.

Although McNamara and Systems Analysis originally installed the Assured Destruction concept partially because it provided a good managerial tool for controlling costs in the strategic forces program budget, by 1966 it had started to lose its bureaucratic utility for OSD. The primary reason for this turnabout was that the Assured Destruction concept provided a floor, but not a firm ceiling for determining the required size of the offensive force posture. Under conditions of a highly demanding threat environment, it easily could be manipulated to generate a requirement for a quite large
and diverse offensive force posture. Although a fixed and relatively small offensive force which could deliver 400 one megaton equivalent warheads was required to inflict the level of destruction which McNamara publicly proclaimed was sufficiently high to meet the criterion of unacceptable damage, the size of the alert force posture which was required to deliver these 400 warheads over the Soviet target system with high confidence was not a fixed number, nor was it necessarily a small number. Instead it was a variable number which could range in size from the 400 baseline figure to much higher levels as a function of the assumptions that were made about the degradation effects caused by malfunctions in the weapon systems themselves and by the combat operations of Soviet offensive missiles and strategic defense forces. The alert force posture required to pass the Assured Destruction test of sufficiency thus could be driven progressively higher by postulating increasingly conservative assumptions about these degradation effects. For example, an alert force posture of 444 warheads is required if the degradation factor is assumed to be 0.1 and 90% of the alert forces are calculated to be capable of reaching their assigned targets. But if the degradation factor is assumed to be 0.9, and only 10% of the alert forces is calculated to be capable of reaching their targets, an alert force posture of 4,000 launchers, each capable of carrying a one megaton-equivalent warhead, is required.

When they first installed the concept in 1964 McNamara and the Systems Analysis officials evidently were not particularly worried about the potentially open-ended nature of its requirements. The programmed offensive force posture already was amply large to perform the mission, and further additions would have provided only small marginal returns in productivity. And the Soviet Union appeared unlikely to deploy the large force posture in the foreseeable
future that would have been required to degrade this capability. Indeed, since the offensive missile forces alone were considerably larger than required for the mission and the entire bomber force was redundant, in theory substantial contractions could have been made in the force posture without threatening to erode its assured destruction capability. In light of this fact, the concept provided the Office of Secretary of Defense an excellent managerial tool for justifying restraint and offered the military services little ground for erecting a rationale for the acquisition of more forces and weapons.

By 1966, however, this situation had begun to change significantly. As a result of the ongoing Soviet ICBM buildup and the prospect that the Soviet Union would procure an ABM system, Pentagon force planners began to base their force plans on the assumption that the Soviet Union would deploy a thick ABM system and a large ICBM force with a significant hard target kill capability, and that this "damage limiting" Soviet force could destroy large numbers of United States missiles and bombers before they reached Soviet targets. The growing official concern over this possible degradation had the effect of driving upwards the number of launchers in the force posture that were required.

The changing character of this strategic equation transformed the role which the Assured Destruction concept played in the politically-charged debates between the OSD and the military services over the size and composition of the offensive force posture. The military services seized upon the opportunity which the changing implications of the Assured Destruction concept provided, and began to employ it to serve their own purposes and to create arguments for their proposals. Whereas previously they had been forced to base their
proposals for more offensive forces and new weapon systems on the damage limiting objective, they now began to justify their recommendations with the argument that a large force posture and further improvements were required to provide an adequately-insured assured destruction capability in the face of the growing Soviet threat. They thus effectively placed their proposals under the protective umbrella of a strategic objective, deterrence, which McNamara publicly insisted must be attained with high confidence regardless of costs, and consequently partially shifted the burden of proof from their own shoulders to McNamara and Systems Analysis.

The Army argued that the Nike X ABM system should be deployed because it could provide cost-effective hard point protection for the Minuteman ICBM silos. The Navy's SPO began to submit arguments that a new submarine to replace Polaris was required partially because of the need to provide a more highly-insured assured destruction capability. The Air Force was reluctant to stress the prospect that the Soviet Union might acquire a disarming first strike capability against the Minuteman force because it feared that the OSD might react by shifting emphasis toward sea-based forces and perhaps eliminating land-based missiles entirely. But it did argue that the growing Soviet threat created a requirement to acquire hard rock silos, to develop a new ICBM, to maintain a large bomber force in service, and to develop AMSA.

To some degree, of course, these arguments stemmed from legitimate strategic concerns as well as self-serving bureaucratic interests, and since McNamara and Systems Analysis also were concerned about the growing Soviet threat, they were willing to investigate seriously whatever ideas for new weapon systems and changes in the size and composition of the force posture
promised to provide cost-effective insurance. But they were determined not to be maneuvered into acquiring unnecessary, costly weapon systems because of an excessively conservative reaction to the uncertain future. They responded to the military services' arguments by engaging them in a series of studies and debates over the Soviet threat, the requirements of deterrence, and which weapon systems and R&D hedges were necessary.

The dynamics of the debates, arguments, and competitive analyses which flowed back and forth between the military services and OSD led to the adoption of increasingly conservative assumptions about the future Soviet threat. The military services employed conservative assumptions about the Soviet threat to buttress their recommendations and arguments, while Systems Analysis employed equally conservative assumptions to beat off the challenges raised by the military services and to demonstrate the programmed force posture could perform effectively even if the Soviet Union did deploy a large ABM system and a large ICBM force.

The employment of these conservative assumptions about the Soviet threat had the effect steadily of driving upwards, in Pentagon calculations, the number of launchers which were required to meet the assured destruction criterion. The impact which these conservative assumptions had on Pentagon calculations of force posture requirements for assured destruction is reflected in McNamara's annual posture statements for fiscal years 1966, 1967, 1968, and 1969. The fiscal year 1966 posture statement reported that the programmed force posture in a second strike retaliatory attack could inflict about 115 million fatalities upon the Soviet Union; it said that the offensive missiles alone could inflict about 100 million fatalities and that the bombers in a supplementary attack could inflict about 15 million
The fiscal year 1968 posture statement offered an equally sanguine view. It reported that about one-half of the programmed force posture could survive a Soviet first strike attack and could effectively penetrate Soviet defenses. It further reported that only one-fifth of the surviving offensive missiles could deliver the 400, one megaton-equivalent warheads required to inflict 30% casualties. It also said that in operations against the greater than expected threat, the offensive forces combined could still inflict 40% casualties and, by implication, could still deliver roughly 1,000 one-megaton warheads. By the next year, however, this optimistic prognostication had been downgraded, and the calculations reflected a considerable degradation in the force posture. McNamara reported that in operations against the "highest expected threat" fully fifty percent of the offensive forces could penetrate Soviet defenses and detonate over Soviet targets. As a result, he said, the missile force alone could inflict forty percent casualties or deliver the equivalent of 1,000 one megaton warheads. He further reported that against either one of the Soviet greater than expected threats, the offensive or defensive threats, the programmed forces still could perform their mission through the mid-1970's. However, he also reported that in operations against the offensive and defensive greater than expected threats, the offensive forces could inflict roughly 18-25% casualties, or deliver about 150-300 warheads, and thus would not be able to meet the formal assured destruction requirements. Whether this level of damage would be sufficiently high to be credible and "unacceptable" in Soviet eyes, of course, is a matter of debate. But regardless of the answer, however, the figure of survivable warheads which McNamara presented represented a very substantial degradation from the figure of 1000 warheads which he predicted could be
delivered three years earlier.

Despite this substantial degradation, the military services never did succeed in generating a requirement for the deployment of a larger force posture than already was programmed. As the fiscal year 1969 force posture showed, the programmed force posture still was large enough to inflict fatalities which exceeded the assured destruction criterion in operations against the "highest expected Soviet threat" which was employed to determine immediate force posture requirements. Although the force posture's capability did fall below the assured destruction criterion when the "greater than expected threat" calculations were employed, this did not qualify as creating conditions which required the immediate procurement of more forces. The "greater than expected threat" tool was employed only to determine what research and development hedges should be taken out, not to determine immediate force size requirements.

The military services did succeed in creating a rationale for maintaining a large offensive force posture and for modernizing their forces. Since a larger portion of the offensive force posture now was required in Pentagon calculations for the assured destruction mission, a sharp reduction was made in the numbers of missiles and bombers which could be considered surplus for deterrence and therefore possible candidates for retirement. And although an immediate requirement did not exist to enlarge the size of the offensive force posture, the assumptions that were made about the future Soviet threat did create strong reasons for modernizing the missile and bomber forces in order to strengthen their ability to survive a Soviet first strike attack and to penetrate sophisticated Soviet defenses. 24

The military services also succeeded in creating a rationale for
maintaining all three components of the currently-programmed strategic offensive force posture in active service. Evidently the military services attempted to manipulate the assured destruction calculations in a fashion explicitly designed to eliminate whatever competition had existed among the SLBMs, ICBMs, and strategic bombers and to provide each component a separate and distinct function in the assured destruction mission and therefore a solid reason for its continued presence. As a result of the debates and analyses which took place between the military services and Systems Analysis, a de-facto "triad" doctrine emerged within the Pentagon which postulated that a combined force of land-based missiles, sea-based missiles, and strategic bombers would provide the most optimally designed force posture for insuring the assured destruction capability and denying the Soviet Union the ability cheaply or easily to defend itself. To some degree, this "triad" doctrine was a product of deliberative inquiry and dispassionate analysis, and therefore was constructed on a framework of logical arguments and sound reasons. But to some degree it also was a direct product of the partisan motives of the military services and their skill at employing argumentation and analyses to protect their interests.

The military services evidently presented numerous arguments which were accepted by OSD force planners as being legitimate and valid. The primary advantage of the SLBM submarines was that they provided a quite secure and invulnerable deterrent force which could not be destroyed in one quick blow by a surprise Soviet attack. Despite these advantages, however, little sentiment existed within the OSD to place exclusive reliance on a force of SLBM submarines; moreover, the SPO and the Navy admirals were not prepared to launch a major effort to broaden the Polaris fleet's role
and to tackle the Air Force in a major battle over roles and missions. 30

Although some sentiment existed within Systems Analysis for prodding the Navy into allowing the Polaris fleet to take on a broader role, evidently the Systems Analysis force planners were reluctant to rely exclusively on SLBM submarines for the assured destruction mission because some danger existed that major malfunctions might occur and cause a complete system failure or, alternatively, a breakdown might occur in communications between the submarines and national command authorities. 31 The possibility also existed that a retaliatory force composed only of missiles launched from submarines could be intercepted effectively by Soviet ABM systems. Finally, the SLBM missiles, largely by virtue of accuracy limitations and vulnerable command and control systems, did not offer adequate targeting options, flexibility, and efficiency to support United States objectives in wars of limited counterforce exchanges and gradual escalation. 32

Some sentiment did begin to grow in 1967 among Systems Analysis officials that the Minuteman missile force was in danger of becoming vulnerable to a Soviet ICBM attack and that at some future juncture it should be reduced substantially or phased out entirely. 33 However, the possibility that the Soviet Union would acquire a disarming first strike capability was so far removed in the future that Systems Analysis felt little sense of urgency to move forward immediately and had little taste for stirring up a major political battle with the Air Force. 34 High Systems Analysis officials believed that the prevailing political climate was not sufficiently conducive to initiating a major innovation in light of Air Force hostility, the Navy's lack of interest in expanding the Polaris force and fighting the Air Force, and the general political climate surrounding McNamara's many battles and
rapidly deteriorating relations with the Joint Chiefs of Staff. In addition, substantial strategic reasons still existed for maintaining a large Minuteman force in service. In particular, the Minuteman missiles could be counted upon to remain under tight, positive command and control even under harsh combat conditions. They were not linked to national authorities by a tenuous communications system, as were the SLBM submarines; nor were they dependent, for the moment at least, upon a launch-on-warning doctrine, as were the strategic bombers. They also flew along a flatter trajectory than SLBM missiles; therefore a combined force of SLBM and ICBM missiles complicated greatly the defender's tracking and interception problems. Finally, the Minuteman missiles provided much better countermilitary target destruction capabilities.

The Air Force also was able to convince Systems Analysis and DDR&E officials that strategic bombers provided important benefits and essential capabilities, and therefore were necessary components of the force posture. Since they had the capability to launch in advance of incoming Soviet ICBM missiles and to penetrate Soviet air defenses in large numbers, they could be relied upon to perform the assured destruction mission and to strike other targets in a flexible and responsive manner if the offensive missile force failed entirely. In addition, a force of strategic bombers also could force the Soviet Union to split its defensive efforts and to maintain a large and costly bomber defense force in service, thus preventing an exclusive concentration on ABM defense or a cheap solution to providing effective strategic defense.

Moreover, a combined force of strategic bombers and Minuteman missiles offered a retaliatory force that was quite difficult to destroy in a single
surprise attacked launched simultaneously on both elements. As a result of their ability to launch before incoming Soviet ICBMs had arrived, the bombers were vulnerable to destruction only by Soviet SLBM missiles which possibly could arrive at SAC bases before the bombers had taken off. But the Soviet SLBM missiles did not possess sufficiently good hard target kill capabilities to destroy the Minuteman silos as well. Hence, neither ICBM nor SLBM missiles alone could destroy the Minuteman missiles and bombers simultaneously. Nor did any realistic alternative appear to exist for effectively carrying out a coordinated attack with both ICBMs and SLBMs. If the Soviets launched the ICBMs and SLBMs simultaneously, the United States would have ample time to launch its Minuteman missiles before the Soviet ICBMs had arrived. But if they launched their SLBM missiles after their ICBM missiles in order to provide a simultaneous burst, the strategic bombers would have sufficient warning of the impending ICBM attack to launch before the SLBM missiles had arrived. Only by performing the extraordinarily difficult task of destroying the strategic bombers and simultaneously "pinning down" the Minuteman missiles with SLBM bursts over the Minuteman silos until the ICBM missiles had arrived could the Soviet Union hope to destroy both the missiles and the bombers.

Despite the fact that substantial strategic reasons thus existed for maintaining a triad of land-based missiles, sea-based missiles, and strategic bombers, it did not automatically follow that a large number of each component had to be retained in service. For example, as McNamara pointed out in his posture statements, a smaller bomber force probably could perform the same functions as effectively as a large force. Moreover, the assured-destruction mission required only that the force posture have the aggregate
capability to deliver 400 or so warheads and made no specifications about what combination of delivery vehicles was required to transport these warheads to their targets. However, the military services managed to maneuver the Systems Analysis force planners not only into testing the overall adequacy of the force posture for the assured destruction mission, but also into testing the capability of each leg of the triad individually to perform the mission. By doing so, they managed to create a prevailing doctrinal environment within the Pentagon in which the assumption began implicitly to be accepted that what mattered was not the aggregate capability of the offensive force posture, but rather the capability of each leg of the triad. This doctrinal environment produced a climate of opinion which denied McNamara support for making significant contractions in any single leg of the triad, especially further contractions in the strategic bomber force.

While the Air Force was employing the Assured Destruction concept to create a doctrinal requirement for missiles and bombers, it simultaneously employed analytical arguments and cost-effective calculations to build its case for the AMSA bomber. Although the Air Force never did succeed in convincing McNamara to authorize engineering development for AMSA, it did build an impressive array of arguments which created a logical progression which ultimately culminated in the conclusion that AMSA should be developed. Although not all of these arguments were accepted throughout the Pentagon, the Air Force did succeed in building substantial support among the Joint Chiefs of Staff and the DDR&E as well. This effort later bore fruit in 1968, after McNamara's departure, when Secretary Clark Clifford decided to authorize AMSA contract definition.

