INFORMATION TO USERS

This was produced from a copy of a document sent to us for microfilming. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the material submitted.

The following explanation of techniques is provided to help you understand markings or notations which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting through an image and duplicating adjacent pages to assure you of complete continuity.

2. When an image on the film is obliterated with a round black mark it is an indication that the film inspector noticed either blurred copy because of movement during exposure, or duplicate copy. Unless we meant to delete copyrighted materials that should not have been filmed, you will find a good image of the page in the adjacent frame. If copyrighted materials were deleted you will find a target note listing the pages in the adjacent frame.

3. When a map, drawing or chart, etc., is part of the material being photographed the photographer has followed a definite method in "sectioning" the material. It is customary to begin filming at the upper left hand corner of a large sheet and to continue from left to right in equal sections with small overlaps. If necessary, sectioning is continued again—beginning below the first row and continuing on until complete.

4. For any illustrations that cannot be reproduced satisfactorily by xerography, photographic prints can be purchased at additional cost and tipped into your xerographic copy. Requests can be made to our Dissertations Customer Services Department.

5. Some pages in any document may have indistinct print. In all cases we have filmed the best available copy.
NATIONAL SECURITY AND THE NEW WARFARE:
DEFENSE POLICY, WAR PLANNING, AND NUCLEAR WEAPONS, 1945-1950

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By
Larry Dean O'Brien, A.B., M.A.

*** *** ***

The Ohio State University
1981

Reading Committee
Allan R. Millett, Ph.D.
Marvin Zahniser, Ph.D.
Gary Reichard, Ph.D.

Approved By

Allan R. Millett
Advisor
Department of History
To Alison,
who bought her future with the past
ACKNOWLEDGEMENTS

This dissertation would not have been possible without the contributions of many individuals and organizations. I am indebted to the Office of Air Force History, Headquarters, United States Air Force, Washington, D.C., for the support made available to me through its Dissertation Fellowship program. I am especially grateful to former Chief Historian Dr. Stanley Falk and former Assistant Chief Historian Max Rosenberg for their assistance in obtaining access to essential records and sources.

For invaluable assistance in completing the research for this dissertation, I am indebted to the following organizations and their staffs: the Modern Military Branch of the National Archives and Records Service, Washington, D.C., the Suitland National Records Center, Suitland, Maryland, the Alfred F. Simpson Historical Research Center, Maxwell AFB, Alabama, the Manuscripts Division of the Library of Congress, Washington, D.C., and the Harry S. Truman Presidential Library, Independence, Missouri. I am especially grateful to William H. Cunliffe, James Reed and Charles A. Shaughnessy of the Modern Military Branch of NARS, Carolyn Sung of the Library of Congress, and Dennis Bilger of the Truman Library.

Virtually all of the official records on which this dissertation is based were classified when my research began. I am, therefore, grateful to the many security review personnel in a number of government agencies
and departments for their efforts to act as promptly as possible on my extensive requests for records declassification. In that respect, I must single out William A. Barbee of the Joint Chiefs of Staff Declassification Branch for his diligence and cooperation in the face of almost unreasonable demands.

In a very real sense this dissertation is the product of the influence of four individuals on the development of my interests in the field of history. To Dr. Peter Paret of Stanford University and Dr. Alexander Groth of the University of California, Davis, I owe my initial interest in the role of military institutions in human history. To Dr. Maurice Matloff, Chief Historian of the Army's Center for Military History, I owe my specific interest in contemporary American defense policy and strategy. To my dissertation advisor, Dr. Allan R. Millett of The Ohio State University, I owe the development of whatever professional merit as an historian I have been able to bring to this study. In addition, I am specifically indebted to Dr. Millett for his patience, encouragement, and expert advice in bringing this project to a conclusion.

Finally, thanks are due to the other members of my graduate committee at The Ohio State University: Dr. Martin Zahniser and Dr. Gary Reichard of the Department of History and Dr. Charles Hermann of the Department of Political Science and the Mershon Center.
VITA

November 14, 1946 . . . . . . . . . . Born - Lamesa, Texas

1968 . . . . . . . . . . . . . . . . . . . . . . A.B., University of California, Davis, California

1969 . . . . . . . . . . . . . . . . . . . . . . M.A., University of California, Davis, California

1973-1976 . . . . . . . . . . . . . Teaching Assistant, Department of History, The Ohio State University, Columbus, Ohio

PUBLICATIONS

"The Ohio National Guard in the Coal Strike of 1932." Ohio History, LXXXIV (Summer 1975), pp. 127-144.

FIELDS OF STUDY

MAJOR FIELD: History

Areas: Military History of the United States
Professor Allan R. Millett

History of American Foreign Affairs
Professors Marvin Zahniser and Alfred E. Eckes

History of European Diplomacy and Warfare
Professor Carl Boyd

National Security Policy Studies
Professor Charles Hermann
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>iii</td>
</tr>
<tr>
<td>VITA</td>
<td>v</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. THE SEARCH FOR STRATEGIC CONSENSUS: MILITARY DOCTRINE AND ATOMIC WEAPONS, 1945-1947</td>
<td>7</td>
</tr>
<tr>
<td>Air Force Concepts and Doctrine</td>
<td>8</td>
</tr>
<tr>
<td>Army and Navy Concepts and Doctrine</td>
<td>17</td>
</tr>
<tr>
<td>JCS Efforts to Achieve Strategic Consensus</td>
<td>24</td>
</tr>
<tr>
<td>Operation CROSSROADS and the Breakdown of Consensus</td>
<td>32</td>
</tr>
<tr>
<td>II. GLOBAL POLITICS AND DEFENSE PREPAREDNESS: FOREIGN AND MILITARY POLICIES, 1945-1947</td>
<td>48</td>
</tr>
<tr>
<td>Soviet-American Relations and Defense Preparedness:</td>
<td></td>
</tr>
<tr>
<td>The Military View</td>
<td>49</td>
</tr>
<tr>
<td>A Sudden Civilian Enthusiasm for Military Preparedness</td>
<td>57</td>
</tr>
<tr>
<td>The Truman Doctrine and the Elusiveness of Military Preparedness</td>
<td>60</td>
</tr>
<tr>
<td>The Finletter Commission Report</td>
<td>64</td>
</tr>
<tr>
<td>III. THE AWESOME FORCE: NUCLEAR WEAPONS POLICY AND PLANNING, 1945-1947</td>
<td>72</td>
</tr>
<tr>
<td>International Control of Atomic Energy</td>
<td>73</td>
</tr>
<tr>
<td>Domestic Control of Atomic Energy</td>
<td>80</td>
</tr>
<tr>
<td>Weapons Production Policy and Military Requirements Planning</td>
<td>85</td>
</tr>
<tr>
<td>The Weapons Custody Issue</td>
<td>95</td>
</tr>
<tr>
<td>Policy on the Use of Nuclear Weapons in War</td>
<td>98</td>
</tr>
<tr>
<td>IV. EARLY CONCEPTS OF THE NEW WARFARE: STRATEGIC PLANNING: 1945-1947</td>
<td>110</td>
</tr>
<tr>
<td>The PINCHER Concept</td>
<td>111</td>
</tr>
<tr>
<td>Joint Air War Planning and the Revision of PINCHER</td>
<td>118</td>
</tr>
<tr>
<td>Operation Air War Planning: MAKEFAST, EARSHOT, and SAC 14-47</td>
<td>124</td>
</tr>
<tr>
<td>War Planning Without Atomic Bombs</td>
<td>130</td>
</tr>
</tbody>
</table>
IV. (continued)

Alternate Strategic Concepts and Joint Air War Planning ........................................ 134
The BROILER Concept ......................................................... 141

V. THE "CALCULATED RISK": NATIONAL SECURITY POLICY, 1948-1949 154

The Possibility of War ............................................. 156
The Articulation of Containment and the Berlin Bluff ............. 158
Toward Western Military Cooperation .................................... 165
NSC 20 and the Failure to Integrate the Elements of National Security Policy ...................... 171
The NATO Treaty and MDAP ............................................. 179

VI. THE INDISPENSABLE FORCE: NUCLEAR WEAPONS POLICY AND PLANNING, 1948-AUGUST 1949 188

The Weapons Custody Issue Rejoined ................................ 190
NSC 30 and Policy on the Use of Nuclear Weapons in War ......... 196
Weapons Production Policy and Military Requirements Planning ................................ 203

VII. STRATEGIES FOR ATOMIC MONOPOLY: WAR PLANNING, 1948-AUGUST 1949 225

The Revised BROILER Concept ........................................... 228
The Key West Agreement .................................................... 233
The FROLIC Concept ........................................................ 236
Joint Outline Emergency War Plans HALFMOON and TROJAN .... 238
The Newport Agreement ...................................................... 248
Industrial Mobilization Plan COGWHEEL ............................... 251
Air Force Operational Plans and Concepts ............................. 254
Analyzing the Strategic Air Offensive ................................. 265
Development of the OFFTACKLE Concept ............................... 276


Acceleration of the Fission Bomb Program ......................... 299
The Super Bomb Debate: Opposing Forces .......................... 301
The Super Bomb Debate: Deciding How Not to Decide ............. 307
The Super Bomb Debate: How Finally to Decide .................... 316

IX. NSC 68: NEW DIRECTIONS AND MISDIRECTIONS IN NATIONAL SECURITY POLICY, JANUARY-JUNE 1950 330

Origins and Organization of the State-Defense Policy Review Group .............................. 331
National Security Objectives and the Roots of Soviet-American Conflict ...................... 338
<table>
<thead>
<tr>
<th>IX. (continued)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Nature of the Soviet Threat and American Policy</td>
<td></td>
</tr>
<tr>
<td>Alternatives</td>
<td>342</td>
</tr>
<tr>
<td>Conflicting Views on the Nature of Rearmament and the Role of Nuclear Weapons</td>
<td>348</td>
</tr>
<tr>
<td>The Bureaucratic Conflicts of Clearing the Policy Review Group's Report</td>
<td>353</td>
</tr>
<tr>
<td>A New National Security Policy Takes Shape</td>
<td>362</td>
</tr>
</tbody>
</table>

| X. STRATEGIC RESPONSES TO NUCLEAR MUTUALITY: WAR PLANNING, AUGUST 1949-JUNE 1950 | 374 |
|-------------------------------------------------------------------------------------------------------------------------------|
| The Background of Long Range War Planning | 376 |
| Reevaluating the Patterns of Future Warfare | 381 |
| Air Defense and the Damage Limitation Dilemma | 393 |
| Emergency War Planning After the Soviet Atomic Test | 399 |
| Analyzing the Strategic Air Offensive | 404 |
| New Operational Air Warfare Plans and Concepts | 411 |

<table>
<thead>
<tr>
<th>BIBLIOGRAPHY</th>
<th>423</th>
</tr>
</thead>
</table>
American defense policy and strategy and the role of nuclear weapons in both during the early postwar years have exercised a strong interest for historians and political scientists. The literature on these subjects is as extensive as it is varied in its perspectives and conclusions. Important gaps remain, however. Much of the existing literature--especially that part devoted to the implications of defense policy and strategy for diplomacy--focuses mainly on the role of civilian policy-makers, if it does not completely ignore the role of military planners. That part of the literature devoted specifically to the military establishment has tended to focus on organizational, institutional, and budgetary and programming issues rather than the actual details of strategic planning.

The substance of war planning and the nature of civilian-military interactions on strategic planning issues remain largely unexplored areas. The primary reason for this omission in the literature is a practical one. Most, if not all, of the necessary documentation remained classified and therefore inaccessible to researchers. Recently, however, as a result of relaxed classification and security review procedures, new and important evidence has become available which makes it possible to reconstruct the full dimensions of strategic war planning by the American armed forces and the interaction of civilian policy-makers
and military planners in the construction of national strategic policy in the early postwar era.

The purpose of this study is first of all to describe and analyze the development by the armed forces of strategic plans and concepts for the use of nuclear weapons in war. The focus of this effort is on the planning process within the Joint Chiefs of Staff organization and to a lesser extent the operational planning process within the Air Force, which had primary responsibility for nuclear air warfare. The second purpose of this study is to describe and analyze the nature of civilian-military interaction in the definition of national strategic policy. That effort focuses also very heavily on the activities of the Joint Chiefs of Staff organization, but naturally extends in equal measure to the activities of the civilian leadership in the defense establishment, the State Department, the Atomic Energy Commission, and the White House. Both objectives of this study have important implications for understanding the nature of American foreign and defense policies in the early postwar years. The study is not intended, however, as a comprehensive reexamination of either foreign or defense policy. Rather, they provide the essential context within which strategic planning and policy may be interpreted and understood.

The basic thesis of this study is that during the period 1945-1950 civilian policy-makers in the Truman Administration failed, despite several efforts, to integrate the political, fiscal, and military elements of national security policy and essentially divorced themselves from fundamental questions of national strategic policy regarding the usefulness of nuclear weapons for either deterrence or defense. Thus,
the military planners, themselves, deeply divided in their doctrinal and institutional perspectives, were left very largely on their own to resolve those issues.

During the two years following the end of World War II, civilian policy-makers in the Truman Administration constructed a design for the containment of Soviet expansionism in Europe and the Middle East which fundamentally transformed the nature and scope of American foreign policy. There was, however, no parallel transformation in American military policy. Although broadly expanded military commitments and responsibilities were clearly implicit in containment, the means conceived for achieving that policy were essentially political and economic rather than military. Despite consistent warnings from military leaders and some civilian policy-makers as well that foreign policy commitments far exceeded American military capabilities for their enforcement, the Truman Administration purposefully restricted defense rearmament in order to finance the political and economic instruments of the containment policy.

The risks inherent in that course were rationalized—when they were rationalized at all—by a vague and never clearly articulated confidence in the deterrent power of the American nuclear monopoly. Not until 1948 was there any genuinely serious effort to analyze the relationship of foreign and defense policies. Even then there was no specific effort to analyze the usefulness of nuclear weapons for either deterrence or defense. Indeed, the Administration deliberately avoided the issue.

The fundamental question of what role nuclear weapons would play in American war plans if deterrence failed as well as other important
issues of strategy were left to the military planners to decide. De­
spite deep doctrinal conflicts between the airpower concepts of the Air
Force and the more traditional general war concepts of the Navy and
Army, the military planners found no realistic alternative to placing
heavy reliance on nuclear weapons as the core of American military cap­
ability. Given the limited resources available to the armed forces,
nuclear weapons constituted the only advantage the United States would
possess in a military confrontation with the Soviet Union.

Thus, the basic strategic dispute among the military planners was
not whether nuclear weapons should be used in a general war, but in what
manner they would be used and how quickly (or slowly) they would effect
Soviet war fighting capabilities. Preoccupied with that debate and
corollary disputes over the division of service forces and functions,
the military planners tended to focus only on short-term contingencies.
Despite the generally accepted assumption that the Soviet Union would
possess significant numbers of nuclear weapons by about 1953, neither
the military planners nor their civilian superiors gave serious atten­
tion to the strategic problems of deterring or fighting a nuclear armed
enemy. War plans, therefore, emphasized the objective of destroying the
economic and industrial capacity of the Soviet Union to wage war and
neglected the objective of limiting the damage that might be done to the
United States.

Announcement of the first Soviet atomic test in September 1949
prompted both civilian policy-makers and military planners to reassess
the role of nuclear weapons in strategic policy and plans. The civilian
policy-makers were fundamentally divided, however. One group sought to
reestablish the deterrent power of nuclear weapons by pursuing a policy of achieving and maintaining technological superiority. Another group, convinced that nuclear weapons had lost their usefulness as either a deterrent or a weapon of warfare, sought to redesign national defense policy in order to significantly reduce, if not entirely eliminate, reliance on those weapons. The former group successfully promoted the development of thermonuclear weapons and the acceleration of fission weapon production. The latter group initiated the defense policy reassessment embodied in NSC 68.

Neither of those efforts, however, resulted in a coherent analysis of the strategic problems of deterrence or defense under conditions of nuclear mutuality. The advocates of nuclear superiority never progressed far beyond the simplistic rationale that more and bigger are better. Nor, despite its reputation to the contrary, did NSC 68 provide a wholly consistent or practical strategic analysis on which to base defense postures and policies for either deterring or fighting a nuclear armed enemy.

In response to the Soviet possession of atomic weapons, the military planners provided a theoretically rational concept for fighting a nuclear war based on a strategy of preemptive counterforce strikes against Soviet strategic forces. Although there were numerous practical obstacles to implementing such a concept, it nevertheless reflected an important effort to come to grips with the strategic problems of nuclear mutuality. Civilian policy-makers, however, neither approved nor specifically disapproved the concept. Indeed, there is no evidence that the concept was ever even discussed by civilian policy-makers during
this period. Therein lay the fundamental characteristic as well as the chief failure of national strategic policy in the early postwar years. Having constructed both foreign and defense policy on the deterrent power of nuclear weapons—either by design or by default—the civilian policy-makers failed realistically to confront the issue of how those weapons would or could be used if deterrence failed.
CHAPTER I

THE SEARCH FOR STRATEGIC CONSENSUS:
MILITARY DOCTRINE AND ATOMIC WEAPONS, 1945-1947

The technical and strategic implications of nuclear weapons appear clear enough in retrospect, but they were not so self-evident in 1945. In the immediate postwar period, there was among military officers, airmen included, a genuine ambivalence toward atomic weapons. That attitude resulted from a recognition that the effect of atomic weapons on the nature of warfare and the patterns of military strategy depended on their future development, the quantities in which they would be available, and the operational feasibility of delivering them accurately to distant targets.

The responses of the individual services to the advent of atomic weapons were shaped by their peculiar, and often mutually antagonistic, doctrinal and institutional perspectives. The airpower concepts of the Air Force, which were most easily adapted to nuclear weapons, conflicted almost immediately with the more traditional general war concepts of the Navy and Army. Collectively uncertain of the technical possibilities of the distant future, and forced to compete for increasingly scarce budgetary resources with which to fulfill even short-term plans and programs, the military services were unable to establish a fundamental consensus on the strategic and organizational implications of atomic
weapons. Tied firmly to their own strategic predilections, the services pursued essentially separate doctrinal paths into the nuclear age.

**Air Force Concepts and Doctrine**

Because of the secrecy of the MANHATTAN Project few air officers had any technical knowledge of atomic weapons before the end of World War II. As a result, comprehensive study of the implications of those weapons for warfare and air strategy was impossible during the war. In May 1945, however, AAF Commanding General Henry Arnold outlined his thoughts on the matter for Army Chief of Staff Marshall. Atomic weapons, Arnold suggested, could ultimately revolutionize warfare to the point of "endangering human survival." But, it was the new means of long-range air delivery, as much as atomic weapons, which revolutionized strategy. The United States was no longer geographically invulnerable. With the development of new air weapons, Arnold told Marshall, "New York, Pittsburgh, Detroit, Chicago, or San Francisco will be subject to annihilation in a matter of hours."¹

The concepts and doctrines of American airmen in the immediate postwar period were largely a product of their perception of the strategic threat against American security; and, not surprisingly, their perception of the threat was almost entirely in terms of the technical possibilities of strategic air weapons. After World War II, air officers persistently repeated the theme of America's vulnerability from the air. The existence of atomic weapons made the argument especially compelling.²

To air strategists in the early postwar period, total war was almost the only conceivable form of armed conflict between major powers. They
reasoned that any great power conflict in which America might become involved would begin with a direct attack on the United States. "In each World War," General Arnold told the Senate Military Affairs Committee in October 1945, "there has been sufficient time for the mobilization of our vast might. This lesson is too plain for the next aggressor to miss. The United States will be his first target." The same conclusion was repeated by other senior air officers. 3

The source of future strategic air attacks against the United States also seemed clear to American airmen. Attack would come over the North Polar wastes--the shortest air route from Europe and Asia where America's only potential enemies were located. The geopolitical neatness of the "Polar Concept" appealed to senior air officers. General Carl Spaatz, Arnold's successor as Commanding General of the Army Air Forces, was particularly fond of elaborating the idea to Congressional audiences, usually employing a long pointer and a wall-sized polar projection map for dramatic effect. 4

Air officers had no illusions about whom our future enemy might be. Most were convinced long before the end of World War II that the Soviet Union was a probable menace. Of course, the USSR possessed no genuine strategic air capability in 1945, but American air officers repeatedly emphasized that the Soviets sooner or later would have long-range air forces as well as atomic weapons. 5

It seemed to American airmen that the potential threat of sudden, disabling, air-atomic attack against the United States required a fundamental change in national strategic policy. The Spaatz Board, established in September 1945 to study the effects of atomic weapons on
postwar AAF force programs, reported that the United States "could no longer expect to have the grace of a few months to prepare . . . defenses after war is started." Survival would depend on the adequacy of forces-in-being, especially air forces, to forestall early defeat.  

Development of the air force-in-being concept has not been well understood. Despite considerable historical analysis of Air Force program planning, especially the so-called Seventy Group Program, little serious attention has been given the doctrinal context within which force planning occurred. An understanding of AAF force doctrines requires first of all an understanding of the development of postwar Air Force concepts regarding the decisiveness of strategic bombardment, the role of atomic weapons in the pattern of future general war, and the purpose of air forces-in-being.  

Initially, there was considerable uncertainty within the Air Force about the effects of atomic weapons. No one denied the destructiveness of atomic bombs, but it appeared to many airmen that there would be a number of serious technical limitations on their employment. The Spaatz Board especially emphasized the expected scarcity of atomic weapons. Limited availability also meant that such valuable weapons would not be expended on targets without very high assurance of success. Thus, at first, many airmen believed that atomic weapons might not be employed at all until air superiority over target areas was achieved.  

Airmen rejected the technical arguments for scarcity before many other authorities, but they recognized how slowly a significant stockpile would be built. The Spaatz Board concluded that until the availability of atomic bombs could be increased and the technical and
tactical problems associated with their employment solved, the Air Force would have to depend heavily on conventional air weapons. That would require relatively large air forces-in-being. 9

Continued dependence on conventional weapons with only supplemental use of atomic bombs seemed unrealistic to many airmen, even for the short-term future. General Curtis LeMay recognized very early that atomic bombs would become the only important strategic air weapon in the future. In August 1945, LeMay urgently recommended to General Ira Eaker, Deputy Commanding General of the AAF, that the Air Force give top postwar priority to building a strategic force capable of delivering a decisive attack with atomic bombs on short notice. General Thomas S. Power, later LeMay's deputy in the Strategic Air Command, was similarly convinced that a strategic air offensive, having even limited objectives, was possible only through the effective employment of atomic weapons. 10

By early 1946 there was a growing debate within the Air Staff over the potential decisiveness of an initial strategic atomic offensive. One group, centered in LeMay's Office of the Deputy Chief of the Air Staff for Research and Development (DC/AS-RD) and in the Office of the Assistant Chief of the Air Staff for Operations (AC/AS-3), argued that the atomic bomb offered the possibility of launching an "Air Blitz" that would result in the rapid disintegration and defeat of the enemy. Doubters pointed out that the Air Force did not have, nor could it soon expect to have, the atomic bombs necessary to effect a decision with a single blow. More thoughtful dissenters argued that the employment of atomic weapons by both sides would result in an indecisive war of attrition or mutual annihilation. 11
A majority of air officers probably would have preferred to accept the "Air Blitz" concept. However, before mid-1948, most were inclined to agree that until atomic weapons were available in larger quantities the effects of an initial strategic air offensive would probably be limited, and there would be a requirement for subsequent sustained operations by both conventional and atomic air forces as well as ground, tactical air, and naval forces. The pattern of a general war would include an initial strategic atomic offensive aimed at damaging the enemy's war-making capacity and softening him up for subsequent surface engagement. Later phases would see joint offensive operations, including a sustained strategic air offensive, aimed at completely destroying the enemy's will and capacity to resist.12

In that scenario, air forces-in-being would provide the offensive power for immediate attack against the enemy. The minimum objective of immediate action was to buy time for a rapid mobilization of American war potential. Of course, it was also possible, airmen continued to hope, that a decision would be achieved by the initial air offensive alone. But, even the far more limited "time gaining" role was one for which the Air Force believed itself peculiarly suited by virtue of its ability to strike at the heart of the enemy without long delay.13

An important collateral purpose of air forces-in-being was to provide the minimum necessary manpower, training, logistic, and administrative base for a rapid expansion to force levels capable of supporting sustained strategic operations as well as other necessary air operations in later phases of a war. Indeed, American airmen never rejected the need for post-hostilities mobilization of either air forces or ground
and naval forces. Senior air officers easily reconciled their force-in-being concept with the political and economic necessity of accepting at least a modified mobilization strategy. They did insist, however, on the priority of strategic air forces-in-being adequate to buy the time needed for mobilization of balanced armed forces.  

A fundamental principle of American air war doctrine, inherited from Douhet, Trenchard and Mitchell, was that air forces, to be decisive, must be employed offensively. A corollary was that air defenses would never provide complete security against attack. The theoretical consequence was that one's own nation might have to endure punishing air attacks until an offensive decision was achieved. The advent of atomic weapons magnified the doctrinal contradiction. Was any degree of interim punishment with atomic weapons acceptable?  

American airmen were acutely aware of the dilemma, but they turned to traditional doctrine for a solution. Borrowing from Douhet, General Arnold insisted that "real security against atomic weapons in the visible future will rest on our ability to take immediate offensive action with overwhelming force." General Spaatz agreed. "The only reasonable defense," he believed, "has become a total offense, one that would be aimed at smashing the enemy's whole organism, and would counter his offense incidentally in the process."  

To reduce or eliminate the punishment one's own nation must suffer in a strategic air war, Douhet argued that a nation must retaliate quickly or attack first to gain "command of the air." American airmen considered both options. The Spaatz Board concluded that against an enemy possessing atomic weapons the United States "must be prepared for
preventive [meaning preemptive in this context] or retaliatory action."
For a time, the concept of preemption exercised a seductive influence
over some airmen, as, in fact, it did over many others. "We must
recognize," wrote General Arnold in January 1946, "that the only certain
protection against [an atomic attack] is the ability to meet and over­
come it before the first blow is struck."17

By early 1947, however, talk of preemption among American airmen
was replaced by the expectation that the United States would retaliate
after being attacked. "We must . . . prepare ourselves to absorb the
first blow," General Spaatz told a Senate Committee in June 1947, "and
then, without delay, deliver a retaliatory counter-attack . . ." Much
earlier, General Thomas Power was convinced that, "because of our pre­
sent national policy, it is unrealistic to assume a situation other than
one of retaliation . . . following an enemy attack."18

After 1945, military preoccupation with fighting atomic wars tended
to discredit military strategists in the eyes of the civilian theorists
who dominated the mainstream of American strategic thought. Instead of
preparing to fight atomic wars, the civilian theorists emphasized pre­
paration to deter them. As first articulated by Bernard Brodie in 1945
and 1946, the concept of nuclear deterrence was built on two assump­
tions. First, almost any degree of interim punishment with atomic wea­
ons was unacceptable. Second, the virtual impossibility of avoiding
some degree of mutual retaliation must inhibit the use of atomic bombs
in war.19

Air Force officers did not reject the general idea of deterrence,
nor was the concept unfamiliar to them. They believed, however, that to
be credible deterrence required the ability to fight and win air wars. In his earliest analysis of atomic weapons, General Arnold argued that "we must . . . secure our nation by developing and maintaining those weapons, forces and techniques required to pose a warning to aggressors in order to deter them from launching a modern devastating war."

General Spaatz also believed that the "most powerful deterrent against [atomic attack] is the immediate capability of a powerful air counter-attack."^20

The concept of deterrence articulated by Bernard Brodie appealed to airmen. Indeed, there was little in Brodie's early formulations which contradicted established air doctrine. General Arnold apparently studied Brodie's earliest writings on the subject, and later analyses by Brodie were circulated within the Air Force planning staff. Nevertheless, American airmen believed that deterrence might fail. They fatalistically accepted the conclusion of General Arnold's Science Advisor, Dr. Theodore von Karman, that there was "no proof that . . . human passions cannot produce conflicts which lead to the annihilation of one-half or two-thirds of the population of a country."^21

If deterrence failed, how did air officers propose to fight and win an atomic war, and how did they propose to limit damage to their own nation? American airmen sought solutions to those problems in traditional air war theory regarding the proper objectives of strategic air attack. The American concept of strategic bombardment developed in the 1930s was postulated on the decisiveness of destroying the industrial and economic vitals of an enemy nation, thus depriving it of the capacity to wage war. Until that was achieved, damage to one's own nation could
be mitigated by attacks against the enemy's strategic air forces and the aviation and petroleum industries that supported them, and, to a lesser degree, by air defenses.22

Senior air officers were aware of the need for air defense and counter-air force operations to limit damage to the United States. But, before late 1949 when the Soviets exploded their first atomic bomb, air war planners were primarily concerned with the objective of destroying an enemy's industrial and economic capacity to wage war. Strategic targeting concepts, therefore, emphasized industrial objectives rather than damage limiting objectives. To win a war, General Spaatz told Assistant Secretary of War Stuart Symington in February 1947, strategic air forces must strike "directly at the heart of the enemy's industrial, economic . . . organization."23

There was, nevertheless, considerable confusion among Air Force target planners after 1945 about the most promising industrial systems for atomic attack. The most remunerative targets during World War II—petroleum and transportation systems—were not thought suitable for attack with scarce atomic bombs, except where they were located in large concentrations. Despite the increased destructiveness of atomic weapons, heavy industrial targets were also discounted except as collateral objectives. As a result of discoveries made by the US Strategic Bombing Survey in Europe, target planners were enthusiastic about the potential effects of destroying electric power systems. But, such systems were too dispersed for atomic bomb attacks.24

Almost by process of elimination cities appeared to be the only appropriate targets for atomic bombs. The principal advantage that air
officers saw in atomic attacks against cities was the disruption of military and political command and control systems, and the assurance of widespread damage to a variety of industrial targets. Considering the lack of detailed target intelligence and the unreliability of target acquisition systems at that time, cities were also easier to hit than point targets. For some time, Air Force doctrine continued to discount the morale effects of either conventional or atomic bombing. However, the coincidence of urban and industrial concentrations tended to blur the distinction between population and industrial or military targets, and, eventually, interest in the psychological effects of atomic bombing increased. 25

Demonstrating the decisiveness of their strategic targeting concepts was a principal theoretical problem for Air Force strategists in the early postwar period. The limitations of early nuclear weapons and their means of delivery allowed considerable doubt in that regard. Indeed, airmen themselves came only gradually to understand the possible dimensions of nuclear destruction. Unfortunately, during much of the period of American nuclear monopoly, air strategists were so preoccupied with how to win a nuclear war that they failed to consider seriously enough how to prevent losing one.

Army and Navy Concepts and Doctrine

A traditional problem for American military strategists was defining credible threats to justify standing military forces. But, unlike their counterparts in the Air Force, Army planners were extremely vague about the nature of the postwar threat to American security. What views they did express were heavily influenced by Air Force thinking. In so
far as there was an independent Army view before the end of World War II, it seemed to be based on a fear of isolation from European and Far Eastern allies, either as a result of those allies being overrun or as a result of their combining against the United States. A limited definition of the indirect threat to U.S. security posed by attacks on our allies in Western Europe and the Far East took shape among Army strategic planners after early 1946. However, the army never developed, in the early postwar period, a fundamental formulation of that threat. Nor, did Army planners explore, on a theoretical level, the strategic implications of an indirect attack as opposed to the direct attack postulated by airmen.26

In large measure, the Army planners accepted the Air Force's analysis of the nature of future threat. However, they did not accept all of the implications of that analysis. Committed to force concepts based on Universal Military Training and limited forces-in-being, the Army was more firmly tied to a mobilization strategy than was either the AAF or the Navy. Army planners accepted the fact that the advent of atomic weapons and long-range aircraft potentially reduced the time available for mobilization. But, they resisted the assumption that an attack might occur without any warning at all. Army planners continued to insist that some period of political warning would be available in which to begin mobilization.27

To gain additional time for mobilization, forces-in-being capable of immediate defensive and offensive action were necessary. To the delight of airmen, Army officers were convinced that atomic air forces were the ideal instrument for that purpose. In discussing the need for
retaliatory forces, General Marshall suggested as early as October 1943 that "having airpower will be the quickest remedy." The idea persisted. A statement of War Department strategic thinking published in early 1947 claimed that "our need is for strategic bombers to carry atomic explosives immediately [to the enemy]."

Despite the advent of atomic weapons, Army planners never entertained the idea that a decision might be achieved with forces already in-being at the outset of a war. Indeed, Army officers energetically rebutted widespread public and Congressional suggestions that atomic weapons made conventional armed forces obsolete. At least, until atomic weapons were available in larger numbers and the tactical and technical problems associated with their delivery were solved, Army strategists expected the pattern of general warfare to remain largely unchanged. There would be an initial phase in which atomic weapons and other striking forces would be employed to blunt enemy attacks and to "initiate" the destruction of his war-making capacity. But, final victory would be achieved only in successive phases during which balanced armed forces would be brought to bear.

Initially, Army planners had no well defined view about how an atomic war might be fought. However, their dependence on a mobilization strategy made Army planners especially sensitive to the problems of nuclear attack on the United States. Therefore, the Army placed more explicit emphasis than did the Air Force on effective air defenses and damage limitation concepts. The Army agreed with airmen that no defense against air attack could be completely effective. But, in accepting the "overriding importance of strategic bombing," Army officers insisted
that atomic striking forces should be "employed first to destroy the
more dangerous enemy means of operating against us; his launching sites,
[atomic weapons] storage areas, and his . . . airbases." Only there­
after, should retaliatory attacks be directed at the enemy's industrial
war-making capacity.\(^{30}\)

Other than General Leslie Groves, senior Army officers did not seem
particularly attracted by the idea of preemptive or preventive attack as
a solution to the problem of interim punishment. Although General
Eisenhower invited discussion of Groves' views, he made it plain that he
did not endorse them. By early 1947, as in the Air Force, preemption
was rejected as a politically unrealistic alternative to retaliation.
"We are prevented by our form of government and our constitutional
processes from launching surprise attacks against potential enemies,"
read a March 1947 War Department policy statement; "our military stra­
tegy must take [that fact] into account and devise ways and means of
decreasing the scale of its disadvantageous effects."\(^{31}\)

Initially, Army planners were convinced that atomic bombs, because
of their scarcity, expense and destructive characteristics, were suited
only for use against special purpose, strategic objectives. Only later,
as Army strategic planners came to realize that the loss of Western
Europe and the Middle East to Soviet ground forces constituted a danger­
ous threat to American survival, did they begin to argue for the employ­
ment of atomic weapons against tactical targets to retard Soviet ad­
vances. But, even then their attitudes were not part of any coherent
concept of nuclear warfare.\(^{32}\)
Like the Army, the Navy did not work out a comprehensive view of the nature of future threats to American security during World War II. Traditional naval strategy, handed down from Mahan, defined the principal purpose of naval forces as destruction of enemy fleets which challenged our control of the sea or threatened seaborne invasion. After World War II there was no apparent threat from the sea. Naval officers were convinced that the Soviet Union was a likely menace to American interests, but, with the exception of a still small submarine force, the Soviet Navy was inconsequential.

Navy officers accepted the potential threat from the air posed by atomic weapons, although they did not well understand its theoretical implications. Indeed, most naval officers were convinced that the Soviets would never initiate a major war until they were capable of attacking the United States directly with air or sea launched atomic weapons. At the same time, Navy planners also recognized that Soviet ground offensives in Western Europe and the Middle East accompanied by interruption of the sea lanes with submarine forces would pose a serious indirect threat to U.S. security. In the early postwar years, preoccupation with the narrow operational definition of general naval functions prevented the Navy from developing a coherent theoretical formulation of that view. However, naval officers did exhibit a more cogent concern for the indirect threat then did airmen.

Traditionally, Navy force concepts emphasized the importance of the fleet-in-being, prepared to undertake immediately both defensive and offensive operations in the event of attack. Even before the advent of atomic weapons, Navy postwar planners assumed that the time for
mobilization would be reduced in a future war. Unlike the Air Force, however, the Navy insisted that it must maintain a broad functional range of forces-in-being. The expense of those forces meant that fewer of each kind could be maintained in peacetime. Thus, the Navy was compelled to accept a modified mobilization strategy in order to rationalize its balanced force concept. 35

Early Navy attitudes toward the strategic implications of atomic weapons were closely related to the Navy's need to demonstrate that atomic bombs did not render naval forces obsolete. Navy responses to such charges took several forms. First, the Navy was intent upon proving that fleets were not helplessly vulnerable to nuclear attack. Navy participation in the CROSSROADS tests in 1946 was largely devoted to that objective. Secondly, the Navy made every effort to establish a claim to the employment of atomic weapons by carrier-based aircraft. Most importantly, however, the Navy argued that atomic weapons would not change the fundamental pattern of warfare in the foreseeable future. Thus, there remained a need for a variety of general purpose naval forces capable of employing both atomic and conventional weapons. 36

The Navy initiated efforts to develop an atomic delivery capability in mid-1946. But, as one recent analysis convincingly demonstrates, that effort was never aimed exclusively or even primarily at achieving a strategic nuclear capability. Indeed, the majority of senior Navy officers were extremely skeptical of the efficacy of strategic bombardment. Atomic weapons did not alter their opinion. Navy officers were primarily concerned with integrating atomic weapons into the established pattern of naval warfare in which strategic bombardment was only one of
a variety of functions. Ultimately, it was the Navy's insistence on having a variety of functions as much as its specific claim to a strategic bombing function that created conflict with the Air Force. 37

Cautious in their appraisal of the military effectiveness of atomic weapons, naval strategists believed that wars in the foreseeable future would be similar to World War II in pattern and duration. Far from being decisive, initial operations, nuclear or otherwise, could only serve to contain enemy offensives. Final victory would be achieved in subsequent phases in which balanced armed forces would progressively destroy both the military and economic capacity of the enemy to wage war. In such a war, balanced naval forces would be necessary to seize and defend forward bases, to protect the sea lanes on which those bases depended, and to carry out a variety of offensive air and amphibious operations. 38

Consistent with their views of the pattern of warfare and the efficacy of strategic bombardment, Navy strategists argued that initial atomic operations, by either land or carrier based aircraft, would be most profitably aimed at tactical or quasi-strategic targets, such as air and naval bases, troop concentrations, and supply and transportation systems. Although they thought that petroleum production and political-military command and control centers were appropriate initial strategic targets, Navy strategists argued that counter-industrial bombardment would have no immediate effect on military operations and should be relegated to later phases of the war. 39

Navy strategists anticipated that an enemy in possession of atomic weapons would use them against the United States, but they apparently
did not seriously consider the implications of that fact for their concepts of general war. Navy targeting concepts, emphasizing the initial importance of tactical and quasi-strategic objectives, were never explicitly related to the problem of lessening the effects of a nuclear attack against the United States. A few naval officers suggested the desirability of preemptive or preventive war, but their thinking—not widely accepted within the Navy—did not provoke serious examination of the problem. 40

JCS Efforts to Achieve Strategic Consensus

A principal source of interservice disagreement in the postwar period was the lack of a commonly held view of the nature and requirements of warfare in an emergent nuclear age. Initial efforts to achieve such a consensus within the Joint Chiefs of Staff organization during late 1945 and early 1946 failed to reconcile fundamentally antagonistic service doctrines and aspirations. Instead, service differences were concealed by carefully vague language intended to satisfy everyone. Ultimately, however, no one was satisfied.

Efforts to achieve a broad doctrinal consensus took three forms. The first was an attempt to redefine the principles of national strategic policy. The second was a parallel attempt to establish basic concepts to guide strategic war planning. The last was a specific effort to analyze the effects of atomic weapons on the pattern of warfare and military organization.

Throughout World War II the military sought unsuccessfully to obtain explicit political guidance as to the postwar interests, commitments, and policies of the American Government. Thus, service planning
proceeded in a virtual political void. The imminence of victory in the fall of 1945 finally prompted the Joint Chiefs of Staff to confront the issue unilaterally. Between May and late September the military chiefs, principally aided by their senior strategists in the Joint Planning Staff (JPS), worked out a tentative statement of national military policy that they hoped would be endorsed by the Service Secretaries and the President as the basis of postwar planning. 41

Mindful of the American experience of political isolation and military unpreparedness, the Joint Planners argued that any future major war would inevitably involve the United States. "Any nation," they told the Joint Chiefs, "which in the future may attempt to dominate the world may be expected to make her major effort against the United States." That problem was complicated by the fact that military technology potentially erased the advantages of geographical insularity which in the past permitted the United States to assume an exclusively defensive posture, and wait for aggression to occur before resorting to armed force. Our future policy, the Joint Planners insisted, must be "one of active—as opposed to our traditional policy of passive—defense." 42

The Joint Chiefs accepted the planners' analysis. In addition, they agreed that the United States must possess the "means of retaliatory or punitive attack" which would "make it unwise for a major aggressor nation to initiate a major war." However, should we fail to deter aggression, and hostile forces were "arrayed against us," the JCS, affirming the view of the Joint Planners, insisted that the United States must also be prepared to "strike the first blow if necessary." Such a
statement of the concepts of deterrence and preemption was not novel in American military thought, but neither idea had ever received political sanction in national strategic policy. Preemptive warfare too much resembled aggression to suit American sensibilities, and deterrence had too many unwelcome implications for the size and expense of peacetime military establishments.43

The military chiefs clearly intended to redefine the character of national military policy, but they were sensitive to the political constraints on such an effort. To achieve the goal of an "active" defense posture, the JCS sought to establish a politically acceptable compromise between a traditional policy of emergency mobilization and one of maintaining peacetime forces-in-being capable of decisive action. The military chiefs frankly admitted that "the maintenance of overwhelmingly strong forces in time of peace [was] politically and economically unacceptable to the people of the United States." But, the advent of dramatic new weapons which threatened America's geographical invulnerability, reduced the time available for mobilization after an emergency arose. To reconcile those conflicting political and military realities, the JCS adopted the principle of maintaining in peacetime "sufficient active forces to afford ... security ... during the initial period of mobilization." As it turned out, the intense interservice debates over strategy and budgets which marked the early postwar period very largely revolved around that necessarily vague compromise and the practical issue of what constituted "sufficient" peacetime force and weapon programs.44
Based on their assumptions about postwar military policy, the Joint Planners submitted to the JCS a statement of general strategic concepts together with an estimate of potential threats in September 1945. The Soviet Union was clearly identified as the "only major power with which the U.S. might come into conflict," but the nature of the Soviet threat was carefully hedged. While the American monopoly of atomic weapons persisted, the most likely cause of war, according to the planners, would be Soviet aggression in Western Europe, the Middle East, or China, rather than a direct attack upon the United States.  

The major strategic concepts outlined by the planners and adopted by the JCS included (1) expansion of the United States' "strategic frontier" through the development of a system of overseas bases, (2) exploitation of "special weapons" and mobile striking forces in the initial phase of war, while rapidly mobilizing for sustained operations, and (3) prompt reaction to strategic warning, "striking the first blow if necessary." Those concepts were primarily intended to serve as general guidance for war planning in the immediate postwar period. When the planners attempted to apply them, however, they tended to dissolve under the pressure of interservice disagreements.  

Specific attention was given the strategic implications of atomic weapons and the means for their delivery. Discussions between the Joint Planners and representatives of the Manhattan Project and the Joint Committee on New Weapons in August 1945 resulted in considerable emphasis on the development of a system of bases "well removed from the United States" which would "enlarge our strategic frontier," facilitate defense, and "allow us to project our operations, with new weapons or otherwise,
near the enemy." Implementation of that concept was not particularly ambitious, however. The foreign base requirements projected by the JCS during the 1945-1947 period were confined to the Arctic, Pacific and Atlantic approaches to the North American continent. Other than the Constabulary garrisons in Germany, no permanent peacetime bases were projected in the vital strategic areas of Western Europe, the Mediterranean, or the Middle East.47

As a result of accepting a modified mobilization strategy with limited peacetime forces-in-being, the Joint Planners concentrated on outlining the tasks which could be undertaken with forces existing at the outbreak of war. Those tasks, which provided something for everyone, included (1) essential operations for continental defense, (2) the rapid initiation of strategic air operations, "exploiting special weapons," to "disrupt" the enemy's war-making capacity, (3) the early destruction of enemy naval forces and shipping, and (4) the seizure of forward bases required for subsequent operations. Once mobilization permitted, a second phase of sustained, conventional land, sea and air operations supplemented by continued atomic operations would begin. The guiding strategic principle in that second phase was to seize or neutralize areas vital to Soviet war-making capacity, rather than to "overrun the USSR."48

The broad, joint principles for the employment of armed forces established by the JCS in September and October 1945 were intentionally conservative. They certainly did not constitute a strategy of dependence on nuclear weapons. Neither the Joint Planners nor the JCS anticipated any rapid changes in the traditional pattern of warfare. On
the contrary, the expected scarcity of atomic weapons and fundamental
disagreement within the military establishment over the potential of
strategic bombardment precluded any immediate departures in strategy.
Nevertheless, the widespread public and Congressional misapprehension
that conventional armed forces were obsolete compelled the JCS to define
its thinking on atomic weapons more clearly.

In late August, at the request of General Marshall, the members of
the Joint Strategic Survey Committee (JSSC)—senior military advisors to
the JCS—were asked to examine the effects of atomic weapons on warfare
and military organization. The Committee's conclusions, drafted by Air
Force General Muir S. Fairchild and submitted to the JCS at the end of
October, challenged none of the assumptions already established by the
Joint Planners.49

The JSSC painted a frightening picture of the eventual dangers to
American security once atomic weapons and the means for the long-range
delivery were in the hands of our potential enemies:

"... it will be quite possible to prepare in all secrecy in
the enemy homeland and to launch without warning from enemy
home bases an initial attack by atomic bombs against our vital
areas. Defense against an assault of this kind would be most
difficult and, if strategic surprise were really secured, de-
fense measures in all probability would be largely ineffective.
Such a surprise assault launched simultaneously against our
principal cities might well be catastrophic."

The United States must be prepared for the probability that a future war
would begin with an attempt by our enemy to "achieve the effects of Pearl
Harbor on a vast and relatively complete scale."50

As the same time, the JSSC emphasized that technical and tactical
limitations on the employment of atomic weapons would persist for some
time. For the foreseeable future, atomic bombs, because of their scarcity, size, and destructive characteristics, would be primarily strategic weapons suitable only for use against concentrated industrial or population targets. Because of their expected scarcity, it was also conceivable that atomic bombs would not be used at all until their delivery over the target areas was assured by the achievement of conventional air superiority. Most importantly, until a truly intercontinental delivery capability was realized, the effective employment of atomic weapons would depend on possession of forward bases near the enemy. 51

The JSSC explored the essential dilemma of atomic warfare—how to prevent unacceptable damage to oneself. The only defenses against the atomic bomb, they pointed out, were interception of its carriers in flight or action against the sources of attack. There was the possibility of improved air defense weapons and techniques, but it seemed unlikely that such defensive measures could be completely reliable. Effective action against the sources of attack, the Committee argued, "would normally require us to 'strike first.'" 52

Before early 1947 the concept of preemption exercised a seductive influence in military discussions of the strategic problems of damage limitation. If preemption was politically impracticable, the alternative was immediate retaliation. But, action against the enemy's atomic delivery forces after they had struck the first blow seemed useless. Therefore, the JSSC, like Air Force strategists, reasoned that retaliatory strikes must be aimed at rapidly disrupting the enemy's war-making capacity. The question of how that would lessen the damage already
incurred by the United States was not addressed. Nor, did the Committee specifically explore the effects of retaliatory capability on inhibiting nuclear attacks against us in the first place.  

The JSSC admitted that new weapons would ultimately change the techniques of warfare and might change the "relative importance and strength of the various military components," but not in the foreseeable future. At least so long as forward bases were required for the effective delivery of atomic bombs, conventional ground, sea and air forces would be necessary to secure and defend those bases and to deny them to the enemy. Moreover, until the technical and tactical limitations of atomic weapons and the means for their delivery were overcome, conventional armed forces would be needed to achieve a final decision in warfare. For the present, the techniques and organization of conventional armed forces would remain essentially unchanged by atomic weapons, since those weapons were unsuitable for tactical employment in all but the most "exceptional circumstances."  

The Tripartite Declaration of November 1945, which committed the Truman Administration to a policy of international control of atomic energy, introduced a new element into the JCS evaluation of atomic weapons. The possibility that atomic weapons would be internationally proscribed eliminated the pressure to justify the existence of conventional armaments. At the same time the prospect of giving up a weapon of such enormous potential caused the JSSC, at the urging of General Eisenhower, to take a less critical view of the technical and tactical limitations
of atomic weapons, which the committee had previously emphasized so strongly.\textsuperscript{55}

The JCS apparently intended to publish the conclusions of the Joint Strategic Survey Committee. However, disagreement between General Spaatz, AAF Commanding General, and Admiral Nimitz, Chief of Naval Operations, over the precise wording of the paper demonstrated how fragile was the basis for consensus. Nimitz refused to accept additional language proposed by Spaatz which suggested, ever so vaguely, the priority of strategic air objectives over other military objectives in the event of war. Ultimately deadlocked over the issue, the JCS failed to approve any comprehensive statement of the military implications of atomic weapons, even one for their own internal use.\textsuperscript{56}

\textbf{Operation CROSSROADS and the Breakdown of Consensus}

The deepening bitterness of the unification debate, with its implications for service roles and missions, and the imminent battle over allocation of the fiscal 1947 defense budget destroyed the last pretense of a strategic consensus among the military services during early 1946. How atomic weapons affected modern warfare was an essential element of the interservice contest for postwar favor. To assure its basic functions and organization, the Navy had to prove itself and its concept of warfare still viable in an atomic age. The Air Force, to support its claims to autonomy and the "all importance" of strategic airpower, needed to demonstrate the power of the bomb, even if the thinking of many airmen on atomic weapons was still ambivalent. If either service could embarrass its chief rival for budgetary resources, so much the
better. It was in that context that preparations for the first postwar nuclear weapons tests—Operation CROSSROADS—were begun.

From the beginning, CROSSROADS was a political rather than a scientific event, as the choice of a naval target indicated. The parallels between the tests and General William Mitchell's sinking of the captured German battleship "Ostfriesland" a quarter century earlier were not coincidental. The tests proceeded in an almost circus atmosphere. Virtual armies of journalists and service publicists were on hand to record the demonstration. Air Force and Navy planners jealously guarded against any hint of unfair advantage for their service rivals in the design and execution of the project.57

Who actually originated the idea for an atomic weapons test against naval vessels is the subject of a minor historiographical debate. Apparently, the idea occurred almost simultaneously within both the Air Force and the Navy. In early August General Arnold and General Barney Giles (Acting Commander of the U.S. Strategic Air Forces in the Pacific) suggested independently that the Japanese fleet be used for such tests. At about the same time, Captain Louis L. Strauss, assistant to Navy Secretary Forrestal (and later one of the first members of the Atomic Energy Commission), told his boss that the Navy should test the effects of atomic bombs on surplus naval vessels to counter "loose talk to the effect that the fleet is obsolete."58

During JCS discussions on the disposition of the Japanese fleet in September, General Arnold requested that a number of ships be preserved for atomic weapons tests which the Air Force expected to carry out in the future. Admiral King (still Chief of Naval Operations at that time)
apparently was not enthusiastic about the idea of atomic tests against naval vessels, but he was even less enthusiastic about such tests performed independently by the Air Force. In October, King introduced his own proposal for a test—using surplus U.S. naval ships—which would be jointly planned and controlled. General Arnold, perhaps with the "Ostfriesland" in mind, was intent on using the captured Japanese fleet as a target. After some canny bargaining, the JCS approved the preparation of plans for the tests in early November. 59

In February 1946, the JCS, with President Truman's approval, agreed on general plans for the tests, which called for the detonation of three weapons—one air burst and two underwater bursts—in the vicinity of tiny Bikini Atoll in the Marshall Islands sometime in mid-May; just about the time that Congressional consideration of the fiscal 1947 defense budgets would begin. Subsequent disagreement over detailed plans for the target array—the Navy wanted the ships spread out, the Air Force wanted them closer together—threatened to disrupt the tests, but a compromise was worked out. In late March, however, Truman postponed the tests for several weeks in order not to prejudice American proposals for international control of atomic energy which the Administration expected to introduce at the United Nations in June. Also, Truman apparently decided that the tests should not be performed while Congress was in session, lest they complicate passage of the Administration's defense budgets. 60

CROSSROADS began on 1 July with an air burst detonated at an altitude of 520 feet over the target ships in Bikini lagoon. As a scientific test ABLE shot was a miserable failure. To the ever-lasting
embarrassment of the Air Force the bomb, dropped from a B-29, missed its target center, the orange-painted battleship NEVADA, by over 2000 feet. Instrument malfunctions, not to mention the effects of the errant bomb, resulted in a failure to record much essential data. The underwater BAKER shot was detonated without mishap on 25 July, and the planned third shot—a deep water explosion—was cancelled.  

Predictably, the Bikini tests failed to resolve either the issue of fleet vulnerability or broader interservice disputes over strategy. Already confirmed in their doctrinal views, the Air Force and Navy saw what they wanted to see in the test results. Air Force discussions of CROSSROADS revealed no new strategic perspective; only a concern with improving its operational ability to deliver the bomb accurately. In similarly parochial fashion, the Navy proceeded with its plans to perfect a general purpose nuclear delivery capability, including plans for a new large carrier.  

In another effort to achieve military consensus on the bomb, the JCS had appointed, in January 1946, a civilian-military Evaluation Board to study the CROSSROADS tests and assess the technical and strategic implications of atomic weapons. The power of the bomb and the awful potential threat it posed to American security profoundly impressed the members of the Evaluation Board. "If used in numbers," they were convinced, "atomic bombs not only can nullify any nation's military effort, but can demolish its social and economic structures." Unfortunately, the Board provided no basically new perspectives on how to defeat or ameliorate such an awesome possibility.
Like other military analysts the Board was preoccupied with the danger of a crippling surprise atomic attack. The Board hoped that retaliatory power would "deter a potential enemy from attack." If it did not, the only alternatives were to prevent delivery of the attack or to stop it before it did significant damage. The Board emphasized that the threat justified fundamental departures in national policy:

"There must be . . . a revision of our traditional attitudes toward what constitute acts of aggression so that our armed forces may plan and operate in accordance with the realities of atomic warfare. Our policy of national defense must provide for the employment of every practical means to prevent surprise attack. Offensive measures will be the only generally effective means of defense, and the United States must be prepared to employ them before a potential enemy can inflict significant damage upon us.

. . . . . .

"Where in the past, the duty of the President, as Commander-in-Chief, has been restricted (before formal declaration of war) to action only after the loss of American lives and treasure, it must be made his duty in the future to defend the country against imminent or incipient atomic weapon attack. What constitutes an 'aggressive act' or 'imminent' or 'incipient' attack it is the responsibility of Congress to define . . . so that it may draft suitable standing orders to the Commander-in-Chief for prompt and effective atomic bomb retaliation should another nation ready an atomic weapons attack against us."64

Despite their evident enthusiasm for a strategy of nuclear preemption, the Board members did not closely examine how such a strategy would prevent subsequent atomic retaliation by the enemy. They seemed to understand that "selection and priority of targets" was of "prime importance," but they concluded that, except in special circumstances, nuclear weapons were suitable only for "use against human life and activities in large urban and industrial areas." The Board particularly emphasized the potential psychological effects of atomic bombing. Such use might overwhelm the enemy and destroy his capacity or even his will
to wage war, but what the Board, like many other analysts, failed to see was that it did not guarantee against unacceptable damage to ourselves in the meanwhile. 65

The Board's conclusions in regard to the importance and the proper objectives of strategic atomic operations were generally compatible with Air Force doctrine. However, to the Navy's satisfaction, the Board confirmed the need for a wide range of conventional general war forces and endorsed the development of a seaborne delivery capability for both strategic and tactical employment of atomic weapons. Particularly pleasing to the Navy was the Board's conclusion that fleets at sea were unattractive targets for atomic attack, and, presumably, no more vulnerable than in the past. 66

The report of the JCS Evaluation Board settled none of the disputes over the strategic, functional or structural implications of atomic weapons which increasingly divided the armed services, particularly the Air Force and Navy. In fact, by the time the Board's report was submitted to the JCS, almost a year after the CROSSROADS tests, agreement among the services on those issues was virtually impossible. The Joint Chiefs continued to debate specific aspects of the Evaluation Board's report as late as 1951, but, unable to reach agreement, they never formally approved the document. 67

The closest the JCS could come to a consensus on atomic weapons at the time was an innocuously vague statement of the "Effects on the Nature of War of Future Technical Developments in Weapons" which was circulated in the joint staff committees and the military departments during late 1946 and 1947. Drawn up hurriedly by the JSSC in November
1946, the paper minimized the short-term effects of atomic weapons on the pattern of warfare. On the assumption that no other nation could threaten the United States with a significant atomic attack for at least ten years, the longer-term effects of nuclear weapons were simply ignored.\textsuperscript{68}

Without fundamental consensus on atomic weapons, strategic planning tended to focus only on short-term contingencies, with little reference to the time when America's potential enemies would have significant nuclear weapon stockpiles and adequate means for their delivery. But, agreement even on short-term strategic plans was prevented by continuing disputes over service roles and missions and force structures. In addition, the absence of a coherent national military policy, either in regard to nuclear weapons specifically or the broader aspects of military preparedness, handicapped defense planners, and made interservice agreement even more difficult to achieve.
CHAPTER I NOTES


18. "Presentation to Senate Committee," (presentation by GEN Spaatz to Senate Military Affairs Committee), 12 Jun 47, Vandenberg Papers, Bx 47. "Effect of the Atomic Bomb on AAF Tactical and Strategic Doctrine," presentation by BG T. S. Power to the Joint CROSSROADS Committee Symposium on the Scientific Aspects of Operation CROSSROADS, 4 Feb 47.