Although Systems Analysis shared McNamara's hostility to AMSA, the
Air Force did convince high officials in this office that strategic bombers should be maintained in the force posture, and thus reduced its arguments with OSD at least on this front. Within the Air Force itself, Secretary Harold Brown originally withheld support for AMSA. But AMSA advocates finally convinced Brown by arguing that a small force of heavy AMSA bombers, each armed with 24 SRAM missiles, was a more cost-effective choice than a large force of FB-111 bombers in operations against the Soviet Union's heavily concentrated terminal bomber defenses. Although the DDR&E staff also originally withheld support, the Air Force did gain its acquiescence in 1967. The Air Force's argument that the B-52 bombers could not provide a sufficiently stable platform on low altitude attack missions played a critical role in gaining DDR&E's support. At one juncture, DDR&E head John Foster actually flew aboard a B-52 bomber making a mock low altitude attack; the substantial shuddering and shaking which the bomber experienced in that case helped convince Foster to accept the Air Force's argument. The DDR&E staff still maintained reservations about the specific design features and performance characteristics of AMSA, but a series of mutual compromises finally produced consensus. The Air Force conceded to the DDR&E's recommendation that the AMSA's conventional ordnance capability be increased and that its costly low-altitude supersonic capability should be dropped. The DDR&E staff in turn accepted the Air Force's argument that AMSA should have a high altitude supersonic capability because the benefits of a supersonic capability were worth the incremental costs. Finally, it should be noted that the successful bombing campaign which the B-52s waged in Southeast Asia probably also played an important role. In the opinion of at least one former high Air Force official, the B-52s' performance in Vietnam was a very critical
factor in mobilizing support for strategic bombers and AMSA. 55

1B. The Analytical Constraints Posed by the OSD Staffs

The preceding chapter discussed how the Office of Systems Analysis and the DDR&E staff played a role of critical importance in providing McNamara expert analytical advice and political assistance in his efforts to exert managerial control over the defense budget and the weapons acquisition process. Despite this record of assistance, however, these two staffs, especially DDR&E, appear to have played a dual role in the Pentagon's budget formation process. Sometimes they adopted policy stands that diverged from McNamara's position and turned their analytical artillery on McNamara himself; in some of these cases they gave support to the causes and interests of the military services. Since they occupied positions of linchpin importance in the Pentagon bureaucracy by virtue of their capability to wield substantial influence over the analytical foundation that was erected under each weapon system, their failure to support McNamara on selected occasions contributed to his isolation within the Pentagon and substantially undermined his political capability to turn aside the recommendations of the military services. 56

The primary reason for their heretical behavior was that these staffs developed an independent life of their own and operated partially on the basis of distinct strategic perspectives and internal dynamics. Although they generally remained loyal to McNamara and responded willingly to his guidance, they evidently tended to view their task as one of shaping policy decisions to conform to their own stands rather than serving McNamara exclusively. 58 Their willingness to support McNamara's causes thus was conditional. When their policy stands were similar to McNamara's viewpoints, they were capable not only of embarking upon campaigns designed to persuade
him to change his mind but also of giving assistance to the military services. This particularly was the case for DDR&E, but to a minor degree it applied to Systems Analysis as well.  

Despite the fact that these staffs were assigned to his own office, McNamara was not able to exert complete control over their viewpoints, policy stands, and recommendations. Since he was dependent upon them, they had some leverage over him and consequently possessed considerable room for independent thought and action. To some degree their relationship to McNamara resembled the patterns of mutual dependency that often exist between the top leadership and advisory staff elements in any federal bureaucracy. Although staff elements normally have little decisional authority of their own, their technical expertise and control over information give them substantial influence over the manner in which policy options are structured and presented to senior decision-makers, and thus over the decisions which ultimately are made.  

Although McNamara was reluctant to muzzle otherwise competent advisors who demonstrated occasional streaks of independence or, in DDR&E's case, to stir up a major fight by making major changes, he was not willing to become a prisoner of his staffs and apparently he regularly engaged in the bureaucratic machinations which senior federal government officials often employ to maintain control over their staffs, the positions they adopt, and the information they submit. For example, he evidently maintained some distance in his relations with them and kept them uncertain about the precise degree of influence they wielded over his opinions. Several of his former aides recollected during interviews that he also attempted to foster rivalry and competition between the staffs, to create ambiguity in their respective
roles, and to create overlapping areas of expertise and responsibility. For example, he occasionally switched roles and responsibilities by assigning force sizing issues normally reserved for Systems Analysis to DDR&E and by assigning R&D tasks normally for the province of DDR&E to Systems Analysis. Apparently these bureaucratic strategems were intended to develop a system of checks and balances that would reduce his personal vulnerability and to foster an adversary process that would provide multiple sources of information and an open airing of issues and alternatives.

McNamara had little difficulty in fostering rivalry between Systems Analysis and DDR&E and consequently never had to face the serious problem that they might form a bureaucratic cabal. The two staffs largely regarded each other in adversary terms, suspected each other's motives, and doubted each other's analytical competence. Moreover, the sharp differences that existed between officials from each staff in professional training, career patterns, methods of operation, and substantive concerns were a natural breeding ground for animosity. In particular, DDR&E officials appear to have resented the concern of Systems Analysis officials for reducing costs as well as their preoccupation with aggregate force sizing methodologies and their lack of technical expertise. Systems Analysis officials, meanwhile, often thought that the DDR&E staff was excessively preoccupied with performance characteristics and did not adequately grasp the proper meaning of cost and effectiveness; in addition, they also often thought that DDR&E officials simply were partisan advocates of the technical community's causes and therefore could not be counted on to apply a discriminating, cost-conscious eye to the R&D budget. Evidently antagonisms ran especially high between lower-ranking officials on each staff, where resentments, jealousies, and
suspicions were prevalent. At upper levels the conflict took on a more muted and subtle form, but even there strong elements of rivalry persisted.  

As a result, the two staffs engaged in a continual process of struggle and competition throughout this period. Although this rivalry had several positive effects on McNamara's control over these two staffs, it certainly did not eliminate the problem that he was dependent upon their analytical efforts and their technical expertise, and therefore was vulnerable to their behavior. Nor did it necessarily guarantee that they would not independently arrive at similar policy conclusions and thus operate along parallel policy lines. Indeed, in the case of the limited ABM debate, Systems Analysis and DDR&E advocated similar policy recommendations and did in fact isolate McNamara, who was left only with the support of Deputy Secretary Cyrus Vance. Similarly, in the case of the strategic bomber debate, both staffs submitted position papers which recommended that strategic bombers be maintained in the force posture, even while they disagreed sharply over AMSA.  

B.1. Systems Analysis  
The fact that the DDR&E staff was something less than an enthusiastic ally in McNamara's campaign for restraint, of course, comes as no major surprise in light of the controversy that has surrounded its behavior and policy positions in recent years, especially during Dr. John Foster's tenure, which spanned McNamara's last three years as well as the Laird era. More surprising, however, is the fact that the Systems Analysis staff occasionally marched to the beat of a different drummer. Indeed, the military services and the DDR&E staff itself believed that System Analysis simply was an extension of McNamara and that it shaped its policy positions exclusively to conform to McNamara's predispositions.
The fact that Systems Analysis on some occasions was capable of staking out independent terrain, however, was well known within McNamara's private office, and the independent positions it adopted sometimes caused McNamara no small amount of consternation and difficulty. At least two cases exist in which Systems Analysis behaved in this manner. In the case of the strategic bomber debate the Systems Analysis staff, while it was waging McNamara's fight by bogging the Air Force down in endless debates about AMSA, simultaneously infuriated McNamara by submitting position papers which recommended that strategic bombers should be kept in the force posture and presented long and detailed analyses to justify that position. Similarly, in the case of the ABM debate, Systems Analysis' enchantment with a limited ABM system and its advocacy of that position provided important assistance to the Army and left McNamara without a solid analytical rationale to block the Army's proposal.

This state of affairs certainly was not desired and evidently was not foreseen by McNamara when he created Systems Analysis. He regarded Systems Analysis to be his personal analytical arm and he believed that it should support his causes and interests exclusively. But despite the fact that Systems Analysis and McNamara operated essentially on similar wavelengths and in most cases no tension existed on policy viewpoints, Systems Analysis did develop an independent momentum of its own and gradually evolved into being a conditional ally rather than an obedient servant as it grew in size and became more powerful.

Two major factors appear largely to account for its independent behavior. First, Systems Analysis was staffed by self-confident independent-minded analysts who had policy ambitions of their own and were willing vocally to
advocate their causes and recommendations, even when they did not have the support of McNamara. Although they placed priority on supporting McNamara's general managerial objectives, their own purposes were not confined to doing McNamara's bidding. Second, Systems Analysis officials and McNamara tended to operate on the basis of somewhat different patterns of thought and methodological principles which occasionally gave rise to different policy stands. Despite his reputation for favoring quantitative data and mathematical models, McNamara thought largely in strategic and political terms and was able to see beyond the narrow confines of his methodological techniques. By contrast, the Systems Analysis officials tended to think in more purely mechanistic terms and to regard cost-effective analysis to be an end in itself rather than an aid to analysis. To some degree their insistence on reducing all problems to terms which could be incorporated into a formal cost-benefit methodological framework occasionally led them to exclude factors of major importance, especially qualitative variables and political considerations, which had a major bearing on the issues at stake as well as the conclusions and recommendations that flowed logically from their analyses.

B.2. DDR&E

While the Office of Systems Analysis was an invaluable but occasionally independent ally, the DDR&E staff posed more significant problems. Although DDR&E provided McNamara important technical advice and did oppose some strategic weapon systems which in its estimation were not cost-effective or technically adequate, the most dominant feature of its performance was the substantial pressure it exerted not for wide-ranging self restraint, but rather for a vigorous research and development program that advanced the
technological state-of-art as rapidly as possible and for the incorporation of new weapon systems into the force posture as soon as they had become technically proficient. This particularly was the case from 1965 onward, when Dr. John Foster replaced Harold Brown as DDR&E head. Although DDR&E under Brown did have a reputation for favoring a substantial R&D effort, under Foster it developed a reputation for a particularly vocal, aggressive, and partisan advocacy which went beyond the legacy of preceding years in style and ambition. Once McNamara had departed in 1968, DDR&E's zealous advocacy increased steadily and reached its peak during Melvin Laird's tenure.

McNamara of course was not opposed to the development of weapon systems that were required for national security and made efficient contributions to United States military strategy. But he also recognized that his ability to tailor the research and development effort to national objectives and to control the development of weapon systems that were not required was an essential aspect of his campaign for restraint. To be sure, the large number of problems that McNamara encountered in managing the development process, such as cost escalations, schedule slippages, and performance inadequacies, was not the exclusive fault of DDR&E but rather was a product of numerous other factors, including DoD contracting procedures and the R&D organizational structure and management practices of the military services. These have been addressed elsewhere and need not be covered here in detail apart from taking note of their existence. But DDR&E's behavior did have several negative effects. It inhibited his ability to exert the kind of control over the R&D budget which permitted a balancing of costs, risks, and performance characteristics, and especially constrained any attempt to trade off the pursuit of better performance characteristics for reductions in costs and
technical risks. It also had a constraining effect on his ability to block the development of critically important weapon systems in the early stages of development before substantial funds had been invested and before vested interests had become involved to the point where strong coalitions of bureaucratic, corporate, and political support began to mobilize behind them. Finally, as mentioned above, DDR&E's aggressive advocacy sometimes provided important political assistance to the military services and undermined directly his attempts to block service proposals.

DDR&E's aggressive behavior appears to have been a product of several factors. First, the development of new military technologies was DDR&E's primary route to high organizational status, and therefore pragmatic considerations of organizational self-interest demanded that it advocate a vigorous R&D effort. Second, DDR&E's behavior also reflected the ingrained fascination which some DDR&E officials had for new military technologies as well as their tendency to become overly fond and therefore insufficiently critical of developing weapon systems. Third, many DDR&E officials basically were less cost-conscious than Systems Analysis and the Comptroller's office, and therefore were less inclined to sacrifice appealing performance characteristics on the altar of reducing overall budget costs. Fourth, most high DDR&E officials came to the Pentagon from professional backgrounds with the aerospace corporations or the technical community. They tended to identify with the interests and purposes of their former employers, which were best served by a healthy R&D effort. Fifth, their extensive contacts with the aerospace corporations and the military services provided the independent political base and support that was necessary to permit them to advocate independent positions.
Quite apart from these pragmatic and institutional considerations, however, the DDR&E officials ideologically believed that the national interest best could be served by a vigorous R&D program which explored all new technological opportunities that promised to make valuable contributions to the nation's military strength. In their estimation, highly sophisticated technology was a primary determinant of military power. The fact that this was a period of major qualitative leaps forward in strategic offensive and defensive technology created very substantial incentives for advocating a large R&D effort.

Concern about the future Soviet military threat and the need to adjust to it also loomed large in DDR&E's strategic perspectives. Although diplomatic steps were being taken to stabilize American-Soviet relations, many DDR&E officials continued to perceive the Soviet Union not as a benign power but rather as a malevolent nation that was aspiring to gain military dominance over the United States. The DDR&E officials started to become increasingly nervous when indications began to appear in 1965 that the Soviets had embarked on a significant strategic buildup, and their concern grew progressively in succeeding years as the Soviet ICBM buildup continued and the size and scope of its R&D effort began to rival that of the United States.

This growing concern about the Soviet threat played an important role in stimulating DDR&E's advocacy. High DDR&E officials believed that the linchpin to the security of the United States in future years was its ability to capitalize on its superior scientific and industrial capacity and to maintain technical superiority over the Soviet Union in all areas of important military technology. Not only did technical superiority mean that the United States would continue to be able to produce better weapon systems
and to compensate for anticipated changes in the Soviet threat, but it also enabled the United States, despite major intelligence uncertainties, to develop reasonably reliable forecasts regarding the degree of technological sophistication the Soviet Union would achieve in future years. Consequently, DDR&E officials were especially nervous about the growing Soviet R&D effort and the prospect that the United States might lose its technical lead and even might fall behind in important areas. In their estimation, falling behind in R&D carried the risk that the United States might fall victim to some dramatic surprise Soviet technical breakthrough or that the steady accumulation of more sophisticated weaponry across the board would enable the Soviet Union to gain significant military advantages and thus threaten the ability of the United States to protect its vital security interests.

From what can be discerned on the basis of interviews, DDR&E officials were reacting in some cases to assumptions about the Soviet threat which were considerably more conservative than the forecasts that were presented in the national intelligence estimates, and consequently many of their R&D recommendations reflected an assessment of the Soviet buildup which was more pessimistic than the viewpoint held by large segments of the intelligence community, especially the Central Intelligence Agency. For example, the DDR&E primarily was responsible for the argument that the Tallinn system might be upgraded in future years, and thus could pose a threat to United States offensive missiles. Since assumptions about the future Soviet threat played a critically important role in shaping specific R&D programs, DDR&E officials paid particularly close attention to intelligence information and estimates. Over the course of time, evidently numerous DDR&E officials developed a profound distrust and skepticism about the analyses presented...
in the national intelligence estimates, and came to the conclusion that
the NIE's were misinterpreting Soviet objectives as well as technical
intelligence information on Soviet R&D efforts, and consequently could well
be underestimating the size and nature of the future Soviet threat. They
ascribed these errors primarily to the Central Intelligence Agency which,
they believed, had a thoroughly biased viewpoint which left it particularly
vulnerable to underestimating the Soviet threat; moreover, some suspicion
also developed in DDR&E that the CIA purposely was distorting or suppressing
intelligence information in order to affect the policy decisions of the
United States and to promote a policy of detente. Since they thoroughly
distrusted the analytical skills and integrity of the CIA, they adopted the
viewpoint that they should interpret the raw intelligence information for
themselves and thus discard the intelligence community as an interpreting
intermediary. Although this decision hardly was a unique departure within
the government, indeed it presented only one more manifestation of a time-
honored tradition, it had particularly important consequences for the R&D
budget because it essentially meant that numerous R&D requirements were
being determined on the basis of very conservative threat calculations which
were made by committed policy advocates rather than by presumably less
interested and more detached intelligence analysts.

A final factor that played a determining role in DDR&E's advocacy is
that the DDR&E officials apparently regarded an aggressive and partisan
bureaucratic style to be both appropriate and necessary to attain their
objectives. Within a governmental bureaucracy, perceptions of influence
and de facto rules of the game often matter as much or even more than the
real distribution of power and formal organizational procedures for policy
making. In this case, the DDR&E officials regarded policy making to be an essentially adversary process of negotiations and adjustments among partisan actors, and they trusted that the pulling and hauling of bureaucratic struggle would produce the balanced decisions that were required for effective policy. As a result, they believed that a partisan style not only was perfectly legitimate but also was required in order to achieve good policy results. Since the function of pruning and cutting the R&D budget inevitably was going to be performed by McNamara, Systems Analysis, and the Comptroller, they regarded DDR&E's proper role to be one of aggressive advocacy in order to offset these countervailing forces. Moreover, they did not perceive that their office enjoyed substantial political power. Instead they felt themselves to be surrounded by powerful enemies who were eager to slice the R&D budget; consequently, they evidently believed that they had little choice but to fight hard, in a partisan fashion, in order to wield influence over McNamara's choices.

McNamara was well aware, especially during his later years, that he faced a significant problem in managing the R&D process and that DDR&E was part of the problem. But since he valued DDR&E's technical advice, he was reluctant to institute major changes in its personnel or procedures; moreover, he also evidently was reluctant to stir up a major political fight by encroaching upon the technical community's private preserve. But as time went by, he did begin to take significant steps forward to strengthen his control over the R&D budget. For example, he evidently began to pay closer and more detailed attention to the DDR&E's research and development DPM each year. He also instituted the Development Concept Paper (DCP), which was prepared by the OSD and the military services, and
was designed to provide high level review of major R&D projects before major decisions were made and large amounts of money were authorized. The DCP's examined such important factors as performance specifications, cost estimates, schedules, and technical risks. By documenting the reasons for a development decision, the DCP's provided a vehicle for reconsidering the decision if the reasons changed. The DCP's also set milestones and thresholds which, if exceeded, could call for a reconsideration of the project. A main purpose of the DCP was to combat the tendency to overstate performance characteristics and to understate costs in order to secure Secretarial authorization for a new project; another obvious purpose was to determine whether proposed development projects were required at all and what changes were needed in order to bring development projects into line with national requirements.

Although DCP's initially were not prepared for all major projects, in 1968 they were established as a regular procedure. Despite this innovation, however, many problems continued to persist. They have been addressed in some detail by former Deputy Secretary David Packard, the 1970 Fitzhugh Blue Ribbon Defense Panel, and a series of Congressional hearings in 1970-71 on the weapon system acquisition process. Following McNamara's departure, further changes were instituted, especially in Pentagon contracting procedures, and the Defense Scientific Acquisition Review Committee (DSARC) was established to provide a formal mechanism for conducting high level reviews of costly R&D projects.

Formal organizational procedures matter for little unless efforts are made to make them truly effective. One of the ways in which McNamara attempted to establish real control over the R&D budget was to encourage Systems Analysis to become more involved in the R&D budget and to raise critical questions about DDR&E's plans and proposals. The Systems Analysis
staff responded positively to McNamara's prodding. As early as the Kennedy Administration, Systems Analysis officials had come to the realization that force structure options became quite circumscribed once candidate weapon systems had passed through the development cycle, their design characteristics had become rigidly fixed, and large coalitions of support had grown up around them. Initially the Systems Analysis staff was too small and inexperienced to become involved in the details of the research and development budget, and its initial forays did not receive sufficient support from McNamara. But as time went by, the staff became sufficiently large and experienced to contemplate new adventures; and accordingly, by the mid-1960's it began to venture forth into the R&D budget, this time with greater Secretarial support, in a steadily increasing and serious manner.

Not surprisingly, the DDR&E staff reacted quite negatively to the encroachments of Systems Analysis, and as a result a large number of struggles took place between the two staffs during McNamara's last few years. Most often, their struggles took place over engineering development decisions, which was the point in the research and development process where their interests most directly overlapped. Despite occasional forays, the Systems Analysis staff generally stayed clear of the beginning stages of the development process while the DDR&E staff normally avoided direct involvement in procurement decisions. From what can be discerned on the basis of interviews, neither staff consistently was triumphant. High officials from both staffs characterized the struggle as being about even in terms of results; but it would appear that if the balance was tilted at all, the DDR&E staff more often got the better of its arguments with Systems Analysis.

More important, however, is the issue of what factors determined the
outcome. It would appear that the DDR&E staff enjoyed a good number of advantages in its dealings with Systems Analysis. The Director of DDR&E outranked the Assistant Secretary of Defense for Systems Analysis in the Pentagon's hierarchy and thus enjoyed a significant advantage in status which was offset only partially by Enthoven's close relationship to McNamara. DDR&E also had the direct legal authority to manage the R&D budget and had many levers at its disposal for exerting influence over the design characteristics of weapon systems; the Systems Analysis staff, by contrast, only had the authority to offer its opinions and the power to block weapon systems, provided McNamara could be convinced, once they became eligible for procurement. In addition, the DDR&E staff had greater technical knowledge and often greater skill at bureaucratic maneuver; as a result, Systems Analysis officials often found themselves either outmaneuvered or incapable of challenging the technical assumptions and calculations that formed the foundation for DDR&E's recommendations. Finally, the fact that DDR&E had an independent power base and numerous allies in the military services and the aerospace corporations, and that Systems Analysis did not enjoy the benefits of such a position, also operated to DDR&E's advantage.

Nevertheless, the Systems Analysis staff did have the capability to exert some influence over the R&D budget and to wield a limited blocking power, through McNamara, over the development of some weapon systems. Although it did not have the authority to force DDR&E to change its recommendations, it did have the authority to formally voice disagreements with judgments made in the R&D DPM and the DCP's and to express its opinions to McNamara, who was willing to listen. Despite its lack of technical knowledge, Systems Analysis was able to employ its knowledge of force structure and requirements
issues as well as cost-effectiveness considerations to raise critical questions about weapon systems in the areas of their greatest vulnerability. Although its role still was circumscribed, its substantial influence with McNamara and its proven ability to block the procurement of weapon systems persuaded high DDR&E officials to conclude that little purpose was to be served by pressing forward in the face of strenuous Systems Analysis' objections on the development of strategic weapon systems which might never be allowed to be deployed. Accordingly, high DDR&E officials decided that an attempt should be made first to gain the concurrence of Systems Analysis on major development decisions or at least to clarify and reduce areas of disagreement. As a result, the DDR&E staff began to seek out Systems Analysis' opinions and to approach it with a willingness to make some concessions and compromises in order to build consensus and gain its acquiescence.

2. Political Pressures and Constraints

Secretaries of Defense normally do not admit publicly that bureaucratic or domestic political considerations affected their budgetary decisions. Nor are Defense Department decisions ever justified publicly on grounds other than strategic military requirements. Nonetheless, it is a well-documented fact that Pentagon budget formation often is a highly political process which involves intense conflict among the central participants and that, in such cases, major weapon system decisions often are affected by the Pentagon's internal political dynamics as well as by strategic analysis. Since the Secretary of Defense sits at the center of this process and also becomes involved in executive-congressional relations, it is inevitable that political
constraints place limits on his room for maneuver and that political considerations enter into his decisional calculus along with strategic and fiscal concerns.

McNamara's tenure in particular was surrounded with political controversy, and all of his major strategic weapon system decisions were made amidst intense political pressure. Despite his power and his skill, the political constraints under which he operated sometimes did limit partially his latitude and his ability to make the force posture decisions he personally preferred. These constraints obviously did not paralyze him politically; the bureaucratic politics theses overestimates the inhibiting effects of these constraints. But they did have an important impact nonetheless. Although McNamara never has acknowledged publicly that political motivations entered into his calculations, several of his former close advisors who were interviewed on this subject suggested that a number of political considerations regularly at least partially constrained his behavior. First, in their estimation, there was the consideration of the strength of his own political position. Although McNamara was an assertive Secretary of Defense who aggressively used the legal authority and political capital at his disposal, and did not shrink from a tough struggle with the military services and Congress when the stakes were important, he also was quite cognizant that limits existed on his power, time, and energy. He could only hope to accomplish a limited amount, and the possibility existed that under some circumstances political battles could be lost, at a significant cost to his reputation and effectiveness. Therefore, he did not want to overextend himself or unwisely and unnecessarily invest his limited resources.

Second, McNamara, in their estimation, was particularly concerned
about not overstepping the political bounds which were established by the mandates he received from Presidents Kennedy and Johnson. As a cabinet member, McNamara had a responsibility to adjust his behavior in the Pentagon to the priorities and wishes of the White House. This responsibility required him to be constantly concerned about protecting the President's political flanks and not engaging in behavior which might expose the President to damaging attack or otherwise weaken his position. It also constrained McNamara from stirring up too many political fights by making controversial decisions when the President's position was not strong and the White House was reluctant to provoke significant opposition within the Pentagon or on Capitol Hill.

Third, McNamara also evidently was concerned about the adverse political consequences of his decisions and was reluctant to provoke a very large amount of antagonism among the military services and the Congress, especially when the stakes were not overridingly important. Even political battles successfully fought to block the acquisition of major strategic weapon systems almost automatically had adverse political consequences in the sense that they always caused a good deal of resentment and frustration among the victimized military service and its Congressional allies, as well as vested domestic interests. Since he had to deal with the military services in a large number of areas where he needed their active cooperation and reasonably smooth institutional relations between the OSD and the Joint Chiefs of Staff, he apparently was reluctant to provoke them too far on too many occasions. As a result of his centralization of power within the OSD, which the military services deeply resented and interpreted to be a challenge to their institutional prerogatives, civil-military tensions were high throughout his tenure.
Decisions to reject their force posture recommendations, especially proposals which enjoyed the unanimous support of the JCS, magnified these tensions and significantly strained OSD-JCS relations. Since the President needed cooperation from Congress for a similar set of reasons, McNamara also was concerned about the degree to which controversial decisions might provoke opposition and retaliation on Capitol Hill, especially from the powerful conservative Republicans and Southern Democrats who sat on the key defense committees and viewed McNamara's behavior to be a direct challenge to their own prerogatives. 132

The degree to which this concern to avoid negative political consequences and political opportunity costs affected his calculations obviously depended a great deal in each case upon the nature and strength of the opposition he faced, and therefore the amount of frustration and resentment his decisions for restraint would provoke, as well as his overall relations with the military services and the Congress. This concern was not a predominant factor when the military service which was sponsoring the strategic weapon system at stake did not regard it to be a matter of high priority, and when the other service chiefs and powerful Congressmen did not lend their support. But it became a more important factor when the sponsoring military service did attach high priority and the other service chiefs and numerous powerful Congressmen coalesced together in support. Under such circumstances, a decision for restraint represented a direct challenge to the collective judgment and institutional prerogatives of the military services and Congress, and therefore easily could provoke the very large amount of animosity and tension which could have significantly adverse political consequences on a broad range of policy fronts.
In particular, McNamara apparently was especially reluctant to risk provoking the military services and Congress to the point where their antagonisms threatened to grow into the sort of major polarization and confrontation in civil-military relations and executive-congressional relations which could threaten to erode the President's political position or even undermine the effective functioning of the federal government. The paramount concern for maintaining institutional stability and harmony took precedence over specific policy issues and controversies. Although this concern to prevent polarization was especially prevalent during the 1962 struggle over the B-70 and the 1966 debate over the Nike-X ABM system and the Vietnam War, it apparently played a significant role in affecting McNamara's calculations and tempering his behavior throughout his tenure.

Although the public record provides no firm evidence of the manner in which these political considerations affected his decisions, McNamara's former personal advisors generally believed that they manifested themselves in several different ways. First, in their estimation, McNamara tended to temper his ambitions for restraint in light of the limits which existed on his political power, to husband his political capital, time, and energy carefully, and to expend them in a selective and discriminating fashion. Although he was willing to engage the military services and Congress on issues of major importance, he also tended to place limits on the number of force posture issues in which he became involved at any one time and to avoid stirring up major fights on issues that were not critically important or did not demand immediate and decisive action. As a result, he tended to be relatively accommodating on some issues and avoided tackling others altogether, especially when circumstances demanded that he expend his time, energy, and
political capital elsewhere. 136

Second, McNamara evidently often employed partially for political purposes, the strategy of using his decisions to make qualitative improvements in existing strategic weapon systems as an argument to block further quantitative additions to the force posture or the development and procurement of costly new weapon systems. 137 For example, he employed this tactic in his efforts to freeze the Minuteman force and to block AMSA. Similarly, he often employed the tactic of fostering competition among strategic weapon systems in the hope of blocking new systems to which he objected. Both of these stratagems were effective in the sense that they helped to provide defensible arguments for his decisions to exercise restraint and to buffer himself against political pressures and deny his opponents ammunition to attack him. But they also had a dual, twin-edged effect in the sense that they led him to make trade-offs and played a significant role in several of the decisions he made to acquire expensive qualitative improvements and to authorize the development of new weapon systems, which in themselves were of debatable strategic merit.

Third, McNamara evidently normally attempted to gain the approval of the military services for his decisions, or at least their acquiescence, and as a result, he often was willing to provide the military services, especially the Air Force, some compensation for his refusals to authorize all of their requests and his decisions to make contractions in the force posture. 138 For example, the MIRV and the FB-111 bombers both were offered as direct compensation for the reductions he made in the B-52 bomber force. Although this strategem was advantageous in the sense that it helped reduce the opposition of the military services and the Congress, it also played an
important role in leading McNamara to make some of his decisions in favor of expansion.

Finally, McNamara evidently was willing to make some unilateral, non-reciprocated concessions to the military services and Congress in order to defuse antagonisms and to reduce institutional tensions to manageable levels. Apparently McNamara, along with Presidents Kennedy and Johnson, normally were unwilling to yield totally on issues of fundamental importance, such as the decisions not to produce the B-70 in quantity and not to authorize the Nike-X ABM. But when the danger of polarization and confrontation loomed, they were willing to make some modest concessions, either tacitly or directly.

At no time during his tenure was McNamara completely free from political constraints and thus able to shape the force posture and the defense budget exclusively to his strategic perspectives. As a result, the entire record of his decisions reflects, to greater or lesser degrees, his political adjustments and accommodations. At the same time, however, the extent to which these political considerations affected his behavior apparently vacillated from one year to the next in response to the fluctuations that occurred in his own political position and the surrounding political environment. Accordingly, it is necessary briefly to sketch in broad strokes the manner in which his political circumstances changed during his tenure and the constraints they placed on his room for maneuver.

2A. The Kennedy Years

Although Kennedy and McNamara were able to achieve a substantial portion of their ambitious objectives for instituting major changes in defense decision making, military strategy, and the general purpose and strategic force postures, they operated under very substantial political constraints which did place significant limitations on what could be accomplished and
necessitated some tempering of ambitions. First, President Kennedy's own political position never was particularly strong. He entered the White House in 1961 with only a small margin of victory in the presidential election and he governed a body politic in which support for the Republican Party and conservative policies remained strong. Although his own popularity in the public opinion polls fluctuated a good deal, his lack of a large margin of victory in the election remained a problem throughout his administration. In the months preceding his assassination, Kennedy looked forward to the upcoming 1964 presidential election in the hope that he would be able to win a decisive victory over the conservative challenge of the Republican Party and thus would secure a clear and unmistakable national mandate.  

On Capitol Hill, Kennedy faced a Congress in which the Democratic Party held only a small majority control in the House and Senate, and the Republican opposition was strong and active. Equally as important, his ideological majority was smaller yet and conservative southern Democrats, who were not sympathetic to liberal policies, dominated many of the most important committees. As a result of his inability to command strong Congressional support Kennedy throughout his tenure was prevented from embarking upon major liberal reforms and often had considerable difficulty, especially in 1963, in securing prompt passage of the legislation he did offer.  

Kennedy, of course, had greater freedom of maneuver in foreign affairs. The intense international crises which occurred during his tenure demanded decisiveness and firm action, and the Congress at that time largely was willing to let the executive branch shape the specific features of foreign policy. Although the central features of his defense policy and military strategy also received broad support from Congress and the military services,
a large amount of opposition did arise to the changes he and McNamara instituted in defense decision making as well as some of their specific strategic force posture decisions. Despite the fact that the military services benefitted directly from Kennedy's decision to increase the defense budget, they became quite disgruntled by McNamara's centralization of power within OSD and his willingness on occasion to reject their recommendations, which they interpreted to be a direct challenge to their professional expertise and the role they believed the JCS should play in policy formation. In addition, the military services, especially the Air Force, deeply resented some of McNamara's force posture decisions, especially the cancellation of the Skybolt and the B-70 bomber, which negatively affected their organizational interests and rejected their views of defense priorities. As a result, they complained vigorously within the Pentagon and, despite the steps McNamara took to prevent them from publicly opposing Presidential policies, they still were able to make their disagreements known on Capitol Hill, where they enjoyed considerable support.