22. Greer, Development of Air Doctrine in the Army Air Arm, pp. 17, 41, 57-58, 80, 115.


25. Memo, Partridge to Knerr, 7 Jun 46, and First Indorsement, Knerr to
Partridge, n.d., Spaatz Papers, Bx 276, Knerr File. See also
Arnold, "The Air Force in the Atomic Age." "Effect of the Atomic
Bomb on AAF Tactical and Strategic Doctrine," presentation by BG
T. S. Power . . . , 4 Feb 47.

26. Sherry, Preparing for the Next War, pp. 181-84.

27. JCS 1520, 19 Sep 45, Memo, Marshall to JCS, sub: "Interim Plan for
the Permanent Military Establishment of the Army of the United
States," in Records of the U.S. Joint Chiefs of Staff, RG 218
(hereafter cited as CCS), CCS 370 (8-19-45)S. 1. "War Department
Mobilization Plan I, 1947" (WDP-147), 15 Oct 46, AF OPD 370.01 (5
Nov 46), 336/341. Sherry, Planning for the Next War, Chapters Two
and Three.

28. Marginal note by Marshall on Memo, Handy (AC/S', OPD) to Marshall,
"The Effects of the Atomic Bomb on National Security," 10 Mar 47,
published in Bernard Brodie and Eilene Galloway, The Atomic Bomb
and the Armed Services (Washington, DC: Legislative Reference Ser­

29. JCS 1520, 19 Sep 45. Testimony of GEN Eisenhower, 28 Jun 47, in US
Congress, Senate, Cmte on Appropriations, Military Establishment
Appropriations Bill for 1948, Hearings, 80/1 (Washington, DC: GPO,
1947), p. 295. JCS 1477/6, 21 Jan 46, Memo, Eisenhower to JCS,
sub: "Statement of Effect of Atomic Weapons on National Security

30. JCS 1520, 19 Sep 45. "The Effects of the Atomic Bomb on National
Thinking on the Atomic Bomb," Bulletin of the Atomic Scientists,
III (June 1947), p. 159. JCS 1520/3, 10 Jan 46, Memo, C/S, USA to
JCS, sub: "Tentative Plan for the Permanent Peace-Time Army," CCS
370 (8-19-45)S. 2.

31. See especially comments of BG George A. Lincoln (Army Member of
JPS & Army D/P&O), Summary Transcript of JSP 216th Meeting, 29 Aug
45, CCS 381 (5-13-45)S. 1. "Statement on the Atomic Bomb and Its
Effect on the Army," (written by MG Leslie Groves), n.d. (c January
1946), attached to JCS 1477/6, 21 Jan 46. "The Effects of the

32. Ibid., pp. 65-66. GEN Omar N. Bradley, "This Way Lies Peace,
Saturday Evening Post, CCXXVII (15 October 1949), pp. 32-33. GEN
Omar N. Bradley, "Security is Cooperative Venture--Not Competitive
Race: War in Future Will Still Thrust Eventual Burden on Soldier
28-29. See also Mark B. Schneider, "Nuclear Weapons and American
of Southern California, 1974), Chapter Eleven.


43. JCS 1496/3, 20 Sep 45. JCS 1496/1, 7 Sep 45. JCS 1496/2, 17 Sep 45.

44. JCS 1496/3, 20 Sep 45. Italics added.
45. JCS 1518, 19 Sep 45, Rpt, JSP to JCS, sub: "Strategic Concept and Plan for Employment of United States Armed Forces," JPS 744/1, 4 Sep 45, Rpt by JSP, sub: same, JPS 744/2, 13 Sep 45, Rpt by JSP, sub: same, JPS 744/3, 14 Sep 45, Rpt by JSP, sub: same, all in CCS 381 (5-13-45)S. 1-2.

46. JCS 1518, 19 Sep 45. JCS 1518/1, 1 Oct 45, Memo, CNO to JCS, sub: Strategic Concept and Plan for Employment of United States Armed Forces," JCS 1518/2, 9 Oct 45, Memo, C/S, USA to JCS, sub: same, both in CCS 381 (5-13-45)S. 2.


48. JCS 1518, 19 Sep 45.

49. JCS 1477, 18 Aug 45, Memo, C/S, USA to JCS, sub: "Over-All Effect of Atomic Bomb on Warfare and Military Organization," JCS 1477/1, 30 Aug 45, Rpt, JCCS to JCS, sub: same, both in CCS 471.6 (8-15-45)S. 1. Re: Fairchild draft see Memo w/attach, Sec JSSC to Sec JCS, 26 Oct 45, in Muir S. Fairchild Papers, Bx 3, JSSC File, Library of Congress, Washington, DC.

50. JCS 1477/1, 30 Oct 45.

51. Ibid.

52. Ibid.


54. JCS 1477/1, 30 Oct 45.

55. JCS 1477/2, 6 Dec 45, Memo, C/S, USA to JCS, sub: "Over-All Effect of Atomic Bomb on Warfare and Military Organization," JCS 1477/3, 20 Dec 45, Memo, C/S, USA to JCS, sub: same, JCS 1477/5, 12 Jan 46, Rpt, JSSC to JCS, sub: same, JCS 1477/6, 21 Jan 46, JCS 1477/7, 6 Feb 46, Rpt, JSSC to JCS, sub: same, all in CCS 471.6 (8-15-45)S. 1-2.


59. JCS 1490/3, 18 Sep 45, Memo, CG, AAF to JCS, sub: "Use of Combatant Vessels of the Japanese Navy as Targets," CCS 045.4 JAPAN (8-28-45) S. 1. JCS 1552, 16 Oct 45, Memo, CNO to JCS, sub: "Tests of the Effects of Atomic Explosives," JCS 1552/1, 31 Oct 45, Memo, CG, AAF to JCS, sub: same, and JCS 1552/1 DECISION, 9 Nov 45, all in CCS 471.6 (10-16-45)S. 1.


61. Ibid., pp. 150-51. Moll, "Operation Crossroads," p. 66. Davis, Postwar Defense Policy, p. 246. VADM William H. P. Blandy, "Operation Crossroads: The Story of the Air and Underwater Tests of the Atomic Bomb at Bikini," Army Ordnance, XXXI (January-February), pp. 341-43. The Air Force never satisfactorily explained the bombing error, which was unusually large for visual bombardment. The aerodynamic characteristics of the FM bomb were notoriously unpredictable, but would not account for such an enormous error. The Air Force claimed there was no pilot error; presumably leaving only "sinister forces" as an explanation. Estimates of the yield of the CROSSROADS bombs are in the 20KT range. However, a precise, official figure is still unavailable; perhaps because none was obtained. Re: cancellation of the third test shot see Forrestal Diaries, 26 Jul 46, pp. 187-88, 203.

63. JCS 1961/7, 30 Jun 47, "The Evaluation of the Atomic Bomb as a Military Weapon," Final Report of the Joint Chiefs of Staff Evaluation Board for Operation CROSSROADS, CCS 471.6 (10-16-45)S. 9, Pt. 1. On the origins and purposes of the Board see JCS 1552/7, 10 Jan 46, sub: Appointment of JCS Evaluation Board, JPS 770/17, 23 Feb 46, sub: Instructions to JCS Evaluation Board, both in CCS 471.6 (10-16-45)S. 2-3. Board members were: Karl T. Compton, Chairman; Mr. Bradley Dewey, President of American Chemical Co., MG Thomas F. Farrell (USA, Ret), former Deputy Commanding General, Manhattan District Project; GEN Joseph W. Stilwell (replaced on his death by GEN A. C. Wedemeyer); LTG Louis Bereton, AAF; RADM W. R. Furnell (replaced by VADM J. H. Hoover); and RADM Ralph A. Osfie.

64. JCS 1691/7, 30 Jun 47.

65. Ibid.

66. Ibid.


68. See Encl to JCS 1780, 20 May 47, Rpt, JSSC to JCS, sub: "Estimate of the Effects on the Nature of War of Future Technical Developments in Weapons," CCS 385.2 (10-3-46). A copy of the original paper has not been found, but it was written sometime in November 1946.
CHAPTER II

GLOBAL POLITICS AND DEFENSE PREPAREDNESS:
FOREIGN AND MILITARY POLICIES, 1945-1947

Ideally, military policy is based on political decisions regarding national interests and objectives and the general means for securing them. That relationship between national policy and military policy was an article of faith among postwar military planners. However, throughout World War II and for some time thereafter, military planners were placed in the difficult position of having to guess not only fundamental national interests and objectives, but also the Administration's concept of the means for their achievement.

Whatever the American Government's specific goals and commitments might be in the postwar period, armed forces leaders were already convinced that military preparedness on an unprecedented scale would be essential. But, during World War II each of the services had gone its separate way in planning for the postwar period. If sound, well integrated defense programs were to result from that chaotic process, basic political guidance was indispensable. The unilateral effort of the Joint Chiefs of Staff to define the basic elements of national military policy during mid and late 1945 was aimed at extracting necessary guidance from the Administration. Of course, military leaders also hoped that their own view of future military policy would be adopted.
In retrospect, military leaders probably expected too much from civilian policy-makers. The uncertainty and instability of international relations as well as the competing claims of domestic politics and economics made immediate, definitive policy decisions virtually impossible. Nevertheless, fundamental political questions affecting military policy and planning confronted the Administration. What would be its attitude toward the Soviet Union? What means—military, economic or political—would the United States employ to secure peace and international stability? And, how much were Americans prepared to pay to achieve those objectives? Of particular importance, how did the Administration propose to deal with the terrible potential of atomic weapons? Answers to those questions did not come quickly. In the meantime, military planning proceeded in a virtual political void.

Soviet-American Relations and Defense Preparedness: The Military View

To military officers the problem of Soviet-American relations was a pivotal consideration in postwar defense planning. The statement of military policy approved by the Joint Chiefs of Staff in September 1945 emphasized that fact. "In the last analysis," the JCS concluded, "the maintenance of ... world peace will depend upon mutual cooperation among Britain, Russia and the United States." The possibility of a breakdown in East-West relations—increasingly apparent to military planners in late 1945—required that the United States be prepared militarily to insure its own security. Although the Joint Chiefs recognized limits on military preparedness, they argued that the essential bases of a postwar military policy must include (1) maintenance of defense forces at least sufficient to assure security during the initial
period of mobilization, (2) maintenance of adequate overseas bases, and
(3) "readiness to take prompt and effective military action abroad to
anticipate and prevent attack."¹

The statement of military policy drawn up by the JCS was referred by
the War Department to the State-War-Navy Coordinating Committee in late
September. The State Department took a critical view of the document
from the outset. In comments drafted by Alger Hiss (then Director of the
Office of Special Political Affairs) and approved by the Secretary's
Staff Committee in November, the State Department argued that the JCS
statement was too general, that it placed too much emphasis on the "pos­
sibility of a breakdown in friendly relations between the great powers," and too little emphasis on "the responsibilities of the United States as
a principal member of the United Nations." In fact, State Department
critics seemed to think that a military policy such as the one recommended
by the JCS might contribute to the breakdown of Soviet-American relations.²

At the insistence of the War Department member of the State-War-Navy
Coordinating Committee, the JCS statement was republished in March 1946
as a Committee Paper (SWNCC 282). Thereafter, the document was referred
to an ad hoc subcommittee that never met. The document lay buried for
over two years, a victim of continued State Department opposition and the
crosscurrents of postwar foreign and defense policy transition. Serious
consideration of a comprehensive statement of national defense policy was
not initiated until the spring of 1948 when the issue was taken up by the
newly established National Security Council.³

While rejecting JCS attempts to formally define national military pol-
icy, the State Department was itself trying to work out a comprehensive
statement of American foreign policies. In mid-December, the State Department presented a two part paper, "Foreign Policy of the United States," to the State-War-Navy Coordinating Committee for comment by the Service Departments and the JCS. The first part of the document briefly summarized U.S. policy in regard to international organization and security, atomic energy, regional arrangements, peace settlements, and international economics. The second part dealt with U.S. policy toward individual countries. Throughout the document fundamental importance was attached to the role of the United Nations in insuring international peace and security. Outside that context, there was no mention of national security policy. The State Department also emphasized the importance of continued Soviet-American cooperation, but added that the United States should "stand firm" against unreasonable Soviet demands or efforts on their part to weaken the international structure of peace.

The Joint Strategic Survey Committee, which drafted JCS comments on the first part of the State Department's paper in early January 1946, objected to the "unduly optimistic, if not unrealistic" view of United Nations' capabilities to "enforce peace and security." "In no sense does the United Nations Organization completely safeguard our own peace and security," they argued, "because the only nations capable of conducting a major war against the United States are exempt from the control of the Security Council, by virtue of the veto power provided in the Charter." The JSSC was also seriously concerned with the omission of any mention of policies for national defense. The Committee suggested the addition of a strong statement of U.S. intention to maintain whatever military forces were necessary for national security, at least "until
experience . . . demonstrated the efficacy of the peace-preserving machinery of the United Nations."^5

The Joint Chiefs softened the criticisms of their senior military advisors. They tactfully agreed to endorse the first part of the State Department paper—which they were told was being considered by SWNCC for public release—provided that excerpts from President Truman's recent Navy Day speech were included in order to "inform both other nations and our own people that the United States proposes to maintain military forces to support its foreign policy." The part of the President's speech which the JCS had in mind contained an outline of the "principal tasks" of American armed forces. Those were to enforce the terms of peace imposed on our defeated enemies, to fulfill our military obligations as a member of the United Nations, to preserve the "territorial integrity and political independence" of the nations of the Western Hemisphere, and, most importantly from the JCS point of view, to "provide for the common defense" of the United States in a "troubled and uncertain world."^6

The second part of the State Department paper, submitted to the JCS in February, and not intended for public release, drew sharper comments from the military chiefs, especially in regard to U.S. relations with the Soviet Union. The JCS agreed with the State Department that the United States should adopt a "firm and friendly attitude in our dealings with the Soviet Government," but with the "emphasis upon 'firmness.'" The JCS reasoned that "the consolidation and development of the power of Russia" was the only real threat to peace in the foreseeable future. Therefore, it should be the explicit policy of the United States to
oppose the expansion of Russian influence in Europe and elsewhere by extending political and economic support, through the U.N. or directly, to threatened nations. The Joint Chiefs specifically omitted military support, which they believed was "impracticable" in light of the effects of demobilization on U.S. military capabilities. They did suggest that the "cohesion of Western European countries into a bloc" would be desirable from a military point of view, but stopped short of suggesting any formal military alignments with Western Europe.7

Within the Truman Administration in late 1945 and early 1946 there were two contending attitudes toward handling the Russians. One view held that cooperation was possible if both sides showed a willingness to negotiate and compromise. Policy-makers holding that view counseled restraint and conciliation toward the Soviets. The other view was based on the belief that Soviet policy was essentially expansionist and that further concessions by the United States would only encourage aggressive behavior. John Gaddis observes in his analysis of postwar foreign policy that much of the confusion in Truman Administration policy toward Russia before late 1946 or early 1947 stemmed from the fact that neither attitude dominated.8

Despite the division of opinion within the Administration, indications of Soviet expansive designs created increasing alarm among U.S. policy-makers during the early months of 1946. A bellicose speech by Premier Stalin in early February emphasizing the basic incompatibility of communism and capitalism created widespread suspicion of Soviet motives. Public revelation a week later that a Russian spy ring operating in Canada had managed to steal atomic weapon secrets added to growing
public and Congressional dissatisfaction with the Administration's apparent policy of restraint toward Soviet provocations.9

Russian pressure against Iran and Turkey, building up for almost a year, reached crisis proportions in early March. In Turkey, the Soviets demanded cession of the eastern Kars and Ardahan provinces, naval base rights on the Dardanelles, and changes in the 1936 Montreux Convention governing passage through the straits. In Iran, the Russians wanted autonomy for Azerbaijan, the right to station troops in the province, and virtual control over north Iranian oil production.10

In comments solicited by the Secretary of State at the height of the Middle East crisis, the Joint Planners analyzed Soviet intentions and U.S. security interests in the area. Soviet demands, they said, manifested a desire to dominate the region. Specific Soviet objectives were to provide additional security for the vital Baku, Kharkov and Ploesti areas, insure access to the Mediterranean, and control the strategic Kars Plateau which commanded the only suitable overland, military routes from the Caucasus to the Persian Gulf and Suez. While not a "direct" military threat to the United States, Soviet penetration of the Middle East and eastern Mediterranean in time of war—giving Russia control of the Persian Gulf oil areas and access to Suez—would "impair our national security." Politically, the planners added, U.S. acquiescence to Soviet demands would undermine Western influence in the Middle East and elsewhere.11

American diplomatic support stiffened Turkish and Iranian resistance to Russian demands, but sterner measures were not within American capabilities. Plans, suggested by Navy Secretary Forrestal, to send a strong naval task force, including the carriers MIDWAY and FRANKLIN D. ROOSEVELT
and the battleship MISSOURI, to the eastern Mediterranean in early March were scaled down because of the unavailability of naval support vessels on short notice. The State Department opposed the idea in any case. In the end, only the MISSOURI was dispatched, and it was sent with the ostensibly benign mission of returning the ashes of the deceased Turkish Ambassador. A subsequent request by the President for a summary of military forces available in the event of an emergency resulted in an extremely discouraging response by the JCS. Three carrier Task Groups and a single Marine Division were the only effective combat forces that could be deployed within a ninety day period, Admiral Leahy told the President on 12 March. And, even that would be impossible unless demobilization was halted immediately.12

The deteriorating state of American military capability had been a fundamental concern of military leaders for some time. In the wake of Soviet dissimulation and bluster at Potsdam and at the initial meetings of the Council of Foreign Ministers in the summer and fall of 1945, the Joint Strategic Survey Committee told the JCS: "If there is to be any limit to Russian demands, we must know where we can draw the line." There was little the United States could do to loosen the Soviet grip on eastern Europe, but the rapid demobilization of our military forces threatened our ability to oppose the extension of Russian influence to other areas. It was time, the JSSC said, for the Joint Chiefs to reexamine U.S. military capabilities to determine where and to what extent we could successfully resist Soviet expansion.13

Thereafter, the Joint War Planners (JWPC) and Joint Intelligence Staff (JIS) undertook a lengthy analysis of Soviet postwar aims together with a
detailed appraisal of existing and projected U.S. military capabilities. The joint intelligence estimators were convinced that the Soviets would not deliberately risk a major war for a decade or longer. Despite impressive military capabilities, the Soviet Union lacked the developed economic strength for a prolonged war. Russia also lacked atomic weapons and the naval and strategic air forces necessary to wage war on a global scale. Until those deficiencies were remedied, military intelligence analysts agreed, the Soviets would rely primarily on political pressure, applied directly or through "native Communist groups," to obtain their objectives "by means short of war."^14

According to the military analysts, the long-term Soviet aim, if not actually world domination, was to establish a "predominant influence over the Eurasian land mass." Toward that end, shorter-term Russian aims would include consolidation of Soviet hegemony in areas adjacent to their borders, creation of "security zones" along the strategic approaches to the USSR, improvement of their access to the eastern Mediterranean and the Persian Gulf areas, and expansion of their sphere of influence wherever opportunity existed, especially in Western Europe, North Africa and the Middle East. ^15

Unless the effects of demobilization were quickly reversed, the Joint War Planners told the JCS, the United States would have inadequate military forces to back up political and diplomatic resistance to Soviet expansion. To deploy even a small expeditionary force of two divisions would require up to twelve months' preparation. Should a major war occur, U.S. capabilities to initially resist Soviet advances in Western Europe and the Middle East simply did not exist, and would not exist for the foreseeable
future. "Only the potential capabilities of atomic bombing would constitute any real threat to possible Russian aggression," the Joint War Planners concluded, but that was of little utility in containing political or indirect aggression.  

**A Sudden Civilian Enthusiasm for Military Preparedness**

The Middle Eastern crisis together with continued Soviet self-aggrandizement in Europe resulted in increased concern among many civilian policy-makers about our ability, as Forrestal put it, "to back up our notes with action." Even State Department attitudes toward the role of potential military force in Soviet-American relations altered dramatically after March 1946. In an influential and widely circulated analysis of Soviet policy and possible American responses sent from the Moscow Embassy in February, George Kennan argued that "Soviet power . . . is highly sensitive to [the] logic of force. . . . if the adversary has sufficient force and makes clear his readiness to use it, he rarely has to do so."  

Whatever ultimate conclusions regarding U.S. military policy Kennan had in mind, the effect of his analysis on State Department thinking was clear. In response to a JCS request for political guidance in regard to military requirements for the implementation of U.S. policy toward Russia, the State Department asserted that "the success of U.S. diplomatic opposition to present Soviet expansion will depend in large measure upon the Soviet estimate of U.S. military capabilities and the determination of the American Government and people to employ armed force in opposition to Soviet expansion." To the delight of military leaders, the State Department added that it was "essential" to immediately "reconstitute our military establishment." Public statements by the President seemed to amplify
the same theme. "Only so long as we remain strong," Truman told a Chicago audience in early April, "can we ensure peace in the world."\(^{18}\)

The military chiefs sought to reinforce the sudden enthusiasm of civilian policy-makers for military preparedness. The JCS reiterated its earlier warnings to the President on the state of American military capabilities. War seemed unlikely, but, if the Soviets precipitated a crisis through miscalculation of Western vital interests, U.S. forces-in-being were not sufficient to offer major resistance to Soviet expansion. Western Europe and most of the Middle East would have to be abandoned if war occurred in the near future. The JCS urged civilian policy-makers to take steps to increase military readiness.\(^ {19}\)

The Middle Eastern crisis and increasing Russian intransigence over European peace settlements prompted the Administration to undertake a basic reexamination of its policy toward the Soviet Union during the summer of 1946. In July, President Truman asked his Special Counsel, Clark Clifford, to compile a comprehensive report on Soviet-American relations. After extensive consultation with the State, War and Navy Departments, the Joint Chiefs of Staff, and the Central Intelligence Group, Clifford submitted his report to the President two months later. Emphasizing the role of ideology in Soviet foreign policy, the report concluded that the Russians regarded conflict between communism and capitalism as inevitable, and were making every effort to increase their military power and to "weaken and subvert their potential opponents" in preparation for a final confrontation.\(^{20}\)

Further concessions to Soviet demands, Clifford argued, would only encourage greater and more dangerous aggressiveness on Russia's part. Instead, the United States should follow a policy of steadfast resistance to
the expansion of Soviet power and influence in the hope of eventually convincing the Russians that it was in their interest to cooperate peacefully with the West. Clifford reasoned that military preparedness would be a key element of American policy:

"The language of military power is the only language which disciples of power politics understand. The United States must use that language in order that Soviet leaders will realize that our government is determined to uphold the interests of its citizens and the rights of small nations."21

Clifford acknowledged that the Soviets probably did not want an immediate military showdown with the West. Nevertheless, the Russians were rapidly developing their military strength, and the possibility of war was an ever-present danger. The United States must, therefore, be prepared to deter or to defeat any action by the USSR which would jeopardize its security. The Clifford Report endorsed a wide range of conventional military capabilities as essential to American military preparedness. But, the report laid particular emphasis on the value of atomic weapons and other means of mass destruction in deterring Soviet aggression. The United States "must be prepared to wage atomic and biological warfare if necessary" since the "mere fact of preparedness" might be the "only powerful deterrent to Soviet aggressive action."22

Clearly, the Clifford Report drew heavily on George Kennan's earlier analysis of Soviet behavior. But the report's conclusions regarding the political and military dimensions of the Soviet threat owed even more to JCS estimates of Russian intentions and capabilities. In a memorandum to the President, meant for Clifford's use, the Joint Chiefs summarized their own view of Soviet policy, which confirmed the previous analyses of the Joint War Planners and Joint Intelligence Staff. Until the Soviets
remedied deficiencies in their military potential—especially the lack of atomic weapons and naval and strategic air-power—they would avoid precipitating a major war. But, in the meantime, the Soviet Union would use "every means, short of war," to increase its sphere of influence, to acquire control of strategic areas, "to cause disintegration of the resistance capabilities of the capitalist nations and to achieve their [political] isolation." 23

Ultimately, the JCS believed, Soviet policy was aimed at "world domination." The implications of such a policy for American security seemed clear. "Our military policy and willingness to support our armed forces," the military chiefs insisted, "must be based on the elementary assumption that the Soviet mentality will recognize only one deterrent to the policy of aggression, and that is force." The United States must, therefore, resist the spread of Soviet influence, strengthen ties to friendly nations, and, above all, maintain sufficient military forces-in-being to defend the United States if war should occur. 24

The Truman Doctrine and the Elusiveness of Military Preparedness

The intent, if not the substance, of the Truman Doctrine and Containment was clearly evident in the Clifford Report, but it only served to confirm a shift of attitude toward the Soviet Union which was already obvious within the Administration. Renewed Soviet demands on Turkey in early August provoked a swift and "deadly earnest" response. Truman's top civilian and military advisors agreed that Soviet domination of Turkey endangered the entire Near and Middle East. The Russians had to be convinced that the United States would not hesitate to support Turkey with "the force of American arms" if necessary. A strong diplomatic protest was sent to
Moscow. To back it up, elements of the Atlantic Fleet, including the aircraft carrier FRANKLIN D. ROOSEVELT, were dispatched to the eastern Mediterranean to join the battleship MISSOURI, which had gone to the area in March.

On 19 August, the day the U.S. delivered its protest to the Soviets over Turkey, Yugoslavian Air Force fighters shot down two American transport aircraft which apparently strayed into the country's airspace near the disputed Italian area of Venezia Giulia. At the same time the Soviets increased their propaganda offensive against the right-wing Greek Government in support of an attempted take-over in Athens by the communist National Liberation Front (EAM). The possibility that the Soviets would precipitate a war was discussed by Truman and his advisors. The President seemed willing to take the risk. By late November, the Central Intelligence Group cautiously concluded that a military confrontation was unlikely, but added that an "intensive war of nerves" would probably continue.

When the British Government informed the State Department on 21 February 1947 that it would no longer bear the financial burden of economic and military assistance to Greece and Turkey, the American course of action seemed clear. Three days later the President approved a recommendation by the Secretaries of State, War and Navy that the United States provide necessary assistance to those countries. In his address to Congress on 12 March requesting aid funds, the President proclaimed that "it must be the policy of the United States to support free peoples who are resisting attempted subjugation by armed minorities or by outside pressures."

Just how far the United States should go in supporting "free peoples" was a matter of disagreement within the Administration. George Kennan was
alarmed at the implied universality of the Truman Doctrine. However, the enthusiasm of other, more senior civilian policy-makers to foil the spread of Soviet influence seemed boundless. A major reexamination of U.S. foreign assistance policy, begun a few days before the President's address to Congress, came to the potentially far reaching conclusion that "any threatened nation which, with U.S. help, can survive has a valid claim on U.S. resources."\textsuperscript{28}

In fact, the rapidly deteriorating political and economic condition of Western Europe was the focus of Administration concern. Despite Under Secretary of State Dean Acheson's promise to Congress that aid to Greece and Turkey would not set a precedent for U.S. policy, the SWNCC study and subsequent analyses by the State Department Policy Planning Staff resulted in the Administration's commitment by mid-1947 to a major program to strengthen European resistance to Soviet pressure and subversion. Finally presented to Congress in December, the European Recovery Program projected a massive investment in the rehabilitation of European political and economic stability.\textsuperscript{29}

The emerging policy of Containment evident in the Truman Doctrine and the Marshall Plan was essentially political and economic in conception. The emphasis on military preparedness to restrain Soviet expansion so evident in Administration thinking in mid and late 1946 almost vanished during 1947. Indeed, the Administration seemed unwilling to consider the military policy implications of increasing political commitments. President Truman placed firm limits on military budgets, which were progressively tightened during 1946 and 1947. An economy-minded Congress—in the hands of conservative Republicans after January 1947—enforced even more severe
restrictions on defense spending than did the President. Public opinion favored "getting tough with the Russians," but most Americans were unwilling to make the economic sacrifices necessary to implement such a policy. Even foreign economic assistance faced stiff opposition in Congress. Resources simply were not forthcoming for both improvements in military capability and an ambitious program of foreign aid.  

Despite continued warnings from military leaders that American defenses were inadequate to support expanding commitments, the Administration appeared to rationalize the potential risk. Indeed, the most likely near-term threat to American security—Soviet exploitation of economic chaos in Europe—was a political rather than a strictly military challenge. Forrestal, recently appointed Secretary of Defense, offered his own rationale for Administration policy in a letter to Senator Chan Gurney in December 1947. He explained:

"Certainly we cannot default Europe to Russia. To do so would mean that within the next two decades North America would be open to successful attack by a totalitarian land power augmented by the naval and air power which the resources of all Europe are capable of producing if brought under a single authoritarian management.

But, given the limits of American resources, we could not simultaneously finance European economic recovery and the capability to defend Europe with our own forces. Forrestal continued:

... At the present time we are keeping our military expenditures below the levels which our military leaders must in good conscience estimate as the minimum which would in themselves ensure national security. By so doing we are able to increase our expenditures to assist in European recovery. In other words, we are taking a calculated risk in order to follow a course which offers a prospect of eventually achieving national security and also long-term world stability.
Forrestal believed that the United States enjoyed certain advantages which allowed it to pursue such a policy:

As long as we can outproduce the world, can control the sea and can strike inland with the atomic bomb, we can assume certain risks otherwise unacceptable in an effort to restore world trade, to restore the balance of power—military power—and to eliminate some of the conditions which breed war. The years before any possible power can achieve the capability effectively to attack us with weapons of mass destruction are our years of opportunity. 31

The Finletter Commission Report

In the context of expanding political and economic commitments and shrinking military capabilities, the Finletter Commission on Air Policy submitted its report to the President on 1 January 1948. Appointed in July 1947, the Commission was charged with making an objective study of national aviation policies and problems and making recommendations to the President. Much of the commission's effort was focused on the mundane issues of military and civilian aviation requirements and production and the economics of the American aviation industry. More broadly, however, the commission addressed fundamental issues of national security policy and strategy. 32

Whereas the advocates of the Truman Doctrine and the Marshall Plan within the Administration emphasized the political and economic stabilization of Europe as the principal means of guaranteeing American security, the Finletter Commission emphasized military preparedness—specifically the development of air power—in-being capable of deterring or defeating any potential aggressor. Political and economic initiatives to insure the peace were not discounted, but the Finletter Commission concluded that in the long-term future when our potential enemies would possess the means of launching devastating atomic attacks against the United States the only
The fundamental difference was that Administration policy-makers focused almost exclusively on the opportunities of the present and gave little attention to the dangers of the future. To its credit, the Finletter Commission took a longer and broader view. The United States, the Commission concluded, must start immediately to build the military forces required for the future when our enemies would have significant stockpiles of nuclear weapons and the means for their delivery. Exactly when that time would come was difficult to forecast. Opinions presented to the Commission set the date sometime between 1951 and about 1957. Taking a conservative approach, the Commission agreed that it would be "an unreasonable risk ... to rely on other nations not having atomic weapons in quantity by the end of 1952." By that time, the Commission
believed it was imperative for the United States to have the airpower-
in-being capable of dealing with an atomic attack.  

The Finletter Report was enthusiastically received by airpower ad-
vocates, especially in the Air Force and in the Congress. The Air Force
was given additional encouragement to seek supplemental funding for a
full seventy-group peacetime air force. The conclusions of the Joint
Congressional Aviation Policy Board report completed in early March 1948
drew heavily on the recommendations of the Finletter Commission and re-
forced Congressional enthusiasm for strengthened airpower. Ultimately,
however, the Finletter Commission had little, if any, impact on national
security policy. Instead of prompting Administration policy-makers to
take a broader and longer-term view of foreign policy and defense stra-
tegy, the report's conclusions only reinforced the tendency to focus on
the present so long as the main danger lay in the future. The Commis-
sion's conclusion that overall defense budgets could remain within es-
tablished limits reinforced the Administration's commitments to those
limits. In fact, within a few months the increased funds for the air-
power on which the Administration continued to rely as the mainstay of
American military capability was reduced below the levels recommended
by the Finletter Commission.  

Thus, the Administration continued to base its foreign and defense
policies on the "calculated risk" described by Forrestal in December
1947. That risk was formidable indeed, not only for the future, but for
the present as well. American military power at the end of 1947 was not
simply limited. It was, in almost every sense, inadequate to achieve
even the most fundamental strategic aims outside our own hemisphere.
Due to the lack of strategic consensus within the military establishment—in large part a product of restricted defense budgets—there was not even an approved war plan. Moreover, the ability to strike with atomic weapons, in which Forrestal placed such great reliance, was virtually nil. There was, in fact, no coherent nuclear weapons policy by the end of 1947, no significant stockpile of weapons, and virtually no operational delivery capability.
CHAPTER II NOTES

1. JCS 1496/3, 20 Sep 4.


4. "Foreign Policy of the United States," rev 1 Dec 45, in CCS 092 US (12-21-45). This paper was submitted to SWNCC on 17 December 1945.

5. JCS 1592, 2 Jan 46, Interim Rpt, JSSC to JCS, sub: "Foreign Policy of the United States," CCS 092 US (12-21-45).

6. JCS 1592/1, 21 Jan 46, Interim Rpt, JSSC to JCS, sub: "Foreign Policy of the United States," and JCS 1592/1 DECISION, 26 Jan 45, both in CCS 092 US (12-21-45).

7. JCS 1592/2, 10 Feb 46, Rpt, JSSC to JCS, sub: "Foreign Policy of the United States," CCS 092 US (12-21-45).


11. JCS 1641, 6 Mar 46, w/attach Ltr, Secretary of State to JCS, JCS 1641/1, 10 Mar 46, Rpt, JSP to JCS, sub: "U.S. Security Interests in the Eastern Mediterranean," JCS 1641/2, 11 Mar 46, Memo, JSSC to JCS, sub: same, and JCS 1641/3 DECISION, 13 Mar 46, all in CCS 092 USSR (3-27-45)S. 6.

12. Re: the Mediterranean task force see Forrestal Diaries, pp. 144-45, Strauss, Men and Decisions, pp. 157-58, and Feis, From Trust to Terror, p. 83. Re: JCS estimate of forces available see JCS 1643, 10 Mar 46, w/attach Ltr, JCS to Truman, sub: "Availability of Land, Sea, and Air Forces in the event of Emergency," CCS 370 (3-8-46), and Memo, FADM Leahy to Truman, 12 Mar 46, in PSF Subject Files, Military/Army/Navy Folder, HST Library. Two accounts of Administrations actions during
the March crisis claim that President Truman bluntly informed Stalin (presumably in or with the note transmitted by the U.S. Embassy on 5 March 1945) that he would send American troops into Iran if Red Army forces were not removed, and, that Truman "ordered preparations for the movement of American ground, sea, and air forces." See Seyom Brown, The Faces of Power (NY: Columbia University Press, 1968), p. 38, and John C. Campbell, Defense of the Middle East: Problems of American Policy (NY: Praeger, 1960), p. 33. Ostensibly, the source of these accounts was Truman. If so, the President's recollection was probably embellished. Truman certainly took the Iranian situation seriously—telling Averell Harriman that "we might be at war with the Soviet Union over Iran." The American note to Stalin made it clear that the United States would not acquiesce calmly to the continued presence of Soviet troops in Iran. However, the published text of the note does not state that American military forces would be sent to Iran. Whether such a threat was made explicit is doubtful. Nor as far as can be ascertained, did Truman order "preparations for the movement of ground, sea, and air forces;" he only requested information regarding their availability. If Truman ever entertained such ideas, the reply of the JCS certainly discouraged him. For published text of 5 March 1946 note see New York Times, 8 March 1946.


15. See especially JIS 80/9, 26 Oct 45, and JWPC 416/1, rev 8 Jan 46.

16. Ibid.


19. JCS 1641/5, 11 Apr 46, Rpt, JSP to JCS, sub: "Estimate Based on Assumption of Occurrence of Major Hostilities," JCS 1641/5 DECISION, 20 Apr 46, JCS 1641/6, 18 May 46, Rpt, JSSC to JCS, sub: same, JCS 1641/7, 24 May 46, Memo, CNO to JCS, sub: same, JCS 1641/8, 14 Jun 46, Memo, C/S, USA to JCS, sub: same, and JCS 1641/6 DECISION, 19 Jun 46, all in CCS 092 USSR (3-27-45)S. 6-7.

20. "American Relations with the Soviet Union," Report to the President by the Special Counsel (Clark M. Clifford), 24 Sep 46, in White House Central Files, HST Library. A copy of the report is also printed in Arthur Krock, Memoirs: Sixty Years on the Firing Line (NY: 1968), Appendix A, pp. 419-82. The report was actually drafted by Clifford's assistant George M. Elsey.

21. Ibid.

22. Ibid.

23. JCS 1696, 27 Jul 46, Rpt, JSSC to JCS, w/encl Memo for the President, CCS 092 USSR (3-27-45)S. 9. See also Memo, JCS to Truman, 26 Jul 46, in Clark M. Clifford Papers, Russian-Folder 2, HST Library.

24. Ibid.


33. Ibid.

34. Ibid.

35. Ibid.

CHAPTER III
THE AWESOME FORCE:
NUCLEAR WEAPONS POLICY AND PLANNING, 1945-1947

The advent of atomic bombs produced profound confusion among American policy-makers. The potential hazards of those awesome weapons for our security and the stability of international relations, although imperfectly perceived, created grave apprehension. There was, however, no consensus on how this new force should be handled. Many of the scientists and policy-makers most closely associated with the development of atomic weapons—certain that the eventual spread of nuclear technology was inevitable—argued that peace and security could be guaranteed only by international control of atomic energy. Others, less ideallyconfident in the efficacy of international agreement, argued that the United States should seek to preserve its superiority in nuclear weapons technology as the most certain guarantee of its security.

The debate over domestic control of atomic energy proved even more divisive than that over international control. In case the latter effort failed, civilian policy-makers in the War and Navy Departments sought, perhaps over-zealously, to establish the organizational basis for continued armed forces participation in the development of nuclear technology for military purposes. Congressional and Administration opponents of that initiative, fearing that the military would dominate
atomic energy programs, skillfully exploited the sensitive issue of civilian vs. military control to defeat War and Navy Department proposals. Although ultimate civilian control of atomic energy policy was never really in doubt, emotional debate over the issue resulted in needless restrictions on military participation in atomic weapons programs.

The Administration's decision to seek an international control agreement and the prolonged debate over domestic control organization postponed the development of coherent nuclear weapons programs and policies. Although atomic weapons constituted the only clear military advantage enjoyed by the United States over its most likely enemy, only limited progress in weapons research or production was evident by the end of 1947. The Administration made no effort to establish policies for nuclear weapons use and continued even after 1947 to withhold the operational stockpile from military custody. The resulting uncertainty about the present and future quantity, characteristics, and reliability of nuclear weapons created serious problems for military planners.

**International Control of Atomic Energy**

At the end of World War II the principal Administration advocates of international control of atomic energy were centered in the War Department. Secretary Stimson, his deputy Robert Patterson, and Vannevar Bush, Director of the Office of Scientific Research and Development, argued that the American atomic monopoly could not be maintained indefinitely. They were sincerely convinced that to attempt to do so would only embitter Soviet-American relations and lead to a dangerous nuclear arms race. Opposition to international control centered around Secretary of State Byrnes and Navy Secretary Forrestal. Byrnes apparently
entertained ideas of exploiting American possession of the bomb to make the Russians more manageable. Forrestal, deeply suspicious of Soviet communism, frankly doubted a safe agreement was possible. Administration opinion on international control was fairly evenly divided in the fall of 1945, but President Truman was sufficiently persuaded in favor of the policy to declare, in an October message to Congress, his intention to seek international discussions on the subject.1

Prompted by the President's message to Congress, the Joint Chiefs of Staff began to examine their position on international control in late October. The Joint Strategic Survey Committee told the JCS that no international agreement could completely insure "effective and benign" control of atomic weapons. The Committee recommended emphatically that "... our Government should, in so far as practicable and for as long as possible, withhold the secrets of the atomic bomb from all other nations." The JCS agreed with that recommendation, but General Marshall felt that it should be presented to the President in less blunt fashion. Marshall especially did not want it to appear that the military chiefs opposed the President's publicly announced intention to seek discussions of international control with other governments.2

In a letter to Truman on 23 October, the JCS recommended that the "United States should retain for the present all existing secrets with respect to atomic weapons." At the same time, the military chiefs professed approval of "discussions" with foreign governments and the United Nations on international control. The JCS cautioned, however, that the United Nations was incapable of monitoring or enforcing an agreement. Without mentioning the Soviet Union specifically, the JCS also suggested
that disclosure of atomic information under whatever conditions would not lessen international tensions or the possibility of an atomic arms race, at least, until substantial agreement was achieved among the "great powers" in regard to a number of fundamental political problems. ³

Although Secretary Byrnes urged the President to "procrastinate," the Administration initiated Anglo-American-Canadian consultations on international control in November. The Tripartite Declaration issued at the end of those meetings called for establishment of a United Nations Commission to study the exchange of scientific information, means of controlling atomic energy, elimination of atomic weapons, and effective methods to insure compliance with an international agreement. A few days later, Truman announced that the United States would propose creation of such a Commission at the first meeting of the General Assembly scheduled for January in London. At the December meeting of the Council of Foreign Ministers in Moscow, Secretary of State Byrnes, having reluctantly reconciled himself to a policy of international control, invited the Russians to join the United States and Britain in sponsoring the U.N. Commission. Molotov insisted that the Commission report only to the Security Council where veto power could be exercised, but after some haggling the Soviets accepted Byrnes' proposal. ⁴

The JCS reexamined and elaborated its position on international control in December 1945 and January 1946. The JSSC, which conducted the re-study, no longer opposed the principle of international control. But, the reservations and prerequisites placed on the operation of such a system left little doubt of the Committee's deep skepticism that international control was possible. The JSSC insisted that "satisfactory"
and "enforceable" safeguards as well as effective sanctions ("including war") against violators were "vital" conditions for agreement. No atomic energy information, even on peaceful industrial applications, should be revealed before a fool-proof inspection system was installed and fully operational. In any case, progress toward an international control agreement "should not be hurried."\(^5\)

The JSSC clearly doubted that their conditions could be met. "No realistic system of inspection is as yet apparent," they concluded. In fact, the Committee added that "no system of inspection can be . . . one hundred percent effective . . ., and ninety-nine percent effectiveness is no guarantee." The JSSC was particularly reluctant to see the U.S. nuclear arsenal destroyed or surrendered to an international body. Perhaps, they suggested, the United States could explore the possibility of an agreement that would appoint America "trustee of the bomb." That idea was suggested earlier by Navy Secretary Forrestal, but the JSSC seriously doubted that other nations would agree.\(^6\)

Before January 1946 the Administration gave little detailed attention to the technical and political issues of safeguards, inspection systems, the potential for evasion, or sanctions against violators. Before leaving for the U.N. meeting in London, Secretary Byrnes appointed a special committee, chaired by Under Secretary of State Acheson, to study those problems and develop specific proposals. The committee, which included Vannevar Bush, James Conant, John J. McCloy and General Leslie Groves, was assisted by a panel of technical consultants led by David E. Lilienthal, Chairman of the TVA, and J. Robert Oppenheimer, former Director of the Los Alamos Laboratory. Among that group only
General Groves harbored any serious doubts about the desirability of international control.\(^7\)

The stated objective of the Acheson-Lilienthal group was to devise an internationally acceptable method of atomic energy control which would simplify the problems of inspection at the same time that it provided early and unambiguous "danger signals" of violation or evasion. The solution, the group concluded, lay in the establishment of an international Atomic Development Authority (ADA) with exclusive proprietary control over all "dangerous" atomic energy activities, including mining of raw materials, the production of fissionable substances, and research and development in the area of atomic explosives. Ostensibly therefore, inspection could be limited almost entirely to Atomic Development Authority facilities dispersed around the world.\(^8\)

The Acheson-Lilienthal group concluded that certain atomic energy activities (e.g., power generation and medical research applications) could be carried on outside the immediate control of the ADA without risk. Those activities could be rendered "safe," the group said, by providing "denatured" nuclear materials to private or national atomic energy projects under an ADA licensing system. The scientific panel admitted that "denaturing" (accomplished by the addition of a non-fissionable isotope) was reversible, but not "readily."\(^9\)

Diverting "denatured" nuclear materials or engaging in any of the activities defined as "dangerous" would constitute a violation and would, according to the Acheson-Lilienthal group, provide a warning period of at least a year, during which time other nations could take "appropriate action." The group did not consider the matter of
sanctions in detail. Nor, did it give adequate attention to the problem of detecting "dangerous" activities conducted in secret outside ADA facilities.

The JCS was not content with the proposals contained in the Acheson-Lilienthal Report. The military chiefs tactfully described the report as nothing more than a "preliminary study" and a "basis for future planning." General Groves, who only reluctantly agreed to approve the report, immediately sought to clarify the feasibility of "denaturing" fissionable materials, fearing public misunderstanding of the process would inspire false confidence in the reliability of safeguards. Groves insisted that the State Department publish a statement signed by a dozen notable nuclear scientists reemphasizing the reversibility of the "denaturing" process.

The appointment in March of Bernard Baruch as U.S. Representative to the U.N. Atomic Energy Commission effectively removed international control policy from the hands of long-time advocates. A prolonged and bitter debate ensued between the Acheson-Lilienthal group and Baruch, principally over the issue of whether sanctions against violators should be included in any international agreement. Baruch insisted that they must be included, and President Truman agreed. Before presenting the American proposal to the UNAEC on 14 June, Baruch added one other element—abrogation of the right to veto sanctions voted by a majority of the Security Council against violators of an atomic control agreement.

Although Baruch ultimately accepted much of the Acheson-Lilienthal formula intact, his introduction of the sanction and veto issues is
often credited with dooming the American proposal to failure. Whatever the merits of that argument, mounting domestic criticism of U.S. international control policy, especially in Congress, and deepening suspicion of Soviet intentions within the Administration during early and mid-1946 made a less cautious approach impractical.¹³

Some revisionist historians have attributed Baruch's proposals, at least in part, to the weight of military opinion. In fact, Baruch only solicited formal comments from the military chiefs a few days before presenting the American plan to the U.N., and their views were less than unanimous on the issues of sanctions and the veto. Each of the Chiefs stressed the absolute requirement for proven safeguards in advance of any final agreement. Leahy, Eisenhower, and Spaatz agreed that sanctions were necessary, but implied they would be difficult to achieve as a practical matter. Leahy alone explicitly endorsed "repeal of the 'veto' provision." Admiral Nimitz took a novel position on those questions. He insisted that neither automatic sanctions nor abrogation of the veto were acceptable because such provisions would infringe American sovereignty.¹⁴

The military chiefs dutifully endorsed international control in principle, but none were anxiety to relinquish American nuclear weapons. Spaatz argued that, because of the reduction of conventional military capability by demobilization, the "atomic bomb . . . is now an essential part of our military strength." Eisenhower expressed the same attitude: "If we enter too hurriedly into an international agreement to abolish all atomic weapons, we may find ourselves in the position of having no
restricting means in the world capable of effective action if a great
power violates the agreement."  

By the time the Baruch proposals were laid before the United
Nations, Soviet-American relations had reached such an impasse that the
Administration already doubted the wisdom of its policy. Only a month
later Truman warned Baruch that "we should not under any circumstances
throw away our gun until we were sure that the rest of the world can't
arm against us." Even Stimson let his former colleagues know that "the
time has passed" for seeking an international solution to the problem of
atomic weapons. In his report to the President in September, Clark
Clifford bluntly recommended against an international control agreement
which would deprive the United States of its most effective technologi­
cal weapon against the Soviet Union. Soviet responses to the Baruch
proposal left little doubt of Russian intentions. Throughout 1946 and
1947 American and Soviet representatives on the UNAEC fenced with one
another, but it was soon evident that the issue was hopelessly dead­
locked.  

Domestic Control of Atomic Energy

While the Administration pursued the ultimate objective of interna­
tional control of atomic energy during 1945 and 1946, it also sought to
establish the organizational basis for domestic control. In his message
to Congress in October 1945, President Truman proposed creation of an
Atomic Energy Commission with authority to regulate all domestic activi­
ties, military and non-military, related to atomic energy. The Presi­
dent did not detail the structure and functions of the Commission, but
the War Department was ready with a draft bill calling for a mixed
civilian-military Commission, and a military administrator (à la General Groves) with substantial authority to manage atomic energy programs. The War Department pressed for prompt passage of the bill which was introduced in the House and Senate under the benevolent sponsorship of Congressman Andrew May and Senator Edwin Johnson on 4 October.17

Truman was apparently unaware of the substance of War Department proposals before their introduction. Initially, he seemed indifferent to the matter. But, the tide of public and Congressional criticism, which blocked immediate passage of the May-Johnson bill, together with the influence of opponents inside the Administration, persuaded Truman that the War Department approach to domestic control was unsound. In a memorandum sent to both Patterson and Forrestal in late November, Truman insisted that military representation on the Commission or in its administration was unacceptable.18

Actually, the President's memo to Patterson and Forrestal was drafted by James Newman, who, as Special Counsel to the Senate Special Committee on Atomic Energy, guided Senator Brien McMahon's opposition to the May-Johnson bill. Newman also influenced policy through his position as assistant to John Snyder in the Office of War Mobilization and Reconversion (OWMR) where he officially remained after informally assuming the Special Counsel's duties. He also maintained close ties to dissident scientists opposed to "military control" of domestic atomic energy programs. Newman's role in shaping domestic atomic energy legislation was pivotal.19

Chairman McMahon of the Special Senate Committee proposed his own bill for an all civilian Atomic Energy Commission. Confident of
Truman's support, he requested a meeting with the President and the War and Navy Secretaries to clarify the Administration's position. At the meeting on 4 December, Patterson and Forrestal argued strongly for military participation in the management of domestic atomic energy programs, as did Admiral Leahy and General Groves who were also present. Truman was not persuaded. He insisted that the Commission's activities be controlled and managed exclusively by civilians.

Despite the President's firm attitude, Patterson and Forrestal continued to lobby for the May-Johnson bill until Truman brought an abrupt halt to their activities. In a terse memorandum, also drafted by James Newman, the President outlined his views on the structure and functions of the Atomic Energy Commission, which he reiterated "should be exclusively composed of civilians." He warned Patterson and Forrestal that henceforth they should express no opinion relative to atomic energy legislation "not consistent" with the President's views.

In December Senator McMahon redrafted his bill to bring it fully in line with Truman's views on the functions of the Commission. In fact, Newman rewrote the bill to bring it in line with the views which he and others in the Administration had convinced Truman to adopt. In February, the President publicly endorsed the rewritten McMahon bill (S. 1717) in a letter, also drafted by Newman, to the Special Committee Chairman.

The advocates of military participation in atomic energy programs resisted the McMahon bill, although they were forced to act with caution as a result of Truman's ukase. Forrestal got one last slap at the bill in testimony before the Special Committee on 23 January. In comments contained in a War Department report on the bill, Patterson suggested
that, if military representatives were excluded, the Commission should be required to obtain JCS concurrence before adopting policies or programs affecting the "utilization of atomic energy as a military weapon."

The War Department report was suppressed by Newman, acting in his OWMR capacity, but Patterson made the same suggestion in his testimony before the Special Committee on 14 February.23

Public revelation of the Canadian atomic spy case two days later seriously embarrassed McMahon. Thereafter, several members of the Special Committee were in a more receptive mood toward military representation on the Commission. Over McMahon's objections, General Groves was invited by the Committee to give his personal, rather than official, views on the subject. Groves reinforced Patterson's earlier testimony. If some form of military participation was not installed in the McMahon bill, Groves insisted, the Commission should be required to obtain JCS approval on "matters of policy" pertaining to military requirements. General Eisenhower and Admiral Nimitz gave their views to the Committee informally. Although circumspect, they left no doubt that they wanted some provision for military representation within the Commission.24

Conservative members of the Senate Committee were swayed by the military's appeal for representation within the Commission structure. Convinced that a reasonable compromise of the civilian-military control issue was necessary, Senator Vandenberg proposed an amendment to the McMahon bill providing for a Military Liaison Committee to consult with the Commission on matters of policy. McMahon and the President opposed the amendment. The sticking point was the degree of influence the Liaison Committee would exercise, and whether it would have recourse to
appeal if overruled by the civilian Commission. The dispute was ultimately decided in Vandenberg's favor. Although military partisans in the House attempted to reinstate direct military representation on the Commission, the McMahon bill was eventually passed by both houses on 26 July and signed by the President a week later on the basis of the Senate compromise.  

The Atomic Energy Act of 1946 provided for a Military Liaison Committee with which the civilian Atomic Energy Commission was required to "consult . . . on all atomic energy matters which the Committee deems to relate to military applications." The Liaison Committee was allowed to appeal Commission rulings on such matters to the War and Navy Secretaries, but was given no direct access to the President, to whom the Act gave ultimate responsibility for decisions regarding atomic weapons programs. Although the Act permitted the Director of the Commission's Division of Military Applications to be a military officer, no statutory provisions were made for operational level coordination between the Division and the military services. That oversight, in addition to the cumbersome procedures for policy coordination at the Liaison Committee level, created serious and continuing problems for military planners.  

The Atomic Energy Commission, under the chairmanship of David E. Lilienthal, officially assumed its functions at the end of December 1946. In an effort to integrate the channels of policy coordination between the military services, the JCS and the civilian Commission, the Military Liaison Committee (MLC), headed by Air Force General Lewis H. Brereton, was formally linked to the Joint Research and Development Board (JRDB), which was responsible to the service Secretaries and the
JCS for coordination of general weapons development programs. In order to establish operational level links between the services and the AEC's Division of Military Applications, the service Secretaries created the Armed Forces Special Weapons Project (AFSWP) in January 1947. The Director of the Project, General Groves, also served as a member of the Military Liaison Committee and as a member of the JRDB's Atomic Energy Committee.  

That confusing web of organizational relationships created serious coordination problems. Pending unification, the AFSWP had no formal charter, and its relationship with the AEC, the services, and the JCS was on a virtually ad hoc basis during the early period of its operation. Ostensibly, the AFSWP was responsible to the JCS for operational matters, and to each of the services through their own atomic energy operating agencies for training, logistic, and weapon development purposes. Even after the issuance of a formal charter in December 1947, specific lines of authority between AFSWP and the JCS remained unclear. Uncertainty over channels of responsibility fueled interservice disputes. The Air Force, which had a principal stake in the activities of the AFSWP was particularly unhappy with the organizational arrangement. In fact, before unification, the Air Force was unable to establish a formal link to AFSWP. In the meanwhile, the Air Force maintained informal liaison through the AAF Special Weapons Group at Kirtland Field near the AFSWP headquarters at Sandia Base, New Mexico.  

Weapons Production Policy and Military Requirements Planning

The immediate needs of the American atomic energy program were to establish plans for development and production of weapons and to improve
the deteriorating condition of research and production facilities. Left in a virtual state of suspended animation since the end of the war, atomic energy activities were in complete disarray by early 1947. Because of technical problems with the three Hanford reactors, plutonium production during 1946 and early 1947 was reduced. Inefficient techniques for the separation of plutonium from the fuel slugs discharged by the Hanford reactors further limited the availability of the precious metal and wasted uranium. The production of U-235 at the gaseous-diffusion plants at Oak Ridge presented no technical problems, but limited supplies of uranium ore affected operations both there and at Hanford. Weapons research and production facilities at Los Alamos and Sandia Base deteriorated as a result of losses in key personnel and the uncertain future of weapons research and development.²⁹

During the first three months of 1947, the new AEC Commissioners were preoccupied with a bitter confirmation fight in the Senate, and had little time to devote to substantive problems. In the meanwhile, the General Advisory Committee (GAC), established by the Atomic Energy Act to provide technical assistance and advice to the Commission, exercised great influence in establishing priorities for the American atomic energy program. In view of the threatening international situation and the increasing improbability of international agreement for control of atomic energy, the GAC reluctantly concluded that first priority in domestic atomic energy programs must go to weapons research and development. Of almost equal importance was the need to increase the production of plutonium. That required construction of new reactors at Hanford, development of more efficient methods for the separation of
plutonium from the Hanford fuel slugs, and, if possible, extension of the useful life of the existing Hanford reactors. Weapons research, the GAC concluded, should concentrate on designs which were more economical in the use of fissionable material and development of ways to employ U-235 in an implosion weapon. For those purposes weapons tests would be necessary in the near future. 30

In January 1947, the AEC directed its staff to begin work on atomic energy program recommendations to be presented to the President jointly by the AEC and the Secretaries of War and Navy. Initially, the Commission staff, particularly AEC Administrator Carroll Wilson, relied heavily on GAC advice. By early February, when Lilienthal, Patterson, and Forrestal sent a joint letter to the President promising program recommendations within a month, the Commission had made no effort to solicit and views of the Military Liaison Committee or the Joint Chiefs of Staff. 31

Prompted by the joint letter to the President, General Eisenhower initiated a study by the Joint Strategic Survey Committee of general atomic weapons production policy. Following informal consultations with the AEC Commissioners and the Military Liaison Committee, the JSSC reported its conclusions in late February. "It is vitally important to our national security," the Committee insisted, "that an adequate stockpile of bombs be built up at an early date." However, it appeared that minimum atomic weapon requirements could not be met "for a number of years." It was, therefore, necessary that the AEC expand plant facilities for the production of fissionable materials and establish long-range production plans. In the meanwhile, the JSSC recommended, "all
fissiogenic material including that produced in the calendar year 1947, except the amount necessary for essential research . . . be utilized for fabrication of atomic bombs." The JCS approved those recommendations and promptly forwarded them to the AEC and the service Secretaries. At the same time the JCS also directed the JSSC and the Joint Planners to begin work on long-range estimates of total military requirements for atomic weapons. 32

On March 27 the AEC approved a draft directive for the 1947 atomic energy program. Drawn up by the Commission staff under informal consultation with the Joint Strategic Survey Committee, the draft directive did not specify the precise amounts of fissiogenic material to be produced in 1947. Instead, it only provided for "continuation of the current production program." It is not clear what precisely the "current production program" was. It appears that the phrase was interpreted by all concerned to mean the maximum amount of fissiogenic material that could be obtained from existing, operating production facilities. 33

Whatever actual production turned out to be, the draft directive provided that all fissiogenic material available in 1947, except that necessary for essential research, be allocated to weapons manufacture. Specific limits were placed on the amount of fissiogenic material which should be diverted for research purposes, and at least half that allocation was to remain "ready for fabrication into weapon parts within a period of one month." 34

In March or April, the AEC's Division of Military Applications established an estimate of the bomb production rate for the remainder of 1947. The precise figure is unavailable, but existing evidence
indicates that actual bomb production never exceeded two or three weapons a month before May or June 1948. Nevertheless, military leaders had reason to be pleased with the draft directive. It was fully in accord with the recommendations approved by the JCS and forwarded to the AEC and service Secretaries in February. Probably, the wording of the directive was worked out informally between the AEC staff and the JSSC in late March. In any case, Forrestal, Patterson, and Leahy promptly signed the draft directive on 2 April. 35

The next day the AEC Commissioners went to the White House to brief the President on the status of atomic weapons production. The existing stockpile was "very small." The precise figure remains classified, but it was probably about a dozen bombs. None of the weapons were assembled, and the "most important type of bomb being [developed was] new and [had] never been tested by explosion." Because of technical problems, plutonium production was lagging. Measures to correct the problem might slow production even further. In addition, there was a shrinking supply of raw materials. According to Lilienthal, the President's reaction to those facts was "grim." The commissioners did not detail corrective measures, but they warned the President that "extraordinary efforts in terms of money, materials, equipment and human energy" would be required. 36

The AEC Commissioners did not discuss the specifics of the 1947 atomic energy program with the President on 3 April. That subject was not dealt with until two weeks later, after final Senate confirmation of the Commissioners' appointments. On 16 April Lilienthal returned to the White House with Forrestal, Patterson and Leahy to obtain the
President's approval of the draft directive to which they had agreed earlier.  

By mid-1947, the AEC was making some progress in its efforts to rebuild the atomic energy program. By July there were plans for two new reactors at Hanford, but those facilities would not be ready until at least 1949. Two other completely new reactor complexes would not be ready until after mid-1950. Progress on new plutonium separation techniques was slow, and raw materials continued to present a problem. Fortunately, it became apparent by the fall of 1947 that the technical difficulties with the original Hanford reactors were not as serious as previously thought. Revitalization of the weapons research and production facilities at Los Alamos and Sandia was also encouraging, but had little immediate effect on weapons production levels. If weapons production was to increase, there was an immediate need for field tests of new designs. Lilienthal obtained the President's approval for the tests in June, but they would not take place until the spring of 1948.  

Despite agreement on the 1947 atomic energy programs, there remained a need for long-range planning based on a determination of military requirements for nuclear weapons. By September 1947, however, little headway had been made in the study of long-range requirements ordered by the JCS in February. Final conclusions were delayed pending the development of joint strategic plans and Air Force target studies, both of which progressed slowly during the spring and summer of 1947. 

Apparently as a result of pressure from the Joint Committee on Atomic Energy, which had responsibility for Congressional oversight of atomic energy programs, the JCS directed the Joint Staff Planners to
reach a decision by the end of October on the "minimum" number of atomic bombs required for a war in the "proximate future." On 28 October the planners reported to the JCS that "approximately" four hundred atomic bombs each of twenty kilotons yield (comparable to the NAGASAKI FM bomb) were needed. The JCS approved that figure and forwarded it to AEC Chairman Lilienthal through the military Liaison Committee the next day, together with a promise to detail a specific schedule of requirements at a later date. 39

Exactly how the Joint Planners arrived at the figure of four hundred bombs is only partly clear. A later JCS document explains that the planners estimated that 150 (20KT) bombs on target would be required to destroy a theoretical target system of 100 Soviet urban complexes. Calculating that fifty percent of the bombs airborne would be delivered effectively, the planners doubled the 150 figure and added a 100 bomb reserve (about forty-four percent) to arrive at the total of four hundred. There was obviously a heavy measure of guess work involved in the estimate, but in fairness to the planners, the above explanation does not reflect the full extent of their calculations. 40

In fact, the Joint Planners had considered the problem of weapons requirements in relation to strategic planning since late 1945. An early study by the Joint War Plans Committee completed in January 1946 estimated forty-seven (20KT) bombs on target were needed to destroy seventeen selected Soviet urban complexes. Based on a successful delivery rate of forty-eight percent of the bombs airborne and a one hundred percent reserve, a total requirement for 196 bombs was projected. That
amounted to an average requirement of almost six bombs airborne for every target complex engaged.41

By mid-1947 the Joint War Planners scaled down their estimates of bomb requirements. A tentative joint air war plan completed in July in connection with force and mobilization planning concluded that thirty-four (20KT) bombs on target were needed to destroy twenty-four selected Soviet urban complexes. Allowing for a fifty percent successful delivery rate, a minimum of sixty-eight bombs, not including a reserve, was needed. The average requirement of about three bombs airborne per target complex was substantially less than the early 1946 estimate and was almost identical to the Joint Staff Planners' October projections.42

Air Force planning tended to be less economical. In June 1947, the Air Intelligence Staff undertook a major study of potential air targets in the Soviet Union. The study established a tentative atomic target list of forty-nine urban complexes and estimated that approximately 100 (20KT) bombs on target were necessary for their destruction. Based on a fifty percent successful delivery rate (which was a standard Air Force planning factor interpolated from World War II experience) and a one hundred percent reserve, the Air Intelligence Staff arrived at a total requirement of four hundred bombs. Actually, the Air Intelligence Staff's estimate of bomb requirements, which amounted to about four bombs airborne for every target complex attacked, was higher than that of the Joint Planners, who estimated only three bombs airborne per target complex and a smaller reserve. Strategic Air Command estimates, although based on an abbreviated target list, were even higher, amounting to an average of almost nine bombs airborne for every target complex attacked.43
It seems likely that the Joint Planners reached a compromise figure of four hundred bombs based on a modification of the Air Intelligence Staff's formula and their own tentative strategic planning studies. Although both calculations were relatively crude, it is apparent that the four hundred bomb figure was not simply picked out of the air. Nor was the estimate excessive. If anything, both the Air Force and the JCS were willing to understate requirements in order to insure they would be taken seriously by the AEC.44

The Joint War Planners and the Joint Strategic Survey Committee continued to work on the schedule of bomb requirements promised to Lilienthal by the JCS in October. By December, following consultations with the MLC and AFSWP, they concluded that the four hundred bomb objective probably could be attained by the beginning of 1953, if modifications in the design and composition of the nuclear core of the FM type bomb proved successful during the weapon tests planned for the spring of 1948. The exact intermediate figures recommended by the planners in their schedule of requirements are not available. Based upon other information, however, a rough reconstruction is possible.45

<table>
<thead>
<tr>
<th>Date</th>
<th>Number</th>
<th>Annual Prod Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Jan 48</td>
<td>approx 25</td>
<td>50</td>
</tr>
<tr>
<td>1 Jan 49</td>
<td>approx 75</td>
<td>50</td>
</tr>
<tr>
<td>1 Jan 50</td>
<td>approx 125</td>
<td>75</td>
</tr>
<tr>
<td>1 Jan 51</td>
<td>approx 200</td>
<td>100</td>
</tr>
<tr>
<td>1 Jan 52</td>
<td>approx 300</td>
<td>100</td>
</tr>
<tr>
<td>1 Jan 53</td>
<td>400</td>
<td>100+</td>
</tr>
</tbody>
</table>
The Planner's schedule of requirements was influenced by two factors. First, they did not want to reasonably exceed the limits of production capability thought to exist at the time. Thus, they accepted the AEC's planned rate of bomb production pending the results of weapons tests in 1948. Secondly, existing bomb designs were relatively inefficient. Too rapid fabrication of bombs of the existing design and composition, the planners admitted, "would involve a waste of critical material which might reduce the ultimate stockpile possibilities." They nevertheless insisted that fabrication of weapons of existing designs should have first priority in the allocation of fissionable material. Fissionable materials for research should be limited, the planners recommended, to an amount no larger than that necessary for the fabrication of fifteen FM type bombs. The JCS approved the schedule of bomb requirements on 17 December and forwarded them to AEC Chairman Lilienthal. In January 1948, the AEC notified the JCS through the MLC that it intended to continue bomb production at the rate approved by the President in April and would recommend to the President extension of that rate of production until after the 1948 tests. If the tests were successful, then an increased rate would be recommended to the President, and existing weapons would be refabricated to provide for more efficient use of the fissionable materials in their cores. The AEC doubted that there would be enough time after the 1948 tests to meet the 1 January 1949 requirement stated by the JCS, but the Commission was confident that, if the tests succeeded, the four hundred bomb total requirement could be attained by the end of 1952 with existing and planned production facilities.
The JCS had gotten essentially what it requested from the AEC. Whether that was sufficient was another matter. After seeing the schedule of bomb requirements, Senator Hickenlooper, Chairman of the Joint Atomic Energy Committee, bluntly asked Forrestal if the schedule represented the strategic "needs of the Armed Forces" or just an "estimate based upon what the Joint Chiefs anticipate to be the . . . ability of our facilities to produce." Forrestal assured the Senator (who was no friend of Lilienthal and the AEC) that JCS computations were based on the "safe minimum strategic . . . needs" of the armed forces and "were correlated with existing strategic plans." In fact, as Hickenlooper suspected, the JCS was influenced by its understanding of production capacity through 1952. The "strategic plan" with which the requirements were ostensibly "correlated" was nothing more than a hypothetical air war plan that was never approved by the JCS.48

The Weapons Custody Issue

The most alarming potential obstacle to progress in development of atomic energy programs was tension between the civilian Atomic Energy Commission and the military. Specific disagreements included the degree of military access to Atomic Energy Restricted Data and the details of new reactor construction at Hanford. But, the most divisive issue was custody of the weapons stockpile. In December 1946, President Truman exercised the prerogative assigned him by the Atomic Energy Act to give complete control and legal custody of nuclear weapons to the civilian Commission. The military, fearing that the transfer of weapons would be delayed in an emergency, was never happy about that arrangement, and did everything possible to change it.49
The first of several crises over the issue developed in July and August 1947. The report of the JCS Evaluation Board on Operation CROSSROADS, submitted at the end of June, recommended not only that stockpile custody be returned to the military, but that the civilian Atomic Energy Commission be reconstituted to include military representatives. In mid-August, at the instigation of General Groves, the Military Liaison Committee insisted that the AEC agree to the transfer of weapons custody. Lilienthal, angered by the JCS Evaluation Board Report and assured of Presidential support, flatly refused.\(^{50}\)

Although the AEC retained legal custody, actual supervision and security of the weapons stockpile, then located at the Sandia-Kirtland Field complex near Albuquerque, New Mexico, was in the hands of military officers of the Armed Forces Special Weapons Project. A directive clarifying responsibilities and channels of authority at the storage and assembly facilities at Sandia and Kirtland was worked out between the AEC and the Military Liaison Committee in August. But the Liaison Committee was still unsatisfied with ultimate Commission custody of the stockpile.\(^{51}\)

In September General Brereton, MLC Chairman, sought direct support from the service Secretaries to pursue the AEC to give up weapons custody. Armed Forces control of the stockpile, he told them, was necessary to insure "constant preparedness to attack with atomic bombs." Navy Secretary John Sullivan was the only one of the three Secretaries to reply directly. He wholeheartedly supported transfer of weapons custody. General Spaatz, replying for the new Secretary of the Air Force, insisted that prompt availability of atomic weapons was "mandatory." General Eisenhower, replying for the Secretary of the Army, was less emphatic.
He agreed that the armed forces "eventually" should have custody of the stockpile, but he seemed reluctant to make an issue of the matter. Only if the AEC agreed was Eisenhower prepared to go ahead with MLC recommendations. 52

The armed forces, especially the Air Force had good reason to worry about how quickly and smoothly atomic weapons could be transferred from AEC custody to operational units in the event of an emergency. No national procedures existed for the communication of Presidential authority for weapons transfer. Tentative operational procedures for the physical transfer of bombs were drawn up by Strategic Air Command and Eighth Air Force Headquarters in mid or late 1947, and were first tested in a joint SAC-AFSWP exercise in November. Difficulties encountered during the test, codenamed Operation AJAX, reinforced military disapproval of AEC control of the stockpile, and created new doubts about the efficiency of weapons surveillance. The test also indicated the need to deploy the stockpile to more convenient locations, which would further complicate operational transfer in an emergency. 53

In mid-November, Brereton formally asked the AEC to turn over the stockpile to the armed forces "at the earliest practicable date." His request was discussed at an AEC-MLC meeting a few days later. The AEC Commissioners argued that stockpile transfer was not realistic. Many of the stockpile weapons were no more than laboratory models, they said, and the AFSWP did not yet possess the expertise to keep the weapons in a ready state. Lilienthal, not wanting to touch off a "big row" over the matter, suggested that the MLC submit detailed arguments in favor of weapons transfer for Commission consideration, but he made it clear that
the response would probably be negative. There the matter stood at the end of 1947—on the brink of an inevitable showdown.  

**Policy on the Use of Nuclear Weapons in War**

Custody of atomic weapons was essentially an operational concern. A more fundamental policy consideration for the military was whether Presidential authority to use atomic weapons in war would be granted at all, and to what extent strategic plans should be based on the assumption that authority would be granted. The answers to those questions were less obvious than it may seem. Despite the evident military advantages atomic weapons afforded the United States, the Administration established no formal policy regarding their use in warfare; nor did the Administration attempt to do so before 1948. Clearly, Forrestal and other defense policy-makers assumed atomic weapons would be used if war occurred, but President Truman was almost silent on the issue.

The Clifford Report, in September 1946, strongly recommended that the United States be "prepared to wage atomic . . . warfare," but the report added:

"Whether it would actually be in this country's interest to employ atomic . . . weapons . . . in the event of hostilities is a question which would require careful consideration in the light of circumstances prevailing at the time."

That was apparently the President's view as well. Truman was aware of the military advantages of American possession of atomic weapons. Within limits, he was anxious to develop the capacity to wage atomic warfare, but he jealously guarded his prerogative to make the actual decision to employ atomic weapons when or if the need arose. His strong support for "civilian control" of atomic energy programs was an indication of his attitude.
With the exception of certain elements in the Navy, whose motives were not altruistic, the assumption that atomic weapons would be employed in a future general war was almost universally accepted in the military. But, whether, in the absence of specific political guidance, military planning should proceed on that assumption remained an issue. In February 1946, the JCS directed the Joint Strategic Survey Committee to develop for JCS approval a list of general assumptions to guide joint strategic planning. A principal conclusion of that effort was that atomic weapons "will be used if the United States becomes involved in a major war." Initially, that assumption provoked no objection and was approved by the JCS in May.57

In June, the Vice Chief of Naval Operations, acting for Admiral Nimitz, requested that all reference to the employment of atomic weapons be deleted from current planning assumptions. Ostensibly, the Navy's recommendation was prompted by the recent Baruch proposals to the United Nations for international control of atomic energy and the ultimate prohibition of atomic weapons. Actually, the Navy was taking advantage of an opportunity to protect against the curtailment of conventional naval forces for general war. Indeed, many senior naval officers feared the institutional implications for the Navy of too heavy dependence on atomic weapons in defense planning.58

General Spaatz vigorously disputed the Navy's recommendation. He argued that until atomic weapons were, in fact, banned by international agreement, the Joint agencies should not be denied "a complete basis for current planning." In the absence of firm national policy guidance, the JCS ultimately compromised the issue by adopting the less positive
principle that atomic weapons "may"—rather than "will"—be used in a future general war. Although at least one war plan "sans" nuclear operations was actually drawn up in late 1947, the strategic planners found it increasingly unrealistic to imagine a general war employing only existing conventional forces. 59

In a review of planning assumptions in September 1947, the JSSC concluded that the American military establishment was capable of handling "only minor emergencies" using "conventional weapons" alone and that atomic weapons would be used in a major war. By the end of the year the issue was still being debated within the JCS. Admiral Leahy continued to argue against the dependence of war plans on the use of atomic weapons. To the other military chiefs, however, it was no longer a question of whether atomic weapons should be used, but rather how they would be used. 60
CHAPTER III NOTES


of the Moscow Conference of the Three Foreign Ministers," 28 Dec

5. JCS 1567/28, 12 Jan 46, Rpt, JSSC to JCS, sub: "Guidance as to the
Military Implications of a United Nations Commission on Atomic
Energy," JCS 1567/11 DECISION, 28 Dec 45, both in CCS 092 (4-14-
45)S. 3-4. See also JCS 1477/2, 6 Dec 45, JCS 1477/3, 20 Dec 45,
JCS 1477/4, 24 Dec 45, Memo, CNO to JCS, sub: "Effect of Atomic
Weapons on National Security and Post-War Military Plans," JCS
1477/5, 12 Jan 46, and JCS 1477/7, 6 Feb 46, all in CCS 471.6 (8-
15-45)S. 1-2.

6. JCS 1567/26, 12 Jan 46. Extract from Forrestal Diaries, 21 Sep 45.
See also JCS 1477/5, 12 Jan 46 and JCS 1477/7, 6 Feb 46.

13. Re: Groves views see Memo by CG, MED, 2 Jan 46, sub: "Our
Army of the Future--As Influenced by Atomic Weapons," FRUS: 1946/I,
pp. 1197-98. For a slightly different draft of the same document
see "Statement on the Atomic Bomb and Its Effects on the Army,"
Appendix to Encl to JCS 1477/6, 21 Jan 46, CCS 471.6 (8-15-45)S. 2.

8. US Department of State, A Report on International Control of Atomic
Energy (Acheson-Lilienthal Report), 16 Mar 46 (Washington, DC: GPO,
1946). The Report was submitted to Byrnes on 21 March 1946.

9. Ibid.

10. Ibid.

11. JCS 1669/6, 20 Jul 46, Rpt, JSSC to JCS, sub: "International Con­trol of Atomic Energy," JCS 1669/6 DECISION, 1 Aug 46, both in CCS
State Department Press Release, 9 Apr 46, published in Department

12. US Department of State, Statement of United States Policy on Con­trol of Atomic Energy As Presented by Bernard M. Baruch to the
United Nations Energy Commission, 14 June 1946 (Washington, DC:
Ltr, Truman to Baruch, 7 Jun 46, both in FRUS: 1946/I, pp. 846-51.

13. See e.g., Walter LaFeber, America, Russia and the Old War (NY: John

15. Ltr, Spaatz to Baruch, n.d. (c 14 Jun 46), and Ltr, Eisenhower to Baruch, 14 Jun 46.


18. Ibid., pp. 431-39. Memos, Truman to Patterson and Forrestal, 28 Nov 45, in Records of the Office of the Secretary of War (hereafter cited as OWS), RG 107, National Archives and Records Service, Washington, DC, OWS 471.6 ATOMIC BOMB.


20. Truman, Memoirs, II, p. 3. James Newman was also present at the meeting.


29. Hewlett and Duncan, Atomic Shield, pp. 39-41, 141.

30. Ibid., pp. 17, 32, 44-46, 60; see especially those references re: GAC meetings 2 February and 28-30 March 1947. At that time, Dr. Fermi urged theoretical studies of a thermonuclear device, but was overruled by his colleagues.

31. Ibid., p. 46. Re: the joint letter to Truman see JCS 1745/w attch, 3 Feb 47, Memo, C/S, USA to JCS, sub: "Proposed Study on the Production of Fissionable Material," CCS 471.6 (8-15-45)S. 4.


33. An undated copy of the draft directive, actually in the form of a letter to the President, is enclosed in JCS 1745/2, 1 Apr 47, Rpt, JSSC to JCS, sub: "Production of Fissionable Material," CCS 471.6 (8-15-45)S. 4. See also Hewlett and Duncan, Atomic Shield, p. 47. There was the same interpretation placed on the 1948 fissionable material production program directive, approved by Truman in April 1948. That document called for a continuation of the 1947 program. See Ibid., p. 172.
34. Undated copy of draft directive enclosed in JCS 1745/2-1 Apr 47: same as Ltr, Lilienthal, Patterson, Forrestal & Leahy to Truman, dtd 2 Apr 47, cited in Ibid., p. 47. Information on the specific amounts of fissionable material allocated for research is not available. However, a later JCS document noted that the amount was not to exceed that necessary for the fabrication of 15 bombs. See JCS 1745/5, 8 Dec 47, Rpt, JSSC to JCS, sub: "production of Fissionable Material, CCS 471.6 (8-15-45)S. 8.

35. The calculation of actual bomb production is speculative, but there are indications of its general validity. In early 1947 the stockpile numbered about a dozen weapons. (See Interview, author with GEN Curtis E. LeMay, 16 February 1976, Newport Beach, CA.) As of 1 January 1949 the stockpile numbered about 75 weapons. After SANDSTONE, weapons production gradually increased to about six weapons per month in December 1948. (See "Operation DUALISM," Transcript of USAF Commanders' Conference, Maxwell AFB, AL, 6-8 Dec 48, Vol. II, AFSHRC 168.151-10.) From that we may assume that about 30-35 weapons were produced during the period June-December 1948. That means about 40-45 weapons were in stockpile as of June 1948. Therefore, about 28-33 weapons were produced between early 1947 and May 1948—less three expended at SANDSTONE. Thus an average of about two to three bombs a month were produced during the same period.

36. "Report to the President of the United States from the Atomic Energy Commission, January 1-April 1, 1947," dtd 3 Apr 47, PSF Files, NSC Atomic File, NSC Atomic Energy Reports Folder, HST Library. Re: bomb stockpile see note #35 above. The "new" type of bomb apparently was a reference to the FM Composite type discussed by the Scientific Panel of the Interim Committee in September 1945. This weapon was tested for the first time at SANDSTONE in April 1948. It is unlikely that any of these weapons had actually been produced by April 1947. The first test mock-ups were only constructed during the summer of 1947. However, the weapon had been a major development objective since at least late 1945. See Hewlett and Duncan, Atomic Shield, p. 138, 146, 151.


41. JWPC 416/1, rev 8 Jan 46.

42. JWPC 486/7, 29 Jul 47, JWPC Study, sub: "Guidance for Mobilization Planning as Effected by the Use of Atomic Weapons," CCS 004.04 (11-4-36) S. 3, BP Pt. 1A. Differences in specific targets may account for some of the differences between the January 1946 and July 1947 estimates, but a majority of the targets in each study were the same. See Chapter IV for target lists. Note also that figures for average number of bombs airborne required per target complex were used here only for purposes of comparison. Destruction of different targets, of course, required varying numbers of bombs, depending on the size, configuration, and topographical characteristics of the target. At this time all bomb requirements were expressed in 20KT equivalents.


### SUMMARY OF JCS AND AIR FORCE ATOMIC BOMB REQUIREMENT STUDIES

<table>
<thead>
<tr>
<th>Target comp'xs</th>
<th>Bombs off ground</th>
<th>Off ground per comp'x</th>
<th>Bombs on target</th>
<th>On target per comp'x</th>
<th>Bombs in reserve</th>
<th>Total Bombs</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>98</td>
<td>5.76</td>
<td>47</td>
<td>2.76</td>
<td>98</td>
<td>196</td>
<td>JWPC 416/1, 8 Jan 46</td>
</tr>
<tr>
<td>24</td>
<td>68</td>
<td>2.83</td>
<td>34</td>
<td>1.41</td>
<td>na</td>
<td>na</td>
<td>JWPC 486/7, 29 Jul 47</td>
</tr>
<tr>
<td>49</td>
<td>200</td>
<td>4.04</td>
<td>100</td>
<td>2.05</td>
<td>200</td>
<td>400</td>
<td>AAF Air Int Study, Jun-Oct 1947</td>
</tr>
<tr>
<td>20</td>
<td>180</td>
<td>9.00</td>
<td>90</td>
<td>4.50</td>
<td>na</td>
<td>na</td>
<td>SAC 14-47, Dec 1947</td>
</tr>
<tr>
<td>100</td>
<td>300</td>
<td>3.00</td>
<td>150</td>
<td>1.50</td>
<td>100</td>
<td>400</td>
<td>JCS 1745/5, 8 Dec 47</td>
</tr>
</tbody>
</table>

44. See Memo, Brereton, Ch, MLC to Spaatz, 7 Jul 47, sub: Atomic Weapons Requirements, in AAG Files F-500 through F-749, 337/341.
45. JCS 1745/5, 8 Dec 47. Admittedly this reconstruction of the planners schedule of requirements is speculative, but there are indications of its general validity. In September 1945, the Scientific Panel of the Interim Committee estimated an annual bomb production rate of 36 for wartime models or as many as 50 for an improved FM weapon using a Pu/U-235 composite core. These estimates were based on existing production facilities. (See Report, Scientific Panel to Interim Committee, September 1945, cited in Schneider, "Nuclear Weapons and American Strategy, 1945-1953," p. 80, 80n.) Although the military planners accepted conservative AEC production estimates for 1947 and early 1948, they clearly anticipated an increased rate, if the planned tests proved modifications in the bomb's core design and composition workable. And, they anticipated even greater increases once expanded production facilities came on line in 1949 and 1950. If the modifications failed, the planners still anticipated a maximum, average annual production rate of about 50 bombs over the next eight years as the result of increased Pu production. That, as the planners stated in JCS 1745/5, would provide a 400 bomb total by 1956 instead of 1953. Based on the assumption that tests of the FM Composite bomb would be successful, the Joint War Planners estimated a minimum annual production capability of 100 bombs by the end of 1950. (See JWPC 486/7, 29 Jul 47.) At the beginning of 1948 there were about 25 bombs in the stockpile. (See note #35 above.) Based on that figure and an annual production rate rising from 50 to 100 during the 1948-1949 period, the planners' schedule of requirements has been reconstructed. In fact, the point is academic, since actual production considerably exceeded the schedule of requirements by mid-1949. (See JCS 1823/14, 24 May 49).

46. JCS 1745/5, 8 Dec 47. JCS 1745/7, 16 Dec 47, Memo, D/JS to JCS, sub: "Production of Fissionable Material," and JCS 1745/7 DECISION, 17 Dec 47, both in CCS 471.6 (8-15-45)S. 8. The amount of fissionable materials to be allocated to weapons and other research was established in April by agreement of the Secretaries of War and Navy, the JCS, and Lilienthal. Re: weapons efficiency note the following: The Nagasaki FM (MARK III) bomb used approximately 612kg of plutonium to achieve yields in the 20KT range. The Hiroshima LB (MARK I) bomb was even less efficient, using perhaps as much as 90-93kg of U-235 to achieve yields of 12-14KT. The FM Composite bomb envisioned by the Scientific Panel of the Interim Committee in September 1945 was expected to achieve yields in the range of 20KT with a combination of approximately 2.5kg of plutonium and 5.9kg of enriched U-235. With a composite core of approximately 3.2kg plutonium and 6.5kg U-235, yields up to 40KT were envisioned. In any case, significant improvements in the efficiency of implosion weapons was anticipated. See Report, Scientific Panel to Interim Committee, September 1945.

47. Ltr, Lilienthal to JCS, 29 Jan 48, Appendix to JCS 1745/14, 10 Feb 48, Memo, D/JS to JCS, sub: "Production of Fissionable Material," CCS 471.6 (8-15-45)S. 8.


50. For JCS Evaluation Board Report see JCS 1691/7, 30 Jun 47. Hewlett and Duncan, Atomic Shield, pp. 136-37. Journals of David E. Lilienthal, II, 5 Aug 47, pp. 233-34. Many of the problems between the AEC and the MLC were attributable to the abrasive personality of General Groves. A virtual czar during the war, Groves found cooperation with the civilian Commission, not to mention his own military superiors, difficult. By October 1947 Lilienthal wanted Groves removed and was ready to make a point of it. Eisenhower apparently considered relieving Groves from his MLC and AFSWP posts at about the same time, but Groves had powerful political allies in Congress whom the JCS was not willing to alienate. To almost everyone's relief Groves finally retired in February 1948. See especially Journals of David E. Lilienthal, II, 19 Sep 47, 15 Oct 47, pp. 236, 247-52.

51. Hewlett and Duncan, Atomic Shield, pp. 60-61, 136-37. The stockpile, such as it was, was transferred from Los Alamos to Sandia-Kirtland during the spring of 1947. See Ibid., pp. 17-18, 45, 60-61.


55. Ltr, Forrestal to Senator Chan Gurney, 8 Dec 47.

56. "American Relations with the Soviet Union," (Clifford Report), 24 Sep 46. Truman, Memoirs, II, pp. 294-95, 312. On at least one occasion privately expressed doubts that atomic bombs "can ever be used again," but the context and meaning of his remark is less than clear. See account of conversation between the President and Budget Director Harold D. Smith, c 5 Oct 45, cited in Haynes, The Awesome Power, p. 60.

57. JCS 1630, 19 Feb 46, Memo, C/S, USA to JCS, sub: "Strategic Guidance to Facilitate Planning Within the Joint Agencies," JCS 1630/1, 26 Apr 46, Rpt, JSSC to JCS, sub: same, and JCS 1630/1 DECISION, 9 May 46, all in CCS 381 (2-18-46)S. 1.


59. JCS 1630/4, 1 Jul 46, Memo, CG, AAF to JCS, sub: "General Assumptions for Joint Planning Purposes," JCS 1630/5, 12 Jul 46, Note by Secs to JCS, sub: "Strategic Guidance to Facilitate Planning within the Joint Agencies," and JCS 1630/1 AMENDED DECISION, 13 Jul 46, all in CCS 381 (2-18-46)S. 1. In re: to strategic planning see Chapter IV.

60. JCS 1630/6, 24 Sep 47, Rpt, JSSC to JCS, sub: "Strategic Guidance to Facilitate Planning within the Joint Agencies," JCS 1630/7, 12 Nov 47, Memo, CNO to JCS, sub: same, JCS 1630/8, 20 Jan 48, Memo, C/S, USA to JCS, sub: same, JCS 1630/9, 10 Feb 48, Memo, CNO to JCS, sub: same, JCS 1630/6 DECISION, 26 Feb 48, all in CCS 381 (2-18-46)S. 1. See also Leahy Diary, 10 Jul 47 and 12 Nov 47, Leahy Papers, Bx 5.
The evolution of strategic plans in the immediate postwar period was a hesitant and often confused process. The fragile strategic consensus, carefully worked out by the Joint Chiefs of Staff in late 1945, broke down almost immediately under the pressure of interservice disagreements over the organization, composition and functions of the armed forces. The absence of firm political guidance in a period of national policy transition, uncertainty about the future availability and use of atomic weapons, and limited defense resources retarded the development of politically and militarily realistic plans. In fact, there was no jointly approved war plan before the spring of 1948.

Despite the political and strategic importance of European security, the military planners despaired of a successful defense in Western Europe. If war came in the near future, they planned to abandon the area in the face of overwhelming Soviet ground force superiority. The planners reasoned that a main effort in the Middle East, aimed at occupying or otherwise neutralizing the vital centers of Soviet war-making capacity, would eventually cause the withdrawal or collapse of Russian forces in Europe. Disagreement over the political reality of that strategy was soon apparent, but military factors—limited forces, the importance of Middle Eastern oil, and the need for forward bases within
range of vital Soviet targets—dictated a continued commitment to a main
effort in the Middle East.

The role of atomic weapons in a near-future war was not entirely
clear to the military planners. Emphasis on the exploitation of atomic
weapons to damage Russia's war-making capacity and retard its offensive
advances during the first months of war was evident in early war plan­
ning concepts. But, not even Air Force strategists claimed with com­
plete confidence that an initial atomic offensive would be decisive.
Navy strategists expected even less. For a time, they insisted that the
United States must be prepared to fight a general war without atomic
weapons. By late 1947, however, it was clear to all the planners that,
so long as American conventional capabilities remained limited, general
war concepts must be predicated on the early and extensive use of atomic
bombs. The issue, which increasingly divided the services during the
next two years, was how and by whom atomic weapons should be used.

The PINCHER Concept

The first efforts to forge postwar strategic plans began in the
Joint Chiefs of Staff organization in May 1945. The statements of broad
strategic policy and concepts approved by the JCS in September (see
Chapter I) constituted an attempt to establish basic principles to guide
the development of war plans. The Joint Chiefs agreed that the United
States would continue to rely on a strategic policy of mobilization in
time of emergency, but with increased forces-in-being capable of pro­
viding the time needed to carry out mobilization. National security
would rest on offensive rather than strictly defensive action. From the
outset of war "mobile striking forces," operating from forward bases
with both nuclear and conventional weapons, would take the offensive to retard enemy advances and disrupt his war-making capacity. Once mobilization permitted, combined operations aimed at the final defeat of the enemy would begin.¹

Deterioration of the international situation in late 1945 and early 1946 and the rapid evaporation of American military capabilities as a result of demobilization added a sense of urgency to the task of developing joint war plans. Soviet pressure in the eastern Mediterranean and the Middle East served to emphasize the vital strategic importance of those areas. President Truman's reaction to the crises over Turkey and Iran encouraged the military planners to believe that the Administration also recognized vital interests in those areas. At the same time, the military planners were keenly aware of the limits of American power. As the JCS warned the President in March 1946, U.S. military capabilities were deteriorating dangerously.²

In that context, the joint planners began their attempts to translate vague overall concepts into realistic plans. The first result was a concept of operations, codenamed PINCHER, for a war beginning about January 1948. As early as October 1945, the joint planners asked the Joint Intelligence Committee to prepare basic estimates of Soviet military capabilities and intentions in strategically important areas on which joint war planning might proceed. Completed in late November, those estimates revealed that the Russians were capable of overrunning most of Western Europe, together with Greece, Turkey, and parts of the upper Persian Gulf area, at any time during the next two years. For the present, Soviet long-range bombardment operations against the United
States or the approaches to the North American continent were discounted. The Russians were not expected to possess atomic weapons in significant numbers for at least five to ten years.3

The planners agreed that the Russians probably would not deliberately provoke a war. The PINCHER Concept, completed in March 1946, was based on the assumption that a conflict might arise from an act of Soviet aggression in the eastern Mediterranean or Middle East—perhaps an attack on Turkey—as a result of miscalculation of Western vital interests in those areas. That scenario of how a war might begin was supported by the planners' reasoning that the USSR's principal postwar objective was to establish a "protective barrier... along those portions of her border where penetration would imperil the security of vital areas." That objective had been accomplished in all areas except the Middle East, where the vital regions of southwest Russia and the Caucasus remained potentially exposed. Conversely, Soviet penetration of Turkey or Iran would threaten Western access to Middle Eastern oil and the strategically important Cairo-Suez area.4

If war occurred, the planners expected the Soviet Union to launch simultaneous attacks in Europe and the Middle East. It was estimated that the Russians could easily overrun all of continental Europe with the possible exception of parts of Norway, Spain and Italy. For the foreseeable future, an allied defense along the Rhine was thought to be infeasible because of a lack of forces for rapid reinforcement of the European garrisons. In the Middle East, the planners estimated the Soviets were capable of rapidly overrunning Turkey and the upper Persian Gulf area. Assuming that all available allied forces were deployed
quickly for its defense, the planners optimistically believed that the Cairo-Suez area could be saved; primarily because of the severe logistic problems involved in a Soviet campaign against the area. In the Far East, the Soviets were expected to pursue only limited objectives—occupation of southern Korea, Manchuria, and parts of north China, air attacks against Japan, and submarine attacks against allied shipping—aimed at consolidating their position for a strategic defense.  

Based on the nature of the estimated threat and limited allied capabilities, PINCHER outlined a broad concept of operations that included the following initial undertakings: (1) provision for the defense of the continental United States from minor attacks, (2) establishment and defense of air bases in the United Kingdom, Cairo-Suez area, northwest India (Karachi-Lahore area), and possibly southern Italy and western China, (3) defense of the sea and air lines of communication to those bases, (4) prompt initiation of atomic and conventional air operations against Soviet war-making capacity, and (5) early destruction of Soviet naval forces and shipping together with a strategic blockade of the USSR. Once mobilization permitted, PINCHER called for the initiation of "operations leading to the seizure of the Caucasus and the opening of the Dardanelles in preparation for a subsequent offensive into other Soviet vital areas," together with intensified strategic air operations.

A number of basic assumptions—some of them extremely questionable—shaped the PINCHER Concept. The planners estimated that the United States would begin mobilization six months before the outbreak of war. As a result of Air Force disagreement, that estimate was later
reduced to three months. Even so, it remained an extremely doubtful assumption which seriously affected estimates of allied deployment capabilities. The planners realized that during the period covered by PINCHER only a very limited number of atomic bombs would be available. That resulted in the dubious assumption that a largely conventional strategic air campaign, supplemented by the few atomic bombs in the stockpile, could significantly reduce Soviet war-making capacity. Initially, no analysis was made of that assumption. A brief study of potential atomic objectives was completed by the Joint Intelligence Committee in early November 1945, but, initially, the joint planners did not give specific attention to the question of targets.  

Overall, the most important assumptions in PINCHER concerned the locus of strategic effort and the allies' capability to carry out the concept. The planners argued that the geographical area of decision in a future war with the Soviet Union would be the Middle East rather than Western Europe. On its merits the argument was enticing, although not very realistic politically. Assuming, as the planners did, that the strategic air campaign would not be decisive immediately, it was necessary to contemplate eventual ground operations against the sources of Soviet power. In that respect, the guiding principle established by the joint planners was to avoid confronting the bulk of Soviet ground forces in a "war of attrition." "Objective areas," they insisted, should be narrowed down to those vital centers of Soviet war-making capacity that could be occupied or otherwise neutralized within the limits of ultimate allied capabilities and without unreasonable or prolonged sacrifice of
blood and treasure. That meant initiating operations from bases as close as possible to the Soviet Union.  

On the basis of that principle, the planners argued that the Middle East offered the least difficult avenue of approach to Russia's vital areas and offered the additional advantage of retaining or quickly regaining critically necessary petroleum resources. Initiation of a ground offensive through central Europe was rejected for several reasons. First, the estimate of allied inability to hold Western Europe against initial Soviet attacks would make it necessary to reestablish a logistically supportable foothold on the continent before operations against the USSR could be undertaken. More importantly, an approach to western Russia through central Europe would "constitute a direct frontal attack upon the enemy's strongest positions" in an area remote from the vital centers of Soviet war-making capacity. According to the planners, even if a foothold in Western Europe could be held initially, either on the French Atlantic coast or in Spain, it would divert scarce allied resources and "deny the Allies flexibility of action."  

The scheme of initial operations under the PINCHER Concept constituted the virtual abandonment of Western Europe, other than the United Kingdom which was required as a base for strategic air operations. PINCHER projected the immediate withdrawal of U.S. forces in southern Germany. Preferably, the withdrawal would be through the Alps into Italy with the initial objective of holding the line of the Appennines south of the Po Valley in order to retain the important Foggia air bases and facilitate control of the central Mediterranean. Alternatively,
U.S. forces would be evacuated along the French Atlantic coast or withdrawn into Spain.  

Although superficially logical, the basic element of the PINCHER Concept, i.e., dependence on a main effort in the Middle East, was seriously flawed. Allied capabilities for initial retention of the Cairo-Suez area and the oil resources of the lower Persian Gulf were grossly inadequate. Estimated, initial force requirements for PINCHER far exceeded available budgetary resources for the maintenance of peacetime forces-in-being. The paramount strategic requirement for retention of the Cairo-Suez area was maintenance of the Mediterranean line of communication. By the planners' own admission, that was impossible.

The Mediterranean line of communication was extremely vulnerable to both air and submarine interdiction. The planner's provision for the possible defense of southern Italy was very largely aimed at protecting the central Mediterranean. The ability of the allies to hold southern Italy, or even to effect a withdrawal through the Alps, was, as later planning indicated, very doubtful. Soviet occupation of Italy or Spain would effectively close the Mediterranean line of communication to Suez. The line through the Red Sea, by way of South Africa or the Pacific Ocean, was extremely long. Over such distances, it would be quite difficult, if not impossible, to support even minimum defense operations for the Cairo-Suez area. Offensive operations against Soviet forces in the Middle East, the Caucasus or the Dardanelles would require keeping the Mediterranean open. Alternative operations through the Persian Gulf and Iran, also discussed by the planners, would be a logistician's nightmare. Even assuming that the Mediterranean line of communication
remained open, operations against the Dardanelles, southwestern Russia, or the Caucasus would have involved enormous difficulties.\textsuperscript{12}

\textbf{Joint Air War Planning and the Revision of PINCHER}

The very serious shortcomings of PINCHER were evident to the strategic planners, and formed the focus of a lively debate in the months following its completion. Three basic problems concerned the planners. First, they feared that political pressure for initial defense in Europe, and the expenditure of scarce resources on such an effort, would result in early disaster or in a commitment of military operations to a "line of departure" in central Europe rather than in the Middle East. Secondly, the planners were concerned with the development of more detailed plans for the strategic air campaign, including the selection of target systems. Lastly, they were concerned with the need to reexamine the requirements for initially defending the Cairo-Suez area and maintaining the Mediterranean line of communication vital to the PINCHER Concept of a main effort in the Middle East.\textsuperscript{13}

A study of those problems was initiated in March 1946. The study concluded that a coordinated defense of Western Europe, along the Rhine or elsewhere, was impossible. In the event of war, U.S. forces should be "immediately withdrawn from the continent" or "withdrawn to defensive positions in Italy or possibly Spain." The prognosis for a withdrawal into Italy was not encouraging. Withdrawal into Spain was thought to be feasible, but the possibility of retaining lodgement areas elsewhere on the continent was rejected as unrealistic.\textsuperscript{14}

Analysis of the strategic air offensive focused on the selection of priority targets for atomic bombardment and forward bases from which
those targets could be attacked. Lacking detailed intelligence on the location and concentration of vital Soviet war industry, the planners simply identified a number of Soviet "industrial urban areas as a suitable target system." The planners' target analysis was based largely on the atomic target study conducted by the joint intelligence estimators at the request of the Joint War Plans Committee in late October and early November 1945. The objective of the earlier study was to identify targets whose destruction would cripple or seriously damage immediate Soviet offensive capabilities, and also disrupt Russia's longer-range potential for waging war.15

A cursory analysis of the relative advantages of various bombing objectives indicated that destruction of specialized industrial facilities, especially those for aircraft and petroleum production and administrative and control facilities offered the best chance of immediately curtailing Soviet offensive capabilities. Destruction of mixed industrial and research and development facilities, especially those related to atomic energy, seemed to offer the best opportunity for disrupting the development of longer-range capabilities.16

With the meager target intelligence at hand, the Joint Intelligence Committee developed a list of twenty Soviet cities believed to contain a high proportion of appropriate objectives:

- Moscow
- Gorki
- Kuibyshev
- Sverdlovsk
- Novosibirsk
- Tashkent
- Chelyabinsk
- Nizhni Tagil
- Magnitogorsk
- Molotov
Working from the JCS study, the joint planners expanded the potential atomic target system to thirty cities—the original plus ten: 17

<table>
<thead>
<tr>
<th>City</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omsk</td>
<td>Baku</td>
</tr>
<tr>
<td>Saratov</td>
<td>Yaroslavl</td>
</tr>
<tr>
<td>Kazan</td>
<td>Stalinsk</td>
</tr>
<tr>
<td>Leningrad</td>
<td>Irkutsk</td>
</tr>
<tr>
<td>Dnepropetrosvk</td>
<td>Chkalov</td>
</tr>
<tr>
<td>Stalino</td>
<td>Kirov</td>
</tr>
<tr>
<td>Khabarovsk</td>
<td>Kemerovo</td>
</tr>
<tr>
<td>Vladivostok</td>
<td>Komsomolsk</td>
</tr>
<tr>
<td>Ufa</td>
<td>Zlatoust</td>
</tr>
</tbody>
</table>

Several serious weaknesses were evident in these rather shallow analyses. The very limited availability of atomic weapons made it extremely doubtful that even twenty cities could be destroyed, much less thirty. A study completed by the JWPC in January 1946 indicated that as many as ninety-eight atomic bombs would be required to destroy only seventeen of the original twenty target complexes. In early 1946, there were perhaps less than ten bombs in the atomic stockpile and no reliable projections of future availability. Assuming that adequate atomic weapons were available, the ability to deliver them was extremely limited. In early 1946, the sum of Air Force atomic capability resided in a single Bombardment Group, the 509th, possessing less than thirty atomic-modified B-29 aircraft. Even assuming that the selected targets could be destroyed, there was no assurance that would have the desired effect on Soviet war-making capacity. No effort was made to analyze that
problem; nor the logistic problems affecting the timing of air attacks. 18

Prompted by the Joint Staff Planner's study of the strategic air offensive, General Eaker, AAF Deputy Commanding General, directed General Curtis LeMay, then Deputy Chief of the Air Staff for Research and Development, to produce an operational plan for the employment of atomic weapons against the Soviet Union based on existing AAF delivery capabilities. Logically, that task would have been undertaken by the normal Air Staff planning agency (AC/AS-5). However, because of strict security measures imposed by Manhattan Project authorities, LeMay's Research and Development Staff was the only AAF Headquarters agency with access to necessary atomic weapons data. The persistence of that situation for another year or more serves to underscore the difficulties encountered by air war planners during the immediate postwar period. 19

The LeMay plan, completed around April, called for the initiation of a small number of atomic sorties—ten to fifteen depending on weapons availability—from bases in the United Kingdom by a single B-29 Group sometime after the second month of war. Principal objectives included important government administration, communications and industrial centers. Those operations were intended to supplement a larger, conventional air offensive. However, Air Force planning for the conventional air campaign did not begin for several months pending the development of joint and War Department guidance. 20

The joint planners concentrated much of their analysis of the strategic air offensive on the selection of defensible bases within range of priority targets. In that respect, no changes were made in the original
PINCHER Concept. Primary bases were projected in the United Kingdom, the Cairo-Suez area, and the vicinity of Lahore, northwest India (later Pakistan). Principal emphasis was placed on the establishment and defense of bases in Britain for the earliest possible initiation of atomic air operations, but the planners did not estimate when attacks might begin.  

In the event that the Cairo-Suez area was lost, the planners offered the alternative of a primary base in the vicinity of Bengasi (Libya) with staging areas in Crete or Cyprus. Also, establishment of air bases in southern Italy, western China (in the vicinity of Chengtu), and Japan was considered. Assuming that the primary bases were defensible, their principal shortcoming was that they were not within B-29 range of the most remote Soviet targets. That remained a problem until the introduction of longer-range aircraft, range extension techniques, and aerial refueling systems.  

Joint study of the problem of maintaining control of the line of communication in the central and eastern Mediterranean was not completed. The Joint Chiefs agreed generally on the strategic importance of the eastern Mediterranean-Middle East area, but there were already signs of disagreement at the joint planners' level regarding the appropriate course of action in that area in the event of war.  

Continued deliberations by the joint planners resulted in revision of the PINCHER Concept in June 1946, but the changes were largely cosmetic. There was increased emphasis on the early initiation of the strategic air campaign and the exploitation of atomic weapons. Specific objectives in the thirty city target system continued to be rather
nebulous, but general priorities accentuating petroleum and aviation industry facilities were introduced. The fact remained, however, that useful target intelligence was extremely limited.24

The increasing importance attached to early atomic air operations from bases in the United Kingdom by both the JCS and the Air Force was demonstrated a short time later. During a visit to Britain in early July 1946, General Spaatz obtained an agreement from Air Chief Marshal Sir Arthur Tedder for the British to provide facilities and equipment for handling and loading atomic capable B-29 aircraft at two unspecified airdromes in southern Britain. An Air Force liaison officer was dispatched to Britain in August to assist with the project.25

In revising PINCHER, the joint planners slightly altered their earlier estimate of the indefensibility of Western Europe. Mainly for political reasons, they accepted the "possibility" of maintaining lodgements in western France or the Low Countries. Nevertheless, the planners preferred the rapid withdrawal of U.S. forces from Western Europe in case of war. The Joint Chiefs never formally approved PINCHER, but there was evident agreement among them at the time that initial commitments on the European continent should be strictly limited. That was the position taken by the JCS in a general strategic appraisal transmitted to President Truman in April 1946. The Chiefs emphasized the critical importance of extricating scattered American occupation forces in Europe and elsewhere in order to preserve them for subsequent operations.26

Air Force planners raised serious doubts regarding the feasibility of major overland operations in the Middle East. Specific operations to
occupy the Caucasus and Dardanelles areas originally projected by PINCHER were dropped in the June revisions, although the possibility of such operations was not given up entirely. The strategic course of action in the area would later become a matter of basic disagreement between Air Force and Navy planners.\(^{27}\)

As a result of the unresolved organizational and functional debates surrounding the issue of service unification, development of the PINCHER Concept was virtually suspended after mid-June 1946. Without basic agreement on service organization and functions, it was impossible to determine the specific forces necessary to translate the PINCHER Concept into a Joint Outline War Plan. That situation persisted until November when pressure for development of a completed plan provoked a confused burst of activity among the planners.

**Operational Air War Planning: MAKEFAST, EARSHOT, and SAC 14-47**

While the joint planners debated, the Air Force began work on emergency air war plans. In June, the Headquarters' planning agency (AC/AS-5) developed a very rough outline of Air Force deployment in the event of war. A month later General Eaker established an Air War Plans Committee in the Air Staff to expedite work on a plan based generally on the PINCHER Concept. Coordinated by the Strategy Branch of AC/AS-5, the Committee included personnel from all Headquarters' agencies. In September, the Army Director of Plans and Operations requested the early completion of an outline air plan to be integrated with Army Ground and Service Forces' plans, also based on PINCHER, then being prepared by the War Department General Staff.\(^{28}\)
The Air Staff completed its first outline emergency air war plan, codenamed MAKEFAST, in October. The plan provided for a limited atomic and conventional air campaign, and was based on the existing forty-eight group Air Force and deployment capabilities forecast in the current War Department Mobilization Plan (WDMP II). MAKEFAST called for the commencement of strategic air operations by six B-29 groups from bases in the United Kingdom and Cairo-Suze area four to five months after the beginning of war. Whether the base areas would be tenable after four or five months was academic, since more rapid operational deployment was not possible with anticipated resources.

The atomic annex to MAKEFAST apparently resembled the plan developed by LeMay's Research and Development staff in April 1946--limited atomic sorties from U.K. bases by a single B-29 group aimed at destroying high priority government administrative, communications, and industrial targets. The 509th Bombardment Group, still the only atomic-capable unit in the Strategic Air Command, was given first priority for deployment to U.K. bases in the event of war. MAKEFAST included a list of forty principal Soviet urban-industrial areas which apparently represented the Air Force view of the priority of atomic targets:

<table>
<thead>
<tr>
<th>Moscow</th>
<th>Tashkent</th>
<th>Dnepropetrovsk</th>
<th>Makhach Kala</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gorki</td>
<td>Chelyabinsk</td>
<td>Stalino</td>
<td>Rostov</td>
</tr>
<tr>
<td>Kuibyshev</td>
<td>Nizhni Tagil</td>
<td>Khabarovsk</td>
<td>Odessa</td>
</tr>
<tr>
<td>Sverdlovsk</td>
<td>Magnitogorsk</td>
<td>Vladivostok</td>
<td>Dairen</td>
</tr>
<tr>
<td>Novosibirsk</td>
<td>Molotov</td>
<td>Ufa</td>
<td>Alma Ata</td>
</tr>
<tr>
<td>Omsk</td>
<td>Tbilisi</td>
<td>Chkalov</td>
<td>Riga</td>
</tr>
<tr>
<td>Saratov</td>
<td>Stalinsk</td>
<td>Kirov</td>
<td>Kiev</td>
</tr>
</tbody>
</table>
Given the limits of atomic capability at the time, however, only a fraction of the target system could be attacked. Moreover, because of B-29 range limitations, atomic attacks launched from U.K. bases would have to be conducted on a one-way basis.30

Analysis of various air objectives indicated that destruction of Soviet petroleum production offered the only chance of immediately effecting enemy offensive capabilities with conventional bombardment. The recommended conventional target system consisted of twenty-nine petroleum refining facilities in the USSR and Eastern Europe, which accounted for about eighty percent of Soviet or Soviet-controlled petroleum output, particularly automotive and aviation gasoline. In addition, aerial mining of the Black and Caspian Sea ports was expected to curtail shipments of crude oil to remaining refining facilities.31

In regard to conventional operations, the critical strategic factor in MAKEFAST was whether Cairo-Suez bases could be defended during the initial months of war. Fully half the targets in the petroleum system could be reached only from Cairo-Suez bases. One-way atomic operations may have been feasible, but one-way conventional operations were out of the question. Estimates of the air defense requirements for the Cairo-Suez area far exceed Air Force capabilities, and the Air Staff planners were not confident that the Mediterranean line of communication could be
maintained. In the event Cairo-Suez bases were lost, less satisfactory alternate bases were recommended in the Lahore area of northwest India.  

Air Staff estimates of the ability of the initial six bomb group force to accomplish its assigned task were certainly over-optimistic. Expected attrition rates during the first eight months of operations were barely within estimated replacement capabilities, and the deployment of only four additional bomb groups was anticipated before the end of the first year of war. Without increased atomic capability, Air Force strategic operations would be virtually inconsequential. Air Force planners recognized the urgent need to improve atomic operational capability. A report by a special Headquarters Staff committee in November outlined basic planning requirements for atomic operations, but limited access to necessary atomic weapons information continued to handicap both Air Force and joint planners.  

After reviewing MAKEFAST, General Spaatz requested an immediate revision of the plan to reflect Air Force deployment capabilities as of February 1947. The revised plan, codenamed EARSHOT, was completed by the War Plans Division of AC/AS-5 in February and distributed in the Air Staff a month later. The plan outlined air defense and tactical operations as well as the strategic air campaign for a war beginning after 1 March 1947. 

EARSHOT, like MAKEFAST, was primarily a plan for conventional bombardment of Soviet petroleum targets, supplemented by limited atomic operations against major urban-industrial centers. Based on the fifty-five group phase of the projected seventy group program and a revised
War Department Mobilization Plan (WDP-147), EARSHOT called for the commencement of strategic air operations by six B-29 groups from bases in the United Kingdom and the Cairo-Suez area during the period D+3 to D+5 months. Limited operations by three additional B-29 groups based in Okinawa and Japan against Soviet Far Eastern targets, commencing about D+4 months, were also considered.

Although initial conventional objectives were limited to petroleum targets as in MAKEFAST, reevaluation of target intelligence and Air Force delivery capabilities resulted in changes in the target system. The revised system included thirty-two targets in the USSR and Eastern Europe, but accounted for only about seventy-four percent of Soviet or Soviet controlled petroleum output. As in MAKEFAST, the critical element in EARSHOT was whether Cairo-Suez bases could be secured and maintained during the initial months of war. The revised target analysis indicated that only sixteen of the thirty-two petroleum targets, accounting for only about seven percent of Soviet refining capacity were within range of U.K. bases. The most important elements in the system could be reached only from the Cairo-Suez area.

Air Force planners were pessimistic that control of Cairo-Suez bases or the Mediterranean line of communication could be retained much after D+165 days, if that long. That meant conventional strategic air operations intended to commence from Cairo-Suez bases about D+5 months would be interrupted before completion. Alternate bases in northwest India and Oman (at the mouth of the Persian Gulf) could not be developed quickly enough to support initial operations, and were discounted.
Around July or August 1947 the Strategic Air Command began work on its first emergency operational plan, SAC Project 14-47. Finally completed in December, the plan was little more than an extension of the Strategic Air Command and Eighth Air Force Mobilization Plans completed in April. The operational plan, if it can be called that, provided for the deployment of three B-29 groups—7th, 43rd, and 509th—to bases in the United Kingdom and the Cairo-Suez area to launch atomic attacks against twenty Soviet urban-industrial areas, supplemented by diversionary, conventional operations against Soviet petroleum targets by three additional bomb groups.  

SAC Project 14-47 called for the delivery of as many as 180 atomic bombs. At the time, SAC planners apparently had no idea how many bombs were in the atomic stockpile. The plan suffered from other obvious shortcomings. Neither the 7th nor the 43rd bomb groups possessed atomic-capable aircraft or atomic trained crews for at least a year after the plan was submitted. Unfortunately, detailed and realistic operational planning by the Strategic Air Command was not initiated until late 1948 after the belated development of both joint and Air Staff guidance and the improvement of SAC capabilities.  

The virtually inconsequential results of the conventional and limited atomic air campaigns outlined in Air Force plans underscored the need to increase capabilities for early atomic operations. The question at the time was not whether atomic operations would be decisive immediately, but whether any significant air offensive effort could be mounted at all during the early months of war. However, continued uncertainty about the future availability of atomic weapons and national
policy toward their employment retarded realistic planning. Continued organizational and functional disputes between the services resulted in utter confusion among the joint planners.