As a result of the Congressional opposition which arose to their controversial decisions, tensions and executive-congressional relations occasionally threatened to erupt into a major confrontation, such as in the heated struggle over the B-70. Although Kennedy was willing to pay a substantial political price to attain his goals and courageously withstood intense political pressures in such struggles as the fights over the B-70 and the Limited Test Ban treaty, he was quite cognizant of the limits of his power and was willing to mollify the opposition in order to reduce antagonisms. Within the Pentagon, McNamara was quite cognizant of Kennedy's tenuous position and placed special emphasis on not overstepping his mandate. Indeed, his
sense of caution in this regard was so strong that on occasions Kennedy had to prod McNamara into moving more aggressively. Quite apart from protecting Kennedy and adjusting his behavior to Administration priorities, there remained the more immediate problem of not polarizing relations with the recalcitrant Joint Chiefs of Staff. As a result, McNamara evidently was willing to placate the Joint Chiefs up to a point; and even as he proceeded forward to make several controversial force posture decisions against their recommendations, he constantly took soundings, largely through discussions with the Chairman of the Joint Chiefs of Staff and the service secretaries, regarding how far he could go without undermining relations with the JCS too far. Evidently chairman General Maxwell Taylor, who took office in 1963, was especially helpful in informing McNamara of how much room for maneuver he had and signalling clearly how the other service chiefs would react to the decisions he was contemplating.

One example which suggests the manner in which Kennedy's and McNamara's willingness to make partial compromises and concessions in the face of intense political pressures manifested itself in their budgetary decisions is the struggle which took place over the B-70 and its reconnaissance post-strike version successor, the RS-70. In this case, Kennedy and McNamara stood firm against political pressures to deploy the B-70/RS-70 or to produce as many prototypes as the Air Force wanted; but simultaneously they made a series of tactical concessions on R&D funding in 1962 to head off a showdown with angry Congressmen who were incensed at Kennedy's decision in 1961 to impound Congressionally-appropriated funds.

During the summer, 1961, the House and Senate voted to authorize and appropriate substantial additional funds for the B-70 ($180 million), B-52
production ($514 million), and Dynasoar ($85.8 million) which the Kennedy Administration had not requested and strongly opposed during Congressional hearings. Despite intense pressure to spend these funds, Kennedy decided in early November to act upon McNamara's recommendation and to impound the funds. The issue again became intensely controversial in early 1962, as hearings opened for the fiscal year 1963 budget, when the Kennedy Administration announced its decision to recommend against production of more RS-70 prototypes and to ask for only $118 million additional R&D funds. Congressional opposition to this decision built quickly, and in early March the House Armed Services Committee voted to authorize $481 for R&D and production of two more prototypes. Although Kennedy continued to hold his ground against these production funds, he did offer $53 million for R&D funds as a compromise to Representative Vinson, Chairman of the Armed Services Committee, in their celebrated "walk around the rose garden." Despite this concession, which helped head off a showdown with Congress, the House later voted to authorize $223 million for R&D, and the Senate authorized $400 million; a compromise figure of $362.6 million was agreed upon in the House-Senate conference committee. Although Kennedy and McNamara refused to spend all of these funds, they did agree to spend an additional $50 million for RS-70 radar development as a second compromise to the Air Force and Congress. This issue surfaced again in 1963 when the House and Senate Armed Services committees again authorized an additional $363.7 million for construction of two more RS-70 aircraft, but it finally died in late June when the House Appropriation Committee voted not to recommend appropriation.

Similarly, the Kennedy Administration's decision to authorize a
Minuteman force of 1000-1300 missiles also can be interpreted as being at least partially a product of a political calculus for managing relations with Congress and the Air Force. Indeed, published accounts of the events which led up to that decision suggest that McNamara justified this recommendation to Kennedy with the explicit rationale that a decision to procure a smaller force would have provoked a storm of protest on Capitol Hill.\textsuperscript{152} This, of course, is not to suggest that this decision completely lacked a foundation in strategic logic; the counterforce strategy did create a requirement for a large Minuteman force, and a 1000 missile force certainly was not viewed as being excessive by Systems Analysis force planners at that time.\textsuperscript{153} Most probably, strategic reasons and political motivations were closely intertwined in the minds of Kennedy and McNamara when they made this decision. Quite apart from strategic considerations, however, this decision certainly did have significant political advantages. It buffered the Kennedy Administration against charges that it was not acquiring a large and powerful offensive force, and it provided an explicit rationale for defending the decisions to cancel Skybolt and the B-70. Finally, it also helped reduce Air Force opposition to these cancellations and to mollify disgruntled Congressmen.

2 B. The Johnson Administration 1964-65

During the first two years of the Johnson Administration, McNamara enjoyed the benefits of a significantly improved political position and faced a somewhat less difficult political task.\textsuperscript{154} This especially was the case after the November, 1964, presidential election in which President Johnson turned aside the conservative challenge posed by Senator Goldwater and the right wing of the Republican Party. Johnson had become chief executive in 1963 only by a grim twist of fate and therefore could claim no
electoral mandate for innovative policy departures or even his own presidency. Consequently, he tended to proceed rather cautiously at first, to stress continuity in his policies with the Kennedy Administration, and to capitalize on the wave of public support that arose in the wake of Kennedy's assassination. Although Johnson and McNamara moved promptly to reduce expenditures on strategic forces in the fiscal year 1965 budget, few major force posture decisions were made in this budget, especially decisions which foreclosed future procurements. Throughout the spring and summer, McNamara and Johnson concentrated their efforts on beating off the Republican Party's intensely partisan attacks on their defense policies and arguing against spending more development funds for the AMSA and the IMI interceptor.

The presidential election that fall produced a quite different political situation. Johnson's landslide victory over Goldwater provided a strong national mandate for his presidency as well as a very solid political position and a large amount of political support in Washington. The election also had returned a Congress which was more liberal and Democratic than had been its predecessor, and therefore was more willing and capable of providing strong support for liberal policy innovations, especially in domestic policy. Since the campaign had taken on a strong partisan and ideological dimension, and the two candidates had made foreign policy and defense policy major subjects of debate, Johnson's landslide victory represented a decisive public rejection of the conservatism of the Republican right wing and a strong national endorsement of his policies for fiscal prudence and for slowing down the arms race and seeking detente in United States-Soviet relations.

McNamara, of course, survived the transition in administrations and quickly emerged as one of Johnson's most trusted and powerful advisors.
Within the Pentagon, his position was solid and on Capitol Hill his prestige had risen to the point where even his adversaries and enemies publicly were praising his accomplishments. Another factor that contributed to an improved climate was that during this period a temporary, partial hiatus occurred in McNamara's battles with the military services and Congress over strategic forces. Although disagreements remained strong over strategic priorities, fewer and less intense conflicts took place over immediate procurement decisions. This was a transitional period between deployment controversies. The major strategic force posture issues which had dominated the Kennedy Administration largely had been settled, and the issues which later were to dominate the Johnson Administration had not yet become so controversial. Since the technology of the Nike-X ABM system still was undergoing development, the Army was willing to accept the argument that deployment temporarily should be delayed; and since the Air Force had not yet made final decisions on AMSA design characteristics and performance specifications, it was willing to accept McNamara's decision to defer engineering development.\textsuperscript{155}

On Capitol Hill, McNamara did not face major pressures for prompt action on Nike X and AMSA, and a growing concern for fiscal prudence coupled with McNamara's prestigious position and the relative equanimity of the Joint Chiefs of Staff produced a more tranquil political climate and greater receptiveness to McNamara's decisions.

Accordingly, he took advantage of this opportunity and moved forward in several areas. After the results of the damage limiting study had become available in late 1964, he forged a solid consensus within the Johnson Administration against a thick ABM system and the other ingredients of a full damage limiting force. He formally announced the decision to terminate
the Minuteman buildup at 1000 missiles, and he made the decisions to retire the older model B-52 bombers and to initiate substantial reductions in the bomber defense force.

The fact that the political pressures were somewhat less compelling during 1965, however, does not mean that Johnson and McNamara enjoyed complete freedom of maneuver. Although McNamara was in a better position to resist pressures and to drive a hard bargain with the military services, his position certainly was not so strong that he could afford the luxury of ignoring the opposition of the military services and conservative Congressmen and freely provoking their anger and resentment. Consequently, the same political considerations continued to affect his decisional calculus, albeit in less compelling fashion. As a result, the record of his decisions during this period shows a mixture of boldness and caution, a willingness to move forward more aggressively but at the same time a continued recognition of the need to make pragmatic adjustments and accommodations in order to manage the political tensions that accompanied controversial decisions. The most obvious example of his continued sensitivity to the reactions of the military services and the Congress, of course, is the manner in which he provided the Air Force direct compensation, in the form of MIRV and the FB-111 bombers, for his decisions to freeze the Minuteman buildup and to retire the older model B-52 bombers. By providing this compensation, he was able to gain Air Force acquiescence for these controversial decisions; the Air Force's support, in turn, helped enable him to deal with several Congressmen who were quite upset with both decisions, especially the decision to retire the B-52 C-F bombers. Similarly, the package deal he forged with the Air Force for the bomber air defense force enabled him to gain Air Force acquiescence for his
decisions to begin phasing out the outdated portions of that force.

2C. The Johnson Administration, 1966-68

McNamara faced a more complicated and difficult situation during the tumultuous final two years of his tenure as a result of the dramatic changes for the worse which took place in the political circumstances and conditions he faced. A factor of major importance was that President Johnson's political position deteriorated very badly. Johnson lost the support of many Congressional liberals because of their disagreements with his Vietnam War policies, and he suffered a substantial loss in public opinion polls as a result of growing domestic opposition to the war. In addition, his continued refusal to procure the Nike-X ABM system and to escalate in Vietnam contributed to a marked erosion of support among conservatives in Congress, including the powerful Southern Democrats.

With this deteriorating position came a growing vulnerability to political pressures from conservatives, and a sharp increase in attacks launched from this direction on his policies for strategic forces. To some extent these pressures were exerted by Congressional Democrats, but conservative Republicans were active as well. By early 1967, it had become apparent that the Republican Party was intending to capitalize on Johnson's vulnerability and to turn his refusal to deploy an ABM system and to respond more demonstrably to the ongoing Soviet buildup into a major political issue in the upcoming presidential campaign. Although his deteriorating political position did not undermine completely Johnson's willingness to support McNamara's efforts to block massive additional investments in strategic forces, his evident concern to protect his political flanks and to reduce conservative opposition on Capitol Hill and within the Pentagon did leave him more willing to make
In addition, McNamara's own political position deteriorated. His personal position with President Johnson declined significantly from 1966 onward as a result of his growing reservations about the Vietnam War and the advice he began to offer to halt the military buildup, to level off the bombing campaign in North Vietnam, and to seek a negotiated settlement. It is difficult to ascertain what effect his deteriorating position with the President had on Johnson's willingness to support his efforts to deal with strategic force posture issues and on his own perception of the room for maneuver he still possessed. But from what can be gathered on the basis of personal interviews, Johnson appears to have continued to lend his support, and McNamara does not appear to have felt any compelling reasons stemming from his relationship with Johnson to stand less firmly against JCS pressures. Indeed, one prominent member of the Joint Chiefs of Staff remarked during an interview that despite the fact that Johnson's growing reservations about McNamara did provide the JCS an opportunity to exert more influence on the White House on Vietnam policy, it did not provide the JCS any appreciably greater degree of influence on strategic forces issues nor did it contribute to a diminution of McNamara's influence in this area. In the estimation of this official, the JCS throughout these last two years still perceived McNamara basically to be in firm control of strategic force posture decisions and did not believe that they wielded much influence on Johnson in this area.

Even if McNamara's deteriorating position with Johnson did not contribute to a significant erosion of Presidential support, the growing opposition and the substantial political pressures he received from the military services
and the Congress did magnify his political problems significantly. Within the Pentagon, McNamara's personal relationships with the Joint Chiefs of Staff deteriorated significantly as a result of differences over Vietnam policy and his continued refusal to approve their recommendations for strategic forces. As frustration among the military services grew, opposition to McNamara built rapidly, and consequently his authority and prestige in the Pentagon declined. 164 In addition, the Joint Chiefs of Staff from 1966 onward increasingly began to adopt the tactic of coalescing together through logrolling in order to present McNamara with a united front of opposition. 165 Although the service chiefs did not believe that they had much leverage over McNamara and were reluctant to resign in protest because they figured that McNamara simply would replace them with more pliant officers, they did calculate that by banding together they might be able to exert more direct pressure on McNamara as well as to gain more allies in Congress. 166 This tactic had the effect of turning force posture disagreements into a major OSD-JCS confrontation, and it presented McNamara the difficult task, which he preferred not to undertake, of rejecting the unanimous recommendations of his senior military advisors. 167

On Capitol Hill, McNamara faced a similar array of political difficulties. Since he was a chief Johnson Administration spokesman for the Vietnam War, he became a target for attack by liberals who opposed the war, and his personal prestige in some liberal circles declined markedly. In addition, he also came under increasingly severe attack from Congressional conservatives who were critical of his strategic force posture decisions, and were angry about his failure to show proper respect for their institutional prerogatives and wanted to reassert Congressional control over defense policy. Congressional opposition began to build in late 1965 at the time he announced the
decision to retire the older model B-52s and to procure the FB-111. In early December, 1965, Barry Goldwater demanded McNamara's resignation, and Senators Russell, Stennis, Monroney, and Roberston publicly deplored what they interpreted to be his abandonment of the manned strategic bomber concept. 168

By early 1966 the growth of Congressional opposition was becoming increasingly apparent as House Armed Services Committee Chairman Mendel Rivers launched a drive to curb McNamara's powers and threatened to delay approval of the fiscal year 1967 defense budget, including Vietnam funds, until McNamara had approved AMSA development and heeded Congressional wishes on overall defense policy. 169 On January 17, Rivers announced the formation of a special subcommittee, to be chaired by Representative Hebert, to look into McNamara's decision to scrap the B-52 and B-58 bombers before regular budget hearings had begun. 170 By late January, fully four Congressional subcommittees were investigating various aspects of McNamara's defense policies. 171 In addition to Hebert's subcommittee on bombers, there were subcommittees on military research, base closings, and military construction. In later months additional House and Senate subcommittees were established, and at one time fully six subcommittees were operating simultaneously. 172

As Congressional hearings on the fiscal year 1967 budget continued during the early months of 1966, McNamara came under growing Congressional attack for his refusal to procure the Nike-X ABM and to allow contract definition for AMSA, as well as his alleged overruling of JCS recommendations on both weapon systems. Virtually every chairman of the House and Senate defense committees favored contract definition for AMSA. The list of AMSA supporters in early 1966 includes, for example, Senators Stennis and McClellan of the Senate Investigative Subcommittee, Senator Russell of the
Senate Armed Services Committee, Representative Mahon of the House Appropriations Committee, and Rivers of the House Armed Services Committee. Equivalent support existed for the Nike X ABM. As a result of this strong support, the House Armed Services Committee authorized, over McNamara's objections, an additional $167.9 million for Nike X preproduction tooling, $11.8 million for AMSA contract definition, $55 million for procurement of six more YF-12A in order to keep its production line open, and $80 million for MOL. The Senate Armed Services Committee followed suit and these funds later were authorized by the House and Senate in full.

As a result of this strong Congressional support, the military services resubmitted their requests for AMSA and the Nike X ABM, although they now demanded a 25 city ABM system rather than a thin system. Throughout the summer months Congressional pressures continued to build, and McNamara's relations with Congress steadily deteriorated in light of his continued refusal to yield and the mounting tensions in institutional and personal relationships. In August, 1966, McNamara, appearing before the Senate Subcommittee on DoD Appropriations, chided Congress for its efforts to override executive branch authority and its failure to indicate precisely just what it wanted the DoD to do with the funds it had appropriated for Nike-X and other weapon systems. This and similar remarks hardly were designed to mollify Congressional anger, and they were answered in turn by increasingly vitriolic attacks on McNamara and his policies. Although McNamara's late 1966 ploy to defer ABM deployment pending the SALT initiative won a temporary reprieve, pressures from the military services and Congress for an ABM deployment began to build again in early 1967, and became especially strong when indications began to appear that the Soviet Union was not interested in
immediate negotiations. Symptomatic of the politically-charged nature of the public dialogue about the ABM issue at that time was Representative River's argument that the nation could not wait "for the decision of those who fiddled while America could burn," as well as Senator Russell's remark that "it is deplorable that, in this country, the will of one man should override those of all the men who have been trained to protect the national security."