War Planning Without Atomic Bombs

The vague strategic compromise established by the Joint Chiefs of Staff in September 1945 as the basis for future war planning (i.e., maintenance of "sufficient" peacetime forces-in-being to buy time for mobilization) disintegrated in the summer of 1946. The joint planners could agree on a general concept of operations, but they could not agree on the phasing of operational tasks or force deployments necessary to carry out the concept. What the planners hoped to accomplish in the crucial early months of war, and, more importantly, how quickly they hoped to accomplish it, depended on the size and composition of peacetime establishments which dictated force deployment schedules. Each of the services had its own ideas about the relative importance of functional tasks and the level and timing of force deployments necessary to accomplish those tasks. The sticking point was that available peacetime resources would not satisfy everyone. Each service, nevertheless, continued jealously to protect its functions and force estimates. When joint efforts failed to establish operational and force deployment priorities, PINCHER planning came to a virtual halt.

By the fall of 1946, however, there was heavy pressure on the joint planners to complete a Joint Outline War Plan (JOWP). Without agreed joint plans, the service departments found it difficult to justify budget estimates to the Administration. There was also increasing pressure for the development of force and weapon requirements necessary for
industrial mobilization planning. Theoretically, the joint strategic planners would produce a joint concept and Joint Outline War Plan from which the joint logistic planners would produce a Joint Mobilization Plan to serve as a basis for industrial mobilization planning and feasibility testing of the JOWP. Unable to produce an agreed Joint Outline War Plan, the strategic planners chose instead to produce a purely "hypothetical" JOWP for mobilization planning purposes only. The "hypothetical" plan was based only superficially on the PINCHER Concept of operations and incorporated unilateral service estimates of force requirements and deployment schedules.

Completed in February 1947, the "hypothetical" Joint Outline War Plan, JCS 1725/1, differed from PINCHER in one very important way. The plan was based on the assumption that atomic weapons would not be used by the United States. During the early summer of 1946, the JCS debated whether, in the absence of specific political guidance, strategic planning should proceed on the assumption that authority would be granted for the employment of nuclear weapons in war. Primarily as a tactic to support its conventional force estimates, the Navy argued that planning should not proceed on that assumption. The JCS could agree only that atomic weapons might be used in a future general war. Admittedly, without atomic weapons, overall force requirements for war would increase significantly, but that well suited the Navy's institutional interests.

The joint planners readily admitted that JCS 1725/1 was not the "best or most desirable" plan, nor even very realistic. Force estimates were prepared unilaterally by the services and were not jointly reviewed. Those estimates, according to the joint planners, were out of balance
and exceeded mobilization capabilities during the early months of war. Without a period of pre-hostilities industrial expansion, which was *not* assumed likely, available forces, "particularly air forces, would be inadequate for accomplishment of minimum initial objectives."\(^4\)

JCS 1725/1 operations were phased in four twelve month intervals. In the first phase (D-Day to D+12 months), aimed at stabilization of the Soviet offensive, primary tasks included: (1) essential defense of the continental United States, (2) evacuation of occupation forces in Europe and Korea, (3) securing essential sea lines of communication to the United Kingdom and through the Mediterranean, (4) defense of the U.K., southern Spain, Sicily, a bridgehead in south-central Turkey (the so-called Iskenderun Pocket), and the Aleppo-Mosul-Basra-Suez quadrilateral. Simultaneously, a conventional strategic air campaign would be launched from bases in Britain, the Cairo-Suez area, northwest India (Karachi), Japan, and Okinawa primarily aimed at the destruction of Soviet petroleum production.\(^4\)

The second phase (D+12 to D+24 months), aimed at the reduction of "Soviet war power and potential," involved (1) a "heavy, sustained air bombardment building up to the maximum aerial effort the allies can mount," (2) the progressive advancement of air bases to increase the effectiveness of strategic bombing, and (3) limited ground and naval operations to seize additional key areas, especially western Turkey and the Agean islands, from which subsequent overland campaigns might be conducted against vital areas of the Soviet Union. Phase III and IV operations were not detailed, but a main effort in southwestern Russia and supporting operations in central and eastern Europe were
contemplated sometime in the third year of war. Those operations, together with a continued strategic air campaign, were expected to force a "general surrender" of the enemy during the following year.\footnote{44}

The planners cannot be faulted for a lack of imagination or optimism. Realism seemed to be the only quality absent in their calculations. Prospects for a successful conventional strategic air campaign against the Soviet Union were nil. The initial air campaign proposed in JCS 1725/1 was restricted almost entirely to petroleum production and command and control targets in the Moscow, Baku, Ural, Kuzbass, Donbass, and Ploesti areas. Existing Air Force plans claimed that damage to seventy-five to eighty percent of Soviet petroleum production—but nothing else—was within early conventional bomb tonnage capabilities. Even assuming that was so, how seriously or how quickly it would effect Soviet offensive capabilities was problematic. Allied retention of the Mediterranean line of communication, essential to the initial scheme of JCS 1725/1 operations, far exceeded even the most sanguine estimates developed in support of the earlier PINCHER Concept. The assumption that part of the upper Persian Gulf area or a bridgehead in southern Turkey could be defended was little more than wishful thinking, without which the whole concept of depending on conventional strategic air power collapsed.\footnote{45}

The roughly estimated force requirements submitted unilaterally by the service planners revealed the fundamental incompatibility of service strategic thinking. With complete disregard for the reality of existing and projected peacetime budgets, not to mention the priority of objectives in the JOWP, the services estimated their D-Day/M-Day
forces-in-being at the level they separately desired for their peacetime establishments. The Army assumed thirteen combat divisions; the Navy assumed a twelve CV/CVB carrier force; and the AAF assumed a seventy group force including twenty-one B-29 groups. Projections of force build-up during the first two years of war were equally unrealistic and uncoordinated.46

Alternate Strategic Concepts and Joint Air War Planning

Discussion of the JCS 1725/1 concept by the Joint Chiefs revealed several areas of disagreement. The most evident issue concerned Navy insistence on the protection of service prerogatives in determining force requirements. Strategic disagreements concerned the realism of basing plans on the assumption that atomic weapons would not be used and the operational and force level implications of initially losing control of the Mediterranean line of communication. The immediate problem of force planning procedures was decided temporarily in favor of service prerogatives. Discussion of the remaining issues resulted in a decision to develop a series of three alternate Joint Outline War Plans—the first based on assumptions that atomic weapons would be used and the Mediterranean line of communications retained, the second that atomic weapons would not be used and the Mediterranean line of communications lost, and the third that atomic weapons would be used and the Mediterranean line of communications lost. Only the first two alternate plans were completed. Neither helped to resolve outstanding disagreements.47

The first alternate plan, JWPC 486/7, was completed in July. The plan was heavily influenced by developing Air Force thinking and placed strong reliance on initial and sustained atomic attacks against Soviet
urban-industrial areas. Based on the assumption that the degree and intensity of destruction achieved with atomic weapons would eventually—perhaps immediately—result in the collapse of Soviet resistance, JWPC 486/7 projected only three phases of operations covering a period of one to two years. 

In the initial phase (D-Day to D+3 months), aimed at blunting the Soviet offensive, primary tasks included: (1) defense of the industrial capacity of the United States, (2) evacuation of occupation forces in Europe and Korea, (3) securing essential lines of communication to the United Kingdom and through the Mediterranean, (4) defense of the U.K., southern Spain, Sicily, parts of southern Turkey (Iskenderun Pocket), and the upper Persian Gulf area. On or about D+45 days an initial air-atomic campaign would begin from bases in Britain, the Cairo-Suez area, and northwest India (Karachi).

The second phase (D+3 to about D+12 months) consisted of sustained atomic and conventional air operations aimed at the complete destruction of Soviet war-making capacity. At the same time, ground and tactical air operations would be initiated to secure additional base areas on the Anatolian plain (central Turkey) and in northern Syria and Iraq (Alleppo-Mosul line) to increase the effectiveness of strategic air attacks. Although Air Force and even some Army planners were increasingly confident of the eventual decisiveness of the atomic offensive, the joint planners admitted their inability to predict the timing of Soviet collapse. Consequently, Phase III operations, aimed at imposing and consolidating allied control over a defeated Soviet Union, were not
detailed. While large occupation forces were anticipated, no requirement for major overland operations was expected.50

Details of the initial strategic atomic campaign were elaborated in an outline air plan appended to JWPC 486/7. The plan called for an early, coordinated, and intensive attack against targets whose destruction would yield maximum, immediate military and psychological results. Atomic attacks would be carried out by a special striking force of six B-29 groups beginning between D+30 and D+45 days. The striking force was divided among forward bases in the United Kingdom (three groups), the Cairo-Suze area (one group), and the Karachi area (two groups).51

Initial atomic targets, consisting of twenty-four urban-industrial areas, were selected on the basis of "their size, population density and importance as administrative, research, transportation and communications centers," as well as their importance for weapons, petroleum, and basic industrial production. Although petroleum targets constituted the most remunerative industrial objectives, only those petroleum facilities located in urban areas were selected as atomic targets. The remainder would be destroyed by conventional bombing as part of diversionary attacks accompanying the initial atomic offensive or as part of Phase II operations. Primarily for political reasons, no targets outside the Soviet Union were selected for atomic bombardment. The target system was similar, though not identical, to the one outlined in PINCHER, but bomb requirements were considerably less than earlier estimates:52
<table>
<thead>
<tr>
<th>Complex</th>
<th>Bombs</th>
<th>Complex</th>
<th>Bombs</th>
<th>Complex</th>
<th>Bombs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moscow</td>
<td>7</td>
<td>Zaporoshye</td>
<td>1</td>
<td>Stalingrad</td>
<td>2</td>
</tr>
<tr>
<td>Leningrad</td>
<td>3</td>
<td>Omsk</td>
<td>1</td>
<td>Sverdlovsk</td>
<td>1+</td>
</tr>
<tr>
<td>Kiev</td>
<td>1</td>
<td>Chelyabinsk</td>
<td>1</td>
<td>Novosibirsk</td>
<td>1</td>
</tr>
<tr>
<td>Karkov</td>
<td>2</td>
<td>Molotov</td>
<td>1</td>
<td>Kazan</td>
<td>1</td>
</tr>
<tr>
<td>Baku</td>
<td>1</td>
<td>Ufa</td>
<td>1</td>
<td>Kuibyshev</td>
<td>1</td>
</tr>
<tr>
<td>Gorki</td>
<td>1</td>
<td>Stalinsk</td>
<td>1</td>
<td>Saratov</td>
<td>1</td>
</tr>
<tr>
<td>Dnepropetrovsk</td>
<td>1</td>
<td>Nizhni Tagil</td>
<td>1</td>
<td>Magnitogorsk</td>
<td>1+</td>
</tr>
<tr>
<td>Grozny</td>
<td>1</td>
<td>Stalino</td>
<td>1</td>
<td>Chkalov</td>
<td></td>
</tr>
</tbody>
</table>

Total Bombs Required on Target 34+

Limitation of the initial atomic target system to only twenty-four cities was the result of basic assumptions with respect to operational capabilities. The planners assumed that a stockpile of one hundred (20KT) atomic bombs would be available at the outbreak of war, and an additional one hundred produced annually thereafter. Based on AAF experience factors in World War II, the planners estimated that at least fifty percent of the "bombs off the ground" would be delivered accurately to their intended targets. Additional assumptions regarding AAF operational capabilities and bomb assembly rates limited the number of bombs airborne during the initial phase to a total of sixty-eight. Assuming at least half that number reached their targets, the combination of the twenty-four cities on the target list represented the optimum system which could be destroyed in Phase I operations. Of course, none of those assumptions bore even the remotest resemblance to existing atomic capabilities.
Target systems for the subsequent, sustained atomic-conventional air campaign to begin about D+3 months were not detailed. However, primary objectives in that phase included the reduction of approximately seventy-four petroleum targets in Russia and Eastern Europe through largely conventional bombardment, and the systematic destruction of other Soviet war-making industries through a combination of atomic and conventional bombing.\(^{54}\)

Although more elaborate than the earlier PINCHER Concept of the atomic air offensive, the July 1947 plan suffered from the same principal inadequacy. There was no assurance that destruction of the designated targets would, in fact, bring about the desired result of enemy collapse. The planners' inability to predict the timing of such a collapse was symptomatic of what proved to be a persistent problem for both Air Force and joint planners. How much of the Soviet society and economy had to be destroyed before collapse would occur?

There were several other serious flaws in the plan as well. The defensibility of forward air bases was questionable. The planners expected the Soviets to make every effort to neutralize or occupy bases in the United Kingdom and the Middle East. The vulnerability of the Mediterranean line of communication, necessary to support Middle Eastern bases and to retain vital oil resources, was extremely high. Providing sufficient forces to carry out the concept was also a problem. The planners admitted that the chances of achieving initial mobilization and deployment objectives were remote.\(^{55}\)

Dependence on an early, intensive atomic air offensive had the curious effect of complicating rather than simplifying the problem of
force requirements. Full mobilization requirements were significantly reduced as a result of the assumed shorter period of hostilities and no anticipated ground invasion. However, requirements during the critical early months of mobilization actually increased in JWPC 486/7. Most of the initial increases, especially in ground and tactical air forces, were intended to provide greater security for vital base areas.\(^{56}\)

The second alternate plan requested by the JCS was completed in August 1947. The plan, JWPC 486/8, was based on assumptions that the Mediterranean line of communication would be lost in the early months of war and the United States would not use atomic weapons. Even so, the planners continued to support a main effort in the Middle East. They argued optimistically that alternate lines of communication would suffice until operations could be mounted to regain control of the Mediterranean.\(^{57}\)

Based on re-analysis of Soviet military objectives and capabilities in Europe and the Middle East, the planners estimated that the most likely Soviet threats to the Mediterranean line of communication were operations against Italy and Sicily aimed at interdicting the Sicilian Straits or operations through Spain aimed at possession of Gibraltar. The former appeared most likely, but the latter would be most damaging. Neither operation was expected to begin before D+75 (D+150 days in the case of operations against Gibraltar). In the meanwhile, the planners believed, the allies could accomplish defensive deployments adequate to secure a viable foothold in the Middle East from which initial operations could be carried out in anticipation of the eventual reopening of the Mediterranean line of communication. Based on logistic studies,
estimates of Soviet rates of advance in Greece, Turkey and the upper Persian Gulf area were revised downward. Conveniently, estimates of allied logistic capabilities over longer, alternate lines of communica-
tion to Suez were revised upward. The alternate concept of operations outlined in JWPC 486/8 closely resembled that in JCS 1725/1, with the addition of operations aimed at reopening the Mediterranean at the earliest possible time. If the Mediterranean were closed only at the Sicilian Straits, the planners contemplated operations to regain control of the line of communication sometime around D+4 months. If, however, the Mediterranean were closed at Gibraltar, clearing operations would not begin until after D+12 months—perhaps as late as D+24 months. The planners' analysis was ad-
mittedly optimistic. Whether the allies could supply and defend even minimum base areas in the Middle East over circumlocutious lines of communication was extremely doubtful. The planners nevertheless re-
jected an alternate axis of operations through Western Europe. In their view, the advantages of the Middle Eastern axis—oil and proximity to Soviet vital areas—and the reciprocal disadvantages of a Western European axis were overwhelming.

In late 1947, even Air Force planners were unwilling to claim un-
equivocally that the strategic air offensive would yield immediate, de-
cisive results. Certainly, no one was willing to make that claim for all-conventional air operations. Thus, from a strategic point of view a main effort in the Middle East remained attractive to the planners. Leaving aside for the moment the political unreality of abandoning Western Europe, the principal problem with the Middle East strategy was
the enormous force requirements needed to carry it out under adverse circumstances. Estimated peacetime forces-in-being required to initiate the JWPC 486/8 Concept included a thirty-five division Army and a 130 group Air Force.

The BROILER Concept

Despite almost a year's work, the joint planners still could not agree on specific force estimates and deployment schedules for PINCHER. When called to testify before the Finletter Commission on Air Policy in late 1947, the Joint Chiefs were compelled to make the embarrassing admission that no jointly agreed strategic plan existed. Already under pressure from civilian defense authorities to reach agreement on strategic plans before the fiscal 1949 budget estimates were presented to Congress, the JCS directed the joint planners to prepare a Joint Outline War Plan based only on forces expected to be available as of March 1948.

Working rapidly, the joint planners completed the plan, codenamed BROILER, by early November. The plan relied heavily on the effectiveness of an early and sustained atomic air campaign aimed at precipitating a Soviet collapse within six to twelve months following the outbreak of war. Like the earlier PINCHER Concept, BROILER called for a main effort in the Middle East and initial abandonment of Western Europe. The plan was divided into three operational phases covering a period of one to two years.

In the first phase of BROILER operations (D-Day to D+6 months), aimed at "blunting" Soviet offensive capabilities, primary tasks included: (1) defense of North America, (2) evacuation of occupation
forces, (3) securing essential lines of communication, (4) destruction of Soviet naval forces and shipping, and (5) defense of the U.K., the Cairo-Suez area, and, if possible, parts of southern Turkey, the eastern Mediterranean littoral, and the lower Persian Gulf area. The strategic air campaign would be initiated as quickly as possible from bases in the United Kingdom, the Cairo-Suez area, the Karachi area, and Okinawa. Atomic targets were selected to achieve maximum military and psychological effects and included major industrial and administrative control centers. Conventional bombing objectives included, in order of priority, the petroleum industry, submarine construction facilities, and selected transportation targets.  

The second phase of BROILER operations (D+6 to D+12 months) involved accelerating the strategic air campaign with both atomic and conventional weapons and ground and naval operations to secure additional air bases, recover Middle East oil resources, and, if necessary, reopen the Mediterranean line of communication. Phase III operations, involving the establishment of allied control over a defeated enemy, were not detailed. If major overland operations were necessary, however, the planners recommended dual axes of advance through the Turkish Straits into the southern Ukraine and from Britain through western and central Europe.

Air Force planners argued with increased confidence that complete defeat of the enemy was "possible" as a result of the initial atomic air campaign. Army and Navy planners were not convinced, but they agreed that the "success or failure of [BROILER depended] upon the early effectiveness of the strategic air offensive with atomic weapons." The
forces available for initial operations were so limited that all other considerations were subordinated to the atomic offensive, including security of the Mediterranean line of communication and the lower Persian Gulf oil fields. In addition, the planners assumed that initial requirements for defense of the Cairo-Suez area would be provided by the British. 65

The planners emphasized that the BROILER Concept entailed serious risks. In the face of formidable Soviet capabilities, the planners frankly doubted that essential tasks in the initial phase could be carried out with available forces, thus jeopardizing even the air offensive. Loss of the Mediterranean line of communication, perhaps as early as D+3 months, appeared inevitable. Indeed, no forces were specifically allocated to protect the Mediterranean line of communication. The planners estimated that all of continental Europe, with the exception of Spain, would be in Soviet hands within seventy days. Strong air attacks against the United Kingdom would begin even earlier. In the Middle East, the Russians were believed capable of seizing the entire Persian Gulf area and its vital oil resources within two months. Turkey, Syria, and northern Palestine would fall within four months. A Soviet ground campaign against the Cairo-Suez area was not expected to begin for about six months, but strong Russian air forces would seriously threaten allied air bases in the area much earlier. 66

American and allied forces available to meet initial requirements were woefully inadequate. The equivalent of fourteen seriously understrength Army and Marine divisions was expected to be available as of March 1948. Seven of the fourteen divisions were deployed in the Far
East. European Constabulary forces accounted for three more. That left a strategic reserve of only four ground divisions. Naval forces were expected to be in somewhat better condition, but only six of the Navy's eleven MIDWAY (CVB) and ESSEX (CV) class carriers were scheduled for deployment in the Atlantic and Mediterranean. Less than fifty-two Air Force combat groups, including only nine effective B-29 groups (only one atomic-capable group), were expected to be available by March 1948. Serious shortages of tactical aviation, air defense, transport, and strategic reconnaissance forces were also anticipated. Of available allied forces only five and one-third British Divisions in Palestine and Egypt and defense forces in England were expected to contribute significantly to the accomplishment of initial undertakings. The British European garrison (three divisions) was largely written off with the American Constabulary force.  

The planners estimated that minimum additional forces of sixteen and a half Army divisions and forty-eight air groups, including seven B-29 and fifteen fighter groups, were necessary to eliminate the major risks accepted in the initial phase of BROILER operations. Although less extravagant than earlier estimates, those forces still represented essentially unilateral service calculations and far exceeded existing budgetary limits. Moreover, BROILER seriously over-estimated Air Force atomic delivery capability as of March 1948. No significant improvement in operational capabilities or operational plans was evident at SAC before the end of 1948. 

By late 1947 the joint planners were convinced that realistic general war plans must be predicated on the use of atomic weapons. In a
reexamination of joint planning assumptions in September, the Joint Strategic Survey Committee concluded that American armed forces could handle "only minor emergencies" using conventional weapons alone. The issue of whether strategic planning should be based on the assumption that atomic weapons would be used in war was not formally decided by the JCS until February 1948, but BROILER reflected a general consensus among the joint planners that atomic weapons were essential to American general war concepts.69

However, BROILER settled none of the strategic and functional disagreements between the services. How atomic weapons should be employed and by whom remained a profoundly divisive issue among the military planners. BROILER offered a particularly unsatisfactory basis for interservice compromise. General Spaatz and General Bradley expressed serious concern over the ability of allied forces to secure and maintain the Cairo-Suez area and the Mediterranean line of communication essential to the success of the air offensive. Admiral Louis E. Denfeld, who succeeded Nimitz as Chief of Naval Operations, was equally unhappy with the curtailment of naval missions in deference to the initial atomic air offensive. In December the JCS ordered the joint planners to reexamine the BROILER Concept.70

Thus, at the end of 1947, the armed forces were still without an agreed concept and plan for national defense in the event of war. In large part, that circumstance derived from the inability of the military planners to establish a workable consensus on strategy and the division of service forces and functions. More fundamentally, however, it was the
product of the Administration's failure to establish coherently integrated foreign, military and fiscal policies for national security.
1. See especially JPS 633/4, 18 Jul 45, JCS 1496/3, 20 Sep 45, and JCS 1518, 19 Sep 45.

2. Re: the international situation and Administrative responses see Chapter II. Memo, Leahy to Truman, 12 Mar 46.

3. Re: PINCHER see JPS 789, 2 Mar 46, Rpt, JWPC to JSP, sub: "Concept of Operations for PINCHER," CCS 381 USSR (3-2-46)S. 1. Re: intelligence estimates see JIC 250/6, 29 Nov 45, JIS 80/7, 23 Oct 45, JIS 80/9, 26 Oct 45, JIS 80/10, 25 Oct 45, JIS 80/14, 8 Nov 45. JIS 80/11, 31 Oct 45, Rpt by JIS, sub: "Air Capabilities of the USSR," CCS 092 USSR (3-27-45)S. 2. After demobilization the Soviets were expected to retain a total of 113 Rifle and Tank Divisions. Fifty of those Divisions would remain in Eastern Europe. A total of up to 90 Divisions would be available for offensive operations in Europe and the Middle East without mobilization. See JWPC 416/1, 14 Dec 45, rev 8 Jan 46.

4. JPS 789, 2 Mar 46. Re: Soviet objectives in the eastern Mediterranean and Middle East see also JCS 1641/1, 10 Mar 46, JCS 1641/2, 11 Mar 46, JCS 1641/3, 13 Mar 46, and JCS 1641/3 DECISION, 13 Mar 46.

5. JPS 789, 2 Mar 46. JWPC 416/1, 14 Dec 45, rev 8 Jan 46.

6. JPS 789, 2 Mar 46.

7. Re: mobilization assumptions see Ibid. See also JWPC 432/6, 14 Jun 46, Rpt, JWPC to JSP, sub: "Tentative Over-all Strategic Concept and Estimate of Initial Operations (PINCHER)," and JWPC 432/7, 18 Jun 46, Rpt, JWPC to JSP, sub: same, both in CCS 381 USSR (3-2-46)S. 1-2. Re: strategic targets and the air offensive see JIC 329, 3 Nov 45, Rpt by JIC, sub: "Strategic Vulnerability of the USSR to a Limited Air Attack," and JWPC 416/1, 14 Dec, rev 8 Jan 46, both in CCS 092 USSR (3-24-45)S. 2.

8. JPS 789, 2 Mar 46.

9. Ibid.

10. Ibid.

11. Ibid. No specific schedule of deployments or force requirements was drawn up for the March 1946 version of PINCHER. The JPS noted, however, that initial force requirements would be in accordance with JCS 1478/6, 21 Nov 45, which outlined JCS recommendations on the size of the postwar Army and Navy establishments. See JCS 1478/6, 21 Nov 45, Rpt, JSP to JCS, sub: "Post-War Military and Naval Strengths," CCS 370 (8-19-45)S. 2.
12. JPS 789, 2 Mar 46.


14. JPS 789/1, 13 Apr 46, Rpt, JSP to JCS, sub: "Staff Studies of Certain Military Problems Deriving from 'Concept of Operations for PINCHER,'" CCS 381 USSR (3-2-46)S. 1. See also JCS 1641/5, 11 Apr 46, and JCS 1641/5 DECISION, 20 Apr 46.

15. JPS 789/1, 13 Apr 46, JIS 80/5/M, 22 Oct 45, JIS Memo of Request, sub: "Bombing Targets in Russia," CCS 092 USSR (3-27-45)S. 2. See also JWPC 416/1, 14 Dec 45, rev 8 Jan 46.


17. Re: the original twenty target cities see JIC 329, 3 Nov 45, and JIS 80/8, 25 Oct 45. These twenty cities were believed to account for 90% of Soviet aircraft production, 85-90% of tank and automotive production, 65-70% of refined oil production, and a large percentage of basic metals, machine tool and electronics production as well as a significant number of research and development facilities. Re: the thirty city target system see JPS 789/1, 13 Apr 46.

18. Interview, author with GEN Curtis E. LeMay (USAF, Ret), 16 Feb 76, and USAF Oral History Interview, GEN Curtis E. LeMay, 9 Mar 71. The JCS did not begin to consider atomic weapons requirements until February 1947; see Chapter III. Information re: the number of SILVERPLATE (atomic modified) aircraft during 1946 and 1947 is contradictory. By the end of 1947 there appear to have been a total of between 65 and 70 SILVERPLATES manufactured, including wartime models. Of that number 27 appear to have been operational in January 1946; 17 in November 1946; 18 in October 1947. The remainder were either placed in storage or destroyed. Throughout 1946 and 1947 the only operational atomic Bombardment Group was the 509th. (Note also that SILVERPLATE codename was changed to SADDLETREE in May 1947.) See Amy C. Fenwick, History of SILVERPLATE Project (Dayton, OH: AMC Historical Office, 1952), pp. 17-20; Kipp and Greenwood, "Strategic Deterrence, 1945-1953," Chapter II, p. 32, Chapter III, p. 39, Bowen and Little, Foundation of an Atomic Air Force, 1946-1948, pp. 212, 221.


20. Interview, author with GEN Curtis E. LeMay, 16 Feb 76.
11. JPC 789/1, 13 Apr 46.

12. Ibid. See also JWPC 416/1, 14 Dec 45, rev 8 Jan 46. Information on the operational ranges of B-29 aircraft is contradictory. At this time unrefueled combat operating radii of 1500 to 1800 statute miles was about the limit. Later, unrefueled combat operating radii of 2000 to 2100 statute miles were not uncommon. See Strategic Air Command History, 1948, pp. 279-80, AFSHRC 416.01.

13. See especially JCS 1641/3, 13 Mar 46, and JCS 1641/3 DECISION, 13 Mar 46.


16. JWPC 432/7, 18 Jun 46. JCS 1641/5, 11 Apr 46, and JCS 1641/5 DECISION, 20 Apr 46.


19. "Air Plan for MAKEFAST," 1 Oct 46, AF PO 381 (10 Sep 46), 335/341. See also Memo, Vandenberg to Symington, 6 Nov 47.

31. "Air Plan for MAKEFAST," 1 Oct 46, TAB C & Appendix 4, TAB E. The conventional petroleum system is shown below:

- Baku to Leuna (Ger) to Budapest-Shell (Hung)
- Grozny to Politz (Pol) to Ploesti-Asta Romana (Rum)
- Batumi to Bohlem (Ger) to Ploesti-Concordia Vega
- Gurev to Zeitz (Ger) to Ploesti-Romana Americana
- Taupse to Oswiecim (Pol) to Ploesti-Unirea Sperantza
- Krasnodar to Szony (Hung) to Ploesti-Columbia Aquila
- Krasnovodsk to Pradubice (Czech) to Ploesti-Xenia
- Makhach Kala to Magdeburg (Ger) to Campina-Steaua Romana
- Nebit Dag to Blechhammer (Pol) to Campina-Steava Romana
- Brux (Czech) to Vienna-Lobau (Aust)

32. Ibid., TAB E.

33. Ibid. Report of the AAF Atomic Bomb Planning Committee (Harbold Committee) to CG, AAF, thru DC/AS-RD (LeMay), 1 Nov 46, AF PO 385.2 (1 Mar 46), 336/341. The Harbold Committee was appointed by LeMay in September 1946.

34. "Plan EARSHOT," 15 Mar 47, AF PO 381 (10 Sep 46), 335/341. See also Memo, Vandenberg to Symington, 6 Nov 47.


36. "Plan EARSHOT," 15 Mar 47. The conventional petroleum systems are shown below:

<table>
<thead>
<tr>
<th>Petroleum System Within Range of U.K. Bases</th>
<th>% Tot Tons on Output</th>
<th>Target</th>
<th>% Tot Tons on Output</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brux (Czech)</td>
<td>0.8</td>
<td>250</td>
<td>Magdenburg (Ger)</td>
<td>0.2</td>
</tr>
<tr>
<td>Leuna (Ger)</td>
<td>0.6</td>
<td>330</td>
<td>Zeitz (Ger)</td>
<td>0.2</td>
</tr>
<tr>
<td>Politz (Pol)</td>
<td>0.6</td>
<td>168</td>
<td>Blechhammer (Pol)</td>
<td>0.3</td>
</tr>
<tr>
<td>Bohlem (Ger)</td>
<td>0.3</td>
<td>168</td>
<td>Bratislava</td>
<td>0.3</td>
</tr>
<tr>
<td>Moscow Vladimirski</td>
<td>0.5</td>
<td>210</td>
<td>Budapest-Shell (Hung)</td>
<td>0.4</td>
</tr>
<tr>
<td>Moscow Neftagas</td>
<td>0.5</td>
<td>51</td>
<td>Almasfuzite (Hung)</td>
<td>0.3</td>
</tr>
</tbody>
</table>
### Vienna-Lobau (Aust)  
0.7  
53  
### Pardubice (Czech)  
0.4  
28

### Szony (Hung)  
0.5  
66

**TOTALS**  
6.6  
1889

### Petroleum System Within Range of Cairo-Suez Bases

<table>
<thead>
<tr>
<th>% Tot Tons on Output</th>
<th>% Tot Tons on Output</th>
<th>Target</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grozny</td>
<td>13.3</td>
<td>960</td>
<td>1.9</td>
</tr>
<tr>
<td>Saratov</td>
<td>na</td>
<td>230</td>
<td>0.6</td>
</tr>
<tr>
<td>Krasnovodsk</td>
<td>1.0</td>
<td>57</td>
<td>3.1</td>
</tr>
<tr>
<td>Gurev</td>
<td>1.5</td>
<td>660</td>
<td>1.2</td>
</tr>
<tr>
<td>Baku</td>
<td>29.7</td>
<td>1025</td>
<td>1.4</td>
</tr>
<tr>
<td>Batumi</td>
<td>6.0</td>
<td>193</td>
<td>1.1</td>
</tr>
<tr>
<td>Taupse</td>
<td>3.0</td>
<td>106</td>
<td>0.9</td>
</tr>
<tr>
<td>Krasnoday</td>
<td>2.0</td>
<td>105</td>
<td>1.4</td>
</tr>
</tbody>
</table>

**TOTALS**  
68.1  
3796

---

37. Ibid., ANNEX C & ANNEX P.


42. JCS 1725/1, 13 Feb 47. See also Memo, Vandenberg to Symington, 6 Nov 47. PINCHER estimated that mobilization would begin at least three months before the outbreak of war. However, in July 1946 the JCS agreed that a period of pre-hostilities mobilization was "highly improbable." See JCS 1630/1, 26 Apr 46, and JCS 1630/1, AMENDED DECISION, 13 Jul 46.

43. JCS 1725/1, 13 Feb 47.

44. Ibid.


46. See Force Tabs appended to JCS 1725/1, 13 Feb 47.

47. JCS 1725/2, 12 Mar 47, Memo, C/S, USA to JCS, sub: "Strategic Guidance for Industrial Mobilization Planning," JCS 1725/3, 28 Mar 47, Memo, CNO to JCS, sub: same, JCS 1725/4, 8 Apr 47, Memo, CG, AAF to JCS, sub: same, JCS 1725/4 Corrigendum, 21 Apr 47, and JCS 1725/4 DECISION, 1 May 47, all in CCS 004.04 (11-4-46)S. 3.

48. JWPC 486/7, 29 Jul 47, JWPC Study, sub: "Guidance for Mobilization Planning as Affected by the Use of Atomic Weapons," CCS 004.04 (11-4-46)S. 3, BP Pt. 1A.

49. Ibid.

50. Ibid.

51. Ibid.

52. Ibid. In addition to a population of approximately 17 million, the target system was believed to account for a heavy percentage of Soviet aircraft, automotive, munitions, and basic metals production, but only about fifty percent of oil refining capacity.

53. Ibid.

54. Ibid.

55. Ibid.

56. See Force Tabs appended to JWPC 486/7, 29 Jul 47.
57. JWPC 486/8, 18 Aug 47, Rpt, JWPC to JSP, sub: "Guidance for Mobilization Planning as Affected by Loss of the Mediterranean Line of Communications," CCS 004.04 (11-4-46)S. 3, BP Pt. 1A.

58. Ibid.

59. Ibid.

60. See Force Tabs appended to JWPC 486/8, 18 Aug 47.


62. JSPG 496/1, 8 Nov 47, Rpt by JSPG, sub: "Plan BOILER," CCS 381 USSR (3-2-46)S. 8.

63. Ibid.

64. Ibid.

65. Ibid.

66. Ibid. It was estimated that with a short period of preparation the Soviets would have up to 165 ground Divisions and 13,000 aircraft available for initial operations in Europe and the Middle East.

67. Ibid. The American strategic reserve consisted of one Marine Division, one Army Infantry Division, one Army airborne Division, and two Army Regimental Combat Teams, and a single Army armored Regiment.

68. See Force Tabs appended to JSPG 496/1, 8 Nov 47.

69. JCS 1630/6, 24 Sep 47, and JCS 1630/6 DECISION, 26 Feb 48.

70. JSPG 496/3, 18 Dec 47, Note by Secs JSPC to JSPG, sub: "Joint Outline War Plan (Planning Guidance)," CCS 381 USSR (3-2-46)S. 9.
During 1947 and early 1948, deteriorating political and economic conditions in Europe and the Mediterranean, compounded by relentless Soviet pressure, prompted the United States to embark on a series of bold foreign policy initiatives aimed at restoring stability and security to the "free nations" of the West. The Truman Doctrine, the Marshall Plan, and U.S. support for Western Union that culminated in the North Atlantic Treaty and the Mutual Defense Assistance Program in 1949 formed the basic pillars of an emerging policy of Containment. In its earliest incarnation, Containment was intended to stiffen the "free nations" resistance to communist pressure primarily by fostering general economic revival. However, the inherent threat of Soviet armed aggression, heightened by the crises of February-March and June 1948, resulted in an increased reliance on military assistance and collective security arrangements to contain Soviet expansion. Although the actual objectives of those devices were essentially political rather than military, they had far reaching implications for the scope and nature of American defense commitments.

In that context, some civilian policy-makers attached a renewed urgency to the state of American military preparedness. There was, however, no consensus within the Administration on the shape or extent of rearmament. As the immediate crises faded after mid-1948, overall
Administration emphasis on defense preparedness—reflected in budget allocations—was tempered, as in the past, by the domestic political necessity to limit military expenditures. That problem was compounded by the anticipated financial burden of foreign economic and military assistance. After March 1948, the civilian leadership in the National Military Establishment tried, but failed to establish a comprehensive national security policy appropriate to the expanded scale of the Administration's international commitments. Thus, American foreign policy initiatives proceeded in the absence of a firm statement of overall national security policy or comprehensive programs for defense rearmament.

As described by Secretary of Defense Forrestal to Senator Chan Gurney in December 1947, the international policy of the Administration was a "calculated risk." Ostensibly, American economic strength and monopoly of atomic weapons allowed the Administration to defer rearmament in order financially to pursue the political and economic stabilization of Europe and the Middle East. Such a policy was predicated on the assumption that the United States could use economic and political weapons to frustrate Soviet expansionist ambitions without provoking Moscow to war. The fact that the assumption ultimately proved valid—there was no war—did not lessen the risk. Nor was the validity of the assumption so certain at the time, as is evidenced by the war scare that took hold of the Administration and the military establishment during March 1948.

Nowhere were the risks inherent in American policy more keenly felt than within the military establishment. The JCS repeatedly cautioned
the Administration that, without rearmament, its foreign policy initiatives were potentially dangerous. The Soviet Union possessed the military power to overrun Western Europe and the Middle East at any time it might choose. Economic and military assistance programs or essentially hollow military alliances could not defeat a Soviet invasion. Nor, despite its atomic monopoly, did the United States have the operational military capability to do so alone.

The Possibility of War

To the Soviets, the Marshall Plan and the parallel development of the Western Union military alliance represented two dangers. First, they reduced the opportunities for further expansion of Soviet influence in Western Europe. Second, Moscow imagined they threatened the eventual "rollback of socialism" in Eastern Europe. In effect, the Soviets ascribed to the West the same aggressive purposes that they pursued. Convinced that the Marshall Plan was merely an imperialist conspiracy to establish the economic basis for West European rearmament, the Soviets adopted increasingly belligerent policies in late 1947 and 1948 that had the effect of hastening coalescence in the West. The collapse of the London Foreign Ministers' conference in December 1947 as a result of Soviet obstructionism prompted the western powers to quicken the pace of economic and political integration of their occupation zones in Germany. With American encouragement, Britain initiated discussions with France and the Benelux countries in January 1948 aimed at establishing a West European military alliance.¹

The exact motives behind Soviet reactions to those developments may never be known. Perhaps, sensing the futility any longer of obstructing
the Marshall Plan and Western Union, the Soviets resolved to consolidate their position in Eastern Europe and Germany by whatever methods were necessary. The communist party coup in Czechoslovakia in February, inspired and directed by Moscow, firmly established the Prague Government as a Soviet satellite. Already, the Soviets were gradually increasing pressure on the western powers in Berlin.²

The crudeness and violence of Soviet behavior in February and March 1948 surprised American policy-makers, who apparently had not fully considered the implications of their European initiatives for the state of East-West relations. When General Lucius Clay cabled General Bradley on 5 March that he had recently detected "a subtle change in Soviet attitudes" that led him to believe that war might come with "dramatic suddenness," Washington policy-makers were profoundly alarmed. Throughout 1947 and even in the midst of the Czech coup in February 1948, the American intelligence agencies had consistently concluded that the Soviet Union would not intentionally begin a war for at least another five to ten years. Even General Clay admitted that he could not support his feeling with any "data or outward evidence." Nevertheless, there was serious concern that a new and dangerous element was present in East-West relations.³

The day after Clay's message was received, the CIA briefed senior Administration and military officials. The agency's conclusions remained unchanged. There was "no compelling reason to alter the currently held view that for the next five to ten years, Russia would try to avoid war." The military intelligence agencies were less certain of that conclusion, however. Following a joint conference of intelligence
agencies, the CIA published a carefully hedged estimate on 15 March. Presented to President Truman the next day the estimate concluded:

An examination of all pertinent available information has produced no reliable evidence that the USSR intends to resort to military action within the next sixty days.

The weight of logic, as well as evidence, also leads to the conclusion that the USSR will not resort to military action within sixty days.

There is, nevertheless, the ever-present possibility that some miscalculation or incident may result in war.  

During the following weeks, the American intelligence agencies refined their estimate of Soviet intentions. A joint report issued by CIA on 2 April cautiously concluded that the USSR would "not resort to direct military action during 1948." However, the intelligence estimators emphasized that their analysis was based "essentially upon logic rather than upon evidence." Especially "in light of recent U.S. policy statements and other measures against Communist expansion," it was possible, though not likely, that the Soviets would resort to war in order to prevent a restoration of the European balance of power.

Detailed analyses by the intelligence agencies of Soviet behavior in Germany gradually reinforced the conclusion that war was unlikely. Germany, with its vast industrial potential, was the key to Soviet reactions to U.S. and Western policy initiatives in Europe. The Soviets realized they could no longer exploit the mechanism of quadripartite control of Germany to undermine the success of the Marshall Plan. Short of deliberately initiating a war, Moscow's alternative was to concentrate on development of the Soviet Zone "as the nucleus for the eventual unification of Germany from the East." That course, the CIA concluded, would be "facilitated by the expulsion of the Western Powers from
Berlin. Indeed, by early April the American intelligence agencies were already predicting such an effort in the near future. The CIA believed that Soviet adoption of this course precluded the possibility of direct military action. Why pressure the western powers out of Berlin if they intended to begin a war in any case? Judging from subsequent events many civilian policymakers were reassured by that reasoning. The military establishment, including its intelligence agencies, remained unconvinced, however, that war was impossible.  

The Articulation of Containment and the Berlin Bluff

Despite the tenseness of the February-March crisis, civilian policymakers in Washington pressed forward with their European initiatives. On 17 March President Truman appeared before Congress to urge passage of the European Recovery Program. At the same time, he heartily endorsed the Western Union military alliance consummated only a few hours before with the signing of the Brussels Treaty. "I am sure," Truman said, "that the determination of the free countries of Europe to defend themselves will be matched by an equal determination on our part to help them protect themselves."  

The $17 billion European Recovery Program presented to Congress in December 1947 contained no provision for direct military assistance. By early 1948, however, there was a clear consensus among civilian policymakers at the State Department and in the National Military Establishment that favored the expansion of military as well as economic aid to the "free nations." By focusing attention on the potential threat of Soviet armed aggression in Europe, the February-March crisis seemed to reinforce that attitude.
In contrast, the military chiefs viewed the prospect of expanded national commitments with extreme uneasiness. They agreed in principle that military assistance and collective security arrangements aimed at strengthening West European defense capabilities were ultimately in the American national interest. But, they cautioned that such commitments might seriously jeopardize our security in the short-term future by diverting scarce resources needed by our armed forces or by obliging the U.S. to strategic concepts it was incapable of carrying out. Still unconvinced that a Soviet-initiated preventive war was impossible, the military chiefs warned that such commitments might result in hastening the very aggression they were intended to deter. In the event war occurred in the short-term future, U.S. military aid to Western Europe would be of no consequence and could only curtail our own capabilities.

Following the President's 17 March address to Congress, the NSC staff, in cooperation with the State and Service Departments, attempted for the first time to produce a comprehensive statement of national policy for the containment of "Soviet-directed world communism." Soviet domination of the potential power of the strategic areas of Europe and Asia, the NSC staff concluded, would be inimical and ultimately fatal to U.S. security. "The United States should therefore take the lead in organizing a world-wide counter-offensive aimed at mobilizing and strengthening our own and anti-communist forces in the non-Soviet world." To implement that policy the NSC staff recommended general measures to strengthen our own military establishment, programs of economic and military assistance to non-communist nations, and close military cooperation with the Western Union alliance. In addition, the United States should
make "unmistakably clear to the Kremlin" our determination to resist aggression "so as to avoid the possibility of an 'accidental' war through Soviet miscalculation of how far the Western Powers might be pushed."\(^9\)

JCS comments on the NSC study were cautionary. The military chiefs fully endorsed the idea of strengthening our own military establishment, especially measures for meeting a short-term emergency. In regard to military assistance programs and military cooperation with the Western Union nations, the JCS remained unenthusiastic. The chiefs emphasized the danger of extending our military commitments beyond our capabilities. While they agreed with the principle of improving the military potential of non-communist nations, the chiefs insisted that we should undertake no obligations that would "interfere with our own needs." Finally, the JCS cautioned against "the possibility . . . that we ourselves may miscalculate how far we may go in opposition to the USSR, particularly opposition unaccompanied by appropriate readiness."\(^10\)

Despite considerable support for the conclusions of NSC 7 among civilian policy-makers in the Service Departments, the State Department opposed further consideration of the study. Apparently, State Department interest was limited to exploration of the possibility of U.S. ties to Western Union. As a result, the major elements of the study's proposed national policy—U.S. rearmament, foreign economic and military assistance, and U.S. support for Western Union—were considered separately by the NSC during the following months, rather than as inseparable parts of a single national security policy.\(^11\)

Since February, the State Department had maintained close contact with British Foreign Minister Bevin in regard to the development of
Western Union negotiations. After the conclusion of the Brussels Treaty, exploratory discussions began with the Five Power representatives regarding the possibility of U.S. participation in the alliance. As early as 11 April Truman and Marshall began efforts to enlist the support of Senators Vandenberg and Connally for such an initiative. About the same time, the State Department submitted for NSC consideration an outline "Collective Defense Agreement for the North Atlantic Area" that called for the extension of the Five Power agreement to include other Western Europe nations as well as the United States and Canada. The State Department concluded that while that was being worked out the President should declare U.S. intentions to support the Western Union nations in the event of an armed attack against them, and the United States and Britain should jointly undertake to support Greek, Turkish and Iranian security.  

The JCS reaction to those State Department proposals was essentially the same as to NSC 7. The military chiefs approved the concept of collective defense in principle, but they stated bluntly that without an appropriate increase in military readiness such a commitment might, in fact, be "dangerous to our national security." The JCS also warned that the nature of U.S. military obligations under a defense treaty should be precisely defined lest "our global strategy [be] determined by default and expediency rather than by logic and sound military considerations." The chiefs insisted that the U.S. not agree to any concept of military action until its efficacy could be determined by detailed planning. In regard to military assistance to other nations the chiefs repeated their earlier attitude that such aid should not "interfere with our own military requirements."
Administration negotiations with Senator Vandenberg were concluded on 11 May with approval of a draft Senate Resolution supporting U.S. participation in collective defense agreements. At the same time the State Department called for the initiation of formal discussions with the Brussels Pact nations to work out the details of a North Atlantic defense treaty. The State Department also recommended that the President authorize interim U.S. participation in the Five Power Military Talks scheduled for July in London. 14

The military chiefs were uneasy over the possible implications of U.S. participation in the London military talks. Pending a formal defense agreement that precisely defined our obligations, the JCS insisted that U.S. military representatives should participate as "non-members" to preclude any misunderstanding about the nature of our commitment that might jeopardize our own strategic concepts or requirements. The JCS repeated the already familiar litany that commitments without appropriate military strength were potentially "dangerous." 15

The Vanderberg Resolution (S.R. 239) was approved by the Senate on 11 July 1948. Within two weeks the Soviets clamped a blockade on all surface traffic in or out of Berlin. Despite the tenseness of the situation, Administration reaction to the blockade was almost blase in comparison to the alarm that took hold of policy-makers in early March. President Truman was adamant that the United States must remain in Berlin. With the possible exception of Army Secretary Royall, his civilian advisors agreed. The possibility of war was considered, but largely discounted. Truman was prepared to "deal with the situation as it developed" without undue concern for the consequences. 16
If the Berlin Blockade was a symbol of American resolution to stand firmly against Soviet pressure, it was also a symbol of the enormous "calculated risk" involved in American policy in Europe. The President wisely rejected the idea of raising the blockade by force in favor of continuing to supply Berlin by air. In fact, he had little choice. The United States simply did not possess the military capability to make a more forceful reaction credible should the Soviets choose to resist. To have dispatched even a single Army division to Europe would have required a partial mobilization.\(^{17}\)

The only military forces quickly available to reinforce the American presence in Europe were three groups of B-29 medium bombers. It was no coincidence that those aircraft—closely identified with America's atomic monopoly—were so promptly and ostentatiously introduced into the crisis. With Truman's approval, two squadrons of the 301st Bomb Group were dispatched to Germany on 28 June. After obtaining British agreement, two additional bomb groups—the 28th and 307th—were moved to bases in the United Kingdom in early and mid-July. The Administration did nothing to discourage widespread speculation in the Western press that those B-29s carried atomic bombs. In fact, none of the aircraft sent to Europe were even capable of carrying atomic weapons. One wag on General LeMay's United States Air Forces, Europe (USAFE) staff thought so little of their utility that he suggested that they be used to haul coal into Berlin.\(^{18}\)

At the outset of the blockade, Secretary Forrestal raised the issue of actually transferring atomic weapons to the United Kingdom, where the British and Americans had already prepared bomb loading facilities. It was quickly evident, however, that such action was virtually impossible.
In the summer of 1948, the entire atomic delivery capability of the United States still resided in a single bomb group—the 509th—that possessed as few as thirty-two aircraft and crews. In addition, no more than one or two qualified bomb assembly teams were available to put the weapons together.  

Toward Western Military Cooperation

While the American armed forces held an empty gun to Stalin's head, the Administration hastened preparations for expanded military cooperation with Western Europe. With Truman's approval, the State Department initiated formal negotiations with the Western Union governments in early July for a North Atlantic defense pact. The Americans made it clear that no firm commitment could be made without congressional action, and that must await the outcome of the fall elections. In the meantime, however, the United States would participate informally in the development of European defense planning.

The military chiefs were reluctantly swept along by the tide of events. In late July, the JCS issued instructions to its representative at the London Five Power Military Talks, Army Major General Lyman Lemnitzer. The chiefs told Lemnitzer to tactfully but firmly encourage the Brussels Pact planners to develop modest, short-term strategic concepts that envisaged no initial U.S. deployments to the European continent in the event of war beyond those garrisons already in place.

Although not yet developed in detail, general Five Power strategic concepts called for a defense "as far to the east in Germany as possible" in order to provide "sufficient time for American military power to intervene decisively." That concept was determined more by political
necessity than by sound military reasoning. It was also precisely the sort of strategic thinking that the JCS hoped to avoid, at least in the near-term. U.S. military assistance or planned deployments predicated on such a strategy were incompatible with existing military resources and would only serve to wreck American strategic plans.  

The JCS told Lemnitzer that he should make no promises of material aid. Nor was he to reveal the nature of existing U.S. emergency war plans that involved the virtual abandonment of continental Europe. Rather, he should emphasize the likelihood that longer-range planning based on the development of Western Europe's own military potential would make a successful defense progressively more realistic. General Lemnitzer's task was an unenviable one. He had to convince the Brussels Pact planners to accept in the near-term the certainty of initial military defeat and probably occupation by the Soviets in the event of war. And, he had to do that without undermining Western Europe's confidence in the American connection.  

The JCS was emphatic that General Lemnitzer make every effort to "contain" Western Union requests for military assistance. What the Administration might undertake in that regard for the sake of political expediency continued to worry military leaders, especially in the Army and Navy. In fact, the NSC staff had drawn up a statement of overall policy on foreign military assistance in mid-June. Approved by the NSC and the President in early July the statement concluded that the United States should provide military assistance in the form of supplies, equipment and technical advice to "selected" nations--primarily in Western Europe--to strengthen their capacity to resist communist political and
military aggression. In an evident but essentially meaningless bow to
the military, the NSC agreed that any program of foreign military assis-
tance "should not jeopardize the fulfillment of the minimum material re-
quirements of the United States armed forces," nor "be inconsistent with
strategic concepts approved by the Joint Chiefs of Staff."24

For Air Force Chief of Staff Vandenberg, the directions of the Ad-
ministration's national security policy seemed clear: severely limited
national rearmament combined with programs of economic and military
assistance and a collective defense alliance with Western Europe. In
July, Vandenberg attempted to put the implications of that overall policy
for short-term U.S. military plans and programs in perspective for the
JCS. Whether the military chiefs liked it or not, he reasoned, the London
Military Talks would inevitably result in a Western Union view that the
United States "must pledge real and effect [support in] screening Western
Europe from Soviet conquest and occupation," as well as demands for mili-
tary supplies and equipment. To Vandenberg it seemed unlikely that the
United States could add a substantial program of military assistance to
the burdens of the European Recovery Program and have much left over for
national rearmament. He framed the policy issues succinctly:

Is war with the Soviets so imminent that no United States
military assistance could be provided in time to improve
the Western Union military situation? If not, will the
progressive revitalization of Western Union military power
contribute more . . . to the overall security of the United
States than a concentration on unilateral increases in
United States military power? To what extent might the
United States go, on the basis of calculated risk, in
assisting potentially effective allies at the cost of
retarding its own rearmament program?25
At Vandenberg's request the Joint Strategic Survey Committee initiated a study of those issues. Completed in early August—in the bleak atmosphere of the first weeks of the Berlin Blockade—the study estimated that both the USSR and the Western democracies "can be expected to take action and counteraction on such close calculations as to the reaction of the other that war may be precipitated at any time by an unfortunate incident." In view of Soviet capabilities and the military weakness of the Western Union nations, the JSSC concluded that the United States must "be prepared to strike promptly and effectively along lines of its own choosing." Therefore, concentration on our own rearmament program would contribute more to our overall security than expenditures on the Western Union nations. The JSSC agreed that building up Western Union military power was a desirable long-term objective, but recommended that military aid to Western Europe be kept within limits that would not "deny timely completion of our own rearmament program." 26

General Vandenberg was not satisfied with the generalities of the JSSC conclusions, which, he said, boiled down to a policy of giving the Western Union nations only that assistance that was "surplus to our own requirements." Even that did not mean very much since the JCS had yet to agree on the extent of U.S. requirements for war. Recommending that the whole issue be re-examined by the JSSC, Vandenberg added the suggestion—then a virtual heresy in the JCS—that "it might well be in the greater interest of the national security for the United States to restrict its own needs purposefully in order to apply the resources thus saved to the revitalization of Western Union military power." Vandenberg's motives in this instance were self-serving. From a strategic point of view
he was convinced that any war with the Soviet Union would be quickly
decided by strategic atomic airpower. He also was confident that the
Air Force could compete successfully for scarce budget resources. 27

The Western Union Military Committee that met beginning in late
July 1948 elaborated an overall strategic concept that called for "an
immediate air offensive, a ground defense in Germany as far to the east
as possible, an air defense of the countries of the Western Union, a de­
fense of the Middle East and North Africa, the control of sea communica­
tions, and, finally, an offensive on land as early as possible." As a
general statement of strategic objectives that concept was not neces­
sarily incompatible with existing U.S. plans. But, as detailed opera­
tional planning proceeded in the following months, it became quite evi­
dent that U.S. and Western Union interpretations of the short-term de­
ployment and phasing implications of the concept were in fundamental
conflict, especially as they related to a ground defense in Europe. 28

The Western Union Military Committee was unable to establish the
exact extent of required U.S. military assistance pending the develop­
ment of detailed operational plans and force programs. However, the
U.S. representatives in London reported that European expectations of
overall military aid "may ultimately reach a magnitude comparable to the
requirements of the European Recovery Program." Such a possibility was
anhemata to Army and Navy leaders, although increasingly less so to Air
Force leaders. In early November the JCS, including General Vandenberg,
told Forrestal that, for the sake of national security, foreign military
assistance must be subordinated to the needs of our own armed forces.
Vandenberg was apparently unwilling to raise his reservations in that
regard outside the JCS.Within that body he was less reticent. 29
In mid-November, the JSSC elaborated its earlier conclusions in regard to the issues raised by General Vandenberg in July and September 1948. The JSSC addressed itself primarily to Vandenberg's criticism that there existed no firm determination of U.S. needs on which to base analysis of foreign assistance requirements. The committee argued that the Joint Mobilization Plan for Fiscal 1950, COGWHEEL (JCS 1725/22), completed in August 1948, but not yet approved by the JCS, provided a suitable basis for that purpose. Vandenberg disagreed. The peacetime requirements outlined in COGWHEEL for our armed forces, he pointed out, already exceeded likely budget resources. In other words, foreign assistance contingent on fulfillment of peacetime COGWHEEL requirements amounted to no foreign assistance at all. Even if the administration should agree to finance both COGWHEEL and a substantial program of military aid—which Vandenberg realized would not happen—it would "risk the economic security of the U.S." 30

Gratuitously, Vandenberg added his own opinion that minimum U.S. requirements consisted of those forces needed to carry out an atomic offensive to buy time for a "mobilization against a long war" together with essential air defense and naval forces to protect the United States and vital sea lines of communication. That conclusion, which went to the very heart of the continuing interservice debate over strategic plans and programs, was not calculated to win the approval of the other service chiefs. Instead, in January 1949 the JCS agreed not to agree on basic principles and to confront foreign military aid requests on a case-by-case basis. 31
The questions that General Vandenberg raised in the JCS, although narrowly directed at the implications of foreign assistance, touched basic issues of national security policy. What was the nature of the political and military threat confronting the United States. What were our national security objectives? And, what measures were best calculated to fulfill those objectives and provide security against likely threats? That there was no comprehensive statement of national policy that even addressed those issues increasingly concerned both civilian policy-makers and military leaders in the defense establishment.

Prompted by the immediate problem of getting agreement on Fiscal 1950 defense budget estimates, Secretary Forrestal told the President and the National Security Council in July 1948 that "decisions must be reached as to the respective roles which military strength and other activities directed toward our national security--foreign aid, for example--should each play in an over-all security program." And, those decisions should be predicated on clearly defined objectives and careful analysis of existing and potential threats. Forrestal asked that the NSC produce, for the President's approval, a "comprehensive statement of national policy" addressing those issues.32

In response to Forrestal's request the NSC agreed in early August that the State Department should prepare a statement of national security objectives together with an estimate of the "nature and timing" of likely threats as a basis for national policy decisions on specific security measures and programs. Although a significant first step toward defining
overall national security policy, the Council's action had little immediate impact. Aimed primarily at determining short-term policy guidance for Fiscal 1950 defense planning, the potential importance of its initiative was diminished by continued disagreement among both civilian and military authorities over basic principles.33

From the outset, elements within the State Department, particularly the Policy Planning Staff, were not enthusiastic about explicitly defining national security objectives and means. In regard to Forrestal's request, Kennan argued that U.S. policies must be viewed as a means of influencing an "extremely fluid" international situation and, therefore, should be determined "from day to day" in light of rapidly shifting circumstances. From his perspective that was not an illogical conclusion, but Kennan failed to appreciate the impossibility of adjusting military strategy and programs on a "day to day" basis.34

In fact, the Policy Planning Staff was already working on both a statement of national objectives toward the USSR and an estimate of the Soviet threat to American security. The first of those statements, a lengthy document written by Kennan and submitted to the NSC in mid-August, concluded that general U.S. objectives toward Russia in either peace or war should be to reduce Soviet power and influence to the point where it no longer constituted a threat to international peace and stability and to alter Soviet concepts of international relations that denied the possibility of "peaceful coexistence" between the communist and non-communist worlds. To accomplish those aims in peacetime, Kennan insisted that we must not "place the fundamental emphasis of our policy on preparation for an armed conflict, to the exclusion of the development
of possibilities for achieving our objectives without war." He did not suggest what an appropriate balance would be. If war did occur, U.S. objectives should be confined to eliminating Soviet military control over areas outside the USSR and to assuring "that no communist regime was left in control of enough of the . . . military-industrial potential of the Soviet Union to enable it to wage war . . ." It should not be our aim in war, Kennan insisted, to seek unconditional surrender or by "extravagant military effort . . . bring all of Russia under our control." Apparently, Kennan was content to leave the means of achieving war aims— without either occupying or atomizing the Soviet Union—to the imagination of the military strategists. 

Despite the recent international crises, the Policy Planning Staff's estimate of Soviet threats to U.S. security was reassuring. Basing their conclusions on CIA estimates, the policy planners perceived only the slightest possibility that the Soviets would deliberately initiate a war in the near future. They expected the Kremlin leaders would continue to rely on political pressure and indirect military intimidation to achieve their objectives. Unlike the military intelligence analysts, however, the policy planners concluded that the Soviets would be equally unwilling to initiate a war once they procured atomic weapons. The military intelligence agencies had not specifically analyzed the effect of that eventuality on Soviet intentions, but they consistently warned against the increased potential danger that would exist once the Russians possessed a strategic atomic capability.

The policy planners argued that American armed forces must serve three basic functions in the future: to deter the Soviets from initiating
a war, to act as "a source of encouragement to nations endeavoring to resist Soviet political aggression," and, if deterrence failed, to wage war successfully. Therefore, given the nature of the Soviet threat, American defense posture should be based on an "adequate" level of military readiness that could be maintained permanently, rather than a maximum level of readiness aimed at a time of peak danger that could not be maintained thereafter. The Policy Planning Staff did not elaborate on those basic principles. Although theoretically sound, they offered little practical guidance to a defense establishment severely divided over what constituted "adequate" military readiness.37

During September and October 1948, the NSC staff worked out a draft statement of national security policy with respect to the Soviet Union, NSC 20/3, that synthesized the views of the State Department policy planners and the civilian policy-makers in the defense establishment. Mr. Kennan's statement of basic objectives was incorporated virtually intact. However, the NSC staff was more cautious in its estimate of both existing and potential threats. The possibility that the Soviets might deliberately initiate a war could not be ruled out. There was a real and "continuing danger" that war would occur as a result of Soviet miscalculation of U.S. determination to resist political aggression, or, as the JCS had always cautioned, through our own miscalculation of Soviet reactions to "measures which we might take."38

In regard to the means of attaining U.S. security objectives, the NSC staff incorporated the major elements of the State Department view in their statement of national security policy: the United States should make every effort to strengthen the pro-American orientation of the
non-communist nations, and support with economic and military assistance those nations "willing and able" to contribute to our own security. In addition, U.S. armed forces should be developed to a level of readiness that could be maintained "as long as necessary" to act as a deterrent to Soviet aggression and as an encouragement to our potential free-world allies. 39

The State Department policy planners did not deal with the issue of what constituted adequate military preparedness. They said only that the United States could not sustain peak military readiness indefinitely. The NSC staff agreed. They cautioned that "due care must be taken to avoid permanently impairing our economy." Nevertheless, the NSC staff make a subtle change in the language defining the functions of armed forces. Influenced by civilian policy-makers in the defense establishment, they stated that the level of military readiness should provide an "adequate basis for immediate military commitments and for rapid mobilization should war prove unavoidable." That language did not solve the practical problem of defining "adequate" military forces, but it implied that decisions regarding force levels were technical as well as political. In other words, political considerations must not entirely exclude military considerations. 40

That little comforted the military chiefs who perceived in NSC 20/3 a policy of expanding international commitments with only the vaguest definition of the military power required to support them. As Soviet capabilities for global warfare improved, the JCS told Secretary Forrestal and the NSC, potential military power would become "less and less important as a war deterrent and improvement of our state of
readiness will become more and more important." The JCS believed that to deter war we must be prepared to fight one. The military chiefs were particularly worried about the growing disparity between American international commitments and U.S. military capabilities. Our commitments, the JCS warned Forrestal, "are very greatly in excess of our present ability to fulfill them either promptly or effectively." If an appropriate increase in military capability was economically infeasible, the U.S. should take "very careful account" of the danger inherent in unsupportable commitments. 41

The draft statement of national security policy was approved by the National Security Council and the President in late November 1948 and referred back to the NSC staff, as NSC 20/4, for preparation of a detailed report outlining specific measures to be undertaken by the United States to achieve basic security objectives. In its preliminary work on that task the NSC staff sought specific advice from the JCS on the level of military preparedness required. 42

The JCS replied that at minimum U.S. military forces "in being or capable of prompt activation" must be able to carry out certain basic tasks. Those included: (1) insuring the integrity of the Western Hemisphere, (2) securing and defending necessary bases, land and sea areas, and lines of communication, (3) the early initiation of a strategic air offensive against vital elements of the Soviet war-making capacity, and (4) initiating the build up of offensive power for whatever later operations might be required to achieve "national war objectives." Those basic tasks were essentially those outlined in then current strategic concepts. Despite some internal dissension, the JCS
chose the politically cautious course of stating military requirements that were compatible with existing Administration budget restrictions. General Bradley felt the JCS statement should be more ambitious, but the other chiefs, who were reluctant to confront the Administration with what were essentially budgetary issues in that particular context, dissuaded him.  

The NSC staff report on measures to achieve U.S. security objectives, completed in late March 1949, incorporated JCS recommendations verbatim. In addition, the report called for implementation of the North Atlantic Pact (it was signed a few days later), a balanced program of foreign economic and military assistance, and other political and economic activities aimed at increasing the stability of non-communist nations and undermining or preventing communist control of areas outside the Soviet Union. Above all, the NSC staff concluded, the United States must preserve its own economic vitality and carefully balance military and foreign aid requirements against available resources.

There was nothing concrete in either NSC 20/4 or the discussions that followed its approval to encourage the JCS to make an issue of the level of military readiness recommended in the NSC staff report in March. Strong opposition to the latter document by the State Department probably added to the chiefs' reluctance. While the report was in preparation, the State Department obtained an agreement from the Service Departments that it should be adopted as "general guidance" rather than a firm Presidential directive. After the report was completed, the State Department took the position that it should not be adopted at all. "I think it is dangerous to give . . . approval to it," Kennan told the
Under Secretary of State, James Webb. Kennan believed that it was impossible to "program" something as complex and subject to changing circumstances as was foreign policy. Moreover, he thought the NSC report implied that war with the Soviet Union was inevitable and that it placed too much emphasis on military preparations. That conclusion might have puzzled the Joint Chiefs who no longer attached any practical importance to the document. 45

In late May, Webb recommended that the NSC report be cancelled. He argued that an attempt to outline specific measures for the implementation of policy was not a proper function of the NSC. The province of the council and its staff was "integration of policies relating to national security." That, Webb said, had been accomplished by NSC 20/4. Therefore, no further action was required. The new Secretary of Defense, Louis Johnson, agreed that the determination of specific measures for implementing policy was not a proper function of the NSC. He argued, however, that the intent of the NSC report was to establish policy guidance. Instead of cancelling the study, Johnson suggested the simple expedient of amending its title to avoid confusion about its real aims. Given his later opposition to the study that became NSC 68, it is ironic that Johnson defended the NSC's efforts in this case. It is ironic, but not mysterious. There was nothing in the NSC staff report that conflicted with Johnson's established commitment to limited defense spending. If anything, the report supported his position. That, of course, is why the JCS no longer attached any importance to it. 46

The NSC staff report was redrafted during July and August, but the State Department still refused to accept it. Kennan repeatedly attacked
the assumption "that it is possible to describe in a few pages a program designed to achieve U.S. objectives with respect to the USSR . . ." Inevitably, the result would be so vague and oversimplified as to have no practical value. At worst it might be dangerous. "To my mind," Kennan told Dean Rusk, "it is wrong in principle for the NSC to produce papers of this sort." That amounted to the coup d'grace for an effort that had already expired from lack of interest. 47

The NATO Treaty and MDAP

While the NSC worked unsuccessfully to rationally integrate the elements of national security policy, the State Department advanced its plans for collective defense and military assistance in Europe. Having reached agreement on basic principles, American, Canadian, and Brussels Pact negotiators worked out a draft treaty for the North Atlantic area just before Christmas 1948. The heart of the document was the provision in Article 5 that an armed attack against one of the parties to the agreement would be considered an attack against all. In the stilted language of the treaty, each party was obligated to "assist the Party or Parties so attacked by taking forthwith such military or other action, individually or in concert with the other Parties, as may be necessary to restore and assure the security of the North Atlantic area." Other important elements of the draft agreement included provisions for mutual aid to strengthen the collective capacity to resist aggression and the establishment of a Defense Committee under the Treaty Council to make recommendations regarding military strategy and mutual aid. 48
The treaty negotiators did not agree on the geographical scope of the treaty. The French insisted that it should extend to North Africa and the western Mediterranean. The Americans and Canadians preferred that the treaty be limited to the national territory of the signatories in Europe and North America and to the sea and air space of the North Atlantic. The negotiators also failed to reach agreement on whether Italy should be included among the nations invited to participate or whether the pact should include assurances to such other nations as Greece, Turkey and Iran.

The military chiefs had a number of reservations about the draft treaty. They agreed that the idea of collective defense was "an essential feature of United States policy," but they reminded the policymakers again of "the need for military strength appropriate to the world situation and to the commitments implicit in the pact." The NCS recommended that the final treaty not embody specific principles of strategy, military organization or the respective military contributions of the signatories. The JCS applauded the language defining obligations in the event of aggression—"such military or other action"—as appropriate and necessary to insure our "freedom of planning," but they wanted the planning role of the proposed Defense Committee more clearly circumscribed.

The JCS was particularly concerned that the geographical scope of the treaty be more precisely defined. They opposed inclusion of North Africa or the western Mediterranean because of the possibility of colonial involvements. Nevertheless, the JCS supported the inclusion of Italy as a pact member because of that country's strategic importance in the Mediterranean.
Following agreement on the scope and membership of the pact organization, the North Atlantic Treaty was signed on 4 April 1949 in Washington by the representatives of twelve nations. Included, in addition to the original negotiating parties, were Norway, Denmark, Portugal, Iceland, and Italy. Greece and Turkey were initially excluded, but received assurances for their security. The Administration had already enlisted the support of Senators Vandenberg and Connally for the provisions embodied in the final treaty. Following Senate hearings during the summer of 1949, the North Atlantic Treaty was finally ratified by President Truman with the advice and consent of the Senate on 25 August. 52

Within hours of ratifying the NATO treaty, the Administration submitted to Congress a $1.45 billion military aid authorization request to implement the Mutual Defense Assistance Program previously worked out in the State Department. Despite strong resistance to the legislation, the Administration was able to obtain Senate approval on 22 September. The revelation the next day that the Soviet Union had exploded an atomic bomb hastened House approval a few days later. 53

By the summer of 1949 the Administration had established the final pillars of its policy to contain Soviet expansion in Europe. The political commitment of the United States to the defense of Europe marked a dramatic shift in American foreign policy. No longer did the nation shun entangling alliances. There was, however, no parallel transformation in American military policy. Confident in the deterrent power of the American nuclear monopoly, the Administration severely limited programs for defense rearmament in order to finance its political and economic initiatives in Europe and elsewhere in the world. But if
deterrence failed, the ability of the United States to exploit its nuclear advantage remained in doubt. Indeed, the Administration had no clearly defined strategic policy for waging nuclear warfare. Without political guidance, the military planners were left virtually on their own to resolve not only strategy but policy as well. Before September 1949, the Administration found little incentive to remedy that situation, or to redress the balance between national commitments and military capability. Only after the discovery that the Soviet Union also possessed nuclear weapons was the Administration prompted to reassess the "calculated risk" inherent in its foreign and military policies.
CHAPTER V NOTES

1. Probably the best account of Soviet attitudes and policies during this period is Adam Ulam, Expansion and Coexistence, pp. 445-50. See also Feis, From Trust to Terror, pp. 275-86.


5. ORE 22-48, 2 Apr 48, sub: "Possibility of Direct Soviet Military Action During 1948," in special CIA documents file held by Modern Military Branch, NARS.

6. CIA 4-48, 8 Apr 48, sub: "Review of the World Situation As It Relates to the Security of the United States," and ORE 29-48, 28 Apr 48 (estimate as of 2 Apr 48), sub: "Possible Program of Future Soviet Moves in Germany," both in special CIA documents file held by Modern Military Branch, NARS.

7. For the text of Truman's address see The New York Times, 18 Mar 48. See also Truman, Years of Trial and Hope, p. 242.


12. Feis, From Trust to Terror, pp. 305-06. NSC 9, 13 Apr 48, sub: "The Position of the United States With Respect to Support for Western Union and Other Related Free Countries," in Army PO 092 TS (12 Apr 48), Case 140; NSC 9/1, 23 Apr 48, sub: same, in Army PO 092 TS (23 Apr 48).

13. JCS 1868/1, 17 Apr 48, Rpt, JSSC to JCS, sub: "The Position of the United States With Respect to Support for Western Union and Other Related Free Countries," and JCS 1868/1 DECISION, 22 Apr 48; JCS 1868/3, 1 May 48, Note by Secs to JCS, sub: same, all in CCS 092 WESTERN EUROPE (3-12-48)S. 1-2.


15. JCS 1868/6, 17 May 48, Rpt, JSSC to JCS, sub: "The Position of the United States With Respect to Support for Western Union and Other Related Free Countries," w/ JCS 1868/6 DECISION, 19 May 48; JCS 1868/4, 1 May 48, Memo, CNO to JCS, sub: same, all in CCS 092 WESTERN EUROPE (3-12-48)S. 2.


18. The Forrestal Diaries, pp. 454-55. Strategic Air Command History, 1948, pp. 146-48, AFSHRC 416.01, Vol I, 1948. The third squadron of the 301st Bomb Group was already in Germany. In fact, the whole Group had been in Germany in early April on a routine training rotation. Ltr, MG Johnson, CG, 15th AF to MG McMullen, DCG, SAC, 13 Jul 48, AFSHRC 416.01, Vol. IV, 1948, Exhibit #2. The three bomb groups sent to Europe during the crisis were part of the 15th Air Force. At that time that organization had no atomic delivery mission.


22. Ibid.

23. Ibid.


27. JCS 1868/18, 3 Sep 48, Memo, C/S, USAF to JCS, sub: "Military Collaboration Between the United States and the Western Union Nations," JCS 1868/22 DECISION, 1 Oct 48; and Note by the Secretaries to the Holders of JCS 1868/18, 1 Oct 48, all in CCS 092 WESTERN EUROPE (3-12-48)S. 6.


29. Ibid. Memo, JCS to SoD, 1 Nov 48, enclosure to JCS 1925/1, n.d. (c late Oct 48). JCS comments were in response to SANACC 360/11, 18 Aug 48 that established priorities for foreign military assistance. Both documents are reprinted in FR: 1949/I, pp. 258-63.


31. JCS 1868/29 DECISION, 11 Jan 49, CCS 092 WESTERN EUROPE (3-12-48)S. 10.

32. Memo, Forrestal to Executive Secretary, NSC, 10 Jul 48, and Ltr, Forrestal to Truman, 10 Jul 48, attch to NSC 20, 12 Jul 48, attch to NSC 20, 12 Jul 48, sub: "Appraisal of the Degree and Character of Military Preparedness Required by the World Situation," FR: 1948/I/2, p. 589.


37. PPS-33, 23 Jun 48.


39. Ibid.

40. Ibid.


43. JCS 1903/7, 4 Feb 49, Rpt, JSSC to JCS, sub: "Measures Required to Achieve United States Objectives With Respect to the USSR," w/ JCS 1903/7 DECISION, 14 Mar 49; JCS 1903/8, 28 Feb 49, Memo, C/S, USA to JCS, sub: same; and JCS 1903/9, 7 Mar 49, Memo, C/S, USAF to JCS, sub: same, all in CCS 381 (5-13-45)S. 4.

45. Memo, Executive Secretary, NSC to SoD, 19 Jan 49, attch to JCS 1903/6, 2 Feb 49. Memo, Kennan to US/S, 14 Apr 49, and "Record of the Under Secretary's Meeting, Department of State," 15 Apr 49, both in FR: 1949/I, pp. 282, 283-84.


47. Memo, Kennan to Rusk, 7 Sep 49, FR: 1949/I, pp. 381-84.


49. Ibid.


51. Ibid.

52. Acheson, Present at the Creation, pp. 276-84. Feis, From Trust to Terror, pp. 379-80.

By the end of 1947 nuclear weapons began to assume a role of central importance in American war planning. Despite the conscious reliance of the Administration on the deterrent power of the American nuclear monopoly, the increasingly important role of those weapons in war planning resulted from military necessity and the technical possibility of expanding weapons production rather than political design. Basic policy issues remained unsettled. Would the United States actually use atomic weapons in the event of war? If so, under what circumstances, in what manner, and against what types of targets would they be used? How should the responsibilities for nuclear preparedness be divided? Who should have control and custody of the weapons stockpile? More importantly, what number and types of atomic weapons should be produced, and how would weapon requirements be decided? The international crises of 1948 focused considerable attention on those questions, but a clearly defined consensus on nuclear weapons policy remained elusive.

The issue of atomic weapons custody was the most severely divisive. Senior military officers, backed by their civilian superiors in the military establishment, argued that readiness for atomic warfare required that the stockpile of bombs be under the control of the armed forces. Opponents of military custody—centered primarily in the Atomic Energy
Commission—insisted that transferring control of atomic weapons was not only technically infeasible, but would undermine Presidential prerogatives and constitute a dangerous challenge to civilian control of atomic energy. Thus, what should have been a simple operational question was turned into a debate over civilian versus military control that seriously complicated political decisions on other more important policy issues and hampered military planning.

The impact of the custody debate was most evident in the approach to defining national policy for the use of atomic weapons in war. Many civilian policy-makers in the military establishment were reluctant to raise the question of weapons use, with its far more sensitive implications for civilian versus military control, until the custody issue was settled. Initially, senior military officers, especially in the Air Force, were anxious to have a well-defined policy on weapons use to guide strategic planning. Gradually, however, they came to believe that it would be better to have no policy at all than to risk an emotionally charged debate over the question, resulting in limitations or restrictions that might dangerously impede realistic strategic planning. For different reasons, civilian policy-makers in the defense establishment and State Department adopted much the same view. Consequently, the question of weapons use was ultimately decided by not deciding. Almost no one seriously doubted that atomic weapons would be used in a major war. But, by leaving the military planners free to prepare for the use of those weapons much as they saw fit, the policy issues were essentially foreclosed.
Weapons production was as much a scientific and technical problem as it was political and military. Ultimate possibilities for the size and composition of the weapons stockpile were not clarified until the end of 1948 when the results of the SANDSTONE tests were digested and analyzed. Nevertheless, political fall-out from the weapons custody issue resulted in an equally acrimonious debate over atomic weapons production policy. Encouraged by the results of the SANDSTONE tests, military planners and their civilian superiors in the military establishment argued that strategic requirements dictated significantly increased weapons production. With some justification, their opponents, particularly in the Atomic Energy Commission, challenged the soundness of military requirements. With far less justification, opponents also charged that demands for increased weapons production were somehow intended to undermine civilian control of atomic energy programs. The actual pace of weapons production increased significantly after January 1949. But, fundamental policies regarding the overall size and nature of the stockpile, and, therefore, its military capabilities, were not finally decided until 1950. By that time, as a result of the Soviet atomic test in August 1949, the issues had expanded to include the debate over the H-bomb.

The Weapons Custody Issue Rejoined

At the end of 1947, the Military Liaison Committee asked the AEC to agree to transfer the atomic weapons stockpile to Armed Forces control. To avoid a bitter fight over the issue at that time, AEC Chairman Lilienthal invited the MLC to submit written arguments in support of its case. Informally, however, Lilienthal let General Brereton, the MLC
Chairman, know that the Commission was strongly opposed to transfer, and the matter would have to be decided by the President. The Liaison Committee submitted its formal arguments in favor of military custody in late December. The weapons stockpile, the Committee insisted, must be "available to the Armed Forces for instant use." Divided responsibility would create confusion and delay in an emergency, especially after the geographical dispersal of the stockpile was accomplished. Furthermore, the Liaison Committee complained that deficiencies in the surveillance and maintenance of the stockpile by AEC technical personnel, revealed during a recent SAC-AFSWP exercise raised serious questions of weapons dependability.\footnote{1}

Anticipating an imminent confrontation over weapons custody, the AEC staff prepared a reply to the MLC in January 1948. The staff argued that weapons transfer was infeasible because the AFSWP did not yet possess the personnel and technical expertise to properly maintain the stockpile. The General Advisory Committee concurred. In February, the GAC recommended that the Commission retain custody, at least, until the technical capabilities of the AFSWP improved.\footnote{2}

Actually, the technical arguments against weapons transfer were less important to the AEC Commissioners than broader political considerations. Lilienthal, in particular, seemed to equate civilian control of atomic energy programs with continued AEC custody of the stockpile. Neither technical nor political arguments were likely to dissuade the Liaison Committee. However, the MLC was in the midst of a major reorganization, and, therefore, at a bureaucratic disadvantage. Exploiting that situation, Lilienthal cannily delayed a formal reply in the hope of avoiding the issue altogether.\footnote{3}
Secretary Forrestal was alarmed by the undisciplined interservice rivalries and bitter personality conflicts which increasingly characterized the operations of the Military Liaison Committee and obstructed civilian-military cooperation in atomic energy programs during late 1947 and early 1948. To resolve those problems, Forrestal reorganized the MLC to bring it more effectively under his control. He appointed a civilian, Remington Arms Corporation Vice-president Donald F. Carpenter, to replace General Brereton as Committee Chairman, and amended the group's charter to make it an "agency of the Secretary of Defense."

General Groves, whose acerbic personality accounted for much of the ill-feeling between the Liaison Committee and the AEC, was induced to retire. Groves' behavior as Chief of the Armed Forces Special Weapons Project and a member of the Liaison Committee had so disrupted civilian-military relations that President Truman personally scrutinized the appointment of his successor, Colonel Kenneth D. Nichols. Truman approved the appointment only after being convinced that Nichols could work amicably with the civilian AEC. 4

Despite significant improvement in relations between the AEC and the military establishment following the reorganization of the Liaison Committee, the custody issue would not go away. Indeed, the mounting international crisis in Europe during the spring of 1948 added a dramatic urgency to military appeals for weapons transfer. Shortly after the Key West Conference, where functional responsibilities for atomic warfare were discussed, the three service Secretaries and the JCS formally asked Forrestal to take the custody issue to the President. Forrestal first discussed the matter informally with AEC Commissioner Louis Strauss—an
old friend and former assistant—but Strauss offered no encouragement. At an AEC-MLC meeting on 1 April, Nichols (now a Major General) told the Commission that readiness of the stockpile and workable procedures for its immediate transfer to the military were imperative, since the deteriorating situation over Berlin might easily lead to war. That turned out to be an exaggeration, but, during the first two weeks of April, AEC and AFSWP personnel at the Sandia-Kirtland complex worked diligently to refine existing procedures for weapons transfer in the event an emergency should occur.\(^5\)

Despite heavy pressure, Lilienthal and his fellow commissioners continued to stall a resolution of the custody issue. In an effort to obtain a decision, MLC Chairman Carpenter suggested that the AEC Commissioners and the Liaison Committee travel to Sandia where the problems of weapons transfer could be jointly reviewed and a satisfactory compromise worked out. Reluctantly, the AEC agreed. But, when the two groups convened at Sandia on 27 May, the conspicuous absence of Chairman Lilienthal left little hope for a quick or amicable end to the debate. During the four-day conference, AEC technical experts argued that transfer of weapons custody was impossible. Bomb design changes as a result of the recent SANDSTONE tests rendered the existing weapons stockpile obsolete. Modification or refabrication of those weapons could only be accomplished at the Los Alamos Laboratory. Furthermore, the AEC technical experts insisted that important developmental functions involved in weapons surveillance could not be carried out by military technicians.\(^6\)

General Nichols expressed the case in favor of military custody. Readiness of the stockpile, he insisted, required that it be in the hands...
of those who would use it in battle. Regarding the AEC's technical objections to military custody, General Nichols pointed out that refabrication of the existing stockpile would take relatively little time. Thereafter, AFSWP technicians were prepared to take over routine surveillance and maintenance of the weapons. If the AEC wanted to continue developmental surveillance by its own scientific teams, that could be done without interfering with military custody. New weapons storage sites at Camp Hood, Texas, and Camp Campbell, Kentucky, were nearing completion. Once those remote sites were operational, continued AEC custody would create even greater problems than in the past.

Following the May conference at Sandia, Carpenter mistakenly believed that a compromise giving stockpile custody to the military was possible. The purely technical requirements had been, or soon would be, met. Even the General Advisory Committee agreed that, at least, part of the weapons stockpile could be transferred to military custody in the near future. The AEC Commissioners thought differently, however. In their minds, policy and political considerations were paramount. In any case, they were still not persuaded that the technical objections had been removed. Forrestal and the service secretaries were convinced that the commissioners, especially Lilienthal, were "engaging in dilatory tactics." At a meeting of the War Council on 17 June, they decided to apply whatever pressure was necessary to resolve the issue.

At a meeting with the AEC on 18 June, the Liaison Committee formally requested the commissioners to join Forrestal in recommending to the President that weapons custody be turned over to the military as soon as possible. The urgency of the committee's request reflected the
recent, foreboding renewal of Soviet pressure on Berlin. Nevertheless, the commissioners firmly refused to agree. Their objections, both political and technical, were by then familiar to Carpenter. Very clearly, they were not prepared to bargain. Further discussions between Forrestal and Lilienthal during late June produced nothing new. Each agreed that the issue was one for the President to decide.  

The showdown came the following month. On 21 July, Lilienthal, his fellow commissioners, Forrestal, Army Secretary Kenneth Royall, Air Force Secretary Stuart Symington, and Carpenter met with President Truman at the White House. Carpenter stated the military's case. Continued AEC custody risked "confusion and failure to act with the necessary speed and precision" in an emergency. If the military was to have "complete confidence" in the stockpile they "must have complete familiarity with it." Military custody would also facilitate the storage of weapons "in the most favorable strategic locations, thereby affording greatest flexibility." The AFSWP, Carpenter said, would be technically capable of assuming responsibility for the stockpile in about four months, but the President should order preparations for the transfer to military custody immediately.  

In presenting the Commission's case, Lilienthal emphasized the issues of civilian control and the legal prerogatives of the President in regard to atomic energy activities. The bomb was not simply another weapon, but one which carried the widest international and diplomatic implications. Lilienthal appealed masterfully to Truman's vanity. Trying to enlighten the President on these serious policy questions "was like trying to teach grandmother how to spin." In addition,
Lilienthal argued that technical objections to military custody still remained. Carpenter's claims notwithstanding, efficient surveillance and maintenance of the stockpile required continued AEC custody. Lilienthal left the White House confident of victory. The military's presentation had gone badly, and Truman did not conceal his annoyance.\textsuperscript{11}

The President revealed his decision to Forrestal at a Cabinet meeting two days later. The stockpile would remain in AEC custody. In his diary, Forrestal implied that the President's decision was largely political, and might be reviewed after the fall elections. In fact, the motive, if not the finality, of Truman's decision was clearly stated in the public announcement released over Forrestal's vehement objections on 24 July: "As President of the United States, I regard the continued control of the atomic energy program, including research, development and custody of atomic weapons, as the proper functions of the civilian authorities."\textsuperscript{12}

Forrestal was angered and embarrassed by the public announcement of his defeat over the custody issue, but he accepted the decision with quiet resignation. At the end of July he directed the Joint Chiefs of Staff and the Military Liaison Committee to review and improve existing procedures for the transfer of atomic weapons in the event of an emergency. The implication was that the military would have to learn to live with continued AEC custody of the weapons stockpile.\textsuperscript{13}

\textbf{NSC 30 and Policy on the Use of Nuclear Weapons in War}

By early 1948, it was evident that realistic plans for a major war with the Soviet Union must be heavily predicated on the early employment of atomic weapons. But, in the absence of specific political guidance,
the issue of whether planning should proceed on the assumption that authority would be granted to use atomic weapons remained unsettled. In February, the JCS seemed to agree that it should. That agreement was short-lived, however. Admiral Leahy and the new Chief of Naval Operations, Admiral Denfeld, continued to argue for alternative planning based on the assumption that atomic bombs would not be used. Their motives were largely institutional. Denfeld, especially, feared that too heavy reliance on atomic weapons would result in the curtailment of naval forces and functions.

In early May, Truman apparently directed the JCS to develop both nuclear and non-nuclear war plans, but offered no firm guidance on the circumstances under which one or the other might be implemented. Continued vacillation by the Joint Chiefs was embarrassingly evident. Following Truman's directive, they amended newly developed assumptions for the guidance of strategic planning to read that "atomic weapons may be used by the United States" in a future general war. Barely three weeks later, the Chiefs once again reversed themselves, agreeing that atomic weapons would, rather than might, be used.14

The need for political guidance was acute, but civilian policy-makers avoided the issue. In April, the National Security Council postponed consideration of the matter indefinitely. The policy-makers' reluctance was largely a matter of political tactics. Civilian officials in the military departments wanted to secure a decision on weapons custody before raising the potentially more sensitive issue of weapons use. In any case, almost no senior policy-maker seriously doubted that atomic weapons would be used if necessary. Within the armed forces, particularly
among senior Air Force officers, however, there was already a growing suspicion that raising the question of atomic weapons use might be counterproductive. As later events evidenced, many civilian policymakers also shared that view.\textsuperscript{15}

Without the persistent urging of Army Secretary Royall, the issue of atomic weapons use might not have been raised among civilian policymakers at all. In May, Royall formally asked the NSC to study the matter. In addition, Royall insisted, the NSC should consider who might authorize employment of atomic bombs, the timing and circumstances of employment, the type and character of targets, and the proper organization of the military establishment to insure the immediate and full exploitation of existing atomic capabilities. Among the most important organizational questions to be answered was control and custody of atomic weapons.\textsuperscript{16}

After some hesitation, the NSC agreed to take up the issues of weapons use with the exception of organizational matters—including weapons custody—which were left specifically for consideration by the War Council. Actually, civilian policy-makers continued to postpone action on the matter. At a meeting of the War Council on 17 June, Forrestal argued that the weapons custody issue should be settled first. Forrestal was obviously concerned with the President's reaction. Truman jealously guarded his prerogatives with respect to atomic weapons. In the face of the developing debate over weapons custody, Forrestal wanted to delay action on the weapons use issue, at least, until he could personally discuss the matter with the President.\textsuperscript{17}
Alarmed by the worsening Berlin crisis, Secretary Royall continued to raise the issue of weapons use at every opportunity. To Forrestal's discomfort, Royall broached the question to Truman at the 21 July White House meeting called to discuss the issue of weapons custody. The President's evasive response and his subsequent decision against military custody obviously discouraged Forrestal. At a meeting with Secretary of State Marshall, Secretary Royall, and General Bradley a week later, he concluded that military planning should allow for the possibility that atomic weapons would not be used, as well as the possibility that they would be used. Marshall had already adopted the same conclusion. Theoretically, that was an admirable, common sense approach to the problem, but neither Marshall nor Forrestal—not to mention President Truman—were yet prepared to accept the implications of such a course of overall military policy and budgets. Indeed, there is no evidence that those implications were even considered at the time.  

As of the end of July 1948, the NSC had taken virtually no action on the issue of weapons use. In the meanwhile, however, the Air Force and the State Department had formed an unlikely coalition to deal with the problem. Senior Air Force officers were convinced that the United States could not fight a major war against the Soviet Union without atomic weapons. They were also convinced that to be effective atomic attacks must be delivered as quickly as possible after the outbreak of war and be aimed at major urban-industrial targets. Therefore, it was "highly desirable" that basic policy decisions regarding the use and objectives of strategic atomic forces be made "prior to, rather than after, the outbreak of a possible war." Following informal discussions
between the Air Staff and State Department policy planners during the spring of 1948, however, senior air officers began to suspect that seeking a clear-cut decision on atomic weapons use might actually result in limitations that would hamper realistic planning. Rather than risk such an outcome, senior Air Force officers concluded it was better to have no policy at all. 19

The Air Force's position was stated in a paper submitted to the National Security Council in early July. Prepared under the supervision of Air Force Director of Plans and Operations, General Samuel E. Anderson, the paper concluded that "no action should be taken at the present time" to decide whether atomic weapons would or would not be used in a future war, or to decide the timing and circumstances of their use. In fact, the reasoning behind those conclusions was subtly constructed to give the Air Force and the Joint Chiefs of Staff a virtually free hand to plan for the use of atomic weapons in whatever manner they saw fit. The paper acknowledged that the actual decision to use atomic weapons was the prerogative of the President. But, the "type and character of targets against which atomic weapons might be used [was] primarily a function of military selection in the preparation and planning of grand strategy." Nor was there any doubt that the Air Force believed atomic weapons must be used if a major war occurred. "It is dangerously delusive," the paper stated, "to consider the self-imposition of any unilateral qualifications of the use of atomic weapons." Thus, there was nothing to be gained, "commensurable with the risk of raising the question," in seeking a well-defined decision on the use of atomic weapons. 20
At the State Department, the Air Force paper was reviewed by
Kennan's Policy Planning Staff. Apparently mesmerized by the paper's
conclusions, Kennan "heartily" recommended it be approved by Secretary
of State Marshall. When Marshall met with Forrestal, Royall and Bradley
on 28 July, the Secretary had already done so. With State Department
backing, the Air Force paper was ultimately reprinted on 10 September
as NSC 30 and placed on the National Security Council agenda. With the
exception of minor editorial changes, the only alteration made in the
text of the paper was the addition to the conclusions section of two
short paragraphs. The first explicitly stated the military's "responsi­
bility" to plan for all means of waging war, including the use of atomic
weapons. The second merely amplified the prerogative of the President
to decide when, or if, atomic weapons would be used.21

On 13 September Marshall, Forrestal, Royall, and Generals Bradley
and Vandenberg went to the White House to discuss the issue of weapons
use with the President. Marshall and Forrestal outlined the policy
questions then under consideration by the NSC. General Vandenberg
briefed the President on existing concepts for the employment of nuclear
weapons. To be most effective, he said, they should be used without
warning, in the greatest possible mass, and at the earliest practicable
time after the outbreak of war. The principal objectives of atomic
attack should be strategic industrial and political-military control
concentrations in Soviet urban areas. At the end of the discussion,
Truman said that he "prayed that he would never have to make such a de­
cision," but he assured everyone present that, if it became necessary,
he would not hesitate to do so.22
With the prompt concurrence of the Joint Chiefs of Staff, the National Security Council approved the conclusions of NSC 30 on 16 September. In effect the civilian policy-makers had decided the issue of atomic weapons use by not deciding. The implications of NSC 30 were most perceptively expressed by W. Walton Butterworth, Director of the State Department's Office of Far Eastern Affairs:

"While apparently taking no decision on the question whether or not atomic weapons should be used, as a practical matter the paper would in large part foreclose the issue. The National Military Establishment, in making its plans, will have to proceed on the basis that atomic weapons are to be used. If war of major proportions breaks out, the Military Establishment will have little alternative but to recommend to the Chief Executive that atomic weapons be used, and he will have no alternative but to go along. Thus, in effect, the paper actually decides the issue."

General Vandenberg essentially confirmed that analysis when he explained his own views on NSC 30 to Air Force Secretary Symington:

"My belief is that atomic weapons will be used in the event of war with the USSR regardless of what policy may be adopted at this time. However, any policy promulgated at this time which prohibits or limits the use of atomic bombs will affect our preparedness to use these weapons, should war come, and may be disastrous to the nation. I, therefore, feel that, if there is doubt that a clear-cut national policy that atomic weapons will be used . . . can be obtained at this time, it is better that we have no national policy at all on this subject."23

During the crisis year of 1948, civilian policy-makers in the American government carefully avoided public discussion of the weapons use issue. Evidently, they believed that to reveal the absence of an affirmative policy might give the Soviets reason to believe that the United States would not use atomic weapons, and thereby undermine the deterrent power of the American monopoly. By early 1949, however, some policy-makers were convinced that the absence of discussion itself might have the same effect. In April, the new Secretary of Defense, Louis
Johnson, persuaded President Truman that a public statement was needed to clarify U.S. intentions not only for "comrade Stalin," but for the American people and our European allies as well. For the occasion, the President chose an informal talk with a group of newly elected Democratic Senators. Truman began by describing his decision to use atomic bombs against Japan in 1945. He was hopeful that decision would never have to be made again. "But," said the President, "if it has to be made for the welfare of the United States, and the democracies of the world are at stake, I wouldn't hesitate to make it again."²⁴

President Truman's public statement seemed clear enough. The United States would use atomic weapons if necessary. That, however, did not constitute a policy sufficient to guide military planning. It did not specify, or even suggest, under what circumstances the United States might find it necessary to use atomic weapons. Nor did it specify in what manner and against what types of targets those weapons would be used. Resolution of those issues, which also influenced whether atomic weapons would be used in the first place, were essentially forfeited to the discretion of the military planners. But, the military planners were themselves divided over basic issues of atomic weapons use.

Weapons Production Policy and Military Requirements Planning

Even the resolve to use atomic bombs if necessary had little meaning unless an adequate stockpile of weapons was available. The production of nuclear weapons during 1947 had been very slow. Organizational problems incident to the transition from military to civilian control of atomic energy programs, as well as technical problems with the supply of fissionable material and nonnuclear components, retarded the growth
of the weapons stockpile. More importantly, however, the inefficiency of existing types of weapons resulted in a decision to limit production until new designs could be proof tested. The actual production rate during 1947 probably never exceeded an average of about two bombs a month. By the end of the year, it appears that there were about twenty-five bombs in the stockpile, mostly of the MARK III (NAGASAKI FM) type. In December 1947, the Joint Chiefs of Staff informed the Atomic Energy Commission that requirements existed for the production of four hundred atomic bombs, each of approximately twenty kilotons yield, by the end of 1952. The schedule of production goals established by the JCS considerably exceeded the existing production rate. After consulting President Truman informally, AEC Chairman Lilienthal notified the JCS that the current rate would be maintained until weapon tests were completed in the spring. If the tests were successful, the Commission would then recommend an increased rate to the President. Lilienthal doubted whether the January 1949 production goal established by the JCS could be met. But, assuming the planned tests succeeded, he was confident the four hundred bomb total requirement could be achieved on schedule.

The need for weapon tests had been evident for some time. If bomb production was to increase, the practicality of improved or altogether new designs—more flexible and efficient in the use of fissionable material—would have to be proved. The principal technical objective of the weapon designers was to perfect efficient methods of employing the more plentiful U-235 in an implosion bomb, either as the sole fissionable component or in combination with plutonium. Other important
objectives included developing smaller, lighter weapons and weapons of
greater power. To accomplish those objectives, numerous theoretical
schemes had already been worked out. At least nine new implosion de-
signs were under discussion at Los Alamos during 1947.27

President Truman gave approval for tests in June. By late September,
the AEC and the JCS had worked out rough plans for a joint task force
(JTF-7) to carry out the tests, codenamed SANDSTONE, at Eniwetok Atoll in
the Marshall Islands beginning sometime in April 1948. Recalling the
carnival atmosphere which surrounded Operation CROSSROADS, the AEC in-
sisted that the SANDSTONE tests must be strictly scientific. Army Gen-
eral John E. Hull was appointed to command the joint task force. As a
practical matter, however, the AEC retained technical direction and the
military provided logistic support.28

The three devices—X-RAY, YOKE, and ZEBRA—detonated at SANDSTONE
during April and May 1948 confirmed important new design principles.
X-RAY, fired on 14 April, was a plutonium/U-235 composite, implosion
design of thirty-seven kilotons yield. YOKE, fired on 30 April, was
also a plutonium/U-235 composite, implosion design, and yielded an energy
release of forty-nine kilotons. ZEBRA, fired on 14 May, was an all U-235
implosion design with an energy release of eighteen kilotons. The ef-
ficiency of all three designs, measured as a ratio of fissionable mate-
rial to yield or damage radius, far exceeded existing weapons. From
available evidence, it appears that the X-RAY composite design used
approximately 3.2kg of plutonium and 6.5kg of U-235. That amounted to
about half the plutonium used in the MARK III (NAGASAKI FM) bomb and a
mere fraction of the U-235 used in the MARK I (HIROSHIMA LB) bomb. The
ZEBRA design was relatively less efficient than X-RAY, but used only about one-third the U-235 required by the MARK I and produced about thirty percent greater yield.\(^{29}\)

Immediately after the first two tests it was evident that a major breakthrough in weapons production was possible. Even before ZEBRA was fired in mid-May, Norris Bradbury, who directed the Los Alamos Laboratory and production operations at Sandia, ordered a halt in the fabrication of standard plutonium FM cores. Henceforth, first priority was given to the fabrication of X-RAY model plutonium/U-235 composite cores for use in the new MARK IV bomb. SANDSTONE suggested a number of promising new directions for future weapons development. The relative inefficiency of shot YOKE—compared to X-ray—made it an unsatisfactory design for production. However, analysis of the YOKE explosion indicated the possibility of building fission weapons of significantly higher yield—in the range of 80 to 150 kilotons. An improved YOKE design of about 80 to 100 kilotons was especially promising. The possibility of developing smaller, lighter weapons of increased yield was also encouraging. As early as September 1948, weapon designers at Los Alamos were confident that specifications for such a bomb—the TX-5 (later the MARK V)—could be set within a year.\(^{30}\)

In practical terms, only the X-RAY and ZEBRA designs—both adapted to the new MARK IV bomb—had any immediate impact on weapons production. None of the higher yield designs suggested after SANDSTONE (including the TX-5) were tested until mid-1951 (GREENHOUSE series). Nor did lower yield (1-10KT) spin-offs of the ZEBRA U-235 design affect weapons production. Those designs were not tested until early 1951 (RANGER series)
when it seemed possible that tactical weapons might be required in Korea. The "improved" YOKE design for a bomb of about 80 to 100 kilotons was not thought to require proof testing, but it had no impact on actual weapons production until, at least, late 1949. A variable yield (20-40KT) modification of the X-RAY composite design—the so-called FOX model—was proposed about a year after SANDSTONE as an eventual replacement for the ZEBRA and X-RAY weapons. Apparently, the FOX design was put into limited production in the late fall of 1949 without proof testing, but had little impact on overall production levels before early 1951.31

Despite the successful outcome of SANDSTONE, the 1948 program for production of fissionable material remained modest. Joint AEC-Military Establishment recommendations were prepared in February and March before SANDSTONE commenced. As in 1947, the program directive was based on the maximum production capabilities of existing plant facilities. Before obtaining the President's approval for the 1948 program on 22 April, Lilienthal and Forrestal agreed that production levels would remain essentially the same as in 1947, at least, until the JCS determined new weapon requirements. In fact, fissionable material production increased after mid-year when the third Hanford reactor—placed in reserve in 1946—was restarted.32

The results of SANDSTONE prompted a complete review of military requirements. In early June, the Military Liaison Committee formally notified the JCS that SANDSTONE had proven three new designs for implosion bombs, each more efficient than previous weapons. As soon as possible, the Committee urged, the JCS should determine the types and yields
of weapons required for the stockpile as a guide for AEC bomb production operations at Sandia. Following a rapid analysis of still incomplete SANDSTONE data by Air Force target planners, the Joint Chiefs established tentative military guidance for weapons production. First priority, they agreed, should go to fabrication of X-model (X-RAY) plutonium/U-235 composite components for the MARK IV bomb. In addition, the plutonium cores of existing MARK IIIIs should be refabricated for use in X-model composite weapons. Second priority should be placed on fabrication of Z-model (ZEBRA) U-235 components for the MARK IV bomb, "looking toward 'large' numbers in the ultimate FM [i.e., implosion bomb] stockpile." Based on preliminary data, the JCS doubted whether Y-model (YOKO) bombs would be required. Production of U-235 components for HIROSHIMA LB (gun type) models could be halted, but existing components should be kept. For the present, the Joint Chiefs agreed that the annual, total bomb production objectives set in December 1947 should be retained. They stressed, however, that the "maximum number of usable FM bombs should be available at all times."33

In early August, Lilienthal responded to the military's guidelines. He told the JCS that all plutonium production had been shifted to the X-model weapon. Beginning late in 1948 or early 1949, the plutonium cores of existing MARK III weapons would be refabricated for use in X-model MARK IV bombs. Production of Z-model MARK IV bombs was expected to begin in September. In accordance with JCS wishes, existing LB nuclear components would be retained. Lilienthal repeated his earlier estimate that total weapons production would fall short of the 1 January 1949 goal established by the JCS. Thus, by the end of 1948, the stockpile
was expected to number less than about seventy-five bombs. At that time, the stockpile would consist of four different types of weapons, mostly new model MARK IVs and soon-to-be-replaced MARK IIIs. Because final analyses of SANDSTONE data were not completed until mid-December, the actual bomb production rate apparently increased only slightly, if at all, before the end of 1948. However, the rate increased significantly during early 1949.34

The lack of final SANDSTONE test analyses also retarded progress on detailed weapon requirements planning during the late summer and fall of 1948. Continuing disputes over service responsibilities for atomic operations and the details of new war plans impeded progress even more. At the beginning of October, the new Chairman of the Military Liaison Committee, William Webster, presented a series of recommendations to the JCS in an effort to get requirements planning moving. First, Webster suggested that the nuclear components of existing HIROSHIMA LB bombs be refabricated for use in Z-model MARK IVs. The advantages of such a step were obvious. Three ZEBRA models of thirty percent greater yield could be produced for every one LB bomb in the stockpile. Webster concurred in the AEC conclusion that the YOKE model bomb not be produced for stockpile. Despite a yield higher than that of the X-RAY bomb, the Y-model provided a negligible increase in damage area. In any case, the weapon designers at Los Alamos had already proposed a program for development of an "improved" YOKE model with a yield of about 80 to 100 kilotons. Such a development program, Webster said, would require relatively modest resources and might be completed, without proof testing, as early as mid-1949. Further improvement in the YOKE design--perhaps up to 150
kilotons—was possible, but such a weapon could only be developed at the expense of other more useful projects. If the Joint Chiefs had a requirement for weapons of significantly greater yield, Webster recommended that they approve development of the "improved" (80-100KT) YOKE.\textsuperscript{35}

The determination of weapons requirements was a sensitive issue in the JCS. Weapon requirements were closely related to target planning, which had important implications for the nature of overall strategy and war planning. The Army and Navy resisted attempts by the Air Force to assert unchallenged control over the determination of atomic weapon requirements or the selection of targets. After a brief debate, the JCS agreed to establish a joint ad hoc committee under the general supervision of Air Force Chief of Staff Vandenberg to study Webster's recommendations. Thus, determination of weapon requirements would not be surrendered completely to Air Force discretion.\textsuperscript{36}

In late December, the ad hoc committee submitted interim conclusions based on the total annual requirements schedule established by the JCS a year earlier. The committee members agreed that existing LB bombs should be replaced as soon as possible by the more efficient Z-models. Nevertheless, the AEC should retain facilities for the quick fabrication of LB nuclear components if the need arose, and one complete LB bomb should be kept in the stockpile for the purpose of training military assembly teams. As long as X-model weapons would be available in "substantial numbers," the committee agreed there was no requirement for Y-model bombs of the type tested at SANDSTONE. There was, however, a military requirement for an "improved" Y-model of about 80 to 100 kilotons yield. Development of such a weapon "should proceed as a matter of high
priority," as long as it did not interfere with the production of other weapons.  

The ad hoc committee also agreed that a "limited number of targets"—less than ten—justified development of an improved YOKE type weapon of about 150 kilotons yield. As early as January 1948, the JCS and the Air Force had expressed interest in weapons of 100 kilotons or greater yield. Because of the relative scarcity of fissionable material, however, production of such weapons might have very unfavorable effects on the size and flexibility of the overall bomb stockpile. The ad hoc committee, therefore, declined to establish a firm military requirement for those weapons, pending an examination of the effect such a project would have on production of other types of bombs.

The ad hoc committee anticipated that the composition of the stockpile would turn over completely during 1949 as new model MARK IVs replaced the obsolete MARK I and MARK III bombs. The committee reversed earlier priorities, recommending that the largest number of weapons in the stockpile consist of X-models, followed in order of predominance by Z-models. The relative numbers were based on the "optimum distribution" of bombs to accomplish destruction of 70 selected targets—the same 70 targets then included in war plan TROJAN—with the "minimum expenditure of uranium ore." An important factor in that calculation was the assumption that radar bombardment would result in an average circular error of as much as 3,000 feet. Thus, larger numbers of the more powerful X-model weapons were required.

The ad hoc committee recommended that the schedule of annual production goals established by the JCS in December 1947 be retained for the
present. Soon, however, those goals should be "increased substantially" and extended beyond 1952. The committee would continue to study the matter, and hoped to have recommendations for increased requirements within a short time. In the meanwhile, "production of bombs should be continued on the basis of full employment of both uranium and plutonium production facilities."\(^{40}\)

The JCS approved the ad hoc committee's recommendations on 12 January 1949 and forwarded them to AEC Chairman Lilienthal through the Military Liaison Committee. The AEC staff and the MLC were already in the process of drafting a directive for the 1949 production program. It was immediately evident to Lilienthal that the military intended to place heavy pressure on the Committee and the President to increase atomic weapons production. After the dispute over weapons custody during 1948, Lilienthal was deeply suspicious of military motives and openly distainful of the "majestic pronouncements" of the JCS. He saw the military's demands for a "substantial," but as yet unspecified, increase in weapons production as a challenge to civilian control of atomic energy programs. Lilienthal bluntly told MLC Chairman Webster that there was "nothing sacred" about "the requirements of the Joint Chiefs of Staff" and he "intended to have a showdown" over the issue of weapons production.\(^{41}\)

The AEC Commissioners met with the Military Liaison Committee on 8 April to work out the wording of the 1949 production program directive. Since restarting the third Hanford reactor in mid-1948, fissionable material production had increased to a point where it was possible to produce more than the number of weapons called for in the December 1947 JCS requirements schedule. Further increases in fissionable material production
were anticipated by late 1949 when the first of two new production reactors would be ready. The JCS had not yet established new, increased weapon requirements, but the MLC argued that the President should authorize essentially open ended bomb production. Lilienthal was apparently willing to increase the pace of weapons production. Indeed, the production rate had already soared by April 1949. As a result of new assembly line methods, the stockpile was apparently approaching as many as 140 to 150 weapons. Nevertheless, Lilienthal refused to recommend to the President a substantial increase in the ultimate stockpile goal without proof that current war plans supported such requirements, and that those plans were based on sound reasoning. Lilienthal expressed the same opinion a few days later when the AEC Commissioners met for the first time with the new Secretary of Defense, Louis Johnson. When Johnson disagreed, the meeting rapidly turned into a disaster.  

The final 1949 atomic energy program directive—in the usual form of a joint letter to the President from the AEC Chairman and the Secretary of Defense—clearly represented the AEC point of view. Approved by Truman on 14 April, the directive provided for continuation of fissionable material production at the maximum rate possible with existing plant facilities. That meant the pace of weapons production would accelerate significantly. According to one estimate the 400 bomb overall goal set in December 1947 might be obtained as early as 1 January 1951—two years ahead of schedule. Beyond that, however, the 1949 directive made no provision for new, increased bomb requirements. Frustrated by Lilienthal and his fellow Commissioners, the Liaison Committee contented itself by inserting in the joint letter a caveat that the JCS considered the current production goal inadequate.
The widening rift between the AEC and the Military Establishment, reflected in the debate over the 1949 atomic energy program directive, was an ominous portent for the future. Lilienthal was convinced that JCS and MLC demands for increased production were arbitrarily based on what they thought they could get, rather than what they needed. Moreover, he was increasingly suspicious that military demands were somehow aimed at undermining civilian control of atomic energy programs. At every opportunity, Lilienthal pressed the latter argument to his advantage with President Truman.44

Lilienthal's skepticism about the manner in which the military determined bomb requirements was not entirely ill-founded, though it was obviously exaggerated. The calculations of the ad hoc JCS requirements committee were based upon analysis of current and projected atomic targets, and upon operational factors such as bombing accuracy and combat losses. At that time, however, the dependability of target intelligence and operational assumptions was far from perfect. In regard to the fundamental strategic assumptions on which target selection was based, the military planners were deeply divided. As a result, the determination of bomb requirements involved a considerable measure of "finger-in-the-wind" estimation. Nevertheless, even Lilienthal, with his instinctive incredulity toward the military, was probably surprised by the scope of increased JCS bomb requirements when they were finally completed in May 1949.45

After five months of study the ad hoc committee concluded that the atomic weapon stockpile should be increased to a thousand or more bombs by 1 January 1956. The committee's calculations were based on analysis
of five types of requirements: (1) "the air offensive against Soviet industrial potential," (2) "a counter-offensive" against Soviet strategic atomic forces, (3) limited tactical atomic operations against Soviet conventional forces, (4) "a small general reserve," and (5) "an equally small post-hostilities stockpile." 46

Calculation of requirements for the counter-industrial air offensive were based on analysis of four categories of strategic targets: (1) the 70 "priority industrial complexes" listed in the current war plan, TROJAN, (2) 113 additional industrial complexes which warranted atomic attack, (3) 26 isolated industrial installations, presumably including atomic weapons research facilities, and (4) 11 industrial complexes in Eastern Europe of "great importance to the Soviet war-making potential." The number of bombs on target needed to destroy those 220 complexes was effectively doubled by roughly calculated requirements for additional—but as yet unspecified—targets, anticipated improvements in enemy air defense systems, and rule-of-thumb estimates of operational factors such as combat losses, gross navigational errors, and accidents. 47

Counterforce requirements were calculated on the basis of the anticipated Russian stockpile of atomic weapons, which was then expected to number no more than about 50 bombs by the end of 1955. The committee agreed that the United States could "well afford to expend several times" that number of bombs to counter Soviet atomic attacks. Justifications for a general bomb reserve and a post-hostilities stockpile were vague. The strategic dangers of prematurely expending the war stockpile were not even mentioned. Specific requirements for the use of atomic weapons on tactical or quasi-strategic theater targets were equally vague. 48
The ad hoc committee's calculation of bomb requirements was obviously crude. In fact, just as Lilienthal suspected, the calculations were heavily influenced by estimates of what could be produced. During early 1949, the Military Liaison Committee conducted a thorough review of existing and projected bomb production capabilities. Based on that information, the ad hoc committee was convinced that its production goal for 1956 could be achieved "with a reasonable amount of construction of additional facilities." Indeed, the goal was intended to "give impetus to the construction of additional production facilities."49

The specific number of bombs that might be available by 1956 was actually of less importance to the ad hoc committee than the "order of magnitude" of fissionable material production. The requirements objective was stated in terms of the number of existing model weapons (X, Z, and "improved" Y-models) that might be produced with a given amount of fissionable material. New types of weapons were already projected, however. The variable yield FOX type weapon would begin replacing ZEBRA and X-RAY models by late 1949. A new gun-type, "penetrating" bomb for tactical employment (later designated the MARK VIII) was already under development, as was a series of other weapons. Henceforth, the ad hoc committee concluded, military requirements should be expressed in overall fissionable material production rather than total bomb numbers.50

The JCS approved the ad hoc committee's conclusions in mid-June and forwarded them to AEC Chairman Lilienthal through the Military Liaison Committee. Lilienthal's reaction was predictable. He told MLC Chairman Webster that the increased requirements exceeded authorized AEC production capacity. Expansion of existing programs would require Presidential
approval. Without more satisfactory evidence that increased production was actually needed, Lilienthal would not recommend such action to Truman. Despite heavy pressure from the military, Lilienthal prevailed. Following a series of negotiations with AEC Administrator Carroll Wilson and Budget Director Frank Pace, Webster agreed to an impartial reexamination of military requirements by the National Security Council.51

On 26 July, President Truman designated Secretary of State Acheson, Defense Secretary Johnson, and AEC Chairman Lilienthal as a "special committee" to review military weapon requirements. Assisted by NSC Executive Secretary Sidney Souers, the "special committee" was to prepare recommendations to the President on (1) the adequacy of existing weapons production programs, (2) the advantages of the accelerated program proposed by the military, and (3) the effects of the accelerated program on overall defense budgets, weapons research and development, and the international situation. Thus was set in motion the first high level, overall review of atomic weapons production policy in the postwar period. The announcement in September that the Soviet Union had successfully detonated an atomic device would have a profound effect on that effort, resulting in the subsequent extension of the review to the merits of developing the hydrogen bomb.52

By restricting general defense rearmament, the American government placed increasingly heavy reliance during 1948 and 1949 on the deterrent power of atomic weapons as the underpinning of its political and economic initiatives to contain Soviet expansion. But, in the same manner that civilian policy-makers failed rationally to integrate foreign and military policy generally, they also failed to establish coherent
policies to guide or to facilitate military planning for the use of atomic weapons should deterrence fail. A simple operational issue such as the custody of the weapons stockpile was transformed into a heated and essentially irrelevant debate over civilian versus military control of atomic energy. The far more fundamental issue of when, how, or if atomic weapons would actually be used was avoided altogether. The equally fundamental issue of weapons production, with its far reaching implications for weapons use, was debated on the same emotionally charged basis as the custody issue. Thus, rational policy decisions affecting the nature and purpose of the weapons stockpile were postponed.