In light of these intense political pressures, perhaps the most noteworthy aspect of this period is that McNamara still was able to stand firm on AMSA, to delay ABM deployment until 1967, and then to fight off the Chiefs' demands for a large system and deploy only a low cost, thin ABM system. Certainly McNamara's success in this regard is strong testimony to the argument that a Secretary's legal authority and firm Presidential support are powerful political instruments which provide very substantial blocking power. Nevertheless, the record of their decisions does suggest that McNamara and Johnson did make adjustments and accommodations to this difficult political situation. Certainly the Sentinel ABM deployment decision, which was made by Johnson evidently against McNamara's preferences but also was envisioned long before by McNamara as a political compromise, represented at least in part an explicit political concession which was intended to satisfy the Joint Chiefs of Staff for the moment, to protect the President's political position and to head off an executive-congressional confrontation.\textsuperscript{75} In the case of McNamara's decisions for MIRV and the offensive missile forces, strategic considerations and political motivations are too intertwined for easy separate analysis. Without questioning the argument that these decisions certainly were a direct product of a strategic calculus, however, it is also accurate to argue that they simultaneously were perceived within OSD as having
the advantage of reducing Air Force opposition to his decision to hold a lid on the Minuteman force and not to move forward rapidly on developing a new ICBM. They also helped protect his political flanks against conservative attacks that he was failing to respond properly to the Soviet buildup and to safeguard America's deterrent capability and strategic superiority. As a result of these decisions, McNamara was able to argue that he was taking sufficiently vigorous actions to protect America's deterrent and that he was preserving strategic superiority over the Soviet Union in total warheads even while he simultaneously continued to freeze the Minuteman force and began to retire more strategic bombers.

2 D. The Effects of the Vietnam War

No other single event marred the latter portion of McNamara's tenure as did the Vietnam War. It sapped his time and energy, and it partially was responsible for the steady erosion of his political position during his last two years. It thus constituted an exogenous event of major importance, and consequently it is appropriate to ask whether and to what degree it had negative effects on his ability to deal with the strategic forces and the extent to which his ability to exercise restraint might have been improved had Vietnam not occurred.

McNamara has never commented publicly on this subject, and his former personal advisors are divided sharply in their assessments. Some argued that Vietnam had very major effects, but others claimed that Vietnam directly affected his ability to deal with the strategic forces only to a small degree, if at all. While the former advisors who held this opinion acknowledged that Vietnam might have undercut his ability to deal with other segments of
the defense budget, they argued that in its absence McNamara's behavior and decisions for the strategic forces probably would not have changed a great deal. They argued that despite the demands of Vietnam, McNamara still continued to place high priority on central strategic force posture issues, still was willing to fight the Joint Chiefs of Staff on a broad range of fronts, and still continued to wield very substantial power over strategic force posture decisions. They further contended that to the extent compromises and concessions were made, they were an outgrowth of the struggles over the strategic forces and did not reflect the political consequences of Vietnam to any appreciable degree; moreover, they contended that in the absence of Vietnam, fiscal constraints would have been less compelling and consequently the greater availability of fiscal resources would have had the effect of weakening McNamara's position rather than strengthening it. In order to underscore their argument that Vietnam did not appreciably weaken McNamara's position, they pointed to the fact that he still continued to enjoy very substantial success in fighting off the pressures of the military services for a large ABM system and the AMSA.

Although this argument appears to be valid in the sense that the demands of Vietnam did not totally undermine McNamara's ability or willingness to stand firm in the face of political pressures and did not drive him into making wholesale concessions on weapon systems to which he was adamantly opposed, it is carried too far when it reaches the point of assuming that the Vietnam War had no negative effects and that his task would not have been any easier in its absence.

First, had the Vietnam War not occurred McNamara would have had more time and energy at his disposal which he could have devoted to other defense
budget and force posture issues, including the strategic forces. Second, his political position would not have deteriorated so badly and consequently the possibility exists that he would have had a good deal more political capital at his disposal which he could have devoted to strategic force issues. Third, President Johnson's political position would have been substantially improved and he would have been less vulnerable to political attack, and therefore perhaps less prone to making concessions and compromises in order to protect his political flanks. Fourth, McNamara's relations with the Joint Chiefs of Staff would have been less tense and the Administration's relations with Congress would have been less strained; consequently less need may have existed to make the kinds of concessions that were required in order to reduce major antagonisms to manageable levels.

In light of these considerations, a persuasive case can be made that in the absence of the Vietnam War, a set of political circumstances might have prevailed in which McNamara would have operated under fewer political constraints and pressures, and would have been more willing and more able to stand firm on some issues and to move forward more aggressively on others. Precisely how these changes would have manifested themselves in strategic force posture decisions is difficult to determine. But had McNamara elected to spend some of his additional time and political capital on the strategic forces, a plausible case can be made that he would successfully have blocked the Sentinel ABM decision, that he would have taken more decisive actions with regard to phasing down the strategic bomber force, and that he would have become involved more deeply in other issues of less immediate priority, such as building further flexibility into the SIOP war plans. Finally, a case also can be made that American-Soviet detente might have gathered momentum more
rapidly and consequently the SALT negotiations might have been initiated before McNamara's departure. In the context of ongoing SALT negotiations possibly McNamara's task would have been easier.

2 E. Political Concessions and Strategic Calculations

The fact that McNamara, like any Secretary of Defense, was willing to make adjustments to political realities does not necessarily mean that decisions which reflected political motivations were exclusively a product of these considerations and that they automatically lacked a sound foundation in strategic logic and therefore made no cost-effective contribution to United States national security objectives and military requirements. Although the bureaucratic politics model, as recently interpreted by some, tends to imply that the presence of political considerations and reciprocal bargaining automatically excludes strategic logic from having played a significant role in shaping decisions, in reality political motivations and strategic calculations are not necessarily mutually exclusive. These two factors can co-exist together and defense decisions can reflect their simultaneous, overlapping, and mutually-supporting presence. Consequently, the presence or even domination of the former does not necessarily mean that the latter is absent; nor does the fact that a Secretarial decision was made for political reasons automatically mean that it produced results which failed to conform in any approximate fashion to his strategic perspectives and therefore violated by a large margin his normative standards of judgment.

Even Secretaries of Defense who operate under substantial political constraints and are forced to make political accommodations still can attempt to tailor the force posture as closely as possible to prevailing fiscal priorities and national military requirements, and can attempt to insure that
even outright political concessions make a minimally acceptable cost-effective contribution or at least do not badly undermine national fiscal priorities. Since success and failure seldom are absolute, degree matters a great deal. Consequently, the mark of a Secretary's power and performance might be not only his ability to avoid making political concessions but also the extent to which he minimized the negative consequences and maximized the positive impact of his concessions and compromises.

As a result of his ability to block the military services' recommendations to procure a thick ABM system and to acquire the AMSA bomber, McNamara did successfully avoid being forced into making political concessions which would have grossly violated his cost-effective standards and fundamentally would have undermined pursuit of the strategic arms control objective. The fact that he did not succeed in shaping the force posture to conform closely to his personally preferred baseline force structure indicates clearly that he was forced by the constraints he faced into making adjustments and concessions which often violated, to greater or lesser degrees, his optimal standards of cost-effectiveness. At the same time, however, his decisions for expansion do reflect a large number of cases in which political and strategic considerations overlapped and co-existed together, as well as a rather consistent capability to insure that his political concessions did make a reasonably effective contribution to United States security requirements, or at least did little harm. Perhaps the best characterization of his performance is that McNamara to an impressive degree was able to make strategic virtue out of political necessity and to gain political advantages out of decisions which were required on strategic grounds.

The decisions McNamara made during his later years to incorporate
numerous qualitative improvements into the offensive missile forces, in particular, were products of mutually-supporting, co-equal strategic and political considerations. The first section of this chapter discussed in some detail the manner in which these decisions were perceived by McNamara and the OSD staffs as making important cost-effective contributions to strengthening the combat capabilities of the offensive forces. Simultaneously these decisions also had important political advantages and played an important role in McNamara's bureaucratic strategy within the Pentagon.

Since the strategic considerations were so powerful and compelling, McNamara and the OSD staffs might have made these decisions even in the absence of domestic political considerations. At the same time, the possibility also exists that the political pressures might have been sufficiently powerful to maintain the momentum for these decisions even if considerable uncertainty had not existed about the Soviet threat and the strategic incentives had been less compelling. Since both of these factors played important roles, the argument can be advanced that either perhaps would have been sufficiently strong to produce these decisions; however, the decisions cannot be adequately explained without due reference to both.

McNamara's decisions for the strategic bomber force also reflect a complex montage of overlapping, but not necessarily co-equal political and strategic motivations. Since McNamara evidently had strong doubts that a requirement existed for a large force of strategic bombers, most probably his toleration of their continued presence on a large scale and his failure to retire even larger numbers of B-52's from active service were products of his recognition that limits existed on what could be accomplished and that pragmatic adjustments had to be made to political realities. Since the
decision to retire the older model B-52's provoked a storm of outcry in Congress, even though McNamara had the support of the Air Force, an attempt to move ahead in bolder strokes would have produced a very serious fight with the Air Force and Congress.

Whether he would have phased out bombers entirely in the absence of political opposition, however, is an open question. Although some of his aides believed that McNamara was prepared to take this step, his posture statements do suggest that he recognized that a small force of bombers could make a useful contribution. Whatever the answer, certainly little doubt exists that a force of strategic bombers did provide a significant stream of strategic benefits and did make a material contribution to United States military strategy. The controversy over strategic bombers centered not on effectiveness per se, but rather on the issue of whether a large bomber force, and particularly an expensive new bomber, offered benefits commensurate with their high costs, especially since the offensive missile force could perform most of the combat functions of bombers. Although substantial disagreement existed over this issue within OSD, a consensus did exist that the bomber force did provide a more highly insured assured destruction capability, a flexible targeting capability, and helped split enemy defenses and prevented the Soviet Union from concentrating exclusively on ballistic missile defense.

The decisions which McNamara made to incorporate costly modifications in the B-52 force, to acquire SRAM, and to procure the FB-111 bombers offered significant political advantages for blocking AMSA and played a role in his bureaucratic strategy for gaining Air Force acquiescence to the decision to retire the older B-52's. But from what can be ascertained on the basis of interviews with high OSD officials, strategic considerations did play
a supplemental role, especially in determining which specific capabilities and performance characteristics were acquired, and the bulk of these decisions were perceived by high OSD officials, and apparently by McNamara himself, as being at least minimally defensible on grounds of strategic requirements and cost-effectiveness. These decisions collectively involved the programmed expenditure of about $4 billion over a several year period (a large but not especially huge amount of money by Pentagon standards) and strengthened the capability of the bomber force to penetrate Soviet area and terminal defenses.

Finally, the Sentinel ABM deployment decision largely was a product of direct political motivations on the part of President Johnson. At the same time, however, it also was a decision which, as McNamara pointed out, had a strong foundation in strategic logic and could be defended publicly on this basis. McNamara was reluctant to deploy a limited ABM system because he feared that the Army, having gotten its foot in the door, would be able to parley it into a much larger system. But he and the OSD staffs also recognized that solid strategic reasons existed for deploying a thin ABM system. It did not cost a great deal (originally estimated to be about $5 billion in five year costs) and it was capable of providing reasonably effective defense against accidental launches and small scale Chinese or Soviet attacks as well as some protection for the Minuteman force. In addition, an important diplomatic reason existed for deployment at that time. Evidently President Johnson hoped that it would prod the Soviet Union into becoming more interested in SALT negotiations.
FOOTNOTES FOR CHAPTER V

1. Indeed, McNamara, by 1966, found himself virtually isolated within the Pentagon on this issue.

2. V.1-1.

3. V.1-2a,b.

4. V.1-3.

5. As was explained in Chap. 4, the deployment of a thick ABM system was established in the damage limiting strategy as a prerequisite for the deployment of a number of other systems, including more offensive missiles and a new bomber air defense force; and any decision to deploy such an ABM system almost certainly would have necessitated the procurement of the other elements of the damage limiting package.

6. V.1-4.

7. V.1-5a,b,c.


9. Since the area of the assured curve occurred at the 30% fatality level, all additions to the force posture beyond the force requirement to deliver the 400 warheads would have provided rapidly diminishing returns.

10. V.1-6a,b,c.

11. V.1-7a,b,c.

12. V.1-8a,b,c.


14. V.1-10a,b,c.

15. V.1-11a,b,c.

16. V.1-12a,b.

17. V.1-13a,b.
18. V.1-14a,b,c.
19. V.1-15a,b,c.
20. V.1-16a,b,c.
24. Ibid, p. 149.
25. V.1-17a,b.
27. V.1-19a,b.
28. V.1-20.
29. V.1-21.
31. V.1-22.
32. V.1-23.
33. V.1-24.
34. V.1-25.
35. V.1-26.
36. V.1-27a,b.
37. V.1-28a,b,c,d.
38. V.1-29a,b,c.
41. V.1-30a,b.
42. V.1-31.
43. V.1-32.
44. V.1-33.
45. Apparently DDR&E played a significant role in convincing Clifford to authorize AMSA development.
46. V.1-34a,b,c.
47. V.1-35a,b.
48. V.1-36a,b.
49. V.1-37a,b,c.
50. V.1-38a,b.
51. V.1-39a,b.
52. V.1-40a,b,c.
53. V.1-41.
54. V.1-42.
55. V.1-43.
56. V.1-44.
57. V.1-45a,b.
58. V.1-46a,b.
59. V.1-47a,b.
60. V.1-48.
61. V.1-49a,b,c,d.
62. V.1-50a,b,c.

63. V.1-51a,b,c.

64. V.1-52a,b.

65. V.1-53a,b.

66. V.1-54a,b,c,d,e,f,g,h,i.

67. V.1-55a,b,c,d,e.

68. V.1-56a,b,c,d.

69. V.1-57a,b,c,d.

70. V.1-58a,b,c.

71. V.1-59.

72. V.1-60.

73. V.1-61.

74. V.1-62.

75. V.1-63.

76. V.1-64.

77. V.1-65.

78. V.1-66.

79. V.1-67.

80. V.1-68a,b,c.

81. See Greenwood, op. cit., p. 50.

82. See testimony of Secretary of Defense Melvin Laird and Deputy Secretary David Packard. Department of Defense Appropriations for Fiscal Year 1973, Senate Hearings Before the Committee on Appropriations, ninety-second Congress, second session, p. 359-391.
83. V.1-69a,b.
84. V.1-70a,b,c.
85. V.1-71a,b,c.
86. V.1-72a,b.
87. V.1-73a,b.
88. See Greenwood, op. cit. p. 49-51.
89. V.1-74a,b.
90. V.1-75a,b,c.
91. V.1-76a,b.
92. V.1-77a,b,c.
93. V.1-78a,b,c.
94. V.1-79a,b,c.
95. See testimony of DDR&E John Foster, Department of Defense Appropriations for Fiscal Year 1973, Senate Hearings Before the Committee on Appropriations, ninety-second Congress, first session, p. 433-447.
96. V.1-80a,b,c.
97. V.1-81a,b.
98. This case certainly does not appear to be unique. Many of the OSD officials who were interviewed reported that DDR&E on a number of occasions adopted similarly unrepresentative viewpoints and advocated them within the Pentagon.
99. V.1-82a,b,c.
100. V.1-83a,b.
101. V.1-84a,b.
102. V.1-85.
103. V.1-86a,b.
104. V.1-87a,b.
105. V.1-88a,b.
106. V.1-89.
107. V.1-90.
108. All Enthoven and Smith op. cit., p. 58-59.
110. V.1-91a,b,c,d.
111. V.1-92.
112. V.1-93a,b.
113. V.1-94a,b,c,d,e.
114. V.1-95.
115. V.1-96.
116. V.1-97a,b,c.
117. The DDR&E is the third highest ranking civilian official in the Department of Defense, following the Secretary and the Deputy Secretary.
118. V.1-97a,b.
119. V.1-98a,b,c,d,e.
120. V.1-99.
121. V.1-100.
122. V.1-101a,b,c.
123. V.1-102a,b,c.
124. V.1-103.
125. V.1-104.
126. V.2-1a,b,c,d.
127. V.2-1a,b.
128. V.2-2a,b,c.
129. V.2-3a,b,c.
130. V.2-4a,b.
131. V.2-5a,b.
132. V.2-6a,b.
133. V.2-7a,b.
134. V.2-8a,b.
135. V.2-9a,b,c.
136. V.2-10a,b,c.
137. V.2-11a,b,c.
138. V.2-12a,b,c.
139. V.2-13a,b,c.
141. Ibid, p. 979.
142. V.2-14a,b,c.
143. V.2-15a,b.
144. V.2-16a,b.
145. V.2-17.

149. Ibid.


152. See Halberstam, The Best and the Brightest, op. cit. Ball, op. cit., Section II.

153. V.2-18.

154. V.2-19.

155. V.2-20.

156. V.2-21a,b.

157. V.2-22a,b.

158. See Trewhitt, op. cit. p. 158.

159. See Jayne, op. cit., p. 360-361.

160. See Newhouse, Cold Dawn, op. cit.

161. V.2-23a,b.

162. V.2-24.

163. V.2-25.

164. V.2-26.

165. V.2-27.

166. V.2-28.

167. V.2-29.


170. See *New York Times*, "Representative Rivers Says House Armed Services Committee Will Probe McNamara Decision to Retire Over 2/3 of SAC Bomber Fleet."

171. See Wilson, *Aviation Week*, *op. cit.*


175. V.2-30.

176. V.2-31a,b.

177. V.2-32a,b,c,d.

178. Thus a force posture decision which was made partially as a result of political calculations simultaneously can also reflect a strategic motivation, and vice-versa.
CHAPTER VI

CONCLUSIONS AND EVALUATIONS

McNamara's tenure now belongs to history, and since strategic circumstances and domestic conditions have changed since his departure, his experience cannot be taken as a blueprint for prognostication or prescription. But the changes have not been so basic or so sweeping that the lessons of his tenure are irrelevant to contemporary issues. Accordingly, it is appropriate to ask what conclusions can be drawn, propositions derived, and lessons learned on the basis of McNamara's record regarding the ability of the Secretary of Defense to exercise restraint.

1. Restraint and its Limitations

Certainly a basic insight which grows out of the McNamara period is that even a Secretary of Defense who favors fiscal prudence and strategic arms control still might believe that justifiable reasons exist for acquiring new strategic weapons or modernizing existing forces. Indeed, since a Secretary's primary responsibility and foremost priority is to provide for the national defense, self-restraint at best is likely to be a conditional concern in any Secretary's calculus, a concern which is given high priority only after essential military requirements first have been met. The paramount goal of providing adequate forces to support the multiple national objectives which drive force planning and the inclination to plan conservatively and to prefer ample margins of
insurance create very powerful incentives for a Secretary to spend substantial resources on strategic forces and to deploy a large, diverse, and fully modern force. These considerations easily can lead a Secretary to conclude that the benefits which new strategic weapons provide are commensurate with their high fiscal costs and their possibly deleterious effects on the arms control objective. Failing this, the sense of responsibility which arises out of his role as protector of the national defense still can lead a Secretary to set aside his personal preferences and reluctantly to approve weapons about which he has reservations. Restraint, therefore, is not only a problem of internal political control. The strategic and role barriers to restraint can be fully as powerful as the political barriers, especially for the Secretary of Defense.

It is important to emphasize that a Secretary's interest in restraint also is partially a product of the strategic circumstances he faces, and can change as these circumstances change. If McNamara's behavior is any indication, a Secretary's interest in restraint tends to decline significantly as the strategic environment becomes more threatening, the future becomes more uncertain, or the margin of safety which the United States enjoys in critically-important areas declines. McNamara was most attracted to restraint during 1963-65 when the strategic force posture was amply large to meet requirements for launchers and the United States enjoyed a very substantial superiority over the Soviet Union in strategic forces. Under these conditions, restraint was economically desirable, and it safely could be contemplated. During his later years, however, McNamara did make necessary adjustments as these conditions began to change. The accelerating Soviet buildup and the uncertainties about the future led him to move forward
to protect America's deterrent capability by acquiring new offensive weapons, such as MIRV, and by taking out numerous R&D hedges.

Although it is impossible to forecast the nature of the strategic circumstances which future Secretaries of Defense will confront, it is appropriate to take note of the divergent trends which are unfolding during the mid-1970's and the countervailing incentives which they appear to be creating. On one hand, the SALT agreements have placed important boundaries on the United States-Soviet strategic competition and have reduced substantially some of the major uncertainties, especially about the size of future Soviet offensive and defensive forces, which dominated the McNamara period and created powerful incentives for the acquisition of new strategic weapons. They also have reduced considerably domestic pressures to procure a large ABM system and further to enlarge the offensive force posture. On the other hand, however, the strategic balance has changed a good deal since the mid-1960's; and the strategic circumstances which have emerged since McNamara's departure have created new challenges and problems. The Soviet Union no longer is inferior in numbers of launchers but has achieved strategic parity, and it is moving forward through a vigorous R&D and procurement effort to modernize its strategic forces. If the momentum of this effort continues to its ultimate conclusion, the Soviet Union will acquire a highly flexible and diverse offensive force posture which will provide the capability to destroy not only American cities but also large numbers of Minuteman missile silos and other military targets.

It is impossible to know how McNamara might react to this strategic situation were he in office now. What can be said is that McNamara, despite his preference for restraint, always moved promptly and aggressively to meet
new challenges. This particularly was the case when America's deterrent capability was threatened. But he also insisted on having adequate options to pursue feasible United States wartime objectives, and he was prepared when necessary to maintain pace in the competition in any area of important weaponry if the Soviet Union insisted on forging ahead.

Regardless of what McNamara might do, the ongoing Soviet buildup is creating incentives for contemporary Secretaries of Defense to make adjustments and compensations in the strategic force posture in response to anticipated Soviet gains. One response is to explore new weapon systems which are less vulnerable to attack and therefore provide a better insured deterrent capability. A second response is to press forward on the development of new weapons and technologies which promise to provide improved war-fighting capabilities, especially capabilities to respond flexibly and to attack Soviet military targets, in order to prevent the development of strategically meaningful asymmetries in this regard.

Sometimes, then, a Secretary of Defense might believe that restraint is not desirable. Clearly not all Secretaries will bring to office the beliefs, priorities, and expectations which made McNamara so favorably disposed to wide-ranging restraint. Indeed, McNamara might well have been atypical in this regard. To say that strategic considerations and the role requirements of his office sometimes inhibit a Secretary's willingness to exercise restraint, however, is not to say that these factors totally prohibit any consideration of this course of action or make unfettered expansion appear to be a desirable option. Concerns for fiscal prudence and arms control, as well as a reluctance to compete in unprofitable areas where the United States faces adverse cost-exchange ratios and similar disadvantages, create countervailing incentives.
Just as they motivated McNamara in the past, so also are they likely to remain sufficiently compelling during the foreseeable future to lead future Secretaries of Defense to favor restraint in particular cases if not on such a wide-ranging basis. Accordingly, it is appropriate to ask whether and under what conditions restraint is feasible.


McNamara's experience demonstrates conclusively that restraint can be a difficult task. Despite his power, his efforts, and his skill, McNamara sometimes failed; and the simple fact that he was forced to seek SALT negotiations as a device to preserve control is a clear indication of how difficult it can be for one man, however powerful, to stand firm in the face of massive bureaucratic momentum and intense political pressures. Despite his legal authority to control the defense budget, the Secretary of Defense does operate under powerful political pressures and more subtle analytical constraints which can inhibit sharply his willingness to exercise his authority and his ability to block strategic weapons which he considers to be unnecessary and undesirable. At the same time, however, the bureaucratic politics model exaggerates the power of these constraints. They can inhibit the Secretary, but they do not necessarily have to paralyze him. The Secretary of Defense does have considerable legal authority and, under proper conditions, a large amount of political power and leverage at his disposal and therefore need not necessarily be politically impotent in the face of pressures from the military services, the Congress, and domestic interest groups. Consequently, while restraint is seldom easy, it is not impossible.

Certainly the constraints are not so imposing as to justify Morton
Halperin's argument that the concept of a powerful Secretary of Defense should be downgraded, and that hope for wise defense policy should be placed in the hands of the White House and Congress.\(^1\) The establishment of layers of review outside the Pentagon, such as the Office of Management and the Budget, the White House Program Review Committee, and the Congressional Budget Office is a sound strategy in the sense that these offices can provide useful alternative sources of analysis and evaluation, and additional buffers against unwise policy choices.\(^2\) But there are no substitutes for a strong Secretary of Defense. Indeed, it is likely that these outside layers depend for success upon the presence of a powerful Secretary of Defense who is willing to listen to their advice.\(^3\) All of these offices lack the direct legal authority which the Secretary possesses to control the defense budget as well as potential leverage which he can exert, and they are largely dependent upon the Pentagon to provide the detailed information which is necessary for evaluating effectively military service recommendations. In the absence of a strong Secretary of Defense capable of bringing Presidential power directly to bear and becoming involved in the details of weapon systems, outside competitors can hardly be expected regularly to be capable of offsetting the major advantages which the military services possess by virtue of their control over defense resources, their political influence, and their ability selectively to present information and analyses which support their causes.

\(2\) \textbf{A. Political Factors Are Important}

But although a powerful Secretary is required for any systematic attempt to exercise restraint, not all Secretaries are politically powerful. A Secretary of Defense can be either strong or weak, or somewhere in between. Consequently, some Secretaries are capable of achieving a good deal more than
others. Much depends upon a complex set of political considerations, including
the strength of his own position and that of the President, the degree to
which the President sympathizes and provides support, their willingness to
pay political opportunity costs, and the degree of opposition the military
services and Congress provide. Clearly, a powerful Secretary who enjoys strong
Presidential support and is willing to provoke opposition is capable of
achieving a good deal more than a politically weak and vulnerable Secretary
who feels compelled to proceed cautiously and to make a steady stream of
concessions. Likewise, a Secretary of Defense who faces little opposition
has an easier task than a Secretary who faces firm demands from the military
services, a united Joint Chiefs of Staff, and intense Congressional pressures.

Since these political constraints are subject to change, the ability of
the Secretary of Defense to exercise restraint can fluctuate a great deal not
only from one Secretary to the next, but also during the course of one
Secretary's tenure. A Secretary can begin his tenure with considerable
freedom to act, and then suffer a steady erosion as his position deteriorates,
opposition builds, and Presidential support declines. There is, of course,
no fixed political law which dictates that a Secretary's political power
must decline as a function of the number of years he is in office. Nonetheless,
a Secretary's power and freedom normally are greatest during the initial
months of a new President's administration, which usually is the period in
which Presidents make their most important policy innovations, or during the
initial months of his own tenure if he enters in the middle of a President's
term. Thereafter, Secretarial powers normally do decline, as they did for
McNamara, and the rate of deterioration is governed by the ebb and flow of
American governmental politics.
Similarly, a Secretary's ability to exercise restraint can vary a great deal as a function of the issue at stake. Some weapon system proposals are easier to block than others because the political consequences of restraint are less adverse. For example, it is a good deal easier to scale back production plans and to stretch out procurement schedules than to cancel new strategic weapon systems altogether. Likewise, it is easier to block new weapons than to make major contractions in the forces-in-being without providing the military services adequate compensation. McNamara's experience suggests that it is easiest to block weapons or to alter their cost and performance characteristics when they are in the initial stages of development and before strong coalitions have grown around them. As weapons pass progressively through the various stages of R&D, sunk costs grow, flexibility declines, the stakes become higher, alternatives diminish, vested interests become increasingly engaged, and political pressures for deployment increase.

Since these political factors and the issues at stake can change from one period to the next, McNamara's experience cannot necessarily be taken as prologue and the course of the future obviously cannot be forecasted in any fine detail. Nonetheless, some basic trends and patterns can be noted. First, McNamara might have been a unique case in terms of the political power he enjoyed. The extensive power which he wielded throughout his tenure is not easily acquired by Secretaries of Defense and probably will not be equalled by another Secretary for many years. Consequently, the fact that McNamara was able to march forward simultaneously on numerous fronts in the teeth of opposition and to achieve considerable success does not mean that future Secretaries of Defense will be in a position to contemplate taking similarly ambitious steps.
At the same time, however, future Secretaries of Defense might well be confronted with a less difficult political situation than McNamara faced. McNamara was attempting to institute fundamental changes in military policy and defense decision-making which challenged the professional judgments and institutional prerogatives of the military services and Congress on a broad range of fronts. Consequently, many of his policy decisions for strategic forces provoked particularly intense and united opposition. Moreover, the Joint Chiefs of Staff carried considerable prestige in many quarters, and they benefitted from the active support of many powerful conservative Congressmen who were capable of exerting substantial control over Congressional appropriations. A somewhat different set of political conditions now exists. First, contemporary Secretaries are not likely to have so ambitious an agenda, and therefore are not likely to provoke such widespread opposition. Second, the concept of a powerful, independent-minded Secretary of Defense is less new and controversial than was the case during the tumultuous years of the early 1960's, when McNamara's intrusion into their affairs was deeply resented by the military services. The institutional struggles between the OSD and the military services which dominated the McNamara era have since abated and thus do not complicate Secretarial decision-making and civil-military relations to the extent they did during the 1960's (albeit partially because recent Secretaries have been less ambitious and more willing to conciliate). In addition, the prestige of the Joint Chiefs of Staff has been tarnished as a result of the Vietnam War and consequently the Chiefs no longer command the influence in Congress or elsewhere they once did. Moreover, the Congress in recent years has shown a somewhat more skeptical attitude toward large defense expenditures and a greater willingness to cut the defense budget and to oppose some costly weapons.
These developments would appear to augur that future Secretaries will be confronted with less intense and less powerful opposition, and sometimes even outside allies, at least for the immediate future. Precisely how far these developments have gone and will go, however, is open to question. The military services still wield substantial influence within the Pentagon; and the fact that the Congress recently undercut Secretary of Defense James Schlesinger's attempt to develop a low cost competitor to the Trident submarine is a clear indication that Congress, despite its more liberal political hue of recent years, still is willing to support the military services in some cases, especially when domestic political considerations so dictate. Moreover, history shows clearly that Congressional attitudes are notoriously fickle and can change a great deal from one period to the next. Consequently, the campaigns which have been launched by liberal Congressmen in recent years against some weapons might not presage the future. While it seems unlikely that the Congress will soon revert to its early 1960's policy preferences, it by no means is certain that the Congress can be expected to become a consistently more eager and willing ally to Secretarial efforts to exercise restraint. If in fact the Congress continues to support the military services in some cases, it is probable that recent Congressional efforts to assert control over defense decision-making, to limit Presidential impounding authority, and to circumscribe the White House's latitude in selecting weapons will have the effect of creating greater legal impediments and weakening the Secretary's ability to control the force posture, to reduce costs, and block undesirable weapons.

The missing ingredient in this political equation, of course, is the President. Whether future Presidents will be willing and able to provide the
kind of support which Kennedy and Johnson gave McNamara is open to question.
Much obviously depends upon the individuals who will occupy the White House in the late 1970's and beyond, and the constituencies to whom they will respond. What can be said is that the growing fiscal demands upon the federal government are creating incentives for any President to exercise fiscal prudence in the federal budget, including the defense budget. Whether this incentive will be translated into a growing Presidential willingness to block costly strategic weapons obviously will depend upon White House fiscal and political priorities. Quite apart from Presidential preferences, there also remains the question of Presidential power. While it is impossible to predict the political strength of future Presidents, it at least can be noted that a strong sentiment throughout the nation appears to exist in favor of weakening the Presidency and making it more responsive to the will of Congress, domestic demands and pressures, and even the federal bureaucracy. Whatever its other features, this sentiment, if increasingly translated into reality, will have the effect of weakening the Secretary of Defense's ability to exercise restraint. One of the virtues of the "imperial Presidency" is that strong Presidents are capable of resisting intense pressures for bad policies; and history shows that the Presidency certainly has not been the only source of policy error in the past. Obviously weakened Presidents will be less capable of embarking upon ill-advised adventures. But they also will be less able to resist pressures for poor policies and less capable of providing the support which a Secretary of Defense needs to stand firm against powerful opposition.