In that context, the military planners were left on their own to devise strategic concepts and plans compatible with the resources made available to them. Despite deep interservice divisions over strategy, the military planners were confronted with no basic alternative to increased reliance on nuclear weapons. Following the SANDSTONE tests, the technical possibility for rapidly increasing the size and flexibility of the nuclear weapons stockpile was evident to the planners, even if the political issues of future weapons production were unsettled. At the same time, it was also evident to the military planners that existing and projected defense budgets would not provide levels of conventional military capability sufficient to wage either limited or general wars. That strategic concepts and plans must rely heavily on the use of atomic weapons, especially in the initial phases of war, was an inescapable conclusion for the planners. How and by whom those weapons should be used remained a deeply divisive issue, however.
CHAPTER VI NOTES

1. Memo, Brereton to Gruenther, 12 Dec 47. "Views of the Military Liaison Committee on Delivery of Atomic Weapons to the Armed Forces," n.d., attch to Ibid. Re: SAC-AFSWP exercise see Chapter III.

2. Hewlett and Duncan, Atomic Shield, pp. 154-56.

3. Ibid., pp. 155-56.


5. JCS 1848/1, 18 Mar 48, Note by Secs to JCS w/attach Ltr, JCS to Forrestal, sub: "Custody of Atomic Weapons;" Memo, Royall, Sullivan, and Symington to Forrestal, 13 Mar 48, attach to JCS 1848/4, 30 Jul 48, Note by Secs to JCS, sub: "Custody of Atomic Weapons," both in CCS 471.6 (8-15-45)S. 9, 11. Re: Forrestal's conversation with Strauss see Strauss, Men and Decisions, pp. 159-60.


7. Hewlett and Duncan, Atomic Shield, pp. 166-67. Re: Camp Hood and Camp Campbell storage sites see LeMay's Office Diary, 16 Dec 48, Curtis E. LeMay Papers, Bx 64, Folder #1, Library of Congress, Washington, DC; and Ltr, LeMay to MG Roger M. Ramey, 24 Jan 49, in Ibid., Bx 58, Ramey Folder.


10. Re: military's position see Ltr, Forrestal to Truman, 21 Jul 48, attach to JCS 1848/4, 30 Jul 48. The letter was read by Carpenter at the meeting. Forrestal Diaries, p. 460. Journals of David E. Lilienthal, II, 21 Jul 48, p. 388. William Webster, Carpenter's Deputy and soon-to-be replacement, also attended the meeting.


23. Re: approval of NSC 30 see NSC Action No. 111, 16 Sep 48, cited in FRUS: 1948/I/2, p. 625n. Re: JSC concurrence see JCS 1935/1, 13 Sep 48, Rpt, JSSC to JCS, sub: "United States Policy on Atomic Warfare," and JCS 1935/1 DECISION, 15 Sep 48, both in CCS 471.6 (8-15-45)S. 12. Re: Butterworth's analysis see Memo by Butterworth, 15 Sep 48, sub: "NSC Paper No. 30 on U.S. Policy on Atomic Warfare," FRUS: 1948/I/2, pp. 630-31. Butterworth was not involved in the Policy Planning Staff review of the Air Force draft of NSC 30 and was only invited to comment on the paper the day before it was approved by NSC. Re: Vandenberg's views see Memo, Vandenberg to Symington, 24 Sep 48.


25. See Chapter III.

26. See JCS 1745/5, 8 Dec 47; JCS 1745/7, 16 Dec 47; and JCS 1745/7 DECISION, 17 Dec 47. Ltr, Lilienthal to JCS, 29 Jan 48, Encl to JCS 1745/14, 10 Feb 48. Journals of David E. Lilienthal, II, 28 Jan 48, p. 286.

27. Hewlett and Duncan, Atomic Shield, pp. 44-46, 58-60.

28. Ibid., pp. 140-41.

30. Re: production of X-RAY cores at Sandia and development of the TX-5 at Los Alamos see Hewlett and Duncan, Atomic Shield, pp. 175-76. Re: the implications of YOKE for higher yield weapons see JCS 1823/7, 21 Oct 48; JCS 1823/8, 6 Nov 48; and JCS 1823/11, 28 Dec 48.

31. Re: the GREENHOUSE (April-May 1951) and RANGER (January-February 1951) tests, including test of TX-5 see Hewlett and Duncan, Atomic Shield, pp. 176, 672. Re: the "improved" YOKE design see JCS 1823/7, 21 Oct 48; JCS 1823/8, 6 Nov 48; and JCS 1823/11, 28 Dec 48. Re: the FOX design see JCS 1823/13, w/encl, 10 May 49, Note by Secs to JCS, sub: "Requirements for the Stockpile of Atomic Weapons;" and JCS 1823/14 w/encl, 27 May 49, Memo, C/S, USAF to JCS, sub: same, both in CCS 471.6 (8-15-45)S. 15.


33. Memo, Nichols to JCS, 3 Jun 48, Encl to JCS 1823/2, 8 Jun 48, Note by Secs to JCS, sub: "Requirements for the Stockpile of Atomic Weapons;" JCS 1823/3, 19 Jun 48, Memo, C/S USAF to JCS, sub: same; JCS 1823/4, 29 Jun 48, Memo, CNO to JCS, sub: same; and JCS 1823/3 DECISION, 8 Jul 48, all in CCS 471.6 (8-15-45)S. 10-11.


37. Rpt, Joint Ad Hoc Committee to C/S, USAF, 20 Dec 48, appendix to JCS 1823/11, 28 Dec 48. See also JCS 1823/7, 6 Nov 48; and JCS 1823/10, 16 Dec 48. The members of the ad hoc committee were BG Roscoe C. Wilson, USAF; CPT T. B. Hill, USN; and LTC C. C. Noble, USA.

39. Rpt, Joint Ad Hoc Committee to C/S, USAF, 20 Dec 48. See also JCS 1823/8, 6 Nov 48. Initially, calculations were based on a 1,500 foot CEP for radar bombardment. Later more realistic 3,000 feet figure was substituted. In fact, 6,000 feet would have been closer to the actual capabilities of SAC at that time. See e.g., "SAC Progress Analysis, 1 November 1948-31 October 1953," pp. 27, 30, in LeMay Papers, Bx 100. Re: TROJAN targets see Chapter VII. TROJAN targets were later increased to 147 in 70 separate complexes. The figure of 70 targets cited here was for separate bombs to be dropped on 30 urban complexes.

40. Rpt, Joint Ad Hoc Committee to C/S, USAF, 20 Dec 48. See also JCS 1823/8, 6 Nov 48.


42. Re: increase in fissionable material production see Hewlett and Duncan, Atomic Shield, pp. 175, 179. Re: AEC meetings with MLC and Secretary Johnson see Journals of David E. Lilienthal, II, 8 and 13 Apr 49, pp. 502-03, 509-10. Re: the increased size of the stockpile see "Summary of Presentation by Dr. Bernard Brodie," 25 Jun 74, New York University National Security Education Seminar, Colorado Springs, CO.


44. See e.g. account of meeting with the President on 11 May 49, Journals of David E. Lilienthal, II, 11 May 49, pp. 524-28. See also Ltr, Lilienthal to Truman, 11 May 49, cited in Hewlett and Duncan, Atomic Shield, p. 181.


46. Ibid. Actual requirement figures do not appear on the record copy of JCS 1823/14 found in the Archives. (It was the practice at that time to file the figures separately.) However, a careful examination of the factors included in the calculation of overall requirements indicates that the total figure must have been one thousand or greater. JCS 1823/14 notes that the December 1947 goal of 400 bombs would probably be achieved by 1 January 1951. The rate of production at that time (i.e., 1951) was expected to be at least 100 bombs annually. At that rate at least 900 bombs could be manufactured by 1 January 1956. But, the ad hoc committee clearly expected the annual rate of
production to increase by 1956. Therefore, it seems reasonable to conclude that the requirements figure proposed by the ad hoc committee was at least one thousand, and very possibly more.

47. Ibid.

48. Ibid.

49. Ibid. Re: MLC survey of weapons production capabilities see Hewlett and Duncan, Atomic Shield, p. 182. The MLC and ad hoc committee cooperated closely in determining increased requirements.

50. Rpt, Joint Ad Hoc Committee to C/S, USAF, 16 May 49. Re: the FOX type weapon see JCS 1823/13, 10 May 49.


52. Ltr, Truman to Souers, 26 Jul 49, FRUS: 1949/I, pp. 501-03.
By early 1948 it was evident that the postwar world would be one of international turmoil and conflict in which the possibility of war would be a constant factor. But, in the two eventful years since the end of World War II, American military planners had made disappointingly slow progress toward establishing realistic concepts and plans for waging war. In large part, that was a result of the Administration's failure to establish a national security policy that provided military resources appropriate to the nation's expanding international commitments. Nevertheless, the military establishment shared much of the responsibility for its own predicament. The National Security Act of 1947 did little to remove the causes of bitter interservice disputes. As defense budgets grew more restrictive in comparison to American military requirements, profound disagreements over service functions and strategy deepened, especially between the Air Force and Navy.

Despite interservice divisions, strategic concepts and plans for general war were increasingly predicated on the successful delivery of an early, crippling atomic air offensive against Soviet war-making capacity. Air war planners were more and more confident that the atomic offensive would prove quickly decisive. Consequently, they were less
concerned with preparations for a long war. Army and Navy planners remained unconvinced that the atomic offensive would be decisive immediately. But, in the context of limited defense budgets, atomic weapons offered the only means of striking either quickly or effectively at the enemy. Thus, interservice disputes over air war strategy focused on the proper objectives and methods of atomic operations.

Air Force strategists argued that the preponderant weight of the atomic offensive must be brought to bear on the vital elements of the Soviet economy and population. Even if such an attack did not instantly immobilize the Soviet armed forces, it would result in a relatively rapid collapse of the capacity and will of the USSR to wage war. Navy and Army strategists doubted that an atomic offensive against the Soviet economy and population would be decisive without a prolonged period of sustained operations. In the initial phase of a long war, they argued, it was more important to employ atomic striking power against tactical and quasi-strategic objectives, the destruction of which would directly and immediately retard the offensive capabilities of the Soviet armed forces.

Regardless of divisions over methods and objectives, military concepts and plans for the employment of atomic weapons were conditioned by one basic factor common to strategic thinking in all the services during 1948 and most of 1949. The monopoly of atomic weapons constituted the one clear advantage enjoyed by the United States in a war with the Soviet Union. While the monopoly lasted, there was never any serious question whether that advantage could or would be exploited in one way or another. Nor was there any serious consideration of the effect that losing the monopoly might have on a war-fighting strategy so heavily dependent on the use of atomic weapons.
Whether the United States must prepare for a long or a short war also affected the nature and extent of non-atomic operations. Before early 1948, even Air Force planners had agreed that any war with the Soviet Union probably would be of relatively long duration, and would, therefore, require extensive ground, tactical air, and naval operations in addition to the strategic air offensive. The main strategic issue had been the geographical locus of effort. In the past, the military planners agreed that the need for forward bases and petroleum resources essential to sustained operations dictated a main effort in the Middle East. By mid or late 1948 that consensus began to break down as a result of a combination of factors. The Administration's increasing political commitment to Western European defense refocused the attention of the military planners on major operations in that area. Increasingly confident that the air offensive would be quickly decisive and encouraged by the possibility of longer range air delivery systems in the near future, Air Force planners were less concerned with the need for either forward bases or petroleum reserves in the Middle East. Although they doubted the feasibility of initially defending Western Europe, Army planners were increasingly preoccupied with the requirements of returning as soon as possible to the continent. Only the Navy planners continued to insist on a major effort in the eastern Mediterranean-Middle East area. Existing defense budgets would not allow major efforts in both Europe and the Middle East. Thus, as a consequence of political commitments and the changing strategic interests of the Air Force and the Army, by mid-1949 the geographical locus of operations in American war plans shifted westward. The almost certain loss of Middle Eastern oil
resources needed for a long war placed added importance on the early success of the strategic atomic offensive. But, the requirements of an initial defense in Europe also placed increased importance on the use of atomic weapons to retard Soviet advances.

The Revised BROILER Concept

Deeply divided over strategic and functional issues, the Joint Chiefs were unable to reach agreement on the original BROILER concept completed in December 1947. At that time they directed the joint planners to re-examine certain operational elements of the concept, particularly ways in which to reduce the vulnerability of forward bases required for the atomic air offensive. The crux of the strategic and functional issues at stake—at least as they related to specific war plans—was the feasibility of retaining the Cairo-Suez area with resources likely to be available in current budgets.¹

The revised BROILER concept, completed in February 1948, was built around forces expected to be available in fiscal year 1949 and offered two basic courses of action. The first course of action closely resembled the original BROILER concept of retaining the Cairo-Suez area. There was one particularly important difference, however. Reexamination of Soviet offensive capabilities in the Middle East and allied forces available for defense of the region convinced the planners that the Cairo-Suez area could be saved at the outset of war only if a large part of the strategic air forces and a considerable number of the available atomic weapons were employed against tactical and quasi-strategic targets to delay the Soviet advance. In fact, such a strategy was self-defeating. As the planners admitted, diversion of the strategic air
effort would be so great that early initiation of an air offensive against Soviet war-making capacity would be virtually precluded. And, even then there was no assurance that the allies could maintain control of the Mediterranean line of communication with the meager resources available to them.²

The alternate course of action in the revised BROILER concept was to initially abandon the Middle East entirely and establish bases in the Karachi area of Pakistan and the Casablanca-Port Lyautey area of northwest Africa. The Karachi area provided a secure base from which atomic air operations could be initiated. However, subsequent recovery of Middle Eastern oil areas would require time consuming and logistically difficult amphibious operations through the Persian Gulf or overland operations from the Casablanca area in conjunction with a campaign to reopen the Mediterranean line of communication.³

The planners agreed that, at least during the first half of fiscal year 1949, available allied forces would be inadequate to undertake the first course of action. Diversion of a considerable part of the limited atomic stockpile to tactical and quasi-strategic targets and the consequent effect on the strategic air offensive was particularly unacceptable. Overall estimates of available and required forces to carry out the first course of action were essentially the same as those outlined in the original BROILER concept. Initially available forces consisted of a strategic reserve of only four ground divisions, six carrier task forces, and an Air Force of about fifty-two combat groups, including only nine effective medium bomb groups. Requirements far exceeded capabilities, and the resulting force deficiencies entailed accepting very
serious risks. Heavy deficiencies in required forces were also expected for the alternate course of action, but the planners agreed that it offered a "greater chance of success" under the circumstances. Only if available forces could be increased substantially during the second half of fiscal 1949 would reconsideration of the original concept be justified.4

The early initiation of an atomic, conventional-supplemented air campaign against the heart of Soviet war-making capacity remained the central element of the BROILER concept under either course of action. "The air offensive," the planners reiterated, "is the primary means now available by which the Allies can deliver destructive force against . . . the backbone of Soviet military power." Delivery of the air offensive was "required to prevent loss of the war or stalemate." The nature and degree of effort necessary to achieve success through strategic atomic bombardment was still unclear, however. How many bombs would be necessary? What objectives and targets would yield the most immediate results? How quickly and reliably could the campaign be carried out?5

The planners expected the number of atomic weapons to increase after late 1948 as a result of the scheduled SANDSTONE tests, but the stockpile in February was still quite small—probably no more than twenty-five to thirty bombs. By the end of 1948 there were only about seventy-five to eighty bombs in the stockpile. Nevertheless, the planners assumed that atomic bombs in "reasonable quantities" would be available in fiscal 1949. It is not entirely clear what "reasonable quantities" meant, but the planners were apparently thinking in terms of at least one hundred bombs with average yields of twenty kilotons.6
The planners analyzed various target systems and concluded that key governmental and administrative control centers together with aircraft and petroleum production facilities in twenty Soviet urban-industrial areas offered the best objectives for the initial atomic air campaign. Specific target complexes included:

- Moscow
- Leningrad
- Gorky
- Kuibyshev
- Baku
- Ufa
- Sverdlovsk
- Saratov
- Nizhniy Tagil
- Kazan
- Novosibirsk
- Chelyabinsk
- Stalinsk
- Molotov
- Saratov
- Kharkov
- Yaroslavl
- Grozny
- Stalingrad
- Omsk
- Magnitogorsk

In addition to initial atomic targets, the planners identified thirty-five priority petroleum targets in the USSR, Eastern Europe and the Middle East for conventional bombardment as well as aerial mining targets aimed at reducing the movement of the Soviet submarine fleet and surface shipping.  

The joint planners also placed increased emphasis on the potential psychological effect of atomic bombardment in the revised BROILER concept. They stated:

In addition to physical destruction it seems reasonable to anticipate that the use of atomic weapons would create a condition of chaos and extreme confusion. The magnitude of this effect cannot be accurately evaluated since at least up to this time it [is] abstract. It seems logical, however, to anticipate that the psychological effect, properly exploited, could become an important factor in the timing of and the effort necessary to cause the cessation of hostilities.

Nevertheless, the planners were still reluctant to predict the exact nature of the psychological effect of atomic bombardment. Even Air Force officers continued to admit that the issue was "one of the knottiest questions connected with the selection of strategic targets."
How quickly and how reliably the air offensive could be carried out largely depended on the availability of secure bases within range of key targets and how rapidly available bombardment groups could be deployed. In the revised BROILER concept, only five medium bomb groups were expected to be in place by D+30 days—two in Britain, one in Cairo-Suez or Karachi area bases, and two in the Ryukyus. The planners hoped that initial air operations would begin by D+45 to D+60 days. Three additional medium bomb groups would be deployed by D+3 months, but after that only one medium bomb group and one heavy (B-36) bomb group would be available before D+12 months. Those forces represented barely half those required to carry out the air offensive.9

An even more critical factor was the vulnerability of bases in the United Kingdom. Soviet air attacks against Britain were expected to begin in force about D+60 days. The joint planners argued—apparently because they wanted to believe it—that U.K. bases could be defended with existing U.S. and British resources. The Joint Intelligence Committee strongly disagreed, however. The JIC insisted that the Soviets could neutralize the United Kingdom as a base in relatively short order.10

The two courses of action outlined in the revised BROILER concept provided a poor basis for the resolution of disagreements over service functions and strategy. Neither course of action provided for the full range of naval warfare missions seen as essential by Navy strategists. The alternate course of action—involving the initial abandonment of the Mediterranean and Middle Eastern oil areas—was particularly unacceptable to Navy planners. On the other hand, the Air Force planners—increasingly
confident that the atomic air offensive would compel a relatively quick Soviet collapse—were less concerned with the initial preservation of an allied presence in the Mediterranean and Middle East. If the war would be over quickly, petroleum and bases for overland operations were not very important problems. The Cairo-Suez area was only important to the Air Force as a base from which key Soviet targets could be reached. As the prospect of longer range aircraft and range extension techniques increased, the specific importance of the Cairo-Suez area diminished for Air Force strategists.

Navy planners, however, were not convinced that the strategic atomic offensive would compel a Soviet collapse quickly enough to make all other considerations irrelevant. If a war should continue longer than a year or eighteen months, the availability of oil would become a critical factor. The Middle East, once given up, might not be easy to recover.

As a practical matter, the essential problem was that military budgets would not support forces in the foreseeable future adequate to implement an overall strategic concept satisfactory to both the Air Force and the Navy. The BROILER concept, therefore, represented a fundamentally unsatisfactory compromise and hardened the main lines of the bitter interservice strategic debate that continued over the next two years.

The Key West Agreement

Following publication of the Pinletter Commission report in January 1948, Secretary of Defense Forrestal pressed the JCS for an agreed joint war plan. However, continued disagreement over service functions and especially over the BROILER concept precluded an immediate decision. It
was in that context that Forrestal brought the chiefs together in mid-March at the Key West Naval Base in an effort to resolve their differences.11

The immediate problem that led to Forrestal's action was a dispute between the Air Force and Navy over the specific forces each service would provide for implementation of strategic atomic operations. Admiral Denfeld insisted that any war plan adopted by the JCS must assign the Navy full responsibility for providing "carrier task forces and carrier aircraft capable of delivering atomic bomb attacks on vital elements of an enemy's war making capacity." General Spaatz insisted that this was an unnecessary duplication of effort and infringed on the primary responsibility of the Air Force for strategic air warfare. In order to continue progress toward an agreed war plan, the Joint Chiefs temporarily compromised the issue in late January. They agreed that the Air Force would be responsible for providing a specific number of aircraft for strategic atomic operations and the Navy would be responsible for providing unspecified carrier and carrier aircraft forces "capable of delivering atomic or other attacks necessary to accomplish its missions."12

Despite the temporary compromise, the basic dispute between the Air Force and the Navy was not resolved. Especially for the Navy, the real issue went beyond responsibility for strategic atomic operations. It went to the very heart of the roles and missions debate with its budgetary implications for overall service force levels. The Navy feared that ultimately it would lose not only the forces necessary to carry out strategic atomic operations, but also those necessary to carry out other general war functions. Specifically, the Navy feared that its plans for
a multi-functional large carrier would be scrapped if it gave up its claim to a role in strategic atomic operations. The Air Force, on the other hand, saw the Navy's insistence on building a large carrier not only as a direct infringement of its strategic air function, but as a threat to the Air Force's overall share of defense budgets.  

The National Security Act of 1947 and its companion Executive Order (E.O. 9877) provided an inadequate basis on which to resolve the fundamental issues of dispute between the Air Force and the Navy. Both documents were open to varying interpretations in regard to the division of service functions. In the wake of the JCS dispute over responsibility for strategic atomic operations in late January, Forrestal proposed a number of amendments to the 1947 Executive Order. Because they appeared to favor the Navy position, the amendments only compounded the problem. The ad hoc committee appointed by the JCS to consider Forrestal's amendments pointed out that agreement on service functions should be derived from an agreed strategic concept and plan. But, until the services could agree on the division of functions, there was little likelihood of agreeing on a war plan.

When the JCS reported that it could not reach agreement on the amendments proposed by Forrestal, he set a deadline of 8 March for the Chiefs to design their own compromise. When that also failed to produce results, Forrestal brought the Chiefs together at Key West between 11 and 14 March determined to force a decision on roles and missions. Under pressure from the Secretary, the JCS did indeed reach agreement. The Air Force was assigned primary responsibility for "strategic air warfare" rather than only responsibility for the "Strategic air forces" as was the case
in E.O. 9877. The Navy was assigned primary responsibility for the con-duct of air operations necessary for the "accomplishment of objectives in a naval campaign." In addition, however, the Navy was given "collateral" responsibility "to be prepared to participate in the over-all air effort as directed by the Joint Chiefs of Staff."15

Ultimately, the Key West agreement on the functions of the armed forces was no less ambiguous than E.O. 9877. The extent of Navy collateral functions was not clearly defined. That was left to the discretion of the JCS on a case by case basis. A memorandum of record interpreting the meaning of the main functions paper agreed to at Key West, drawn up by the JCS in May, only compounded the problem. The memorandum made clear that any service might propose whatever forces or weapons it believed necessary for the accomplishment of its missions. Moreover, the memorandum stated that no service having primary responsibility for a specific function could use its interpretation of collateral functions of another service to deny forces or weapons to that service.16

The FROLIC Concept

Shortly after the meeting at Key West the Joint Strategic Plans Com-mittee presented for JCS consideration a short-range emergency plan, codenamed FROLIC, for the first twelve months of a war beginning in fiscal 1949. FROLIC was based on a quick revision of the alternate, re-vised BROILER concept, codenamed CRANKSHAFT. Like the earlier plans from which it derived, FROLIC called for an initial atomic air offensive against Soviet war-making capacity from bases in the United Kingdom, the Karachi area, and the Ryukyus supported by other essential operations to secure base areas and lines of communication. To increase the
effectiveness of the initial atomic offensive, the schedule of air operations was accelerated. The planners hoped that coordinated attacks from the U.K. and the Ryukyus could begin by D+15 days and from Karachi by D+30 days.17

Overall force deployments in FROLIC were virtually identical to those outlined in the alternate, revised BROILER concept. However, the anticipated build-up of ground and naval forces was less rapid. Consequently, there was no firm commitment to early operations for the recovery of either the Mediterranean or Middle Eastern oil areas. The planners believed that one or the other of those operations might be undertaken with limited forces after about D+10 months, but not both. Even then, the joint logistic planners estimated that FROLIC would have to be "mounted on a logistic shoestring." The importance of such mundane considerations as transport shipping and construction engineers is seldom appreciated by arm chair strategists. But, it was precisely such considerations that alarmed the logistic planners about FROLIC.18

FROLIC proved an even poorer basis for JCS agreement than BROILER. Admiral Denfeld vehemently objected to the plan because it accepted the "certain loss" of the Mediterranean, the Cairo-Suez area, and Middle East oil resources. He argued that "the concept places entire reliance for defeat of the USSR upon the success of long-range air operations . . ." If those operations were unsuccessful, Denfeld concluded, "we shall have lost so much territory, so many alliances, strategic positions, and vital resources . . . as to seriously jeopardize the possibilities of ultimate victory." Denfeld believed that FROLIC was based on an overestimation of Soviet capabilities and an underestimation of the "inherent possibilities
of naval and air power to slow up the enemy advance." He recommended development of an alternate plan that would not only provide for the initial retention of the Mediterranean and Middle East but also defense of Western Europe.  

General Spaatz disagreed. He avoided an argument over the merits of strategic bombardment, but he emphasized that planning must be predicated on realizable capabilities and resources. Spaatz admitted that FROLIC was not an ideal plan, but he insisted that, until it was certain that U.S. military forces could be substantially augmented, implementation of a more ambitious strategic concept was out of the question.  

In fact, the joint planners were already at work on alternate plans aimed at retaining the Mediterranean and the Cairo-Suez area. Though not as ambitious as the concept recommended by Admiral Denfeld, the logistic and force requirements of those plans far exceeded those of FROLIC. At the same time, the joint planners and the Air Force continued to refine the FROLIC concept, by then recodenedamed GRABBER. Despite opposition from Admiral Denfeld within the JCS, the Air Staff continued to work on FROLIC/GRABBER until early 1949 when the plan was finally overtaken by events and discarded.

Joint Outline Emergency War Plans HALFMOON and TROJAN

As an alternative to FROLIC, the JSPC prepared a plan during March and April 1948 based on a revision (FIRETRAP) of the first, revised BROILER concept of initially holding the Mediterranean and the Cairo-Suez area. The new plan, codenamed HALFMOON, called for two phases of operations during the first twelve months of war. In the first phase (D-Day to D+6 months) primary tasks, in addition to the atomic air
offensive, included: (1) defense of the Western Hemisphere, (2) evacuation of allied occupation forces in Europe, (3) securing the Mediterranean line of communication to the extent possible, (4) establishment of air and naval bases in Iceland and the Azores, and (5) defense of the Cairo-Suez base area.

Initial defense of the United Kingdom was left to the British. No defensive forces were committed to Spain, Sicily or Turkey and defense of the Mediterranean line of communication was left to a single large-carrier (CV) task group. The planners optimistically expected the Mediterranean to remain open for six months, but they offered no guarantee. Initial defense of the Cairo-Suez area was limited to four and a third British and American Army divisions and less than six fighter groups (about 900 aircraft). The planners hoped that a Soviet ground offensive against the area could be delayed until after D+180 days when an additional two and a third American divisions and three Air Force fighter groups could be in place. However, retardation of the Soviet advance into Palestine and the lower Persian Gulf area was left primarily to limited tactical air forces not otherwise required for air defense of the Cairo-Suez area. Also, if the Mediterranean line of communication was lost before D+6 months, the deployment of additional defense forces to Egypt would be delayed.

The initial atomic offensive was to be launched as quickly as possible from bases in Britain, the Cairo-Suez area, and the Ryukyus. If Britain and the Cairo-Suez area were untenable, bases in Iceland and the Khartoum area would be employed. Optimistically, the planners hoped to initiate atomic operations from all forward bases by D+15 days. Only
five medium bomb groups—two in the U.K., one at Cairo-Suez bases, and
two in the Ryukyus—were expected to be available for initial strategic
air operations. However, in accordance with the recent Key West agree­
ment, HALFMOON provided that "carrier task groups will supplement and
support the air offensive to the extent practical consistent with their
primary task." A decision on specific targets for the initial air
offensive—an increasingly sticky interservice issue—was deferred by
the planners.24

The second phase of HALFMOON operations (D+6 to D+12 months) called
for an intensified strategic air campaign with both atomic and conven­
tional weapons and the build-up, where possible, of forces to assist in
the defense of the United Kingdom and the Cairo-Suez area. The planners
did not expect that operations aimed at the recovery of the Mediterranean
line of communication or Middle Eastern oil areas could be mounted before
the end of the first year of war. By that time, they hoped to accumulate
an allied force of about twenty-three divisions (eleven American and
twelve Commonwealth) and twenty-six air groups (twenty-two American and
four Canadian) for either an operation against Sicily to reopen the
Mediterranean or operations in the Middle East to regain control of
petroleum resources.25

Another important aspect of the HALFMOON concept was that for the
first time the planners accepted the possibility of an initial, albeit
limited, defense in Europe along the Rhine. Conclusion of the Brussels
Pact in March 1948 and President Truman's evident support for Western
Union, together with recent discussions between U.S. and British military
planners, raised anew the issue of Western European defense. HALFMOON
did not provide for the defense of Western Europe, but the plan called for the initial withdrawal of allied occupation forces in Germany and Austria to a temporary defense line along the Rhine to take "maximum advantage of all opportunities to delay Soviet advances." Thereafter, allied forces would be evacuated through the French coastal ports or withdrawn into Spain. No reinforcement of the European garrisons was anticipated.26

The joint planners resisted the idea of a major commitment in Western Europe. In comments on British strategic views that embraced a forward defense of the continent, the Joint Strategic Survey Committee argued that the United States should limit its defensive commitments in order to retain "freedom of action." British views were characterized as narrowly defensive and "unrealistic." The JSSC insisted that emphasis should be placed on "early offensive use of our naval and air potential" rather than on purely defensive undertakings with limited prospects of success. Fearing its implications for American strategy, the military chiefs approached the whole issue of American participation in a Western European defense alliance with extreme trepidation.27

The critical difference between HALFMOON and FROLIC was that HALFMOON proposed to accomplish far more ambitious initial undertakings with essentially the same number of forces. Indeed, the available forces did not even approach earlier BROILER estimates of those required to implement the same overall concept of operations. The planners reconciled that evident disparity by simply adjusting their estimate of Soviet capabilities where it suited them to do so. If they could not provide for the defense of the United Kingdom, the Cairo-Suez area, or
other objectives before a certain date, they assumed that the Soviets
could not or would not attack those objectives before that date.\textsuperscript{28}

Temporarily encouraged by the prospect of increased force levels in
fiscal 1949, the planners provided for a slightly more rapid build-up
and deployment of forces in HALFMOON than was anticipated in FROLIC.
The differences, amounting to about two ground divisions and four air
groups, were actually inconsequential. In the final analysis, the suc-
cess or failure of HALFMOON depended, no less than FROLIC, on the effec-
tiveness of the atomic air offensive. Yet, HALFMOON accepted far greater
risks to that basic undertaking than did FROLIC. The early loss of
either the United Kingdom or the Cairo-Suez area would have been disas-
trous. Nor did HALFMOON satisfy Admiral Denfeld's insistence on early
recovery of Middle Eastern oil resources. Under FROLIC such operations
were planned for about D+10 months. Under HALFMOON those operations
would be delayed at least beyond D+12 months.\textsuperscript{29}

Despite its evident weaknesses, the HALFMOON concept proved to be
the lowest common denominator of service agreement. Admiral Denfeld
absolutely refused to approve FROLIC. General Bradley and General
Spaatz' successor, General Vandenberg, were almost as unenthusiastic
about HALFMOON. However, in the misplaced expectation of increased
budget funding in fiscal 1949 and under heavy pressure from Forrestal
to reach a decision, Vandenberg and Bradley acquiesced. On May 19 the
JCS approved HALFMOON as the basis for service and unified command oper-
tional planning for fiscal 1949. Thus, HALFMOON became the first
agreed Joint Outline Emergency War Plan in the postwar period.\textsuperscript{30}
In the midst of the European crisis in March, the JCS recommended a $9 billion supplement to the fiscal 1949 defense budget to provide for a seventy group Air Force and an additional 615,500 military personnel. That amounted to virtually doubling the original $10 billion request sent to Congress in January. President Truman reluctantly agreed to a $3 billion supplement that would provide for an augmented fifty-five group Air Force and 349,500 additional military personnel. Subsequent negotiations between Forrestal and the JCS resulted in an agreement, tentatively approved by the President, to request a supplement of $3.5 billion including $2.4 billion in immediate fiscal 1948 obligational authority for aircraft procurement that would provide for a sixty-six group Air Force and increases in naval aviation. On May 6, the same day HALFMOON was presented to the JCS, President Truman reduced the $3.5 billion figure to $3.1 billion. In the meantime, however, the Congress approved the original aircraft procurement package including an additional $822 million for the Air Force to support a full seventy group program. 31

Encouraged by those events and the still bright prospect of other increases in the fiscal 1949 budget, Vandenberg and Bradley gave reluctant approval to the HALFMOON concept. Their hopes were almost immediately dashed. President Truman had already warned Forrestal and the JCS that the fiscal 1950 defense budget would be limited to $15 billion. In early June, the President directed Forrestal to limit the expenditure of fiscal 1948 supplemental and fiscal 1949 funds to a level consistent with the anticipated fiscal 1950 budget ceiling. In effect, Truman
impounded a large part of the earlier budget increases with which the JCS hoped to reduce the force deficiencies in HALFMOON.\textsuperscript{32}

Despite approval of HALFMOON, serious interservice disputes persisted. Disagreements over service functions, particularly control of strategic atomic operations, aggravated by the gathering storm over the fiscal 1950 defense budget, interfered with the development of joint directives for the implementation of HALFMOON. The larger problems manifested themselves in disagreements over specific service missions and the locus of detailed planning responsibilities with respect to the strategic air offensive and operations in the Middle East outlined in HALFMOON. Until those disagreements could be resolved, strategic planning was at a standstill.

In late May, the JSPC presented the JCS with a set of draft directives to the services and unified commands for the implementation of HALFMOON. Those directives were designed to expedite operational planning by assigning specific functional and planning responsibilities based on the Joint Outline Emergency War Plan. However, the joint planners were unable to reach agreement in two particularly vital areas. First, they disagreed on the level of Navy participation in the strategic air offensive. The second area of disagreement was largely procedural. No unified command existed to prepare plans for the establishment and defense of Cairo-Suez area bases or for operations in the Mediterranean and Middle East. Army and Air Force planners insisted that those responsibilities should be assigned to one of the services. The Navy planners insisted that a special joint planning agency be established for that purpose.\textsuperscript{33}
What was at stake in both issues was the preservation of service roles and missions. That was a particularly sensitive problem in the atmosphere created by President Truman's directive in early June impounding fiscal 1948 supplemental and fiscal 1949 defense funds. Indeed, a few days after the President's directive the joint planners amended the overall force deployment schedules for HALFMOON, effectively reducing already severely limited capabilities.34

At the end of June, the JCS appointed an ad hoc committee consisting of the three service Operations Deputies to resolve the specific disagreements over HALFMOON implementing directives. After almost a month's work the committee agreed to adopt the Navy view on both main issues, and to ratify the revised HALFMOON deployment schedules. Although approved by the JCS on 23 July, the agreement only postponed resolution of fundamental disputes. In regard to Navy participation in the strategic air offensive, the agreed directives were purposely vague and therefore open to differing interpretations. In regard to operational planning for the Middle East the agreement only provided a joint organizational framework for continued debate. The agreement did allow detailed operational planning in other areas to proceed. But, by the time the agreed directives were forwarded to the service and unified command planners in early August, they were already obsolete.35

A test of the logistic feasibility of HALFMOON conducted in mid-August revealed very serious deficiencies in air and sea transport, supply, petroleum reserves and specialized personnel, particularly construction engineers necessary to establish forward bases. The joint logistic planners warned that, unless immediate action was taken to
remedy those problems, HALFMOON could not be implemented. That was a
gross understatement. In any case, the JCS took no immediate action.
Only in December were joint logistic planning directives for HALFMOON
finally approved and dispatched by the JCS. By that time the JCS was
already considering a combined British-American-Canadian emergency plan,
codenamed TROJAN, to supersede HALFMOON.36

Discussions between American, British, and Canadian strategic plan-
ners began in early 1948 in anticipation of American participation in
the London Five Power Military Talks. In May, the combined planners
agreed to adopt the general strategic concept embodied in HALFMOON as
the basis for unilateral national plans. At the same time they began
work on a coordinated plan based loosely on the strategic concept of
HALFMOON and the force requirements of FROLIC/GRABBER. Completed in
early November, Plan TROJAN (also known as ABC 101) outlined an allied
concept of operations for the first twelve months of a war beginning
after 1 January 1949. For the American planners, TROJAN constituted a
bridge between fiscal 1949 and fiscal 1950 emergency war planning and
reflected the downward reprogramming of forces in anticipation of
limited fiscal 1950 budget funding.37

The TROJAN concept was virtually identical to that of HALFMOON.
Both plans provided for an initial atomic air offensive to be launched
from bases in Britain, the Cairo-Suez area, and the Ryukyus during the
first three months of war. In case Britain and the Cairo-Suez area
became untenable, alternate bases in Iceland and the Khartoum area
would be employed. Unlike HALFMOON, TROJAN called for operations to
recover Middle Eastern oil areas before D+12 months. The most important
difference between the two plans was that TROJAN provided for smaller overall forces than HALFMOON. Nevertheless, a logistic feasibility test of the plan, conducted in December 1948, indicated that TROJAN far exceeded American and allied resources for its fulfillment.  

General Vandenberg and Air Force planners were firmly convinced that neither HALFMOON nor TROJAN provided a realistic basis for war planning. Vandenberg refused to accept TROJAN as it was presented to the JCS. In addition to the logistic and force deficiencies of the plan, he pointed to other serious weaknesses. He was particularly alarmed over the vulnerability of both U.K. and Cairo-Suez bases to seizure or neutralization after about D+3 months. Although the initial atomic offensive would be completed by that time, subsequent strategic air operations aimed at exploiting initial attacks would be interrupted. Even if Cairo-Suez bases were retained, Vandenberg doubted that operations to recover Middle Eastern oil could be carried out with the meager resources available.

Vandenberg insisted that the joint planners must develop a new plan to replace TROJAN based on a "realistic" estimate of forces available under fiscal 1950 budget limitations. Pending the completion of that plan, Vandenberg agreed to approve only that part of TROJAN outlining operations during the first ninety days of war—essentially the initial atomic air campaign—as an interim emergency plan. Vandenberg adamantly refused to compromise and the JCS finally approved TROJAN in late January 1949 on the basis of the Air Force position. As it turned out, TROJAN remained the only approved emergency war plan throughout 1949, although it was essentially unworkable.
The Newport Agreement

The disputes over war plans stemmed from the failure of the Key West agreement to resolve fundamental differences between the Air Force and the Navy over the specific division of service roles and missions, especially those relating to strategic atomic operations. Spaatz revived that issue in March only a few days after the Chiefs returned from Key West. His tactic was to insist that the JCS agree to designate the Air Force Chief of Staff as its executive agent for directing and supervising the operational functions of the Armed Forces Special Weapons Project. That avoided a direct confrontation with the Navy over the issue of who would provide what forces for strategic air warfare. But, if the JCS agreed to Spaatz' proposal the effect would be to exclude the Navy from operational decisions having important implications for the extent of its participation in strategic atomic operations. If the Air Force could not prevent the Navy from developing carrier based strategic air forces, then the Air Force would try to control allocation of the atomic weapons themselves.\(^41\)

Admiral Denfeld did not formally reply to Spaatz' proposal until July after the final memorandum of record interpreting the meaning of the Key West agreement was completed and approved. On the strength of that memorandum, which prevented one service from denying either forces or weapons to another service, Denfeld refused to accept the Air Force proposal. He was willing to accept a compromise suggested by General Bradley that would require the AFSWP to report separately to each of the service chiefs on those operational matters related to their own services. But, Denfeld insisted that conflicts over the allocation of
weapons or other resources by AFSWP must be resolved by the JCS collectively. General Spaatz's successor, General Vandenberg, found the Navy's proposed compromise less attractive than the status quo. Unable to reach agreement, the JCS referred the problem directly to Secretary Forrestal.\(^42\)

The specific issue in dispute was the relationship of the AFSWP to the individual services and the JCS. But, as everyone involved in the disagreement recognized, the real problem was the division of service roles and missions. In early August, Forrestal asked General Spaatz and Admiral John J. Towers (both having retired from active service) to review the Key West agreement and recommend changes or refinements in the definition of service functions as they related to control of atomic operations and the role of carrier aviation in strategic air warfare.\(^43\)

Spaatz and Towers agreed that there was no need to alter the basic statement of service functions in the Key West agreement. What was needed was a clearer interpretation of the division of responsibility for strategic air warfare. Unfortunately, their formula for accomplishing that was no less ambiguous than the memorandum of record approved in July. Each service, they agreed, should have "exclusive responsibility and commensurate authority" in the fields of its primary missions. But, exclusive responsibility and authority in a given field should "not imply preclusive participation." Applied to the role of carrier aviation in strategic air warfare that meant the Navy could not build carriers intended exclusively for the strategic air mission which was the primary responsibility of the Air Force. But, neither could the Air Force preclude the Navy from building carriers intended for general
naval functions simply because they were also capable of contributing to the strategic air effort. 44

The emptiness of that formula was demonstrated by Spaatz' and Towers' inability to agree on the specific issues of who should control AFSWP operations and the allocation of atomic weapons to carrier air forces. In the first instance, Towers argued that the operational functions of AFSWP should not be vested in any one service, since all three services had an interest in atomic operations. Spaatz argued that the Air Force had the primary interest in the operational effectiveness of the AFSWP and should be vested with the authority to direct and supervise the organization's activities and preparations. In the second instance, Admiral Towers insisted that no arbitrary restrictions should be placed on the allocation of atomic weapons to the services. Spaatz argued that the allocation of atomic weapons should be in accordance with established priorities and requirements of the war plan. 45

Over the weekend of 20-22 August, Forrestal brought the Joint Chiefs together at Newport, Rhode Island, in another attempt to resolve disagreement over the division of service functions. The result was an agreement to adopt the Spaatz-Towers formula giving each service exclusive responsibility and authority for planning and programming in the area of its primary functions, but not the right of "preclusive participation" in that field. Nevertheless, the Chiefs were unable to apply that formula to the issue of who would direct and supervise the AFSWP. As an interim measure, they agreed that AFSWP would "report" to the Air Force Chief of Staff on operational matters pertaining to the current
Joint Outline War Plan, HALFMOON, only. A decision concerning the permanent relationship of AFSWP to the JCS was postponed indefinitely.46

**Industrial Mobilization Plan COGWHEEL**

Ultimately, the Newport formula was no more successful than the Key West agreement in resolving disputes over service roles and missions. In large part, the practical problem was budgetary rather than functional. Existing budgets simply would not support the overall force levels seen as necessary by the Air Force and the Navy to carry out their primary functions. Within weeks of the Newport meeting, that fact was clearly demonstrated by renewed disputes over force requirements for carrying out basic strategic plans.

General Vandenberg and the Air Force planners were convinced that implementation of the HALFMOON concept was impossible with existing forces. Admiral Denfeld and the Navy planners—quite apart from their desire to ensure Navy participation in the air offensive—were dissatisfied with the limitation of a wide range of non-strategic naval forces and missions in the plan. The Navy believed that the limitation of those missions was due to an inordinate emphasis on the strategic air offensive. Ultimately, that dissatisfaction spilled over in an increasingly bitter debate between the Air Force and Navy in regard to the merits as well as the methods of strategic bombardment. In the meantime, related disagreements over joint strategic plans contributed fuel to the fire.47

The most fundamental of those disagreements concerned the development of force requirements for a fiscal 1950 joint mobilization plan. Joint mobilization planning had not progressed significantly since late
1947 when the joint planners first established approximations of overall force requirements. Those estimates were approved by JCS in October 1947, but subsequent review by the joint logistic planners and the Munitions Board revealed that they far exceeded the nation's industrial mobilization capabilities in the specific period of time. In June 1948, the joint strategic planners suggested that FROLIC and HALFMOON be adopted as guidance for mobilization planning. However, these short-range emergency plans were based on estimates of available rather than required forces. Moreover, they covered only the first twelve months of war and were therefore inadequate for long-range mobilization planning. General Bradley brought the problem before the JCS, but little was accomplished until late July when Secretary Forrestal insisted on the immediate development of useful mobilization guidance.48

The result was a Joint Outline War Plan, codenamed COGWHEEL, for a war beginning in fiscal year 1950. The plan was completed by the JSPC in August. Built on the HALFMOON concept, COGWHEEL outlined basic undertakings and phased force requirements for the first two years of war. The concept of operations for the first twelve months of war was virtually identical to that in HALFMOON, although force deployments were significantly accelerated. Based on the assumption that the initial strategic air offensive had substantially reduced Soviet war-making capacity, COGWHEEL called for operations in the second year of war aimed at increasing the security of existing bases and lines of communication, reopening the Mediterranean, and recapturing Middle East oil areas. The latter objective was to be accomplished by a two pronged offensive through the Persian Gulf and overland from the Cairo-Suez area. Other
operations aimed at the recapture of western Turkey and reopening the
Dardanelles would also be undertaken. If necessary, COGWHEEL contem­
plated the initiation of major overland operations through the Odessa-
Crimea area after about D+21 months to force a withdrawal of Soviet
forces in Western Europe. 49

The basic concept of operations in COGWHEEL was not disputed by the
joint planners. Disagreement focused on whether the Navy should be al­
lowed to include three large, flush deck carriers (CVA), in addition to
the one already approved for construction, in its force requirements.
The debate over this issue offers important insights on the nature of the
more intense debate the culminated in the Revolt of the Admirals almost a
year later. In late 1947, the Navy had proposed construction of three
CVAs in plan CHARIOTEER to be employed in strategic air warfare roles.
In COGWHEEL, the Navy proposed the three carriers as replacements for
war losses and justified them not in terms of their contribution to the
strategic air campaign, but in terms of their contribution to sea control
missions. That was a significant change of view. Nevertheless, the Air
Force and Army planners argued that the carriers were irrelevant to
either mission because they would not be completed before about D+30
months. 50

The Joint Chiefs were unable to reach agreement on the carrier
issue. Therefore, in mid-September they forwarded COGWHEEL along with
their separate views to Secretary Forrestal for a final decision. Admi­
ral Denfeld argued that current war plans depended to an inordinate de­
gree on a strategic bombing campaign that might not succeed. "Our
preparations," he insisted, "must not be premised on an early victory."
The three large carriers were therefore justified as "insurance to cover the exigencies of later developments." General Vandenberg avoided an argument over the merits of strategic bombardment, but opposed the carriers on the grounds that they would not be completed in time to be of use. General Bradley agreed and added pointedly that "the construction of these additional carriers ... implies a lack of confidence in the ability of the Air Force to carry out its primary mission." In that assessment, he was absolutely correct. ^51

The carrier issue, as it related to COGHWEEL, was ultimately decided by Forrestal in the Navy's favor. However, the victory was an empty one. Industrial mobilization feasibility tests of COGWHEEL conducted by the Munitions Board found the plan to be far beyond the capabilities of American industry during the first two years of war. Because both the Air Force and the Navy would enter a war during fiscal 1950 with such limited aviation resources-in-being, aircraft production requirements outlined in COGWHEEL for the first two years after D-Day were almost double the capacity of the aviation industry to produce. ^52

Air Force Operational Plans and Concepts

By early 1948 the existing Air Force Short Range Emergency Plan, EARSHOT, was almost a year old. Routine revision of the plan was initially delayed pending completion of the original BROILER concept. When it became evident that the JCS could not reach agreement on BROILER, the Air Force Planners undertook a major revision of EARSHOT based on unilateral assumptions developed in connection with operational and force requirement planning in late 1947. The revised Short Range Emergency Plan (SREP), completed in early March 1948, called for an initial atomic
offensive against vital Soviet governmental control and industrial centers by three B-29 groups operating from U.K. bases. The initial atomic attacks would be followed by a sustained conventional and atomic campaign by eight to ten additional B-29 groups operating from bases in the U.K., the Cairo-Suez or Karachi area, the Ryukyus, and possibly Alaska. 53

The revised SREP reflected the changing concepts and goals of the Air Staff planners and bore little resemblance to its predecessor plan, EARSHTOT. Instead, it was patterned on SAC Project 14-47, the first SAC operational war plan submitted to Headquarters, USAF, in January 1948. In order to exploit the mass destructive potential of atomic weapons as swiftly as possible, the initial atomic phase was to begin as early as D+9 days. Whereas EARSHTOT was largely a conventional plan supplemented by limited atomic operations, the revised SREP called for the delivery of 180 atomic bombs within a fifty-five day period. Also like SAC 14-47, this ambitious plan suffered from some very serious weaknesses. SAC did not possess three atomic-capable bomb groups. Nor was SAC capable of meeting such a rapid deployment schedule. Moreover, there were not 180 atomic bombs in the stockpile. 54

The revised SREP was obviously unsatisfactory as the basis for realistic operational planning. In late March, the Air Staff began work on another plan codenamed HARROW. Completed in early May and based on Air Force capabilities as of 1 April 1948, HARROW called for an initial atomic offensive by three to four B-29 groups from bases in the United Kingdom beginning as early as D+4 days. Initially, atomic objectives in the plan included fifty priority governmental control and industrial targets in the twenty Soviet urban areas designated for the revised
BROILER concept. The atomic campaign would be accomplished by limited conventional operations carried out by three to four additional B-29 groups based in the U.K. and the Ryukyus, but those were intended primarily for diversionary purposes and escort of atomic carriers. About D+12 months three additional B-29 and one B-36 groups were scheduled to begin atomic and conventional operations from bases in the Karachi area and Alaska. By that time U.K. bases were expected to be untenable and operational units redeployed to Iceland.55

HARROW placed almost complete reliance on the success of the initial atomic offensive to compel a rapid collapse of Soviet war-making capacity. Certainly, that reflected a greatly increased Air Force confidence in the decisiveness of atomic weapons, but reliance on those weapons was also dictated by the complete lack of alternatives. By early 1948 non-atomic, strategic air capabilities were literally nil. In HARROW, a total of only seven medium bomb groups were expected to be available during the first year of war, and that was probably an overestimate. The overall Air Force deployment by D+12 months amounted to less than fifty combat groups, including only eleven strategic air groups. In fact, the air planners anticipated that it would be necessary to deactivate sixteen of the fifty-five groups in the peacetime program in order to obtain enough aircraft for initial commitments.56

The availability of aircraft was a particularly critical factor for strategic atomic operations. The 509th Medium Bomb Group remained the only atomic-capable group in the Air Force because of a shortage of atomic-modified aircraft. HARROW proposed to remedy that situation by scheduling the atomic campaign sortie by sortie. The 509th Bomb Group
and its air transport unit would carry out the initial movement of weapons and aircraft to forward bases. Thereafter aircraft, crews, and weapons would be scheduled individually from the United States to forward bases and on to the targets. That scheme of operations was complex enough, but it was further complicated by the fact that initial availability of bombs from the stockpile was controlled by the rate at which they could be assembled. In turn, bomb assembly depended on the availability of assembly equipment and teams, factors over which the Air Force had virtually no control. During much of 1948 there were no more than one or two qualified bomb assembly teams available. Although HARROW called for atomic operations to begin within a week after D-Day, there was absolutely no chance that schedule could be met.57

Because it was completed before JCS approval of HALFMOON, HARROW was loosely based on the earlier alternate, revised BROILER and FROLIC concepts. In the months following JCS approval of HALFMOON, the Air Force planners made a number of adjustments in HARROW, but a fundamental realignment of Air Force and joint planning was precluded by the continued interservice disputes that obstructed the development of joint operational planning directives. In the meantime, Air Force planners extended and embellished the HARROW concept in accordance with their own strategic and force programming assumptions.58

Many of the operational concepts embodied in HARROW and its immediate predecessor plan, especially the increased emphasis on early initiation of the atomic offensive, derived from force requirements planning begun in late 1947 in connection with the Finletter Commission hearings. The first result of those efforts was an Intermediate Range War Plan
(IRWP), codenamed DARKHORSE. Completed in early December 1947, the DARKHORSE concept called for an initial atomic air offensive against 180 priority targets by six medium bomb groups operating from bases in the United Kingdom, Iceland, Maine, Alaska, and the Ryukyus. The offensive would begin between D+1 and D+5 days and end not later than D+45 days. The similarities between DARKHORSE, SAC 14-47, HARROW, and the initial revision of EARSHOT were not coincidental. Whether they were workable or not, all four plans reflected the changed directions of Air Force strategic thinking. 59

Those changes were even more clearly reflected in the follow-on IRWP developed by the Air Staff between April and June 1948. The new plan, codenamed FIRMER, established force requirements for a war beginning after June 1950 and attempted to reconcile Air Force strategic concepts with increasingly limited budgets. Like DARKHORSE and HARROW, FIRMER emphasized the critical importance of delivering a coordinated, mass atomic attack as soon as possible after the outbreak of hostilities. The plan called for the atomic campaign to begin between D+2 and D+4 days and to end not later than D+45 days. Initial atomic objectives included fifty-three priority targets in twenty Soviet urban centers. 60

FIRMER was to be implemented by a striking force of six augmented medium bomb groups (B-29/B-50). Each group included thirty bombardment aircraft and twenty tankers for aerial refueling and was designed to be self-sustaining over the period of the initial atomic offensive. Osten­sively, the size of the strike force was calculated on the basis of both operational requirements (e.g., number of targets, attrition rates) and anticipated restrictions on Air Force aircraft procurement programs for
fiscal 1950 and fiscal 1951. Clearly, however, the latter consideration was the determining factor. The Air Force programmers concluded that the most likely annual level of aircraft procurement over the next two years would support a striking force of only six augmented groups and still provide for all other Air Force requirements.  

The relatively conservative programming conclusions on which FIRMER was based came in the wake of President Truman's impoundment of fiscal 1948 supplemental and fiscal 1949 defense funds and during the crucial negotiations over the fiscal 1950 defense budget. Although the FIRMER program levels were not immediately adopted as the basis of actual Air Force budget estimates, they nevertheless reflected the strong feeling among senior Air Staff officers that existing joint operational concepts dangerously exceeded current or projected resources for their fulfillment. The FIRMER concept implied a considerable scaling down of joint operations, both strategic and non-strategic. Particularly, the concept implied scaling down or possibly abandoning high risk operations in the Mediterranean and Middle East and concentrating on initial strategic air operations from less immediately vulnerable forward bases in the U.K. and the Ryukyus.

FIRMER was only a transitional plan, but the impact of technology on strategy was quite evident. The prospect of operational aerial refueling systems within two to three years reinforced the air planners' increasing indifference to Middle Eastern bases. On a theoretical level, there was already an enormous amount of concern within the Air Staff over the potential vulnerability of forward bases. That concern
encouraged a rapidly growing commitment to the eventual development of an intercontinental delivery capability.  

In the meantime senior air officers were determined to resist joint operational concepts that overextended existing resources or committed the Air Force to operations having only marginal chances of success. That attitude was manifested in the evolution of Air Force operational war planning during late 1948 and early 1949 and finally in General Vandenberg's refusal to accept the TROJAN concept as anything more than an interim replacement for HALFMOON.

In October and November, the Air Staff undertook a revision of the HARROW concept. The result was a compromise plan that combined aspects of TROJAN, FROLIC and earlier Air Force planning. The new plan provided for initial strategic air operations from Cairo-Suez area bases during the first three months of war or until those bases were no longer tenable. The plan also provided for subsequent deployments to Karachi bases. As a precaution against the early loss of the United Kingdom, increased emphasis was placed on the early establishment of bases in Iceland. Under the new plan, the U.K. was to be used only for a staging area.

Senior Air Staff planners were increasingly concerned about the vulnerability of forward bases. As early as January 1948, they had warned that those bases would increase in vulnerability as Soviet capabilities improved. And, once the Soviets possessed atomic weapons such bases would be completely untenable. General Samuel Anderson, Director of Air Force Plans and Operations, reiterated that view at an Air Force commanders' conference called in early December 1948 to discuss the revised
HARROW concept. Until the Air Force would establish an operational intercontinental capability with the B-36 and aerial refueling, forward bases would continue to be necessary. Nevertheless, the revised HARROW concept marked an important shift in Air Force strategic planning. The plan was intended to fill the gap until longer range capabilities envisioned in the FIRMER concept could be attained.  