2 B. The Question of Secretarial Priorities and Exogenous Factors

Quite apart from these political considerations, the Secretary of
Defense's ability to exercise restraint also is directly dependent upon the amount of time, energy, and political capital each Secretary is willing to devote to strategic force posture issues. Since a Secretary of Defense has only a limited supply of personal resources at his disposal, he is capable of dealing with only a portion of the pressing issues which demand his personal attention and therefore is not able to become involved in a number of important subjects. Difficult choices have to be made. The manner in which a Secretary will allocate his resources obviously will vary a great deal from one Secretary to the next as a function of personal priorities and immediate circumstances. Although McNamara was willing to devote a great deal of effort and attention to strategic forces, there certainly is no guarantee that other Secretaries will feel similarly inclined.

In this context, it is important to point out the very large effect which exogenous factors can have on a Secretary's ability to deal with the strategic forces. The impact which the Vietnam War had on McNamara's behavior demonstrates clearly the manner in which some unanticipated external event can intrude to sap the time and energy of a Secretary and to create a host of political and bureaucratic problems which greatly complicates his task. To a considerable extent, the absence of such exogenous events probably is a prerequisite for any serious Secretarial effort to exercise wide-ranging restraint.

2C. The Role of Strategic Arguments and the Importance of Staff Assistance

The McNamara experience further demonstrates that the budget formation process clearly is more than an exercise in bureaucratic struggle, bargaining, and accommodation. Strategic and economic considerations play an important role in determining the patterns of bureaucratic alignment and the fate of
weapon systems, and the ability to marshall good arguments and persuasive analyses is a key determinant of political power. Consequently, some strategic weapons are easier to block than others precisely because they are susceptible to criticism and are difficult to justify; this particularly is the case for weapons which grossly violate cost-effective standards and clearly have overriding negative implications for the arms control objective. But in all cases, the Secretary of Defense is dependent upon defensible reasons, and consequently an essential ingredient in any campaign for restraint is his ability to probe deeply into the arguments submitted by the military services and to formulate sophisticated independent positions which provide coherent, unassailable justifications for decisions to block weapons. Since skilled staff aides can provide this capability, even a Secretary of Defense who is willing to devote substantial attention to the strategic forces requires the assistance of loyal and skilled aides who are capable of providing expert analytical advice and deftly representing the OSD in dealing with the military services.

McNamara was fortunate in this regard. He benefitted from the presence of three loyal and intelligent Deputy Secretaries of Defense, Roswell Gilpatrick, Cyrus Vance, and Paul Nitze (during the last few months). And he received excellent analytical advice from Systems Analysis and DDR&E, and to lesser degrees in this case, from the Comptroller and ISA. Other Secretaries of Defense might not be so fortunate. Indeed, McNamara might have been atypical in his ability to assemble such a large number of highly qualified advisors.

What the future holds in store is impossible to forecast, but recent developments hardly augur well in this regard. Following McNamara's departure,
Secretary Melvin Laird sharply reduced the size and stature of Systems Analysis, which since has been renamed to be the Office of Program Analysis and Evaluation (PAE). He also largely curtailed its ability to initiate new ideas, and basically restricted its function to reviewing service recommendations. As a result, PAE assumed a low profile during his tenure, and it did not play a particularly large or influential role in defense decision-making. Although Laird's actions might have helped to produce improved relations with the military services and the Congress, they also has the negative effect of contributing to a marked decline in the ability of the OSD critically to analyze service recommendations and to stimulate a productive and meaningful debate on force posture alternatives. Since Laird's departure, Secretary Schlesinger apparently has made some attempts to reinvigorate PAE and to recruit better personnel. But PAE's future at best still remains cloudy, and with it the ability of future Secretaries to formulate sophisticated, independent judgments about new weapon systems and force posture alternatives.

The McNamara experience also suggests, however, that the Secretary's very dependence upon OSD staff support in itself can be a source of vulnerability, and that when these staffs behave independently, they are capable of hampering his efforts. The fact that Systems Analysis showed a few streaks of independence is a clear indication that even close staffs which derive their power directly from Secretarial support are capable of staking out separate terrain; and it illustrates the paramount importance of recruiting staff officials who share the Secretary's strategic perspectives and fiscal priorities. Despite a few cases of deviancy, McNamara did succeed in staffing Systems Analysis with officials who operated on similar strategic and
managerial wavelengths, and therefore agreed with him and willingly supported him on nearly all occasions. He was less successful in staffing DDR&E with officials who shared his concern for fiscal prudence and efficient economic management. If his experience is a representative indicator, it would appear that the assigning of more economists and fiscal management specialists would supplement its already impressive technical skills and thus would improve DDR&E's ability to manage the R&D budget and to control the R&D process in accordance with Secretarial priorities.

2 D. The Prerequisites for Restraint: Was McNamara Unique?

Restraint clearly is not a hopeless task, but in most circumstances it is a difficult undertaking. In reviewing McNamara's experience, one is struck by the diversity and multiplicity of considerations which can constrain a Secretary of Defense, and by the many structural factors which appear to be prerequisites for even a highly-motivated Secretary to move forward: legal authority, adequate political capital, sufficient time and energy, unwavering Presidential support, little opposition or at least a sufficiently strong political position to risk antagonizing the military services and Congress, unassailable reasons, good staff support, preferably Pentagon allies or even service acquiescence, favorable strategic circumstances, the absence of adverse exogenous factors, and probably luck. Perhaps all of these elements do not have to be present in each case, but certainly some minimal combination of them must be.

All of these factors were present to greater or lesser degrees during McNamara's tenure, especially during 1963-65. Consequently, McNamara was able seriously to contemplate wide-ranging restraint. But McNamara's favorable circumstances by no means guarantee that other Secretaries will be equally
fortunate. Indeed, it is likely that if McNamara was not unique in this regard, then he certainly was atypical in the degree to which most of these factors worked in his favor. At the very time McNamara became most interested in restraint, the bulk of these factors fell into place and made restraint possible. During his last two years, the strategic and political circumstances became less favorable. But even so, his position did not deteriorate to the point where he was forced to capitulate entirely. He still was able to hold his ground along a number of fronts, or at least to prevent complete defeats.

But while it is unlikely that other Secretaries will enjoy similar favorable circumstances either at the high or low points of their tenures, it does not follow that the norm for Secretaries is something approximating political impotence. Normally these structural conditions are neither completely favorable nor totally adverse but fall somewhere in between. Consequently, restraint often is possible, if not on such a wide ranging basis, then at least to some degree.

3. The Importance of Bureaucratic Strategy

The degree to which restraint is possible is also governed partially by the Secretary himself, his skill, and the bureaucratic strategies he employs within the Pentagon. While a Secretary's ability to move forward is circumscribed by factors beyond his control, it is not totally predetermined in some fixed and rigid sense. A Secretary of Defense need not be a prisoner of his circumstances. To some degree, a skillful Secretary can manipulate his environment, particularly within the Pentagon, and can reduce the constraints he faces and foster more favorable conditions for making controversial decisions. Much therefore depends on a Secretary's ability to devise sound strategies.
and skillfully to manipulate the numerous bureaucratic levers at his disposal. The McNamara period is rich in the use of bureaucratic strategies. McNamara and his OSD aides consciously thought in terms of bureaucratic strategy, and they employed a diverse set of strategies for dealing with the military services. Quite often, as chapters two and three described, these strategies worked. On other occasions they failed or backfired. And in some cases the military services were able to devise counterstrategies for dealing with OSD. Accordingly it is appropriate now to analyze these strategies for the purpose of gaining insights about their costs and benefits, as well as the circumstances under which they might be appropriate, and to examine some of the critical comments which have been made about McNamara's performance in this regard.

3 A. Gaining Presidential Support

The McNamara period provides an excellent example not only of the importance of gaining Presidential support, but also of the manner in which it can be secured. Presidential support is not automatically forthcoming, even when the President is sufficiently powerful to provide meaningful assistance. It must be won; and it easily can be lost. McNamara was able to gain the support of Presidents Kennedy and Johnson by establishing a reputation for competence and loyalty, and by being a political asset. And he was able to maintain this support throughout the bulk of his tenure. Although in his last year his relationship with Johnson cooled as a result of disagreements over Vietnam, McNamara still had enough influence to maintain considerable Presidential backing in his dealings with the military services on strategic forces. Other Secretaries might not be so fortunate; but the McNamara legacy at least provides a recipe for attempting the task.
Even with overall Presidential support, however, sometimes it becomes necessary to make adjustments to Presidential priorities and circumstances. An intelligent and shrewd Secretary, like McNamara, will be especially concerned to protect the President and to not overextend the mandate he receives from the White House. Accordingly, sometimes it is appropriate, when Presidential needs so dictate, to trim the agenda, to become more selective and discriminating, to be cautious, to refrain from taking steps which might provoke too much controversy, and to become more accommodating to the military services and Congress. The extent to which these steps are necessary obviously depends a great deal upon the President's position and the mandate he provides, the Secretary's own position, the stakes, and the risks he is willing to take. The better the circumstances, the more ambitious a Secretary can afford to become and the harder the bargain he can afford to drive.

When a Secretary does decide to make a stand, sometimes it becomes necessary to employ his persuasive talents to shore up Presidential support, even when his position with the White House is solid. Presidents normally have a limited amount of political capital at their disposal and are reluctant to provoke too many enemies. Consequently, they often have to be convinced that the stakes are worth the political costs. Moreover, even a President who is willing to make controversial decisions might not be convinced of the wisdom of the Secretary's advice and therefore might have to be persuaded. Since Presidents normally prefer to rely upon multiple advisors, the Secretary of Defense often faces considerable competition for a President's ear. McNamara was able to triumph almost completely over the competitors he faced precisely because he established and preserved a reputation for offering
sound advice. But this is a task which is not easily accomplished. And finally, when the President is locked into a particular position and the stakes are sufficiently high, it can become necessary to present advice which he does not want to hear. As McNamara's experience with Johnson on the Vietnam War demonstrates, this clearly is a dangerous tactic and any Secretary who employs it runs the risk that he will not be around long enough to use it more than once.

3B. Dealing With the Military Services and Congress

While the gaining of Presidential support requires skill and discretion, the ability to deal with the military services and the Congress also requires sound political instincts. The degree to which a Secretary employs successful tactics in this regard can have a very large bearing on his ability to exercise restraint. Since military and Congressional opposition is a primary political constraint, success in reducing this opposition can permit a Secretary to achieve considerably more than otherwise would be the case. And failure can be an important cause of a Secretary's inability to achieve his managerial objectives.

Some criticisms have been directed at McNamara's performance in this area. In particular, the charge has been raised that McNamara, through his centralization of power, his rejection of the advice offered by the military services and Congress, and his failure to show more respect for their institutional prerogatives, provoked institutional polarization and stimulated a particularly intense opposition which spilled over into substantive policy debates and ultimately hampered his efforts to exercise restraint. If the logic of this criticism is taken one step further, presumably McNamara would have had an easier time and would have been able to achieve more had he been more
accommodating, less brusque, and more politically aware of the realities of institutional politics.

Despite the fact that some of McNamara's actions undoubtedly had significant negative political effects, this criticism should not be accepted without question. First, it is important to remember that McNamara hardly was a political neophyte. He was concerned about maintaining tensions with the military services and Congress at acceptable levels. He regularly took soundings within the Pentagon in order to determine how far he could go without provoking the Joint Chiefs of Staff too far; and he employed a complex array of political tactics to reduce the opposition to his decisions, to recruit allies within the Pentagon, and even to gain the acquiescence of the military services. Although the actions he took to centralize power, to seize the initiative from the military services in force planning, and to keep Congress at arm's length were quite controversial, they were central features of a conscious political strategy to revolutionize defense decision-making and to forge a coherent defense policy, and they were key ingredients in his campaign for restraint. The negative consequences which ensued from these actions were accepted in OSD as being inevitable and justifiable political opportunity costs. Only by fully using his legal authorities, strengthening OSD, and antagonizing the services and Congress could he have hoped to block a large number of weapons.

Consequently, this criticism discounts the virtual certainty that in the absence of these controversial actions, McNamara would have achieved less, not more. In light of prevailing attitudes when he assumed office, a high level of institutional tensions was an inevitable byproduct of his reforms and the force posture goals he set for himself; and institutional tensions could
not have been reduced dramatically without sacrificing his ambitions for substantive policy as well as decision making. Perhaps a more tranquil set of institutional relations was a feasible option, but a prerequisite would have been a weakened OSD and a considerably less impressive Secretarial capability to formulate independent positions and to act decisively, the very ingredients which made coherent policy choice possible. A second prerequisite would have been an increased willingness to accept the policy recommendations of the military services and Congress, and thus fewer decisions for restraint. Although institutional conflicts partially were a source of McNamara's difficulties with them, genuine policy disputes also were extremely important and had a dynamic of their own apart from institutional issues. Consequently, Congressional and military opposition to McNamara's policies would not have subsided had McNamara decentralized the Pentagon's force planning process and shown greater deference to Congress. McNamara still would have been faced with service demands to continue the strategic buildup, and he would have been in a considerably weaker position to resist their pressures. And since the litmus test of a greater willingness to heed their institutional prerogatives would have been increased acquiescence to their policy recommendations, it would have been virtually impossible to reduce their antagonisms without capitulating to their demands.

A rejoinder to this argument is that McNamara could have accomplished both purposes by publicly announcing that he was employing a budget ceiling to make decisions. Presumably the budget ceiling would have given him a public argument for refusing to deploy strategic weapons which the military services and Congress would have been willing to accept; and since it would have enabled him to refrain from questioning the professional judgments of the
military services, it would have helped reduce OSD-JCS tensions.

Without questioning the argument that a more forthright admission that a budget ceiling did exist might have had some marginally beneficial effects, it is important to point out that it hardly would have been a cure-all. A budget ceiling forces the establishment of priorities and it enables the Secretary of Defense to reject low priority items, once the ceiling has been reached, purely for fiscal reasons. But there certainly is no guarantee that the Secretary of Defense and the military services will agree on priorities; and they certainly did not during McNamara's tenure. As a result, McNamara still would have found himself in a debate with the service chiefs over the strategic military judgments which formed the basis of Pentagon priorities, a debate which could not have been settled by the budget ceiling. Moreover, since his insistence that force posture decisions were based on requirements had several managerial and tactical advantages for dealing with the services and Congress, a public acknowledgement that a budget ceiling did exist could have had adverse effects. This particularly would have been the case had McNamara replaced rather than supplemented program analysis with a budget ceiling and simply allocated a fixed amount to the services for use as they pleased. Such a tactic would have eliminated his ability to make coherent judgments about the implications of new weapon systems for national security, and it would have invited the Congress to set its own arbitrary budget ceiling which could well have been lower than the minimal figure McNamara wanted.

This, of course, does not mean that the criticisms which have been leveled at McNamara's political performance completely lack merit. To some extent the rather abrasive personal style of McNamara and his OSD aides was a source of friction apart from fundamental procedural and substantive issues.
Consequently, a less antagonistic demeanor and an ability to show more personal respect for senior military officers and less apparent disdain for Congress might have produced a less tense political climate which could have a beneficial effect on the course of policy debates and somewhat eased McNamara's task. The budget ceiling would have provided one more argument for controlling the strategic forces program budget and for making hard force posture choices; and perhaps the military services would have been more willing in some cases to accept McNamara's controversial decisions. Likewise, an effort to provide the JCS and the military services a more meaningful role in the planning and programming phases of the budget process, without simultaneously sacrificing OSD's right to make independent judgments and to initiate actions, might have mollified military officers somewhat on this score while still not undercutting badly McNamara's ability to exert control.

Regardless of what McNamara might have done better his experience suggests clearly that the goals of controlling the budget and of exercising restraint are incompatible with the objective of avoiding strained relations with the military services and their Congressional supporters in the sense that the pursuit of the former incurs costs to the latter and the pursuit of the latter often necessitates some sacrifice of the former. Consequently, the alternative strategy that grows out of this criticism of McNamara's approach, which (as implemented partially during the Laird reign) amounts to de-emphasis on the Secretary of Defense as strategist and decision-maker, the weakening of OSD, and the transferring of operative decision-making authority to the White House, explicitly trades-off a more tranquil set of institutional relations for a diminished capacity to control the specific
products of the weapons acquisition process. Since a powerful and assertive Secretary of Defense is an essential ingredient for effective control, this alternative strategy does not appear capable of maximizing both objectives simultaneously.