The Air Staff planners who worked on HARROW during 1948 were concerned with establishing a broad operational concept within the anticipated resources and capabilities of the Air Force. The details of operational planning were the responsibility of Strategic Air Command planners. Unfortunately, SAC operational planning had not progressed very successfully during 1948. One reason was that the organizational relationship between SAC, Headquarters USAF, and the JCS remained confused. From the time it was created in March 1946, SAC was considered to be a "specified command" under the direct control of the JCS, but it was not formally designated as such until 1949.

Until mid-1948, SAC operational planning was conducted on a virtually unilateral basis. Air Force guidance was limited very largely to aircraft and personnel program directives and operational training directives for the peacetime, overseas deployment of SAC units. In the absence of jointly approved planning directives, SAC war plans were ostensibly based on existing Air Staff emergency plans. In reality, SAC had nothing more than an emergency mobilization and deployment plan (SAC 14-47) before the end of 1948. The joint planning directives for HALFMOON issued by JCS in August 1948 clearly conflicted with existing Air Staff plans. In any case, by the time they reached SAC they were
already obsolete. Only after General LeMay took command of SAC in October 1948 did operational planning proceed energetically. The first seriously credible SAC operational plan was finally presented at the Air Force commanders' conference in December.

In its initial incarnation, SAC Emergency War Plan 1-49, codenamed VENTUROUS, called for the deployment of seven medium bomb groups to U.K. bases and one heavy (B-36) bomb group to Alaskan bases to carry out initial atomic attacks. The plan called for the delivery of seventy-five bombs on thirty-five Soviet urban-industrial centers between D+4 and D+16 days. Specific target complexes and the schedule of operations are shown below.

<table>
<thead>
<tr>
<th>D+</th>
<th>From U.K. Bases</th>
<th>Bombs</th>
<th>From Alaskan Bases</th>
<th>Bombs</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Moscow</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Baku</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Moscow</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Ufa</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Leningrad</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Kuibyshev</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Gorki</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Sverdlovsk</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Dnepropetrovsk</td>
<td>3</td>
<td>Stalinsk</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Kazan</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Magnitogorsk</td>
<td>1</td>
<td>Kemerovo</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>Nizhniy Tagil</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Tbilisi</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Tula</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Saratov</td>
<td>3</td>
<td>Novosibirsk</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>Kiev</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Penza</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Grozny</td>
<td>2</td>
<td>Vladivostok</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>Yaroslavl</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
VENTUROUS differed fundamentally from the revised HARROW concept. The SAC plan called for all initial atomic operations to be conducted from U.K. and Alaskan bases. No deployments to Cairo-Suez, Karachi or Okinawa bases were included. The SAC planners argued that the operational concepts in HARROW and in joint war plans conflicted with existing operational capabilities. The limited number of atomic-capable aircraft, together with the complicated logistics of moving bombs to forward bases and assembling them within the time allowed, required that the number of bases used for atomic operations be kept to a minimum.

As in the original HARROW concept individual aircraft, crews, and weapons were scheduled from U.S. bases and storage sites to forward bases for bomb assembly and then on to the designated targets. Only in this way was it possible to complete the atomic offensive in a minimum period of time.

There was concern among SAC planners that the offensive should be more concentrated. The first attack was planned for D+4 days, but maximum delivery capability would not be reached until some days later when peak bomb assembly rates should be attained. The SAC planners suggested...
delaying initial sorties until a more concentrated attack could be launched. Air Staff planners agreed in principle, but pointed out that stockpiling unexpended bombs at forward bases entailed very serious risks. In fact, the issue was entirely academic since the bomb delivery schedule outlined in VENTUROUS depended on weapon assembly capabilities that did not yet exist.69

Other technical constraints also influenced the nature of the atomic offensive. Target intelligence, particularly vital radar reconnaissance imagery of designated objectives remained scarce. Since peacetime reconnaissance overflights of Soviet targets were impossible at that time, heavy reliance was placed on pre-mission reconnaissance to be executed following the outbreak of war. The tactical problems of penetrating to the targets, requiring fuel-consuming deception and evasion maneuvers, complicated the problem of range limitation. SAC planners were confident that the development of electronic countermeasures (ECM) would solve some of those problems. But, until aerial refueling became operational, SAC plans required missions against the most remote central Russian targets by medium bombers to continue to terminal bases in the Cairo-Suez or Dharhan areas. That limited the number of aircraft available for multiple missions.70

From the outset of war planning in 1946, both joint and Air Force war plans had contemplated a sustained conventional air campaign following the initial atomic offensive. Beginning with the HARROW concept that second phase received less and less emphasis from Air Force planners. That reflected increasing confidence on the part of air war planners in the decisiveness of atomic weapons. But, it also reflected
the limited availability of resources for sustained operations. Both HARROW and VENTUOUS provided for such operations, but not before the end of the first year of war when a reasonable build-up of forces could be accomplished. 71

Analyzing the Strategic Air Offensive

In mid-December 1948, the Air Force presented a modified version of SAC EWP 1-49 (VENTUOUS) to the JCS as the operational strategic air plan for TROJAN. The plan encountered bitter opposition from the Navy and became the focus of intense debate within the JCS. Ultimately the debate led to virtual bureaucratic warfare between the Air Force and Navy, culminating in the B-36 Controversy and the so-called Revolt of the Admirals. The basic issues associated with those events encompassed institutional disagreements over budget allocations and weapons programs, but the underlying strategic issues debated between the Air Force and the Navy related primarily to the effectiveness and reliability of the atomic air offensive. 72

By early 1948, the Navy was openly challenging the wisdom of the Air Force's concept of strategic atomic bombardment. Navy critics questioned whether the atomic offensive could be carried out successfully; or, if it could be carried out, whether its effect on Soviet war-making capacity would justify the heavy investment of defense resources. Until those questions could be resolved, progress toward integrated strategy and force programs was almost impossible. The problem was placed squarely on Secretary Forrestal's shoulders. But, in the absence of an independent source of strategic analysis, Forrestal was forced to continue relying on the divided JCS organization for information and advice.
The problem of providing objective analysis of strategy and weapons occupied Forrestal's attention from the beginning of his tenure as Secretary of Defense. In early 1948, he proposed to establish a Weapons System Evaluation Group (WSEG) under the control of the civilian Research and Development Board. Predictably, the military chiefs objected to that idea on the grounds that such an organization would infringe JCS prerogatives to determine issues of military strategy. Finally, Forrestal reached a compromise solution by providing that the evaluation group be administered by the Research and Development Board, but jointly controlled with the JCS. WSEG was formally established on that basis in December 1948.  

In late October, Forrestal asked the JCS to initiate comprehensive studies of the chances of successfully delivering the atomic offensive and the effects of the attack on Soviet war-making capacity. In accordance with JCS practice before the establishment of WSEG, study of the first matter was assigned to the Air Force as the service with primary interest. However, because of its implications for target selection, study of the second issue was assigned to a joint ad hoc committee headed by Air Force Lieutenant General H. R. Harmon.  

Not surprisingly, the Air Force study concluded that the strategic air offensive "could be delivered as planned." Completed in late December, the study was based on a modification of SAC EWP 1-49 that called for delivery of seventy atomic bombs against targets in thirty Soviet urban-industrial centers. Actually the study consisted primarily of superficial analyses of Soviet air defense capabilities (judged to be primitive at best), SAC bomber tactics for penetrating Soviet air
defenses, and Soviet capabilities against U.S. forward bases. What the study neglected to analyze were the serious logistic constraints that complicated the initial atomic offensive. Even the technical and tactical constraints were glossed over. Intelligence on Soviet air defense capabilities was manipulated to support Air Force optimism. There was no mention of the poor quality of existing target intelligence and no analysis of bombing accuracy. Operational attrition rates—estimated at twenty-five percent—were not satisfactorily explained. The study admitted that the vulnerability of forward bases presented "certain risks," but the Air Force claimed that those risks were "not unreasonable" during the period in which the initial atomic offensive would be carried out, i.e., during the first month of war.\(^\text{75}\)

As far as the Navy was concerned, the Air Force study was unconvincing. Admiral Denfeld frankly questioned the validity of the Air Force analyses of Soviet air defenses and SAC penetration capabilities. He insisted that the Air Force study be referred to the JSPC and JIC for detailed review. Denfeld also recommended that Air Force bomber tactics be subjected to jointly conducted service tests to determine their actual feasibility. General Vandenberg—undoubtedly aware that the existing strategic air offensive plan had more holes in it than even Admiral Denfeld suspected—lost patience. He bluntly asserted that only the Air Force possessed the necessary experience and background to properly assess strategic air weapons and techniques. He insisted that the Air Force's study be approved and forwarded to Secretary Forrestal.\(^\text{76}\)

Denfeld refused to be intimidated. He could not prevent the Air Force's study from going on to Forrestal, but he forcefully registered
his dissenting views with the Defense Secretary. In addition, Denfeld enlisted General Bradley's support for a joint review of Air Force intelligence estimates. That proved somewhat embarrassing for the Air Force. The review, conducted by the Joint Intelligence Group in cooperation with the service intelligence agencies, revealed that the Air Force had oversimplified the intelligence presented in its study and omitted important details. The JIC did not flatly dispute the Air Force's conclusions, but the consensus was that existing intelligence on practically every aspect of the strategic air offensive was too uncertain for firm conclusions. That was nearly as damning as an outright rebuttal of the Air Force analysis.

General Bradley, who was also beginning to have doubts about Air Force strategic plans, insisted that the whole matter be thoroughly re-examined. He recommended that the JIC prepare a comprehensive intelligence estimate of Soviet capabilities affecting the air offensive and that the recently established Weapons System Evaluation Group study the dependability of air weapon systems. Vandenberg was compelled to agree.

Despite increasing criticism of air war plans, senior Air Force officers remained confident that they could deliver a decisive atomic attack against the Soviet Union if called on to do so. During February and March 1949, SAC continued to refine the details of the emergency war plan. General LeMay's goal was to develop the capability to deliver a single mass atomic attack in order to achieve the greatest possible effect. That goal would remain logistically impossible for some time, but by early 1949 LeMay and his staff had modified their operational plans
to compress the initial atomic offensive into a shorter period of time. LeMay was also confident that SAC could successfully deliver the atomic offensive as planned. He estimated that existing Soviet air defenses against high altitude attacks could be penetrated with operational losses not exceeding fifteen to twenty-five percent. LeMay was concerned about the potential vulnerability of SAC forward bases in the United Kingdom, but he argued that for the short-range future the risk was acceptable.\textsuperscript{79}

In April, the Air Force carried its case directly to President Truman. General LeMay and members of his staff gave the President a detailed presentation of the SAC operational plan including an appraisal of Soviet capabilities and Air Force weapon systems. The President was apparently impressed, but not entirely convinced. Immediately afterward, Truman asked Secretary of Defense Louis Johnson to provide him with a joint evaluation of air war plans. In response, Johnson directed the JCS to accelerate its review of the intelligence and weapons aspects of the air offensive.\textsuperscript{80}

While the JCS debated the chances of successfully delivering the atomic offensive, General Harmon's ad hoc committee, charged with analyzing the effects of the offensive on Soviet war-making capacity, completed its work. Essentially, the study was concerned with analyzing the merits of the targets selected for attack. That had far reaching implications for the particularly sensitive issues of how atomic targets should be chosen and who should choose them. For all practical purposes, the Air Force controlled strategic target selection, but the issue had never been formally decided by the JCS. Air officers insisted that the
responsibility was theirs since strategic bombardment was the primary mission of the Air Force. The Navy and Army argued that targets should be selected jointly. Who should choose targets was not a specific concern of the Harmon Committee, but the Air Force and Navy never lost sight of the possible implications of the committee’s work for their roles and missions.81

By February 1949, the TROJAN target system—embodied in the constantly changing SAC EWP 1-49—had been expanded to 147 objectives in seventy Soviet urban-industrial centers. The specific target complexes are listed below.

| Alapayevak | Izhevak | Minsk | Stalinsk |
| Alma Ata | Kalinin | Molotov | Sverdlovsk |
| Arkhangelsk | Kazan | Molotov | Taganrog |
| Astrakhan | Kemerovo | Moscow | Tashkent |
| Baku | Khabarovsk | Nikolayev | Tbilisi |
| Barnaul | Kirov | Nizhniey Tagil | Tula |
| Batumi | Kharkov | Novosibirsk | Ufa |
| Chelyabinsk | Kramatorsk | Odessa | Ulyanovsk |
| Chkalov | Krasnodar | Omsk | Vladimir |
| Dnepropetrovsk | Kolemma | Orsk | Vladivostok |
| Dneprodzerzhinsk | Kalnevelsk | Penza | Voronezh |
| Drdzhonikidze | Kuibyshev | Riga | Voroshilovgrad |
| Dzerzhinsk | Leningrad | Rostov | Yaroslavl |
| Gorki | Kiev | Saratov | Yamakiyeve |
| Gerlovka | Magnitogorsk | Shoherbakov | Yrevan |
| Grozny | Makeyevka | Stalingrad | Zaporozhye |
| Irkutsk | Krasnogorsk | Stalino | Zhdanov |
| Ivanovo | |

The Air Force claimed that destruction of those target complexes would result in wiping out seventy to one hundred percent of critical Soviet
war industries such as petroleum refining, aviation gasoline production, and aircraft, submarine, electronics and basic armament production. 82

Both the Army and Navy severely criticized the target system proposed by the Air Force for Plan TROJAN. An Army Intelligence Division evaluation of the distribution of Soviet war industry, made available to the Harmon Committee, pointed out the almost complete lack of reliable intelligence to adequately pinpoint individual targets. "Industries that have been designated as within an urban area," the Army evaluation stated, "may in reality be many miles from the city proper." Navy intelligence estimates, also made available to the Harmon Committee, supported the Army view and recommended that the initial atomic offensive be scaled down or at least postponed in order to allow the collection of more dependable target intelligence after the outbreak of war. 83

Air Force planners were not unaware of those problems, although in self-defense they tended to minimize their importance. In fact, the need for pre-mission target reconnaissance played an important part in the SAC planners' decision to reschedule the first atomic sorties in the operational plan from D+4 to D+7 days. Nevertheless, Air Force planners were extremely sensitive to the implications of external criticism. When the Harmon Committee visited SAC Headquarters in February 1949, the reception was so icy that General Vandenberg cautioned LeMay against an attitude of "hypersensitivity." 48

The Harmon Committee submitted its evaluation of the effects of the planned air offensive in May. The committee closely examined economic and industrial intelligence on the Soviet Union provided by the service intelligence agencies and the CIA together with specific target
intelligence provided by the Air Intelligence Division of the Air Staff. Although there was some reluctance on the part of the Strategic Air Command to reveal certain operational details not strictly within the scope of the committee's inquiry, the Harmon group had access to all pertinent target and weapons data.

The committee's report was predicated on the assumption that the Strategic Air Command could accurately deliver "the full number of bombs" specified for Plan TROJAN. The report concluded that the cumulative effects of that offensive would result in a thirty to forty percent overall reduction of Soviet industrial capacity. That assessment conflicted with more optimistic Air Force claims. However, the report added that high priority industrial targets such as petroleum and aviation gasoline production would "suffer severe damage." Despite an estimated 6.7 million direct casualties as a result of atomic attacks, the committee doubted that the psychological effects of the offensive would appreciably impair the Soviet war effort. "For the majority of Soviet people," the committee concluded, "atomic bombing would validate Soviet propaganda . . . and increase their will to fight."

Based on joint intelligence estimates of initial Soviet offensive capabilities, the committee concluded that the atomic air offensive would not prevent Soviet armed forces from advancing rapidly into Western Europe, the Middle East, and the Far East. Thereafter, however, the reduction of petroleum supplies and other critical items would greatly curtail the mobility of Soviet forces, reducing the scale of offensive operations. Soviet air forces would be especially affected by the fuel shortage.
Because it was the product of a joint committee in which all three services had a major vested interest, the Harmon report was a compromise document that neither fully validated nor invalidated specific Air Force claims for the initial atomic offensive. Nevertheless, the report largely confirmed the central role of atomic weapons in American general war strategy. That trend was endorsed in the last paragraph of the committee's report.

The atomic bomb would be a major element of Allied military strength in any war with the USSR, and would constitute the only means of rapidly inflicting shock and serious damage to vital elements of the Soviet war-making capacity. . . . From the standpoint of our national security, the advantages of its early use would be transcending. Every reasonable effort should be devoted to providing the means to be prepared for prompt and effective delivery of the maximum numbers of atomic bombs to appropriate target systems.

The Harmon report did not directly address the issue of what constituted "appropriate" target systems. That issue remained the subject of serious disagreement between the Air Force and the Navy.

Senior Air Force officers were generally pleased with the conclusions of the Harmon Committee. In comments on the report to the JCS, General Vandenberg noted only a few areas of dissatisfaction. He emphasized that the level of destruction effected in high priority war industries would be far greater than that implied by the thirty to forty percent reduction in overall industrial capacity cited in the committee's report. In addition, he believed that the physical disruption of Soviet command and control facilities had not received adequate attention. Vandenberg also argued that it was impossible to state positive conclusions about the psychological effects of the atomic offensive. He
believed the potential effects might be more serious than the committee estimated, however.\textsuperscript{89}

The Navy had every right to be disappointed by the general tenor of the Harmon report, but Admiral Denfeld apparently saw in the document what he wanted to see. He emphasized that the committee's conclusions were predicated on the successful delivery of one hundred percent of the bombs allocated—an unlikely achievement. He objected unsuccessfully to the inclusion of General Vandenberg's comments in the JCS letter transmitting the report to Secretary of Defense Johnson. But, Denfeld was apparently more interested in the outcome of the continuing study of SAC delivery capabilities and the debate over the procedures for atomic target selection.\textsuperscript{90}

The JCS approved the Harmon Committee report in July 1949 and sent it to Secretary Johnson with the expectation that it would be forwarded to the President. In fact, Johnson did not forward the report to Truman. Despite his earlier request for a copy of the report, Truman had apparently forgotten the issue. Not until November, in the wake of the Soviet atomic bomb test and the ensuing debate over the development of thermonuclear weapons, did the President remind Johnson to send the report to the White House.\textsuperscript{91}

While the Harmon Committee analyzed the effect of the atomic offensive on Soviet war-making capacity, the Joint Intelligence Committee proceeded with a full scale reexamination of air intelligence estimates. As directed by the JCS in April, that effort was intended to form the basis of an analysis by the Weapons System Evaluation Group (WSEG) of Strategic Air Command capabilities to successfully deliver the atomic
offensive. The JIC report was submitted to JCS in late August following a careful review by the service intelligence agencies. The report generally confirmed the Air Force's original assessment of Soviet air defense capabilities. Soviet radar technology and equipment was indeed primitive. Airborne electronic intelligence probes along the borders of the Soviet Union indicated that both perimeter and area early warning radars existed, but their range was limited and they were easily susceptible to electronic countermeasures. Other intelligence indicated that the Soviet Air Defense Forces (PVO) were seriously deficient in effective ground control intercept and airborne intercept radar. The Soviets had developed high altitude jet interceptors and possibly all-weather, night interceptors, but such air defense weapons were not thought to be operational in large numbers. Without effective ground control and airborne intercept capabilities, they did not pose a serious threat to high altitude penetration of Soviet airspace.\(^{92}\)

The accuracy of those conclusions was partially confirmed when the CIA began covert overflights of the Soviet Union in early September 1949. The overflights by old C-47s were invariably detected, as evidenced by frantic radio communication between Soviet radar stations and regional air defense command centers. But, Soviet fighters were never able to intercept and destroy a single aircraft. The CIA overflights were used primarily for agent insertions in remote areas and seldom approached large urban centers where the heaviest concentration of air defense assets might be expected. Nevertheless, the overflights demonstrated serious weaknesses in the Soviet air defense system.\(^{93}\)
The conclusions of the JIC report in regard to the vulnerability of American forward bases in the United Kingdom revealed serious problems. The JIC estimated that the Soviets could deploy over 1500 combat aircraft exclusively for operations against the U.K. as early as D+10 days, when the atomic offensive would barely be underway. By D+30 days that number would more than double. Exactly how that would affect strategic air operations from U.K. bases depended on how the Soviets employed their offensive capability. Assuming they would concentrate their efforts on allied air bases, the implication was that the atomic offensive would be seriously disrupted.94

JIC analysis of target and navigational intelligence revealed even more serious problems. Available navigational charts, city plans and mosaics, and aerial photography of the seventy Soviet urban areas designated as target complexes were outdated and inaccurate. Many of the navigational charts were based on cartographic data collected before 1917 and contained geodetic errors of 2000 feet to ten miles. Captured German and Japanese aerial photographs of a majority of the cities were available, but that information was at least four to seven years old. In many cases, the specific location of bombing objectives within the designated seventy cities was unknown. In fact, that was almost irrelevant since the principal problem for SAC navigators would be to locate the cities in the first place.95

Development of the OffTackle Concept

When the Soviet atomic bomb test was revealed in late September 1949, the WSEG analysis of the atomic campaign outlined in TROJAN,
directed by the JCS in April, had barely gotten underway. However, the joint planners had already begun work on a new Joint Outline Emergency War Plan (JOEWP) to replace TROJAN and increase the scope and intensity of the atomic air offensive. Development of a JOEWP to replace TROJAN was delayed by the continuing dispute within the Administration concerning the fiscal 1950 defense budget and by the increasingly bitter interservice dispute over strategic air warfare. Development of a new plan was also complicated by increased political pressure for the defense of Western Europe. The joint planners began preliminary studies of an alternate plan as early as September 1948, but not until April 1949 did the JCS finally direct the planners to prepare a new JOEWP based on forces expected to be available in fiscal 1950.96

The new plan, codenamed OFFTACKLE, would cover the first two years of a war beginning after 1 July 1949. Basic undertakings dictated by the JCS included: (1) defense of the Western Hemisphere, (2) defense of essential base areas in the United Kingdom, the western Mediterranean, and if possible in the eastern Mediterranean/Cairo-Suez area, and (3) an early atomic air offensive against vital elements of the Soviet war-making capacity. In addition, the JCS required that the plan "be so drawn that, if possible, a substantial bridgehead be held in Western Europe."97

Work on OFFTACKLE progressed slowly. The principal problem confronting the planners was to establish an overall strategic concept that was agreeable to the three services and yet consistent with the resources available under the fiscal 1950 budget. Since the course of military operations would be largely determined by allied capabilities in the
early months of war (i.e., those capabilities most directly related to peacetime budgets), agreement on initial tasks and deployments was the critical factor in shaping the overall strategic concept. Thus, the planners concentrated their early efforts on outlining operations to be undertaken during the first year of war, especially during the first three months.\footnote{98}

A very general, overall concept and phasing of operations was established in the first two drafts of OFFTACKLE, completed in May 1949. The plan was divided into four operational phases. The first phase (D-Day through D+3 months) included the initial atomic air offensive and priority deployments to forward bases. The second phase (D+3 through D+12 months) included continuation of the air offensive, operations aimed at stabilizing the Soviet advance, increasing the security of base areas, and building up forces for subsequent operations. The third and fourth phases (D+12 through D+24 months and D+24 months through the end of the war) included the initiation of offensive operations in Western and Eastern Europe aimed at liberating Soviet occupied nations and defeating enemy armed forces.\footnote{99}

Not surprisingly, serious disagreement between the Navy and Air Force planners over the nature, timing, and effects of the atomic air offensive was evident from the outset. The Air Force and Army planners insisted that the atomic air offensive must be initiated at the earliest possible moment. The Navy planners argued that the atomic air offensive be postponed until the following conditions were met: (1) Air Force units were fully deployed and operationally prepared for the "maximum rate of delivery," (2) target intelligence was updated by pre-mission
strategic reconnaissance, (3) atomic weapons were assembled and stock-piled at forward bases, and (4) forces were available for the immediate exploitation of the effects of the atomic offensive. The first three of those conditions were not unreasonable. The last condition, as the Navy planners knew, would mean postponing the air offensive for as long as six months to a year. 100

A more fundamental disagreement between the Air Force and Navy planners concerned the nature of strategic atomic targets and the role of carrier-based aircraft in the atomic offensive. The Air Force planners insisted that the atomic offensive must "be aimed at vital elements of the Soviet war-making capacity with a view to destroying the will and/or means of the USSR to wage war . . . ." The Navy planners interpreted the objectives of strategic air warfare differently. They insisted that priority be given to tactical and quasi-strategic targets the destruction of which would "result in the prompt retarding of the Soviet advance into Western Eurasia" and have a "direct effect upon deployed enemy forces." Of course, such target priorities would provide a wider range of atomic air missions for naval aviation. Specific atomic targets for OFFTACKLE were not detailed. That issue was separately considered by the JCS during the following months. However, the planners did agree in principle that strategic atomic targets should be jointly decided. 101

Despite Navy objections, limited resources and increasing pressure for the defense of Western Europe caused the OFFTACKLE planners to shift the geographical locus of operations away from the Middle East toward the western Mediterranean and the United Kingdom. The political
necessity to defend Western Europe was no longer disputed openly by the military planners. U.S. policy, they noted reluctantly, required "holding a line covering the Western European complex preferably no farther to the west than the Rhine." However, the planners argued that such a policy was militarily "infeasible with the forces available in FY 1950." At best a "substantial bridgehead in Western Europe" might be saved, but the planners were not optimistic. Instead, they aimed at providing for an early return to the European continent. At minimum, that required immediate steps to secure operational bases in the United Kingdom and in the western Mediterranean-North African area including as much of the Iberian peninsula as possible. Securing those geographical areas was given a priority equal to that of the strategic air offensive. Operations in the eastern Mediterranean and the Cairo-Suez area—so important in previous war plans—were deemphasized. 102

First phase OFFTACKLE operations called for minimum initial defensive deployments to secure Alaskan, North Atlantic and Far Eastern bases and to provide for a limited air defense of North America. In Europe, OFFTACKLE provided for an initial withdrawal of allied occupation forces in Germany and Austria to the Rhine, while delaying the Soviet advance to the extent possible with available forces. Ultimately, it was anticipated that the European garrisons would be withdrawn into Spain or to the U.K. Initial ground and tactical air force deployments were aimed at establishing a main allied base in the Oran-Algiers area, extending allied control as far east as Tunisia, defending the Iberian peninsula as far north as possible, and providing air defense for the U.K. For all of those tasks a total of only five and one-third Army and Marine
divisions and eight and two-thirds Air Force fighter groups plus limited
naval aviation would be available by the end of D+3 months. Intelligence estimates indicated that by that time the Soviets might already be moving into northern Spain and would launch heavy air attacks against the U.K. even earlier. No U.S. deployments were planned in the Middle East. A total of three and two-thirds British and Arab Legion divisions and forty-eight British fighter aircraft were available for the defense of the Cairo-Suez area. The JCS planners anticipated that the area might be captured by Soviet forces as early as D+140 days. The Persian Gulf oil areas would be lost much earlier.\textsuperscript{103}

The planners took a cautious approach to second phase operations in OFFTACKLE. They agreed that the nature and objectives of operations in that phase would depend heavily on the effects of the initial atomic offensive on Soviet capabilities. They could not, however, agree on what those effects might be. Therefore, the planners conservatively anticipated the possibility of a prolonged war necessitating large scale conventional operations if the air offensive was not immediately decisive.\textsuperscript{104}

The second phase concept called for a continuation of the strategic air campaign, the continuation of defensive operations in the U.K., North Africa, and Spain, the build-up of tactical air forces in the U.K. for an air superiority battle over Western Europe, and the build-up of ground forces in North Africa for an invasion of southern France early in the third phase. The possibility of seizing Sicily prior to D+12 months was also considered in order to facilitate control of the central Mediterranean prior to an invasion of France.\textsuperscript{105}
There was disagreement over the focus of strategic air operations in the second phase. The Air Force planners wanted to hurry development of bases in the Karachi area (by about D+6 months) for the continuation of an expanded atomic and conventional air war against Soviet industry and key command and control centers. The Navy and Army planners were more interested in employing strategic air forces from North African bases against tactical and quasi-strategic targets in preparation for the invasion of France.  

Between May and August 1949 the joint planners tailored the OFF-TACKLE concept and hammered out a tenuous agreement on the nature of strategic air operations. Since the selection of specific targets for the initial atomic offensive was not a responsibility of the joint war planners, that issue was simply avoided. However, the planners agreed generally that targeting priorities for the initial air offensive should include retardation objectives. They also agreed that tactical and quasi-strategic targets should receive a high priority in the second phase of OFFTACKLE in preparation for subsequent overland operations in Europe. The Air Force planners agreed to scrap plans for the development of a strategic air base in the Karachi area and to divert almost a third of the strategic air effort after D+6 months to North African bases in preparation for an invasion of Europe.  

Downward revision of earlier projections of the ground and tactical air force build-up in the U.K. and North Africa necessitated the postponement of plans for an invasion of Europe early in the third phase. Indeed, there was some question whether the allied build-up could progress rapidly enough to ensure the security of either a foothold in
Spain or bases in North Africa. In any case, the planners agreed that an invasion of Europe would not be possible until late in the third phase or early in the fourth phase, i.e., sometime between D+21 and D+27 months. First priority was placed on defending U.K. and North African bases. Depending on the situation, the planners hoped that limited objective operations to seize Sicily or southern Italy during the second phase would be possible.\textsuperscript{108}

By about D+21 months the planners hoped to achieve a build-up of forces sufficient for a two pronged invasion of Europe. One operation would be launched "from North Africa up the Rhone Valley and thence generally eastward on the northern flank of the Alps." The other operation would be mounted "from the United Kingdom landing at favorable locations between Cherbourg and the base of the Jutland Peninsula as far to the east as possible." The concept was for those two axes to link up, thus cutting off Soviet forces in Western Europe. Subsequent operations would be conducted to the east and southeast as rapidly as possible to cut off or isolate Soviet armed forces in central and eastern Europe, preventing their withdrawal into the Soviet Union. If it was necessary to invade the USSR, objectives would be to isolate and destroy remaining Soviet armed forces and seize major control centers.\textsuperscript{109}

Aside from their disagreement over the nature and objectives of the strategic air offensive, the most serious difficulty faced by the OFF-TACKLE planners was reconciling the plan's overall concept of operations with anticipated resources for its fulfillment. The force deployment schedules for the first twelve months of war established in the first three drafts of OFFTACKLE were far beyond the capabilities achievable...
with fiscal 1950 budget funds. A study of OFFTACKLE by the joint logistic planners in early August 1949 found the plan to be infeasible. The overall manpower and equipment requirements for the first twelve months of war far exceeded mobilization capacity. Logistic deficiencies included a shortage of air transport and aviation fuel, shortages of construction units to establish forward bases, and severe shortages of critical supplies. 110

When the Soviet atomic bomb test was revealed in September 1949, the United States still did not have coherent, workable plans for meeting a war emergency. Both the existing JOEWF, TROJAN, and its proposed replacement, OFFTACKLE, were known to be logistically infeasible. Four years after the end of World War II, the military planners remained deeply divided over basic strategic concepts for fighting a general war. The dispute over the effectiveness of the initial atomic air offensive was reflected in fundamental disagreement over the likely duration of a major war. That dispute was manifested in turn by disagreements over the division of forces and functions, the geographical locus of effort, and the proper objectives of atomic striking forces. Some progress toward compromising the issue of targeting priorities had been made in OFFTACKLE. The combination of political and fiscal pressure virtually mandated a deemphasis of operations in the Middle East in favor of a main effort in Western Europe. Nevertheless, there was no final consensus among the military planners on either of those issues by September 1949. The division of forces and functions was an even less settled issue.
More important than the specific disagreements over strategic concepts was the fact that American war plans were predicated on the sole possession of atomic weapons by the United States. Planning for the use of atomic weapons was based entirely on the assumption that those weapons could be used without fear of retaliation in kind. In the design of existing emergency war plans, no consideration was given to the strategic problem of fighting a nuclear armed enemy, either for its effect on how atomic weapons would or could be used offensively or its implications for limiting damage to the United States from an enemy attack. Preoccupied with the issue of how to win an atomic war, the planners had neglected to consider how to prevent losing one.

The knowledge that the Soviet Union possessed atomic weapons prompted the military planners to begin a serious reassessment of strategic concepts for general war. It also prompted the civilian Administration to confront the implications of nuclear mutuality for foreign and defense policies and the role nuclear weapons played in both. As in the past, however, consensus was elusive.
CHAPTER VII NOTES

1. Re: the original BROILER concept see Chapter IV.


3. Ibid.

4. Ibid.

5. Ibid.

6. Ibid. Re: atomic stockpile figures see Chapter VI.


12. JCS 1745/5, 8 Dec 47, Rpt, JSSC to JCS; JCS 1745/5 DECISION, 21 Jan 48; JCS 1745/6, 13 Dec 47, Memo, CNO to JCS; JCS 1745/8, 19 Dec 47, Memo, C/S, USAF to JCS; JCS 1745/9, 23 Dec 47, Rpt, D/JS to JCS; JCS 1745/10, 31 Dec 47, Memo, C/S, USAF to JCS; JCS 1745/11, 2 Jan 48, Memo, CNO to JCS; JCS 1745/12, 19 Jan 47, Memo, C/S, USAF to JCS; all in CCS 471.6 (8-15-45)S. 8.


15. JCS 1478/23, 26 Apr 48, Note by Secs to JCS, sub: Functions of the Armed Forces and the Joint Chiefs of Staff; and "Functions of the Armed Forces and the Joint Chiefs of Staff," 13 May 48, both in CCS 370 (8-19-45)S. 7-8.

16. JCS 1478/24, 7 Jul 48, Note by Secs to JCS, sub: Memorandum of Record on Functions of the Armed Forces and the Joint Chiefs of Staff, CCS 370 (8-19-45)S. 9.


18. JCS 1844/1, 17 Mar 48. For JCS 1844/1 Force Tabs see JSPG 496/8, 25 Mar 48, Rpt, JSPC to JCS, sub: "Directives for the Implementation of FROLIC;" JLPG 84/5, 19 Mar 48, Rpt, JLPG to JSPC, sub: "Quick Feasibility Test of JSPG 496/4 as Modified by JCS 1844," both in CCS 381 USSR (3-2-46)S. 12. See also ASSS, DD/E&O to C/S, USAF, 22 Apr 48, sub: "Quick Feasibility Test of JSPG 496/4 (as modified by JCS 1844/1), AF OPD 381 (27 Jun 47). The unmodified BROILER concept (JSPG 496/4) was also declared infeasible by JLPG. See JLPC 349/5, 23 Dec 47, Rpt, JLPC, sub: "The Logistic Implications of Strategic Plans for a Major War," CCS 381 (12-17-43)S. 2.


21. Re: continued FROLIC/GRABBER planning see JSPG 496/12, 15 Jun 48, Rpt, JSPC to JCS, sub: "Directives for the Implementation of FROLIC/GRABBER;" JSPG 496/14, 17 Jun 48, Rpt, JSPC to JCS, sub: same; and JCS 1844/9, 18 Jun 48, Note by Secs to JCS, sub: "Brief of an Alternative Short-Range Emergency War Plan (FROLIC/GRABBER)," all in CCS 381 USSR (3-2-46)S. 17. Re: JCS debate over continuation of FROLIC/GRABBER planning see JCS 1844/14, 11 Aug 48, Memo, CNO to JCS, sub: same; JCS 1844/20, 3 Sep 48, Memo, C/S, USA to JCS, sub: same; JCS 1844/26, 22 Sep 48, Memo, CNO to JCS, sub: same; and JCS 1844/35, 19 Mar 49, Memo, C/S, USAF to JCS, sub: same, all in CCS 381 USSR (3-2-46)S. 20-21, 30.
22. Re: HALFWOOD's antecedent, FIRETRAP, see JSPG 496/5/D, 13 Feb 48, JSPG Directive, sub: "Plan FIRETRAP;" re: HALFWOOD see JCS 1844/4, 6 May 48, Note by Secs to JCS, sub: "Brief of Short-Range Emergency Plan HALFWOOD," both in CCS 381 USSR (3-2-46)S. 11, 13. Note that the codename for HALFWOOD was subsequently changed to FLEETWOOD and then to DOUBLESTAR. To avoid confusion, the plan is referred to only as HALFWOOD in this text.

23. JCS 1844/4, 6 May 48.

24. Ibid.

25. Ibid. If operations were undertaken to recapture Middle Eastern oil areas, the planners offered two alternative courses of action: (1) an amphibious operation in the Persian Gulf, or (2) an overland operation from the Cairo-Suez area toward Kirkuk in Iraq.

26. JCS 1844/4, 6 May 48.

27. "Strategy," 5 Apr 48, special rpt, JSSC to JCS, CCS 092 WESTERN EUROPE (3-12-48)S. 1. See also Chapter VII.

28. JCS 1844/4, 6 May 48.

29. Ibid.

30. JCS 1844/4 DECISION, 19 May 48. Admiral Leahy, Chief of Staff to the President refused to approve HALFWOOD because it called for use of atomic weapons. See JCS 1844/6, 13 May 48, Memo, C/SP to JCS, sub: "Brief of Short-Range Emergency Plan HALFWOOD, CCS 381 USSR (3-2-46)S. 15. Since he was not a statutory member of the JCS, the chiefs apparently paid little attention to Leahy and tolerated him merely as a relic of days past.


32. The Forrestal Diaries, p. 438. Schilling, Strategy, Politics and Defense Budgets, pp. 44-46. See also Chapter X.

33. JCS 1844/7, 26 May 48, Rpt, JSPC to JCS, sub: "Directives for the Implementation of HALFWOOD;" and JSPC 877/3, 3 May 48, Rpt, JSPC to JCS, sub: same, both in CCS 381 USSR (3-2-46)S. 13, 15.

34. JCS 1844/7, revised 8 Jun 48.
35. JCS 1844/12 DECISION, 30 Jun 48, Note by Secs to JCS, sub: "Directives for the Implementation of HALFMOON;" JCS 1844/13, 21 Jul 48, Rpt, Ad Hoc Committee to JCS, sub: same; and JCS 1844/13 DECISION, 23 Jul 48, Note by Secs to JCS, sub: same, all in CCS 381 USSR (3-2-46)S. 18. Memo w/ attch, MG R. W. Lindsay, DD/P&O to Air Staff, et al., 11 Aug 48, 342/341. On 19 August the JCS established a joint Mediterranean-Middle East Planning Group with the Chief of Naval Operations as executive agent. The group's first action was to visit the Middle East for an extended survey of the area. Consequently, no substantial planning was accomplished before the end of the year. See JCS 1844/18 DECISION, 19 Aug 48, Note by Secs to JCS, sub: "The Establishment of the Mediterranean-Middle East Planning Group," CCS 381 USSR (3-2-46)S. 20.


37. Re: background of combined planning see JSPC 877/6, 16 May 48, Rpt, JSPC to JCS, sub: "Planners' Conferences," CCS 092 WESTERN EUROPE (3-12-48)S. 2. Re: TROJAN see JCS 1844/32, 11 Nov 48, Note by Secs to JCS, sub: "Brief of Joint Outline Emergency Plan TROJAN (ABC 101)," CCS 381 USSR (3-2-46)S. 25.


39. Ibid.


42. JCS 1854/3, 22 Apr 48, Memo, C/S, USA to JCS, sub: Control and Direction of Strategic Atomic Operations; JCS 1854/4, 13 Jul 48, Memo, C/S, USA to JCS, sub: same; JCS 1854/5, 17 Jul 48, Memo, CNO to JCS, sub: same; JCS 1854/6, 23 Jul 48, Note by Secs to JCS, sub: same; JCS 1854/7, 29 Jul 48, Note by Secs to JCS w/ enclosures, sub: same, all in CCS 471.6 (8-15-45)S. 9-11.
43. Memo, Forrestal to Spaatz and Towers, 9 Aug 48, CCS 337 (7-6-48)S. 1.

44. Memo, Spaatz and Towers to Forrestal, 18 Aug 48, CCS 337 (7-6-48)S. 1.

45. Ibid.


47. See Chapter IV.

48. See JCS 1725/1, 13 Feb 47; JCS 1725/12, 18 Sep 47; JCS 1725/12 DECISION, 27 Oct 47, all cited in Chapter IV. JLPC 349/5, 23 Dec 47. JCS 1725/19, 17 Jun 48, Rpt, JSPC to JCS, sub: "Strategic Guidance for Industrial Mobilization Planning;" and Memo, Forrestal to JCS, enclosure to JCS 1909, 24 Jul 48, Note by Secs to JCS, sub: "Preparation of a Basic War Plan," both in CCS 004.04 (11-4-46)S. 9.

49. JSPC 891/2, 23 Aug 48, Rpt, JSPC to JCS, sub: "Joint Outline War Plans for Determination of Industrial Mobilization Requirements for War Beginning 1 July 1949," and JCS 1725/22, 26 Aug 48, Rpt, JSPC to JCS, sub: same, both in CCS 004.04 (11-4-46)S. 10-11.

50. Ibid.

51. JCS 1725/25, 14 Sep 48, Note by Secs to JCS, sub: "Joint Outline War Plan for Determination of Mobilization Requirements for War Beginning 1 Jul 1949," CCS 004.04 (11-4-46)S. 12.


54. Ibid. Re: SAC Project 14-47 see Chapter IV.


57. Ibid.

58. Ibid.


61. ASSS, Smith to Air Staff, 9 Aug 48.

62. Memo, COL O. S. Picher to LTG Norstad, DCS/O, USAF, 13 Jan 48, AF OPD 000.75 (5 Jan 48), 336/341.

63. Ibid.

64. "Operation DUALISM" Transcript, Vol. I.

65. Ibid. Memo, Picher to Norstad, 13 Jan 48.

66. "Operation DUALISM" Transcript, Vol. II.

67. Ibid.

68. Ibid.

69. Ibid.

70. Ibid.

71. Ibid.

73. Memos, Forrestal and Chairman, RDB to JCS, 4 Feb 48, attch to JCS 1812/5, 27 Feb 48, Rpt, JSSC to JCS, sub: "Proposed Directive for Weapons System Evaluation Group;" JCS 1812/6, 29 Mar 48, Memo, C/S, USA to JCS, sub: same; JCS 1812/8, 16 Apr 48, Note by Secs to JCS, sub: same; JCS 1812/9, 12 Jul 48, Note by Secs to JCS, sub: "Establishment of the Weapons System Evaluation Group;" JCS 1812/10 DECISION, 28 Jul 48, Note by Secs to JCS, sub: same; JCS 1812/12, 13 Oct 48, Note by Secs to JCS, sub: "Proposed Directive for Weapons Systems Evaluation Group;" JCS 1812/13, 1 Dec 48, Note by Secs to JCS, sub: same; JCS 1812/14, 2 Dec 48, Rpt, JSSC to JCS, sub: same; and JCS 1812/14 DECISION, 11 Dec 48, all in CCS 334 WSEG (2-4-48)S. 1. See also RDB 150/3, 8 Dec 48, Vandenberg Papers, Bx 44, AMC file.


77. JCS 1952/1 DECISION, 17 Feb 49. JIC 439/2, 14 Feb 49, Rpt, JIG to JIC, sub: "Intelligence Aspects of Evaluation of Current Strategic Air Offensive Plans;" JIC 439/3, 15 Feb 49, Rpt, JIG to JIC, sub: same; JIC 439/4, 19 Feb 49, Rpt, JIG to JIC, sub: same; JIC 439/5, 26 Feb 49, Rpt, JIC to JCS, sub: same; JIC 439/6, 28 Feb 49, Memo, DD/JIG, sub: same; JIC 439/7, 2 Mar 49, Rpt, JIC to JCS, sub: same; and JCS 1952/4, 3 Mar 49, Rpt, JIC to JCS, sub: same, all in CCS 373 (10-23-48)S. 1-2.

78. JCS 1952/5, 5 Mar 49, Memo, C/S, USAF to JCS, sub: "Intelligence Aspects of Evaluation of Current Strategic Air Offensive Plans;" JCS 1952/6, 25 Mar 49, Memo, C/S, USA to JCS, sub: same; JCS 1952/7, 7 Apr 49, Memo, C/S, USA to JCS, sub: same; and JCS 1952/7 DECISION, 14 Apr 49; SM 662-49, 14 Apr 49; and JIC 439/10/D, 21 Apr 49, Note by Secs to JIC, sub: "Joint Intelligence Estimate for Basing Operational Evaluation Success of the Strategic Air Offensive," all in CCS 373 (10-23-48)S. 2.


80. Memo, BG R. B. Landry to Truman, 19 Apr 49, and Memo, Truman to Louis Johnson, 21 Apr 49, both in PSF, NSC Atomic File, NSC Atomic Bomb—Strategic Bombardment folder, HST Library.
81. JCS 1020/3, 24 Aug 44, sub: "Analysis of Strategic Air Targets in War Against Japan," and other papers in the JCS 1020 series, all in CCS 350.05 (2-5-44). See also related papers in the JCS 1805 series, all in CCS 471.6 (10-16-45)S. 9, Pts 1-3.

82. Re: TROJAN target complexes see JIC 439/11, 19 Jul 49, Rpt, JIC to JCS, sub: "Joint Intelligence Estimate for Basing Operational Evaluation Success of the Strategic Air Offensive," and JCS 1952/11, 10 Feb 50, Rpt, WSEG to JCS, sub: "Report on Evaluation of Effectiveness of Strategic Air Operations," both in CCS 373 (10-23-48)S. 3, BP 2C & 2D. Expansion of the TROJAN target list paralleled the large increase in the size of the nuclear weapons stockpile in the spring of 1949. See Chapter VI. In March an article in The Washington Post by columnist Marquis Childs citing the seventy city figure created quite a stir in the Air Force. The source of the leak was not discovered, but the incident was viewed as a serious breach of security. See Ltr, Symington to LeMay, 16 Mar 49, LeMay Papers, Bx B62, Symington File. The Post article appeared under the title "Warmongering" on 15 March 1949.

83. JIC 439/3, 15 Feb 49.

84. Memo for Record by BG Walter C. Sweeny, Jr., D/P, SAC, 1 Feb 49 and Ltr, Vandenberg to LeMay, 15 Feb 49, both in LeMay Papers, Bx B64, folder #1.

85. JCS 1953/1, 11 May 49, Rpt, Ad Hoc Committee (Harmon Committee) to JCS, sub: "Evaluation of Effect on Soviet War Effort Resulting From Strategic Air Offensive," CCS 373 (10-23-48)S. 2.

86. Ibid.

87. Ibid.

88. Ibid.


90. JCS 1953/5, 19 Jul 49, Memo, CNO to JCS, sub: "Evaluation of Effect on Soviet War Effort Resulting from the Strategic Air Offensive," and JCS 1953/1 DECISION, n.d.

91. Ibid. Ltr, Louis Johnson to Truman, n.d. (c Jul 49), and Ltr, Truman to Johnson, 17 Nov 49, both in PSF, NSC Atomic File, NSC Atomic Bomb—Strategic Bombardment folder, HST Library.
92. JCS 1952/7 DECISION, 14 Apr 49. JIC 439/10/D, 21 Apr 49, and SM 662-49, 14 Apr 49. JIC 439/11, 19 Jul 49, Rpt, JIC to JCS, sub: "Joint Intelligence Estimate for Basing Operational Evaluation Success of the Strategic Air Offensive;" JIC 439/12, 8 Aug 49, Note by Secs to JIC, sub: same; JIC 439/13, 11 Aug 49, Note by Secs to JIC, sub: same; and JCS 1952/8, 25 Aug 49, Rpt, JIC to JCS, sub: same, all in CCS 373 (10-23-48)S. 3-5.


95. JIC 439/11, 19 Jul 49.


97. JCS 1844/37 DECISION, 27 Apr 49. JSPC 877/56, 21 Apr 49. JSPC 877/57/D.

98. JSPC 877/58, 10 May 49, Note by Secs to JCS, sub: "Brief of Joint Outline Emergency War Plan OFFTACKLE;" and JSPC 877/59, 26 May 49, Note by Secs to JCS, sub: same, both in CCS 381 USSR (3-2-46)S. 32.

99. JSPC 877/58, 10 May 49 and JSPC 877/59, 26 May 49.

100. JSPC 877/58, 10 May 49.

101. Ibid. JSPC 877/59, 26 May 49.

102. Ibid. JSPC 877/58, 10 May 49.

103. Ibid.

104. JSPC 877/59, 26 May 49.

105. Ibid.

106. Ibid.

108. Ibid.

109. Ibid.

Postwar estimates of when the Soviet Union would produce its first atomic weapon varied widely. Early military estimates put the date between late 1948 and the end of 1949. Other estimates ranged from about 1950 to 1960 or even later. The most widely accepted estimate was that made by the Finletter Commission in January 1948 which anticipated that the Soviets might have their first atomic weapon by 1950 and a significant stockpile as early as 1952. If the timing of the Soviet atomic test did not come as a completely unanticipated surprise, it was nevertheless a severe shock to civilian policy-makers and military planners, who remained psychologically unprepared for the actuality of the event. Increasingly dependent on the deterrent and war fighting power of the American nuclear monopoly, policy-makers and military planners alike had tended to ignore the implications for either policy or strategy of eventually confronting a nuclear armed enemy.

Responses to the Soviet atomic test were complex. Civilian policy-makers recognized that the loss of the nuclear monopoly undermined the deterrent power of those weapons on which the whole structure and substance of American foreign and defense policy was dependent. How to resolve that problem became the issue of an intense debate. Although
that debate focused very largely on the specific question of whether the
United States should develop and produce thermonuclear weapons, it in-
volved broader and more fundamental issues regarding the political and
strategic utility of nuclear weapons in a world where those weapons were
possessed by both of the major powers.

The contending factions in the nuclear weapons debate cut across
agency and departmental lines within the Administration and also in-
cluded influential participants in Congress. Each of the two major fac-
tions often reflected internally conflicting points of view. One group
of civilian policy-makers--centered primarily in the Atomic Energy Com-
mission and the Department of State--argued that Soviet possession of
nuclear weapons not only undermined the deterrent effect of the American
arsenal, but made the use of those weapons in war irrational. That
group of policy-makers insisted that the United States must alter its
foreign and military policies in order eventually to dispense with the
need for nuclear weapons either as a deterrent or a weapon of war. At
the same time, the United States must renew its efforts to obtain an
international agreement proscribing the possession and use of those
weapons.

A second group of civilian policy-makers--centered primarily in the
defense establishment, but drawing important support from the Congress--
argued that the United States must reassert the deterrent as well as the
war fighting power of nuclear weapons by achieving and maintaining the
unambiguous superiority of the American arsenal. Committed to the fis-
cally conservative basis of existing foreign and defense policies, the
advocates of that course resisted the idea of reassessing either the
general substance of national security policy or the political and military utility of its continued reliance on nuclear weapons.

A third group of civilian policy-makers—centered in the State Department and the Atomic Energy Commission—allied itself with the second group on the specific issue of developing thermonuclear weapons. Although the adherents of that group questioned the long-term efficacy of continued reliance on nuclear weapons as the basis for either deterrence or warfare, they were convinced that the United States could not forfeit technological superiority to the Soviet Union. Unlike the second group, however, they favored a comprehensive reassessment of national security policy and the role nuclear weapons should play in it.

Military officers generally supported the course adopted by their civilian superiors in the Defense Department on the specific issue of thermonuclear weapons. They agreed that those weapons were needed to reestablish technological superiority and the psychological effectiveness of American deterrent power. However, the primary interest of military officers was in expanding the size and weight of the nuclear weapons stockpile, thereby increasing the flexibility and effectiveness of atomic operations. Initially, military officers were more interested in accelerating the production of fission weapons than in the development and production of H-Bombs. But, they immediately recognized the operational advantages thermonuclear weapons would afford, especially for new strategic contingencies anticipated as a result of Soviet possession of nuclear weapons. Once they were convinced that the development and production of thermonuclear weapons would not materially interfere with accelerated production of fission weapons, military officers became
enthusiastic advocates of adding super bombs to the American arsenal as soon as possible. Ultimately, it was the weight of their opinion that decided the issue.

Acceleration of the Fission Bomb Program

In late July 1949, President Truman appointed a "special committee" consisting of Secretary of State Acheson, Defense Secretary Johnson, and AEC Chairman Lilienthal to examine the necessity and possible effects of a major acceleration of nuclear weapons production recommended by the JCS. At that time, the prospects seemed good for a thorough, high-level analysis of the policies, plans and assumptions underlying atomic energy programs. In the following weeks, however, events combined to undermine the effort.¹

In July, there was already mounting pressure on the Administration from several quarters to adopt the accelerated production program recommended by the JCS without lengthy or involved inquiry. Senator Brien McMahon, Chairman of the Joint Committee on Atomic Energy (JCAE) and an increasingly vocal promoter of American nuclear weapons superiority, exhorted the President to approve an open ended production program. According to McMahon, the United States could never have "enough bombs."²

Both Defense Secretary Johnson and Military Liaison Committee Chairman Webster opposed study of the proposal for increased weapons production. At the first meeting of the Special Committee's working group on 3 August, Webster insisted that the proposal be accepted "forthwith" solely on the strength of the JCS's recommendation. That ploy was rebuffed, but Secretary Johnson refused to allow the State Department
and AEC representatives in the working group to have direct access to military plans or other evidence that ostensibly supported the need for increased weapons production.³

When the basic draft of the Special Committee's report was completed by the working group in mid-September, it was largely a product of the military point of view. To justify their position, the military representatives presented the working group with a brief statement by the JCS that boiled down to two arguments. First, the SANDSTONE tests had confirmed the feasibility of additional operational applications for nuclear weapons and demonstrated the technical capacity to expand production. Second, there was no alternative to increased reliance on nuclear weapons if we were to have any chance of achieving our defense objectives in a general war. In other words, the United States should expand nuclear weapons production because it could and because there was no military alternative.⁴

If there had been a chance that the Special Committee study would provide a sober and searching analysis of overall national security policy, that chance was lost in the emotionally charged atmosphere that resulted after announcement of the Soviet atomic test on 23 September. The widely perceived urgency of reacting quickly to that event increased the pressure on the Administration to ratify an accelerated atomic weapons program. At least temporarily, it also precluded a comprehensive examination of broader policy issues. On 28 September, Senator McMahon once more exhorted the President to expand the nuclear weapons program. A report by the Joint Committee staff, completed the following day,
concluded that a substantial increase in weapons production was a matter of the uppermost urgency for American national security.⁵

In its report to the President on 10 October, the Special Committee unanimously approved the proposed acceleration of the atomic energy program. The committee's conclusion was based largely on assurances from the Joint Chiefs of Staff that expanded weapons production would "constitute a net improvement in our military posture both as a deterrent to war and as preparation for war . . ." Despite earlier reservations, Secretary Acheson agreed that the proposed expansion would have no undesirable repercussions for the international situation. Apparently sensing the futility of dissent in the atmosphere created by recent events, Lilienthal also acquiesced. However, he made it clear that the AEC had been able to study the recommended expansion program "only from the view point of its feasibility." President Truman approved the accelerated weapons program on 19 October, but apparently anticipated only modest initial efforts toward its fulfillment. He insisted that the AEC begin the program with only $30 million available out of current appropriations.⁶

The Super Bomb Debate: Opposing Forces

In the days following announcement of the Soviet atomic test, the attention of Washington policy-makers was riveted to the question of how the United States should respond. Many policy-makers thought the situation presented an opportunity to renew serious arms control initiatives. Others were convinced that the situation called for prompt efforts to reassert American nuclear superiority. Acceleration of the fission bomb production program, already a virtual fait accompli, offered one course
of action. But for those policy-makers committed to American nuclear superiority, that seemed too feeble a response. Almost immediately the attention of that group focused on development of the so-called hydrogen or super bomb.

The possibility of constructing hydrogen isotope-fueled, fusion weapons was first discussed in 1942 by MANHATTAN Project physicists Edward Teller and Enrico Fermi, but wartime preoccupation with developing a practical fission bomb precluded more than idle speculation on the problem. Preliminary theoretical work by Teller and others at the Los Alamos Laboratory in early and mid-1946 established two basic conceptions for producing a thermonuclear reaction. The first, called "Alarm Clock," involved igniting a relatively small mass of thermonuclear fuel by means of a large fission explosion. (This was the objective ultimately accomplished by the United States in 1951, and became associated in other variations with the principle of "boosting" the efficiency of fission weapons.) The second, called "Super," involved igniting a large mass of thermonuclear fuel by means of a relatively small fission explosion. This conception promised energy releases on the order of a thousand times greater than existing fission weapons.