3 C. Political Concessions: Degree and Timing Are Important

Despite the facts that a high level of institutional tensions is a natural result of any significant Secretarial effort to exercise control and restraint, and that sometimes a Secretary of Defense has little alternative than to stand firm against military and Congressional pressures, the McNamara period demonstrates that it is both necessary and possible for a skillful Secretary to regulate the degree to which political tensions rise. Effective tension-management thus is an important element in any Secretarial campaign for restraint; and a variety of political strategies exist for accomplishing the task. One of these strategies is to attempt to recruit allies, to split the Chiefs, and to isolate one's opponents. At the other extreme is the strategy of making unilateral, non-reciprocated concessions in order to lead off impending confrontation and to restore some minimal level of institutional harmony. It is, of course, impossible to prescribe when and under what circumstances this strategy should be used. What can be said is that a sharp eye for what is possible and necessary is required, as is a keen sense of timing. It is possible to concede too much, to underestimate one's strength, and to overestimate the political costs of driving a harder bargain. But it is also possible to concede too little, to fail by compromise to achieve one's political purposes while simultaneously conveying an appearance of weakness and vulnerability. Likewise, it is possible to concede too early, or too late. Sometimes, it might be best
to hold out as long as possible in the hope of success; but sometimes it might be better to make the inevitable concessions early, and thus to avoid a political confrontation and the subsequent appearance of defeat.

3D. The Perils of Providing Compensation and the Importance of Foresight

A third strategy, which imposes costs but gains benefits in return, is to provide the services compensation, either tacitly or through overt bargaining, in order to gain their acquiescence for restraint or contraction. This also is a tactic which should be used with care and discrimination. In particular, care should be taken to insure that in cases of reciprocal bargaining the Secretary gets the better half of the bargain or at least the best deal that political circumstances permit. The bomber air defense package deal is an example of the perfect bargain; the Air Force gave up a great deal and the OSD ended up conceding little in return. The bomber-MIRV package deal is another matter. Despite initial appearances of equality, the Air Force ended up getting virtually everything it sought and sacrificed little in return. Its chief concessions were the retirement of the older model B-52 bombers and delay of AMSA; in turn, it received the FB-111, MIRV, and SRAM. However, the retirement of the B-52's was delayed significantly as a result of the Vietnam War and AMSA was approved after McNamara's departure. When interpreted with the benefit of hindsight this hardly was a good bargain for OSD. Perhaps at the time the deal appeared advantageous. But if so, the experience shows clearly the importance of foresight and the extent to which the unanticipated can occur several years later to make a good bargain look bad. Indeed, one is struck by the fact that in both cases one of the parties was victimized because it failed to foresee the effect which future events could have on its end of the bargain. Although the OSD
suffered in the latter case, the Air Force lost in the former. It failed to anticipate that its promised new bomber air defense system might never materialize.

Finally, it should be noted in passing that the OSD certainly has no monopoly on this sort of political skill and that the military services are capable of developing counter-strategies of their own. For example, the military services eventually caught on to McNamara's game of divide and conquer, and they began to band together in order to form a solid front of opposition. Similarly, they made some attempts, mostly unsuccessful, to drive a wedge between McNamara and Johnson; and they did make some inroads into building alliances of support among the OSD staffs. And there is every reason to suppose that they would have performed quite skillfully in bartering had McNamara chosen to make greater use of reciprocal bargaining strategies.

3E. Cost-Effective Analysis as a Political Weapon and the Manipulation of Strategic Concepts

Quite apart from these political tactics, a Secretary of Defense can employ analytical strategies to improve his position. A Secretary needs defensible reasons to turn aside service recommendations, and cost-effective analysis can provide those reasons. Sometimes the Pentagon's analytical force planning process, if left to itself, will provide those reasons. But on other occasions it is both necessary and possible to intervene, and to establish terms of reference, assumptions, and scenarios which will help generate favorable conclusions and recommendations.

In particular, the ability to manipulate strategic concepts and their associated theories of requirements provides a very powerful lever for structuring the terms of debate in the Pentagon and shaping the doctrinal
framework which is employed for planning the strategic nuclear forces. McNamara manipulated this lever adroitly, and his skill in this regard played a significant role in his campaign for restraint. Indeed, the manner in which he installed the concepts of Assured Destruction and Damage Limitation, initiated the 1964 Damage Limitation Study, and then interpreted its results to suit his purposes indicates clearly the central role which cost-effective program analysis can play in shaping defense decision-making and generating the reasons that enable a Secretary to move forward. In this case, a single study transformed the debate in the Pentagon and provided the Secretary of Defense highly powerful reasons for halting the strategic buildup and blocking service recommendations for deployment of four major weapon systems. It is impossible to know how events would have transpired had this study never been conducted, but McNamara's position certainly would have been weaker and his task considerably more difficult.

3F. The Dangers of Manipulating Strategic Concepts

At the same time, it is important to point out that substantial reasons exist for employing this strategy of manipulating strategic concepts and initiating Pentagon-wide studies with care and discretion. First, such studies can be risky ventures. For example, the Damage Limitation Study started out by employing a strategic concept which appeared to create an open-ended requirement for forces and it appeared likely to its participants to generate the analytical reasons and political alignments that would have paved the way for major follow-on investments and the continuation of the strategic buildup. The fact that the study ultimately generated reasons which supported McNamara's position partially was a product of the strategic dynamics of the problem it addressed, but it also partially was an outgrowth.
of the peculiar scenarios and assumptions which were employed. And a large
element of good fortune probably also played a role. Under other circumstances,
the study might have had precisely the opposite effects and could have undercut,
rather than strengthened McNamara's position. As events turned out, of
course, this was a risk that was worth taking. But on other occasions, the
risk might not be worth the potential costs.

Second, such studies can have adverse side effects. For example, the
Damage Limitation Study, despite its beneficial results, also had the negative
effects of removing competition among the military services in performing
this mission, thus reducing the Secretary's capability to foster competition
among the diverse weapon systems at stake, and actually helped drive the
military services into a collegial alliance. In this sense, the study
hampered McNamara's efforts. Similarly, other studies, especially endeavors
which bring the services together and place all of their weapon systems
into a single package, might have equivalent negative effects. Studies
which focus on the marginal productivity of individual weapon systems
might not promise to offer an equivalent package of powerful reasons for
the Secretary to employ at his discretion, but they also would be less risky
and less likely to have such negative side effects.

Third, the strategy of manipulating strategic concepts can have unantic-
ipated long-term consequences. For example, the Assured Destruction concept
started out to be a managerial cost-controlling tool for the OSD, but it
underwent a major transformation in its implications for force planning and
ultimately operated to the benefit of the military services by providing them
powerful arguments for protecting the forces-in-being and modernizing them.
Indeed, one is struck by the extent to which both strategic concepts had
unanticipated consequences. The Damage Limiting concept started out as a concept which operated to the benefit of the military services. But the 1964 Damage Limitation Study completely changed its implications. While not all strategic concepts need have such results, the problem of the unanticipated clearly should be borne in mind and an attempt should be made to determine the extent to which the implications of alternative concepts are sensitive to changes in underlying conditions.

Fourth, the use of strategic concepts can have second-order costs. Strategic concepts are employed to structure the Pentagon's force planning process and therefore are useful to the extent they help Pentagon officials to invest in areas of greatest marginal productivity. But they also can help shape public understanding about United States military strategy and defense policy, and therefore should be judged according to the contribution they make in this arena. Some concepts sharpen public understanding. But others create misimpressions, and thus can have negative effects even if they are useful for force planning. Unfortunately, the twin concepts of Assured Destruction and Damage Limitation appear to have contributed to a good deal of public misunderstanding about United States military strategy and Pentagon views about nuclear war. Although these concepts helped drive home the basic message that nuclear war would visit horrible destruction upon the United States and therefore must be avoided at almost all costs, the peculiar ideas and vocabulary they employed appear to have created the following erroneous impression in some quarters: that the United States had decided to place all bets on deterrence, that the strategic offensive forces were targeted exclusively on Soviet cities, that since mutual assured destruction is one cornerstone of stability the capability to destroy targets other than cities is significantly destabilizing, that the Pentagon no longer was concerned about controlling escalation, that
nuclear war must be a spasm of destruction, and that in official thinking the
danger of increasing the probability of nuclear war far outweighed the gains to be made by making nuclear war more controllable.

The fact is, of course, that a large amount of continuity existed in Pentagon thinking from 1962 onward on military strategy, targeting doctrine, options, and the control of escalation. But this continuity was obscured by the changes which took place in strategic concepts; and the public misunderstanding that was created has lingered long after McNamara's departure and has hampered recent official attempts to stimulate a public debate on these topics.

Whether these costs in the public domain outweighed the benefits which McNamara gained within the Pentagon by employing these concepts is open to question. But regardless of the answer, there would appear to be a natural tension between controlling the force planning process and publicly driving home fundamental points on the one hand, and stimulating a discriminating public dialogue on the other. Strategic concepts, if not well-thought out, that are useful for the first purpose can be harmful for the latter, and vice-versa. Consequently, it is important at least to take cognizance of the possibility of such second order effects when concepts are manipulated for either of these purposes.

3G. Employing Strategic Weapons to Block Each Other: Blocking the Right Weapon Is Important

Another strategy which a Secretary of Defense profitably can employ in his efforts to exercise restraint is to employ some weapons as devices to block others. For example, it is possible to foster competition among weapons in the hope that the weapon system which the Secretary wants to block will come out on the short end, and therefore will be easier to cancel. Likewise,
this tactic can be employed in a purely political mode. It is possible to offer the military services one weapon as compensation in order to gain their acquiescence for a decision to cancel another.

McNamara often employed this strategy to good effect. For example, he employed qualitative improvements as an argument against further quantitative additions to the offensive missile force, and as a device to reduce Air Force opposition to the freezing of the Minuteman force. He also employed the offensive missiles to block the AMSA bomber, and MIRV to block the Nike-X ABM. In addition, he successfully stimulated competitors to the WS-120A ICBM and the F-12 interceptor. If anything, McNamara probably should have employed the tactic of fostering competition during the development process more often. This at least is a conclusion which grew out of interviews with former OSD officials. For example, he had no competitor to the Nike-X ABM, and some competition, perhaps from a Navy sea-based ABM, might have proven helpful. Similarly, McNamara might have benefitted from the presence of another long range bomber as a competitor to AMSA.

Despite the utility of this strategy, it too can have negative and unanticipated effects, and therefore should be used with care. In particular, it is essential to make sure that the weapons which are developed as competitors or are used to provide compensation are more palatable than the alternatives they are designed to block. Whether McNamara succeeded in this regard is open to question in some cases. For example, a case can be made that MIRV, which McNamara employed to block several other offensive weapons, was the least desirable weapon of all and that he might have been better off to concentrate his efforts on blocking MIRV and to make concessions on the other weapons. This of course is a controversial argument, and its acceptability
depends largely on what one thinks of MIRV; opinions obviously differ on this score. But even if the critique of MIRV is not accepted, certainly some error can be found, at least in hindsight, in McNamara's handling of the FB-111. McNamara originally offered the FB-111 as a sop to the Air Force to gain its approval for the retirement of the older model B-52's and a delay in AMSA development. This strategy worked; but after McNamara's departure, Secretary Clifford became interested in scaling back the FB-111 program and was persuaded by a high DDR&E official to authorize development of AMSA as a bureaucratic device to provide compensation to the Air Force for the loss of the FB-111. As a result, the FB-111 became the immediate triggering device of the very weapon system it originally was intended to block. Perhaps McNamara could not have foreseen this eventuality. But this case certainly demonstrates the pitfalls of employing this strategy and the importance of at least attempting to assess the long range ramifications of providing compensation and fostering competition. Finally, it should be noted that the military services are capable of devising counter-strategies to these tactics and of stifling competition when it threatens their favorite weapons. For example, the Air Force blocked DDR&E plans for a stretched version of the FB-111 as well as the SCAD missile because both technologies appeared to create a potential danger to AMSA.

3H. Strategies for Managing the United States-Soviet Competition

An essential ingredient in any Secretarial campaign for restraint is the ability to manage properly the United States-Soviet competition. On one hand, this involves the ability to make adjustments in the United States force posture to the anticipated Soviet threat and to employ arguments about the action-reaction phenomenon to block weapon systems which cannot compete
against Soviet opponents and suffer from adverse cost-exchange ratios. But it also involves structuring the United States force posture in order to encourage the Soviet Union to exercise restraint and to create incentives against provocative Soviet actions.

McNamara succeeded in the former sense and also the latter sense when he employed MIRV as a device to discourage the Soviet Union from deploying a thick ABM system. However, former high OSD officials who were interviewed suggested that McNamara might have made a mistake by not moving forward more aggressively to acquire improved hard target kill capabilities against Soviet missile silos. In their estimation McNamara might have been able to force the Soviets to place more emphasis on deploying a survivable missile force and thus might have helped deflect them away from investing so heavily in large throw-weight missiles which had a potential counterforce capability of their own, or even motivated them to abandon land-based missiles entirely and to invest exclusively in less-provocative sea-based forces. This, of course, is a debatable argument. But it demonstrates that the task of exerting influence over Soviet force posture decisions is an important consideration in force planning, and that decisions for expansion sometimes can provide the levers which encourage the Soviets to exercise restraint.

3 I. Future Research Priorities: Methods of Control

Perhaps there are other strategies as well which a Secretary of Defense can employ to deal with the vast bureaucracy over which he presides. If so, a worthy task of future scholarly research would be to identify these strategies and to evaluate them. Certainly such an undertaking would be the next logical step to follow the wave of theorizing on bureaucratic politics
which has swept over the scholarly literature in recent years. The bureaucratic politics literature has made a useful contribution by calling attention to the important role which organizational politics plays in governmental policy-making, and by stressing the constraints which this political milieu places on the President and the Secretary of Defense. But in the process it has exaggerated the importance of these constraints, and largely has ignored the fact that top officials can manipulate their bureaucracies to gain their objectives. Consequently, it has underestimated the powers of the Secretary of Defense; and perhaps most important, it has not provided significant insights on the strategies a Secretary can employ to achieve his objectives. It provides at best a deterministic and pessimistic, critical interpretation of governmental decision-making. But it does not provide a sufficiently balanced appraisal of Secretarial and Presidential manipulative powers, nor does it provide guidance on the strategies which exist for controlling this cumbersome and often resistant bureaucratic apparatus. But the McNamara experience does demonstrate that while control, rational decisions, and restraint are difficult, they are possible. Now that the barriers to these goals have been identified, it is necessary to determine how these goals can be accomplished.
FOOTNOTES FOR CHAPTER VI


2. For a presentation of this strategy see Adam Yarmolinsky, The Military Establishment, New York, Harper, 1971, Ch. 25.

3. The budget examiners in the Office of Management and the Budget, for example, often pick the issues on which they decide to engage the military services on the basis of the Secretary's attitude and his willingness to formulate an independent position.


5. A number of former high Pentagon officials voiced this criticism during interviews.

6. See Sanders, op. cit., for a description of the changes Laird instituted in defense management and decision-making.

7. 6.2-1a,b,c.

8. This viewpoint was adopted by a few former OSD officials.

9. 6.2-3.

10. 6.2-4, Shortly after the DDR&E plan for the stretched FB-111 was made public, indications began to appear that the SAC was hostile to the idea because it posed a threat to AMSA. See Aviation Week "Improved B-111 Proposed to SAC," June 6, 1966.

11. 6.2-5a,b,c.
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BIOGRAPHICAL NOTE

Name: Richard Lawrence Kugler

Born: Minneapolis, Minnesota
May 24, 1945

Education: University of Minnesota
Bachelor of Arts, 1967

Marital Status:
Married to the former Janet Mary Hiller

Military Service:
Active Duty, United States Air Force 1968-1972
Left Active Duty in Rank of Captain

Teaching Positions:
Teaching Assistant in Political Science, University of
Minnesota, 1967-68

Instructor, University of Maryland, Far East Division,
Political Science, 1969-1970

Faculty Member, Defense Intelligence School

Teaching Assistant in Political Science
Massachusetts Institute of Technology
1974-1975