Despite considerable theoretical effort, confirmation of those basic conceptions progressed slowly. By mid-1948, a preliminary design for "Alarm Clock" was approved for inclusion in the test series planned for 1951, but the results of work on Super were less conclusive. By mid-1949, the best estimates of Super's feasibility were about fifty percent. Nevertheless, scientific advocates of developing the weapon, led by Teller, Ernest Lawrence, and Luis Alvarez, launched an intensive
lobbying campaign within the Administration and Congress to obtain an all out commitment to Super. Thus, when the Soviet atomic test was announced in late September, a number of key Washington policy-makers were not only aware of the weapon and its possibilities, but eager to see it developed as soon as possible.\textsuperscript{8}

The Joint Atomic Energy Committee staff report completed on 28 September concluded that the Soviet achievement dictated an urgent and concerted effort to develop thermonuclear weapons. Early in October, AEC commissioner Lewis Strauss reached the same conclusion. Increased production of fission weapons, he told his commission colleagues, was "not enough." "... the time has now come for a quantum jump in our planning." "... we should now make an intensive effort to get ahead with super." Strauss asked that the General Advisory Committee be consulted immediately on how best to proceed.\textsuperscript{9}

Strauss also talked to Admiral Sidney Souers, Executive Secretary of the National Security Council, about his conviction that Super was now an urgent requirement. In turn, Souers discussed the matter with Truman. Apparently, the President had no knowledge that such a weapon was even conceivable. According to one source, Truman showed an immediate interest in the subject and encouraged Strauss to force the issue up to the White House as soon as possible.\textsuperscript{10}

At the end of October the General Advisory Committee met to consider Strauss's proposal for the high priority development of Super and other measures to augment nuclear weapons programs. As a result of lengthy discussions with the JCS, the committee recommended expansion of AEC plants and facilities to implement accelerated production of
fission bombs as well as the intensification of efforts to develop smaller, lighter fission weapons suitable for "tactical purposes." However, the committee unanimously declined to endorse development of Super as a matter of high priority.  

The GAC argued that the successful application of the Super concept to the development and production of an actual weapon still confronted serious technical problems, not the least of which was the probable requirement for large quantities of tritium as an intermediary in the ignition of the weapon's principal fuel, deuterium. But, the technical constraints were not insurmountable. The committee agreed that "an imaginative and concerted attack on the problem has a better than even chance of producing a weapon within five years."  

The committee's principal objection to Super was on moral grounds. Because of the magnitude of its potential effects, Super was characterized as a "weapon of genocide" without practical military usefulness. A majority of the committee, led by Oppenheimer, agreed that the weapon should never be built by the United States under any circumstances. Two members, Enrico Fermi and Isador Rabi, thought the weapon should be developed only if the United States could not obtain an international agreement proscribing it. Both groups agreed that no crash program should be initiated.  

Opinion among the AEC commissioners was divided. Lilienthal, Henry Smyth, and Sumner Pike agreed with the GAC position against development of Super. Strauss and Gordon Dean favored development. Several days of internal debate were inconclusive. Strauss and Dean argued that the Commission should solicit opinions from the Departments of State and
Defense before making any recommendation to the President. Lilienthal, however, was anxious to place the views of the commission majority before Truman as soon as possible in order to preempt mounting pressure by the JCAE and others to force Administration approval of Super. 14

On 9 November, while Strauss was out of town, Lilienthal sent Truman a memorandum outlining the commission's divided opinion. The commission majority opposed development of Super ostensibly because it was inconsistent with the President's avowed aim of world peace, would undermine the possibility of renewed negotiations for international control of atomic energy, and contributed nothing to America's long term security. "To launch upon a program of Superbombs," Lilienthal told the President, "would set us upon still another costly cycle of misconception and illusion about the value of weapons of mass destruction as the chief means of protecting ourselves and of furthering our national policy." Lilienthal urged the President to make an early decision on the issue to avoid an ill-informed and politically volatile public debate. 15

The minority view was given little attention in the commission's memorandum. But, in separate views appended to the document. Gordon Dean made it clear that he disagreed with the majority. Unless the Soviets were prepared to agree immediately to satisfactory international controls on nuclear weapons, the United States had no choice but to develop Super. As Soviet nuclear weapons capabilities improved, Dean argued, our possession of thermonuclear weapons would be increasingly important as a deterrent. In no case, could the United States "grant to the USSR a potential monopoly in this field." 16
Strauss clarified his own views for the President two weeks later. He was unimpressed with the moral arguments against Super. Nor did he believe that an American decision to renounce the weapon would induce similar restraint on the part of the Soviet Union. Therefore, "the United States must be as completely armed as any possible enemy." Strauss argued that the AEC was competent to advise the President only "with respect to the feasibility of making the weapon." Advice on its military and foreign policy implications was the responsibility of the Departments of Defense and State. But, his own opinion was that the President should direct the AEC "to proceed with all possible expedi­tion" to develop thermonuclear weapons.\(^\text{17}\)

Despite Lilienthal's attempt to preempt the issue with the President, Truman concluded that the question of developing thermonuclear weapons required broader analysis. On 19 November he appointed Acheson, Johnson, and Lilienthal as a "special committee" of the NSC to advise him. He ordered the committee and its working group to analyze the technical, military, and political factors involved and to "make recom­mendations as to whether and in what manner the United States should undertake the development and possible production of 'super' atomic weapons."\(^\text{18}\)

In mid and late November, State Department attitudes about the development of Super had not yet taken firm shape. Opinion within the Policy Planning Staff was divided. Kennan opposed the idea, but his deputy Paul Nitze was inclined to favor it. Initially, Acheson leaned toward an eighteen to twenty-four month moratorium on development in order to explore the possibility of getting an agreement with the
Soviets to proscribe the weapon. If that failed, the Secretary thought the United States could go ahead with development at a later date. But, when the President appointed the special committee on 19 November, the State Department had more questions than answers concerning Super.19

Opinion within the military establishment was better developed. Secretary Johnson and the new Chairman of the Military Liaison Committee, Robert LeBaron, favored going ahead with Super, although they apparently had not drawn any firm conclusions regarding the exact nature and degree of effort to be devoted to the project. The JCS also favored development. According to Lilienthal's account of the JCS's discussions with the GAC in late October, the military chiefs had concluded that the principal value of Super weapons would be psychological. When the chiefs analyzed the issue for Secretary Johnson in late November, however, they emphasized the added operational flexibility such weapons would provide. At least for certain purposes, a few thermonuclear weapons could "substitute for a greater number of fission bombs." Presumably, those conclusions were derived from a preliminary study of the suitability of Super for various types of targets carried out by the Weapons System evaluation Group in September. Whatever its ultimate military applications might be, the JCS insisted that "possession of a thermonuclear weapon by the USSR without such possession by the United States would be intolerable."20

The Super Bomb Debate: Deciding How Not to Decide

Objections to Super by its opponents in the AEC and the General Advisory Committee were predicated primarily on moral arguments. But, when the special committee and its working group got underway at the end
of November, Secretary Acheson insisted that they concentrate on a purely factual analysis of the problem and avoid bogging down in a debate over the ultimate moral questions. That put increased pressure on the AEC to develop or refine technical arguments against Super. Following a reexamination of the issue at the beginning of December, the General Advisory Committee reaffirmed its earlier views, but the committee also emphasized the limited military applications of Super and the effect its development and production would have on the fission bomb program. Subsequent studies by the AEC staff also emphasized those problems. In particular, they stressed the argument that production of tritium, even in quantities necessary for a test of Super, would consume large amounts of uranium that might otherwise be used in the production of fission bombs. Lilienthal and his partisans among the AEC representatives on the special committee's working group also pressed the idea that a decision on Super should be predicated on an overall study of American strategic and diplomatic policy. That idea was shared by the State Department representatives on the working group as well.21

In mid-December, as the result of complaints from the AEC that the Defense Department had not yet defined the operational value of Super, the military representatives on the working group submitted a lengthy appraisal by the JCS of the "military implications of thermonuclear weapons." In addition to Super's psychological advantages as a deterrent, the JCS emphasized the expanded operational flexibility such weapons would provide. They would add materially to the capability to strike against large, dispersed targets such as troop concentrations and enemy strategic air bases the destruction of which would otherwise
require delivery of many more fission bombs. Thus, the tactical problems of delivering an effective nuclear attack would be reduced. The JCS also suggested that the use of superbombs would reduce the overall cost of maintaining strategic striking forces by reducing the number of delivery vehicles required. Presumably, that argument was meant to appeal to the budget cutters in the Administration. 22

Regardless of Super's specific operational applications, the JCS argued that the United States could not afford to forfeit the technological advantage of thermonuclear weapons to the Soviet Union. Such an event, the chiefs insisted, "would have a profoundly demoralizing effect on the American people" and "grave psychological and political repercussions" for the "unity, confidence, and determination" of the Western world. Moreover, sole possession of thermonuclear weapons by the Soviets "could lead to increased truculence in international relations" on their part, or efforts to "blackmail" Western Europe into submission. The increased risk of war and "the inevitable jeopardy to our position as a world power and to our democratic way of life would be intolerable." The JCS recommended that the United States proceed immediately with efforts to determine the technical feasibility of thermonuclear weapons. Until their feasibility was demonstrated, however, the JCS agreed that decisions pertaining to production of Super should be deferred. 23

The JCS recommendation established a broader basis for consensus among the Defense and State Department representatives on the working group of the special committee. Despite some doubts about the military usefulness of Super and its possible effects on international opinion, Paul Nitze recommended that Secretary Acheson adopt the Defense
Department's position of accelerating development of Super, but defer a
decision on its actual production. At the same time Admiral Souers pro-
moted Lilienthal's desire for a reexamination of overall national secu-
rity policy. On 20 December he formally proposed that such a study be
undertaken by the National Security Council staff. Nitze endorsed that
suggestion in his recommendations to the Secretary of State. Though
Acheson favored the proposed NSC study, he had reached no conclusions
about Super. At a meeting of the special committee on 22 December, he
requested more information from the JCS regarding military applications
of the weapon, but took no position on its development. Johnson and
Lilienthal bickered with one another.24

Secretary Johnson was impatient with the pace of the special com-
mittee's work and uncertain of its eventual outcome. Following the
Christmas holidays he went outside the committee in a typically heavy
handed effort to manipulate the decision on Super. During late December
and early January, the Joint Strategic Survey Committee of the JCS had
prepared a critical analysis of the original GAC report on thermonuclear
weapons. When Congress reconvened, Johnson asked LeBaron and General
Bradley to convey the conclusions of the JSSC report to the Joint Atomic
Energy Committee. Senator McMahon was already preparing to hold hear-
ings to promote Super. The conclusions of the JSSC report provided ad-
ditional ammunition. In mid-January, Johnson also sent a copy of the
report to the President.25

The JSSC report added nothing new to the substance of the debate
over thermonuclear weapons, but it provided an effective, if opinionated,
rebuttal to the political and moral criticisms leveled against Super by
its opponents. "It is folly," said the JSSC, "to argue whether one weapon is more immoral than another." The American people and the people of the free world expected the United States to develop the most effective weapons possible to deter Soviet aggression. It would be "foolhardy altruism for the United States voluntarily to weaken its capability" by renouncing thermonuclear weapons. Nor was it likely that the USSR would join in an international agreement to forego development of those weapons. The report reaffirmed earlier JCS recommendations—proceed with efforts to determine the technical feasibility of Super, but defer a decision on actual production.  

The JSSC report clearly impressed President Truman. He told Admiral Souers that the JCS recommendation "made a lot of sense and he was inclined to think that was what we should do." Souers, who was in charge of coordinating the working group of the special committee, told Acheson that he thought Johnson was "playing on the unilateral side" by showing the JSSC report to the President before the committee had reached any final conclusions. Acheson was also perturbed by Johnson's little intrigue, but he told Souers that he too was inclined to think we would have to "go ahead and find out about the feasibility of [thermonuclear weapons]."  

The President's thinking may also have been influenced by other information he received from the JCS at about that same time. When he approved the accelerated fission bomb program in October, the President asked Secretary Johnson to give him an analysis of the operational assumptions that led the JCS to recommend the expansion and the changes in strategic plans that would result. General Bradley briefed the President
on those questions in mid-January. "The number of bombs available in our stockpile," he told Truman, "is a major factor in the formulation of United States military strategy." Currently approved emergency war plans (meaning TROJAN) would not be affected by the expansion because they were based on existing capabilities. However, new plans already under consideration (meaning OFFTACKLE) envisaged an increased range of objectives for atomic operations, including the possible employment of nuclear weapons to retard Soviet ground offensives and to destroy their atomic striking capability. The full impact of the nuclear expansion program would not be felt for several years, but it was increasingly essential to broaden our plans for atomic warfare in order "to bridge the wide gap now existing between our international military commitments and our [conventional] military capabilities." The "level of those capabilities," Bradley warned the President, "already involves acceptance of an extremely serious risk."28

Expansion of nuclear weapons production would not only "improve our military posture," but would permit the development of new weapons, such as smaller, lighter fission weapons and "Super bombs," that would provide added flexibility in our military plans and increase our ability to deter Soviet aggression. Bradley did not discuss Super in any detail, but the overall implication of his briefing was that greater nuclear capability was essential to the achievement of American objectives in either war or peace. How that message affected Truman's thinking on thermonuclear weapons is not entirely clear, but it probably reinforced his inclination to favor their development.29
By mid-January the tide of opinion was clearly in favor of a decision to proceed with the development of Super. A few days after Acheson's conversation with Souers, Gordon Arneson of the working group completed a draft report for the committee's consideration. There was general agreement, he said, that an accelerated effort to determine the feasibility of Super could be completed within about three years without serious effect on the development and production of fission weapons. The chance that such an effort would succeed was at least fifty percent. If it did succeed, Arneson cautioned that the pressures would be greatly increased to produce and stockpile thermonuclear weapons for potential use. The questions raised by that possibility required a fundamental reexamination of American strategic plans and objectives in peace and war as well as the moral, psychological and political issues involved. Regardless of what the United States did, however, there was little reason to believe the Soviets would not make an "intensive" effort to produce a thermonuclear weapon. "Sole possession by the Soviet Union of this weapon would cause severe damage not only to our military posture but to our foreign policy position." Arneson rejected predicating any decision regarding the development of Super on renewed arms control negotiations with the Soviets. Such an appeal was unlikely to succeed and the time spent on it would "increase the prospect of prior Soviet possession of thermonuclear weapons."

Arneson recommended that the President "direct the Atomic Energy Commission to proceed to determine the technical feasibility of thermonuclear weapons," but he purposely avoided the critical issue of what priority that effort should receive. The President, he suggested,
should direct that "the scale and rate of effort . . . be determined jointly by the Atomic Energy Commission and the Department of Defense."

In addition, Arneson recommended that the President direct the Secretary of State and Secretary of Defense to undertake a reexamination of American objectives in peace and war and their effect on our strategic plans. The NSC had approved Admiral Souers' proposal for such a study in early January, but Arneson recommended limiting its participants to the Departments of State and Defense, thereby taking it out of the NSC machinery. Pending completion of that study, Arneson recommended that the President defer any decisions on the actual production of thermonuclear weapons beyond the number required for a test of their feasibility. 31

After approving Arneson's draft report, Acheson showed it to Lilienthal on 26 January. According to Lilienthal's account of their discussion, Acheson shared his serious reservations about the implications of thermonuclear weapons. However, Acheson was convinced that a decision to proceed with development was necessary to prevent a "row" in Congress and the Administration that would make "any useful 'new look' at our military and political posture and policies" impossible. 32

When the special committee gathered in Admiral Souers' office on 31 January, Acheson proposed Arneson's recommendations as the basis of the committee's advice to the President. Lilienthal made a last, eloquent appeal to defer a decision on development of Super pending the outcome of the study of overall national security policy. A decision to proceed with development prior to such a reexamination of basic premises, he argued, "would be highly prejudicial to the examination itself." We should face up now to the weaknesses in our national military posture
that dictated almost exclusive reliance on nuclear weapons or "we would not later be able to face up to them, or we just would not face up to them." Now that the Soviet Union possessed atomic weapons, Lilienthal thought those weapons were a "rapidly depreciating" asset to the United States as the basis of our foreign policies and strategic plans. A decision to develop Super, he concluded would only magnify the inherent weaknesses of relying so heavily on such weapons. 33

Acheson was sympathetic to Lilienthal's point of view, but he argued that the pressure from Congress for an affirmative decision was so great that delay for any reason was an alternative he could not recommend to the President. Secretary Johnson agreed. His only objection to the draft report before the committee was the recommendation to defer a decision on actual production. Johnson did not suggest that he favored such a decision immediately, but he argued that an explicit recommendation against it was unnecessary. Acheson conceded the issue, but he recalled later that both he and Lilienthal were convinced that Johnson's purpose was "to open the way for renewed pressure for a decision on production." 34

With the exception of the explicit recommendation to defer a decision on production, the special committee's final report was virtually identical to Arneson's draft. To Acheson's surprise, Lilienthal reluctantly agreed to sign it, with the understanding that he would be able to present his personal views to the President. Secretary Johnson suggested that the committee go to the White House at once to get a decision. 35
It was clearly evident that Truman had already made up his mind. After glancing at the committee's recommendations he promptly signed them. When Lilienthal attempted to express his reservations, Truman cut him off. Further delay, the President said, would be unwise. In any case, Truman did not think the world would "come to an end" as a result of the decision. The committee members departed the President's office barely seven minutes after they arrived.36

The Super Bomb Debate: How Finally to Decide

As Warner Schilling has pointed out, the President's approval of the special committee's report on 31 January was essentially a non-decision. Beyond rejecting a unilateral renunciation of thermonuclear weapons, no clearly new course of action was set in motion. The public announcement of the "decision" indicated only that the Atomic Energy Commission had been directed "to continue its work on all forms of atomic weapons, including the so-called hydrogen or super-bomb." The President's directive to the AEC was not much more detailed. It only repeated the pertinent recommendations of the special committee report—"proceed to determine the technical feasibility of a thermonuclear weapon, the scale and rate of [that] effort to be determined jointly by the Atomic Energy Commission and the Department of Defense." In effect, the President had decided that the AEC should continue to do what it was already doing. The crucial issue of what added priority, if any, should be given that effort was not decided. The proverbial buck had stopped only briefly at Truman's desk.37

Controversy arose immediately between the Defense Department and the AEC over interpretation of the President's directive. At a meeting
with the commission on 2 February, MLC Chairman LeBaron insisted that a high priority plan to accelerate the development and testing of Super should be drawn up as quickly as possible. He especially wanted the production of tritium stepped up. Acting AEC Chairman Sumner Pike argued that the commission was already doing everything that it could within existing budgetary limits. Additional scientists were being recruited and the commission was prepared to supply the tritium necessary for test purposes.\textsuperscript{38}

LeBaron's interest in the scale of the tritium production program went beyond obtaining sufficient quantities for test purposes, however. He insisted that the commission plan to produce enough tritium to allow immediate fabrication of hydrogen bombs as soon as the feasibility was proved. No explicit decision had been made regarding the eventual production of Super, but LeBaron's demand seemed to confirm Acheson's and Lilienthal's suspicion that the military aimed to foreclose that issue on its own terms. Commissioners Pike and Smyth argued that it was useless to adopt such an approach without well defined military requirements. Even LeBaron conceded that he had no specific idea how much tritium the commission should plan to produce. The uniformed members of the MLC generally endorsed LeBaron's proposal. But, in a private conversation with General McCormack, Director of the AEC's Division of Military Applications, they admitted their concern about the effect expanded tritium production would have on the output of plutonium for fission weapons.\textsuperscript{39}

Following a visit to Los Alamos on 23 February, LeBaron and the MLC expressed approval of the laboratory's plans for a maximum effort to
determine the feasibility of thermonuclear weapons, while continuing essential work on promising new fission bomb designs. Tests aimed at demonstrating thermonuclear principles were already scheduled for the spring of 1951. How soon Super itself could be tested was difficult to judge. Although satisfied with the technical effort at Los Alamos, LeBaron was still concerned about AEC plans for the production of tritium. AEC General Manager Carroll Wilson informed LeBaron on 20 February that the commission could provide test quantities of the isotope sometime in 1952. He made no promises regarding stockpile quantities. Instead, he stressed the need for establishing realistic military requirements and the potential effect an accelerated tritium program might have on the production of fission weapons. 40

Despite the AEC’s continued reluctance to begin the production of tritium in quantity, another event had already occurred to strengthen the Defense Department's position on that issue. On 27 January, Dr. Klaus Fuchs was arrested in Britain and charged with espionage on behalf of the Soviet Union. As a member of the British scientific contingent, Fuchs worked on the MANHATTAN Project between December 1943 and June 1946, first at Columbia University and later at Los Alamos. A gifted physicist, Fuchs gained wide access not only to information about the fission bomb program but also to theoretical data concerning thermonuclear weapons. Shortly before returning to Britain in June 1946, he participated in a conference at Los Alamos where the known principles of thermonuclear reactions were discussed in the fullest detail. Fuchs was recruited in Britain by Soviet military intelligence (GRU) officers sometime in early 1942. Despite his background as an activist in the
communist underground in Germany before the war and the tangential connection of his name with the Canadian atomic spy case in 1946, Fuchs escaped detection until early 1950 when he was identified as a Soviet agent as the result of sensitive communications intelligence obtained by the Armed Forces Security Agency.  

While he was in the United States between 1943 and 1946, Fuchs regularly communicated large volumes of information to GRU resident Anatoli Yakovlev through the courier Harry Gold. After returning to Britain, he continued to provide information until at least early 1948. A preliminary estimate of what specifically Fuchs may have passed to the Soviets was made by the CAC on 30 January and was known to the special committee when it met the next day. According to Gordon Arneson, the case was "in the back of everyone's mind," but did not play a "dominant" role in the committee's decision. Additional revelations from the more detailed interrogation of Fuchs in early February apparently alarmed LeBaron, however. A less charitable interpretation is that LeBaron saw an excellent opportunity to exploit the Fuchs case to his advantage. Whatever his motives, LeBaron promptly asked General Kenneth Nichols and General Herbert Loper of the MLC to evaluate the significance of Fuchs' treason for the status of fission and fusion weapons programs in the Soviet Union.  

In their reply of 16 February, Nichols and Loper speculated that it was conceivable that on the strength of Fuchs' knowledge Soviet nuclear weapon programs had advanced much further than current intelligence estimates indicated. Assuming that the USSR had initiated a concerted effort to develop atomic weapons in 1943, Nichols and Loper suggested it
was possible the Soviets already had a fission bomb production capacity equal to that of the United States, and they might even have a thermonuclear weapon in production. Nichols and Loper cautioned that they had no real evidence to support their speculations, but they believed the possibilities should not be ignored.43

Intelligence estimates of the status of Soviet nuclear weapons production both before and after circulation of the Nichols-Loper memorandum discounted the possibility of a much more advanced Soviet program. Air Force and JCS intelligence reports completed in February and April 1950 showed identical estimates of potential Soviet production capabilities through 1954. The USSR was expected to have no more than ten to twenty fission bombs by mid-1950 and no more than 200 by mid-1954. Although specific intelligence on the nature and accomplishments of the Soviet development program was quite limited in early 1950, there was no real evidence that it had progressed beyond the explosion of a single test device. At best it was no more advanced than the American program was in July 1945.44

Despite the admittedly "fantastic order" of Nichols' and Loper's speculations, LeBaron sent their conclusions on to the Secretary of Defense and the JCS with his qualified endorsement. Though not probable, he thought they were at least credible in light of Fuchs' espionage activities and, therefore, deserved attention. After considering the Nichols-Loper memorandum, and apparently with some prompting from Johnson, the JCS recommended an immediate acceleration of the development and production of hydrogen bombs. Johnson had already showed a copy of the memorandum to Truman. On 24 February, armed with the JCS
recommendation, the Secretary formally requested that the President order the "immediate implementation of all-out development of hydrogen bombs and the means for this production and delivery."\(^65\)

In response to Johnson's request, Truman once again called on the special committee for advice. Lilienthal had resigned as AEC Chairman. His temporary replacement, Henry Smyth met immediately with LeBaron and Gordon Arneson to settle on a course of action. Smyth again warned LeBaron that the quantity production of tritium would require sacrifices in the production of fission weapons. But, if the military was prepared to accept that consequence, Smyth conceded that the special committee could clear away the ambiguity of the January directive by recommending that the President explicitly order the AEC to prepare for stockpile production of thermonuclear materials. LeBaron and Arneson promptly agreed, as did their respective chiefs.\(^46\)

In its report, the special committee described the thermonuclear weapons program as a "matter of the highest urgency." The committee recommended that the President instruct the AEC to prepare for the production of enough tritium to avoid delay between a successful test of thermonuclear weapons and the possible start of their production. The specific scale of tritium production should be the subject of joint recommendations by the Commission and the Defense Department, and should take into account possible effects on the expanded fission bomb production goals approved by the President in October 1949. At least until joint recommendations were submitted, the committee believed that no additional funds were necessary. Truman approved the report without public announcement on 10 March.\(^47\)
The joint AEC-Defense Department study of the appropriate scale of tritium production forced the military to come to grips with the many imponderables associated with the thermonuclear program. It was still uncertain whether a thermonuclear explosion was even possible. The characteristics of an actual weapon, including the precise amount of tritium required for each one, was even less uncertain. Based on a general estimate of the amount of tritium needed for a single weapon the AEC and Department of Defense concluded that it would be necessary to construct two new heavy water reactors at a cost of $250 million to satisfy potential long-range tritium requirements. But, those facilities would not be ready for a number of years. In the meantime, the joint study recommended turning one of three Hanford reactors over to the production of tritium. By using weapons grade U-235 instead of natural uranium to increase the level of neutron activity in the reactor, very limited stockpile quantities of tritium could be provided by the end of 1951. The AEC already expected to have test quantities available by the end of 1950. If thermonuclear weapons—as opposed to test devices—proved feasible sometime in 1952, at the very minimum there would be enough tritium on hand to construct "at least one deliverable weapon" immediately. In addition, there would be an operating tritium production capacity that could be expanded if necessary.

With the addition of the two heavy water reactors, the AEC and the Defense Department believed it was possible to produce a considerable quantity of tritium by 1 January 1956 and still meet the overall fission bomb production goal established in October 1949, i.e., something in excess of a thousand weapons. Interim fission bomb production goals
could probably not be met, however. While the Hanford reactor remained the sole source of tritium, fission bomb shortfalls would range from about seventy weapons at the end of 1951 to a peak of perhaps 200 in 1954. Once the new heavy water reactors were brought on line, the initial shortfalls could be made good. Moreover, by fueling the new reactors with a mix of weapons grade U-235 and natural uranium considerable flexibility would exist for the production of either increased quantities of tritium or plutonium. 49

Following approval by the JCS, the joint AEC-Defense Department study was sent to Truman on 25 May. Though formal confirmation did not come until 8 June, the President immediately indicated his agreement with the study's recommendations. A month later Truman announced his intention to ask Congress to provide $260 million in fiscal 1951 supplementary funds to finance the two new reactors. 50

During the early months of the Korean War, when attention was ostensibly refocused on requirements for conventional military power, the JCS established new requirements for fission bomb production greatly in excess of the October 1949 program. At the same time, the AEC and the Defense Department reached agreement, at the behest of the President, on a substantial expansion of fissionable material production. As a result of those initiatives, approved by the President on 2 October 1950, nuclear weapons production was limited only by the availability of raw materials and the capacity of production facilities. The implication was that the United States would continue to rely heavily on the political as well as the strategic advantages of nuclear weapons. 51
During late 1949 and early 1950, civilian and military leaders in the defense establishment successfully promoted their demands for more and better nuclear weapons to reassert and strengthen America's deterrent and war fighting power following the loss of the nuclear monopoly. At the same time, their opponents and some of their allies in that effort set in motion a basic reassessment of American foreign and military policies and the utility of their continued dependence on nuclear weapons. By the time that reassessment was completed in April 1950, however, the series of decisions in October 1949 and January and March 1950 to expand nuclear weapons programs had taken on a momentum that was almost impossible to reverse. Indeed, as a result of inconsistencies and contradictions between its premises and conclusions, the analysis of national security policy embodied in NSC 68 tended ultimately to confirm rather than reject continued reliance on nuclear weapons.
CHAPTER VIII NOTES

1. See Chapter VI.


10. Ibid., p. 374.


13. Ibid.


15. Ltr, w/ memo and appendicies, Lilienthal to Truman, 9 Nov 49.

16. Ibid.


19. See e.g., "Minutes of Meeting of Policy Planning Staff, Department of State," 3 Nov 49, and Draft Memo, Kennan to Acheson, 18 Nov 49, both in FR: 1949/I, pp. 573-76, 585-87. See also Keenan, Memoirs, pp. 497-98 (paper edition).


23. Ibid.


26. Memo, JCS to Sec Def, 13 Jan 50.


29. JCS 1823/21, 29 Nov 49.


33. Ibid., pp. 627-29. Acheson, Present at the Creation, pp. 348-49.


38. Ibid., pp. 411-12.


40. Hewlett and Duncan, Atomic Shield, pp. 413-15.


43. Memo, Loper to LeBaron, 16 Feb 50, PSF, NSC Atomic File, Atomic Energy-Russia folder, Truman Library


48. Draft ltr, Johnson and Pike to Truman, prepared c. 17 May 50, attch to JCS 1745/24, 17 May 50, Note by Secs to JCS, sub: "Tritium Production Program," CCS 471.6 (12-14-49)S. 1A.
49. Ibid. A portion of the U-235 employed in the production of tritium in the Hanford reactor was recoverable and could be used later for fission bomb production.


51. Re: increase of JCS requirements see JCS 1823/29 DECISION, 12 Sep 50 and JCS 1823/32, 21 Sep 50, Rpt, JSSC to JCS, sub: "U.S. Military Requirements for Fissionable Material," both in CCS 471.6 (8-15-45)S. 19A, and JCS 2110/5 DECISION, 1 Aug 50, CCS 471.6 (3-10-50)S. 1. Re: AEC-Department of Defense agreement see JCS 1823/31, 14 Sep 50, Note by Secs to JCS, sub: same, CCS 471.6 (8-15-45)S. 19A. Re: Truman's role see Memo, Lay to Johnson and Dean, 8 Aug 50, FR: 1950/I, p. 570 and Hewlett and Duncan, Atomic Shield, pp. 525-29.
The impetus for a basic reassessment of the relationship of foreign and military policies came from several quarters in the Administration in late 1949. In each case, reaction to the Soviet possession of atomic weapons was the essential catalyst. One or both of two basic factors associated with that event—perceptions of the Soviet threat and perceptions of the utility of nuclear weapons—shaped the attitudes of those who called for a reevaluation of national security policy. Most of the civilian policy-makers who favored a reassessment agreed that Soviet possession of atomic weapons undermined both the deterrent and warfighting value of those weapons. Among that group, however, there was no consensus on the implications of that fact for either the nature of the Soviet threat or the substance of American foreign and defense policies.

One group of policy-makers argued that the loss of the American nuclear monopoly increased the threat of Soviet military aggression, of either a limited or total character, in addition to raising the level of political threat. Another group maintained that despite the loss of the nuclear monopoly the main threat remained political. If there was a military threat at all, it was one of limited, local aggression in
pursuit of essentially political objectives. Both groups agreed that nuclear mutuality ended or soon would end the usefulness of those weapons as the mainstay of American defense policy. They disagreed, however, on what constituted the most appropriate alternative military posture. The latter group argued that the United States required only relatively small but highly trained and mobile conventional forces suited to deal with the limited military threats that were most likely to materialize. The former group also believed that the United States must shift the emphasis of its military posture toward conventional forces. But, they maintained that the United States must prepare for general war as well as limited, local wars, and, therefore, must have a broad range of military capabilities.

Ultimately, the reassessment of national security policy was controlled by those who believed that the threat of Soviet military aggression was increased as a result of nuclear mutuality. Thus, the premises of the reassessment essentially predetermined its conclusions in favor of increased military preparedness. Despite their assumptions about the diminished usefulness of nuclear weapons, however, those who dominated the reassessment of national security policy failed fully to resolve the implications of that issue for the actual nature of American defense posture and strategy.

Origins and Organization of the State-Defense Policy Review Group

The NSC staff report on measures required to achieve U.S. objectives toward the USSR, completed in March 1949 as a follow up to NSC 20/4, was rejected by the State Department. Nevertheless, continued debate over the usefulness of such an effort during the summer of 1949
resulted in a series of discussions between members of the State Department's Policy Planning Staff and strategic planners in the military establishment that served to highlight the increasing contrast between American diplomatic commitments and military capabilities. Those discussions failed to dissuade George Kennan from opposing the NSC effort, but they had the opposite effect on his deputy and eventual successor, Paul Nitze.¹

Both Kennan and Nitze were disturbed by the military strategists' preoccupation with planning for a general war to the exclusion of planning for more limited military threats. Beyond that point of basic agreement, however, their thinking diverged. Kennan criticized the practice of basing U.S. military posture and plans on worst case judgments of Soviet capabilities rather than realistic estimates of Soviet intentions. He was convinced that the most likely—indeed, the only likely—military threat posed by the Soviet Union was one of localized aggression in pursuit of political not military goals. American general war capabilities emphasizing the use of nuclear weapons were of little use either in deterring or fighting such conflicts. Instead, Kennan believed that the United States required only relatively small but highly mobile conventional forces tailored to meet limited military threats. Current defense budget ceilings, he thought, were more than adequate to maintain such forces.²

Nitze agreed that limited, local aggression was the most likely military threat posed by the Soviet Union and that the United States required the types of conventional military forces best suited to meet that threat. However, he did not believe that general war was such a
remote possibility that it simply could be ignored in determining U.S. military posture and plans. The United States required a broad range of military capabilities not only to meet various levels of military threat, but as a general support for the conduct of foreign policy. The military planners did not disagree with that appraisal, but they pointed out that building such capabilities was impossible under existing defense budgets. Thus, from his discussions with the military planners, Nitze obtained an increased appreciation of the need to integrate more rationally the objectives and means of foreign and military policies.3

Nitze's attitude in that respect had already been influenced by his experience with the development of the Mutual Defense Assistance Program while he was Deputy Assistant Secretary of State for Economic Affairs. Early contacts with MDAP planning convinced Nitze that military programs were determined more often by arbitrary budget limits than by actual requirements. Coming to grips with MDAP impressed many State Department officials with the necessity to more closely correlate foreign, military and fiscal policies. It also forced those officials into closer contacts with the military establishment in ways that gave them a greater understanding of the problems faced by the armed forces in planning military requirements.4

Another source of concern with integrating the objectives and means of national security policy was the National Security Council staff under the direction of Admiral Souers. Souers insisted that analysis of the objectives and means of national security policy was a basic and continuing responsibility of the NSC staff. Efforts to carry out that responsibility in connection with NSC 20/4 had been frustrated by State
Department opposition. However, in the wake of the Soviet atomic test and the ensuing debate over development of thermonuclear weapons, Souers found new support for such an effort among both partisans and critics of American nuclear policy. As a result of discussions within the working group of the NSC special committee on thermonuclear weapons during November and December 1949, Souers formally recommended that the NSC staff be directed to prepare a report assessing the objectives, commitments and risks of overall American policy in relation to our actual and potential military power. As the State Department's chief representative on the working group, Nitze endorsed that recommendation to Secretary Acheson. The NSC approved Souers' proposal on 5 January 1950.5

In mid-January, Deputy Under Secretary of State Dean Rusk set up an ad hoc group to prepare the Department's participation in the NSC directed study. Despite Acheson's approval, however, there remained in the State Department considerable opposition not so much to the proposed study itself, but to conducting it within the machinery of the NSC. When Gordon Arneson submitted his draft report on thermonuclear weapons to Acheson in late January he recommended that the reexamination of national security policy be confined to the Departments of State and Defense, thus, taking it out of NSC channels. The reasons for that appear to have been largely institutional. First, there was already concern within the State Department that the NSC staff was usurping functions that did not rightfully belong to it. Second, there was concern that including other departments and agencies, especially the Atomic Energy Commission, in the study would not only undermine State
and Defense Department prerogatives, but would increase the risk of information leaking prematurely to Congress or the press.\textsuperscript{6}

In his account of the background and development of NSC 68, Paul Hammond implies that the State Department's insistence on removing the study of national security policy from NSC channels was motivated by fears that Secretary of Defense Johnson would fail to cooperate unless there was a clear mandate from the President in favor of the reappraisal. There was considerable concern within the State Department about the degree of Johnson's commitment to the study, but the available evidence does not indicate that was a major consideration in taking the study out of the NSC. A Presidential directive could be obtained just as easily for a study conducted within NSC channels as for one conducted outside those channels. Nevertheless, the President's letter to the Secretaries of State and Defense on 31 January directing that they undertake a reexamination of national security policy reassured State Department officials that Johnson could not refuse at least to participate in the study. Whether he would endorse its conclusions was, of course, another matter.\textsuperscript{7}

In response to the President's directive the State and Defense Departments established a joint "Policy Review Group" in early February. State Department representation in the group was assigned primarily to the Policy Planning Staff. Nitze, who had recently succeeded Kennan as director of the Staff, was designated chairman of the review group. Secretary Johnson placed general responsibility for Defense Department participation in the work of the review group on his long-time confidant and Assistant for Foreign Military Affairs, retired Major General James
H. Burns. Johnson also requested the JCS and the Military Liaison Committee to provide representation in the group. James Lay, Souers successor as Executive Secretary of the NSC, and his assistant Everett Gleason attended the review group's meetings as observers, but did not participate directly in its work.\(^8\)

The JCS directed the Joint Strategic Survey Committee to provide representation on the review group. But, in accordance with established practice, the Chiefs refused to delegate authority to the JSSC to commit them in advance to any specific conclusions. The JSSC assigned its Air Force member, Major General Truman H. Landon, to carry on day-to-day contacts with the review group. Although General Burns, his deputy Najeeb Halaby, or MLC Chairman Robert LeBaron attended many of the review group's sessions, Landon assumed the main burden of Defense Department participation in the actual work of the group. The other members of the JSSC, Army Major General Ray T. Maddocks and Rear Admiral Thomas H. Robbins, reviewed the group's work as it progressed, but did not participate in its meetings.\(^9\)

When the policy review group began its work on 8 February, Nitze and the Policy Planning Staff were already firmly inclined toward the conclusion that the United States must invest whatever was necessary in terms of increased defense budgets to improve military capabilities across the board. In a general appraisal of the Soviet threat circulated at the review group's first meeting, Nitze argued that the Soviet leadership was unremittingly hostile to the West and dedicated to a "life-and-death struggle" with the United States. Nitze admitted that there was no evidence that the Soviet Union was preparing deliberately
to launch an all out war in the near future, but he believed the USSR was increasingly willing "to undertake a course of action, including possible use of force in local areas, which might lead to an accidental outbreak of general military conflict." Comparative studies of Soviet and American military capabilities and expenditures conducted by the Policy Planning Staff during the fall of 1949 reinforced Nitze's view of the Soviet threat and indicated his concept of the direction the review group's study must take.10

General Landon and his colleagues from the Defense Department were certainly not opposed philosophically to improving American military capabilities. Initially, however, they were reluctant to challenge the overall budget ceilings imposed on the defense establishment by the Administration. Their reluctance stemmed from two basic sources. First, military officers were dedicated in principle to the concept of civilian supremacy in matters of defense policy. Once a decision was made by competent authority, the military was obliged to accept it whether they agreed with it or not. Secretary Johnson had firmly impressed his commitment to economy in defense spending on the military services. In addition, he had forbidden any contacts between Department of Defense personnel and other agencies of government, especially the State Department, that might undermine that commitment. Secondly, since 1945 the military had witnessed several efforts similar to the present one ostensibly intended to integrate foreign and defense policies. But, in each case the military's concept of rational defense requirements was subordinated to arbitrary spending limits. Initially, at least, there
was little confidence among military officers that this effort would be different.\(^{11}\)

Under the circumstances, it is not surprising that the initial approach of General Landon and his Defense Department colleagues to the review group's work was cautiously conservative. Officially, they spoke for neither the Secretary of Defense nor the Joint Chiefs. Nitze and his colleagues on the other hand spoke with the authority and confidence of the Secretary of State. It was, therefore, natural that the State Department representatives took the lead in shaping both the premises and conclusions of the review group. Once they perceived the commitment of their State Department associates to a rational reassessment of the basic assumptions underlying existing defense policy, however, General Landon and his colleagues lent their full support and encouragement to that effort and to the new direction in which it led. The discussions of the review group were marked by a free and open exchange of views. Nitze and his colleagues were especially interested in Landon's judgment of what the JCS would or could accept, but the group's work was not controlled by such considerations. Indeed, Landon's essentially unofficial status tended to free him and his fellow JSSC members from the requirement to support only officially sanctioned positions.\(^{12}\)

**National Security Objectives and the Roots of Soviet-American Conflict**

The actual drafting of the policy review group's report was carried out by the Policy Planning Staff—very largely by Nitze himself judging from the style of the writing. The basic draft of the paper was completed in three separate stages between mid-February and early March.
The first stage was a general statement of the ideological nature of Soviet-American conflict and the basic objectives and purposes of American policy. Completed independently by Nitze sometime before 23 February, this stage of the drafting comprised a fairly complete version of what would become the first four chapters of the final report.  

The United States, according to Nitze, was confronted by a world crisis with profound implications for the very survival of civilization. The shifting distribution of international power toward bipolarity, the terrifying potential of nuclear weapons, and the Soviet Union's "fanatic" pursuit of world domination fundamentally altered the nature and stability of international relations, thus, making conflict "endemic." The "fundamental purpose of the United States" was "to create conditions under which our free and democratic system [could] live and prosper." But, achievement of that purpose was threatened by what Nitze described as the "Kremlin design" to subvert and dominate the non-Soviet world. Nitze admitted that Moscow's first postwar priority was to consolidate its power in the USSR and the satellite areas. But, he insisted that "in the minds of the Soviet leaders . . . achievement of this design requires the dynamic extension of their authority and the ultimate elimination of any effective opposition to their authority." Toward that end Soviet efforts were being directed at the "domination of the Eurasian landmass," but the United States "as the bulwark of opposition to Soviet expansion [was] the principal enemy whose integrity and vitality must be subverted or destroyed by one means or another if the Kremlin [was] to achieve its fundamental design."
It would be a mistake to dismiss Nitze's analysis of the roots of Soviet-American conflict as a relic of cold war rhetoric. Nitze's estimate of the implacability of the Soviet "design" derived from the very basis of American foreign policy toward the USSR. In that policy, the attractiveness of democratic ideals and values, contrasted with the bleak reality of communism, bore the political burden of containing the expansion of Soviet influence and eventually causing it to recede. Indeed, according to Nitze's logic, the inevitability of Soviet-American conflict arose from the fact that democratic ideals and values were inherently attractive and the reality of Soviet communism was inherently unattractive. In order to expand its system, or even to maintain it in areas already under communist control, the Soviet Union must subvert or destroy the Western democracies, especially the United States.

Nitze's exposition of the basic political objectives of the United States toward the Soviet Union was vintage Kennan and derived directly from Kennan's contributions to NSC 20/4. Our primary objective must be to "lead in building a successfully functioning political and economic system in the free world." Beyond that, however, the United States must "foster a fundamental change in the nature of the Soviet system." "By practically demonstrating the integrity and vitality of our system, the free world . . . can hope gradually to bring about a Soviet acknowledgement of realities which in sum will eventually constitute a frustration of the Soviet design." Short of that, we must also seek to "create a situation which [would] induce the Soviet Union to accommodate itself, with or without the conscious abandonment of its design, to coexistence on tolerable terms with the non-Soviet world."15
Nitze also invoked Kennan's contributions to NSC 20/4 as the source of American objectives in the event of war with the Soviet Union. Those objectives did not include unconditional surrender, annihilation, or the political and economic subjugation of the Russian people. Rather our war aims were limited to imposing the conditions "requisite to an international environment in which free institutions can flourish, and in which the Russian peoples will have a new chance to work out their own destiny."\(^{16}\)

To achieve its basic objectives, Nitze argued that the United States was limited by "practical and ideological considerations" to peaceful means unless it was attacked or imminently threatened with attack by the Soviet Union. There was, nevertheless, a fundamentally important role for military power—to deter an attack on the United States or its allies while the nation pursued its objectives by means short of war. If deterrence failed, America's use of military force should be guided by the nature of the specific threat it confronted and by its political objectives toward the USSR. If at all possible, the United States should avoid using annihilatory force. The implications of such a policy for American military posture were evident. "Our aim in applying force must be to compel the acceptance of terms consistent with our objectives, and our capabilities for the application of force should . . . be congruent to the range of tasks we may encounter."\(^{17}\)

If there was any difference between Nitze's general statement of American objectives toward the USSR and those expressed in the past by Kennan, it was one of subtle degree rather than substance. Where Nitze and Kennan differed fundamentally was in their interpretation of the
nature of the Soviet threat and its implications for American military posture. Those differences were brought into sharp focus during the second stage of the review group's work in which Nitze, Landon and their colleagues broke away from many of the political, economic and military assumptions of established policy.

The Nature of the Soviet Threat and American Policy Alternatives

In the second stage of its work the review group produced analyses of Soviet and American intentions and capabilities, the nature of the Soviet threat, and the possible courses of action available to U.S. policy-makers. Completed sometime before 27 February, that stage of the drafting formed the heart of the group's final report and comprised four of its remaining five chapters. Although that stage of the group's work was much more a collaborative effort than the first, the actual drafting bore the unmistakable signs of Nitze's pen.18

If the "Kremlin design" was to impose Soviet authority on the Western democracies, what means would be used to achieve that end? In short, what was the specific nature of the Soviet threat? The review group agreed that, so far, the Soviet Union had limited its methods to political subversion and intimidation in an effort to achieve "maximum results with minimum risks and commitments." But, what the Soviets had done in the past, the review group argued, was no "reliable guide to future actions." "The means employed by the Kremlin in pursuit of [its] policy [were] limited only by considerations of expediency." Thus, if "the Kremlin became convinced that it could cause our downfall by one conclusive blow," there was no reason to believe "it would not seek that solution."19
The potential military threat posed by the Soviet Union's overwhelming superiority in conventional armed forces had always been recognized by American policy-makers. But, in the past the dominant assumption underlying both foreign and military policy was that the political threat was greater. That assumption and its consequences for American military preparedness rested very largely on the U.S. monopoly of nuclear weapons. The prevailing opinion among policy-makers was that until the Soviets also possessed nuclear weapons, they were unlikely to deliberately initiate a war. The implication of that line of reasoning was that once the Soviets did possess nuclear weapons the likelihood of their deliberately initiating a war would increase. Based on that rudimentary logic, Nitze, Landon and their colleagues in the policy review group concluded that the military threat posed by the Soviet Union was now at least equal to the political threat, and would increase in proportion to the Soviet's nuclear war capabilities.

The review group identified three levels of increased threat as a result of Soviet possession of nuclear weapons. First, there was an increased likelihood of a surprise attack directly against the United States aimed at the destruction in "one conclusive blow" of our military and economic capacity to wage war. Second, there was the increased likelihood of "piecemeal aggression against others, counting on our unwillingness to engage in atomic war unless we are directly attacked." The third level of threat was "a more violent and ruthless prosecution of [the Soviet] design by cold war." Because of the possession of nuclear weapons, the review group reasoned, the Soviets had even less cause than before to fear a preventive attack from the United States.
The Soviets would, therefore, be encouraged to use their armed forces in a more aggressive political role "to back up infiltration with intimidation." As a result of their comparison of relative Soviet-American capabilities, the review group concluded that the increasing military potential of the Soviet Union, particularly its possession of nuclear weapons, threatened to undermine and defeat the U.S. policy of containment. As codified by Kennan and others after 1947, that policy relied primarily on economic and political means rather than military power for its achievement. Even the development of NATO was essentially a political device. The review group concluded, however, that "without superior aggregate military strength, in being and readily mobilizable, a policy of 'containment'—which is in effect a policy of calculated and gradual coercion—is no more than a policy of bluff." Kennan certainly would have disagreed with that appraisal, but therein lay the fundamental difference between his approach to containment and that of the review group. The members of the review group did not reject political and economic means for the achievement of containment. Their argument was that military power constituted "an indispensable backdrop" to the policy while operating as the "ultimate guarantee of our national security," either by deterring an attack on us or by waging war successfully if deterrence failed.

Despite the United States' superior potential, the review group concluded that there was an increasingly wide gap between its actual military power and that of the Soviet Union. Indeed, if war occurred in 1950, American conventional military capabilities were judged to be
inadequate to carry out any but the most trivial defensive tasks. The United States retained the capability to "conduct powerful offensive air operations against vital elements of the Soviet war-making capacity," but even General Landon was not prepared to state that those operations would be decisive. Personally, Landon may have believed they would be, but he could not commit the JCS to such a conclusion. The attitudes of the other members of the review group toward the uses of nuclear weapons even in an all out war were quite ambivalent. Consequently, the review group's assessment of American military capabilities for either general or limited warfare was extremely pessimistic. "When our military strength is related to the world situation and balanced against the likely exigencies of such a situation," the group concluded, "it is clear that our military strength is becoming dangerously inadequate."^{23}

What then were the courses of action open to the United States? The choices, according to the review group, were to continue current economic and military programs for carrying out our policies, to withdraw from our present commitments and isolate ourselves politically, economically and militarily in the Western Hemisphere, to deliberately initiate a preventive war, or to undertake a rapid buildup of political, economic and, above all, military strength in the free world. Of course, the review group's analysis of the first three choices was aimed at supporting the final choice which the group had already concluded was the only realistic alternative.^{24}

To continue present economic and military programs would result in an increasing disparity between Soviet and American capabilities that would progressively undermine not only our ability to compete vigorously
in the cold war but also our ability to defend ourselves and our allies in the free world. As our ability to defend against Soviet aggression declined, the review group warned that our "determination to resist may also decline." As a result of the increasing disparity between Soviet and American military capabilities, Moscow would be encouraged to pursue a policy of limited military encroachments, confronting the United States more and more frequently "with the dilemma of reacting totally... or of not reacting at all." The possibility of a direct Soviet attack upon the United States would also increase as American military capability "became less and less effective as a war deterrent." Even if the Soviets did not choose to attack the United States directly, continuation of current economic and military programs would ultimately result in America's isolation, further weakening its ability to defend against attack.  

If the United States deliberately chose to withdraw from its international commitments and isolate itself politically, economically and militarily in the Western Hemisphere, it would only hasten the decline of its power relative to that of the Soviet Union. With the United States in an isolated position, "the Soviet Union would quickly dominate most of Eurasia, probably without meeting armed resistance. It would thus acquire a potential far superior to our own, and would promptly proceed to develop this potential with the purpose of eliminating our power." In the end, isolation would "condemn us to capitulate or to fight alone and on the defensive, with drastically limited offensive and retaliatory capabilities in comparison with the Soviet Union."
The third course of action potentially open to the United States was to launch a preventive war. Such a course, the review group argued, would be "repugnant to many Americans" and would be "morally corrosive." In any case, the consensus within the review group was that the United States could not be certain that it could "launch and sustain an attack of sufficient impact to gain a decisive advantage ..." The United States could deliver a powerful blow against the Soviet Union with atomic weapons. But, based on joint military opinion, it was unlikely, or at least uncertain, that such a blow would either compel the Soviet Union to capitulate or prevent its forces from occupying Western Europe and the Middle East. That would mean a "long and difficult struggle during which the free institutions of Western Europe ... would be destroyed and the regenerative capacity of Western Europe dealt a crippling blow."  

If preventive war was too uncertain and dangerous a course to pursue, the review group did not rule out preemptive war when it was demonstrably in the nature of a counter-attack to a blow which is on its way or about to be delivered." Beyond that, the review group had little else to say about preemptive strategy. The group specifically recognized the advantages that would accrue to the Soviets if they launched a surprise, first strike against the United States. But, the review group did not analyze the effects of an American first strike.  

The final course open to the United States, and the one favored by the review group from the outset, was to undertake a rapid buildup of the political, economic and military strength of the free world. As in the past, frustration of the "Kremlin design" required the free world to
"develop a successfully functioning political and economic system and a vigorous political offensive against the Soviet Union." But, more than ever before, the review group emphasized, the United States and the West required military strength as a "shield" to deter Soviet expansion or, if necessary, to defeat Soviet aggression of either a "limited or total character." 29

Conflicting Views on the Nature of Rearmament and the Role of Nuclear Weapons

The review group defined only vaguely how strong the military shield should be. Nitze anticipated annual increases in military budgets on the order of three to four times current outlays. Landon and his fellow JSSC members assumed far more modest increases. In fact, no budgetary estimates were included in the review group's report. Instead, minimum force requirements were stated in terms of basic tasks to be undertaken in the event of general war. Those tasks were interpolated from existing JCS guidance on force structure and included: (1) defense of the Western Hemisphere and allied areas essential to the development of war-making capacity, (2) protection of the mobilization base while offensive forces required for victory were built up, (3) offensive operations to destroy vital elements of the Soviet war-making capacity and keep the enemy off balance until the full offensive strength of the United States and its allies could be brought to bear, (4) defense of essential lines of communication and base areas, and (5) provision of essential aid to allies. 30

The actual size and nature of forces implied by those tasks were open to varying interpretations. The review group offered few specific
indications of its interpretation beyond a general statement that the
ability to perform those tasks required combined allied strength super­
ior to that of the Soviet Union. On the one hand, the review group
seemed to indicate the need for essentially offensive forces. On the
other hand, the only specific type of forces mentioned as essential were
air and sea defense forces. The review group made a distinction between
conventional and nuclear forces and their relative suitability for local
and general war, but made no distinction between the forces, either con­
ventional or nuclear, necessary to wage general war and those required
to support foreign policy. The contradiction was one of consistency
more than substance, but it indicated that the review group had only the
vaguest concept of the exact shape a military buildup should take.31

It is unclear what, if any, specific differences on that issue
existed between the State and Defense Department members of the group.
The existing evidence seems to indicate that, at least initially, Nitze
and his State Department colleagues were primarily interested in improv­
ing conventional military capabilities. Although they were also inter­
ested in improving conventional capabilities, Landon and his Defense
Department colleagues appear to have been more interested in specific
programs to improve offensive nuclear war capabilities and forces for
air defense to limit damage to the U.S. mobilization base in the event
of atomic attack.

If the members of the review group were uncertain about the exact
size and nature of the military buildup, they seemed to have no doubts
about the general impact of the program on Administration fiscal policy.
They stated in their report that such a program would involve substantial
increases in defense spending, a substantial increase in spending for military assistance, at least some increase in spending for foreign economic aid, increased spending for intelligence and covert political activities, and increased spending for internal security and civil defense programs. To pay for those increases it would be necessary to raise taxes and to reduce federal expenditures for domestic programs.  

As already noted, however, Nitze and Landon had widely different opinions on the actual cost of the recommended military buildup. Since no specific figures were cited in the review group's report, it is difficult to know what each man defined as a "substantial" increase in defense expenditures. Apparently, Nitze was thinking in terms of as much as $50 billion annually while Landon and his JSSC colleagues were thinking in terms of about $17-20 billion annually.

By late February, the review group was enough satisfied with the shape of its draft report to begin a series of discussions with outside experts. The first two of those discussions with Robert Oppenheimer and James Conant on 27 February and 2 March revealed fundamental contradictions between the premises and conclusions of the report, especially in regard to the strategic consequences of Soviet nuclear weapons capability. The review group's interpretation of the Soviet military threat to Western security was based almost entirely on the fact that the Soviet Union now possessed nuclear weapons and would steadily increase its capability to deliver those weapons with devastating effect on Western Europe and the United States. That threat might take two forms. First, the increasing danger of a surprise atomic attack directly on the United States. Second, the increased danger of localized Soviet aggression,
counting on America's unwillingness to risk general, nuclear war to re-strain an all out retaliation by the United States. 34

The buildup of American conventional military strength addressed only the second type of threat. The buildup of conventional military forces might be useful in deterring or fighting piecemeal, local aggression by relieving the United States of its dependence on nuclear retaliation or no retaliation at all. However, the review group was unable coherently to formulate how either increased conventional or nuclear forces would make the United States secure from a suprise nuclear at-tack. 35

That problem was discussed during the review group's meetings with Oppenheimer and Conant in late February and early March. The consensus was that mutual possession of atomic weapons raised the incentive for the first, surprise use of those weapons. Although Conant urged the group to concentrate on a more thorough analysis of strategic issues involved in delivering nuclear weapons and on their effects on strategic relationships, the review group never seriously questioned that rudimentary theoretical formulation. Apparently, Landon transmitted to the group considerable concern for the need to improve strategic air defenses, but no one seems ever to have suggested that mutual possession of nuclear weapons might work to restrain their use. 36

Having accepted the premise that mutual possession of nuclear weapons made their use more likely, the logical conclusion might have been to reemphasize the importance of obtaining some form of international agreement to proscribe those weapons. Indeed, that was the conclusion of many of those, including Oppenheimer, Lilienthal, Kennan and others
with whom the premise originated before and during the debate over thermonuclear weapons. In fact, the members of the policy review group not only specifically rejected that course, but they insisted that the United States would have to continue to depend in large measure on nuclear weapons to make up the difference between Soviet and American military capabilities. How that conclusion could be reconciled with the basic premise is something of a mystery.\textsuperscript{37}

In an evident attempt to resolve some of the inconsistencies in its report, especially in regard to the effects of nuclear mutuality, the review group drafted an additional chapter during the first week of March. That chapter purported to be an analysis of the strategic implications of the possession of nuclear weapons by both the United States and the Soviet Union. For the next four to five years, the group stated, the United States would possess a significant but not decisive superiority over the Soviet Union in nuclear weapons capability. The U.S. would be able to "deliver a serious blow against the war-making capacity of the USSR," but it was doubtful whether such a blow "would cause the USSR to sue for terms or prevent Soviet forces from occupying Western Europe" in the event of general war. At best, America's nuclear capability would give it an overall advantage in a war of long duration. By about 1954, however, the USSR would have the nuclear capability to seriously damage the economic and military potential of the United States and even the limited advantages of American nuclear superiority would be lost.\textsuperscript{38}

For the short term, the review group believed that American nuclear capability was "probably" adequate to deter the USSR from a direct attack
on the United States and Western Europe. But, as Soviet nuclear capability "to hit our atomic bases and installations and thus seriously hamper the ability of the United States to [retaliate grew] . . . the Kremlin might be tempted to strike swiftly and with stealth." The review group concluded that increases in the U.S. nuclear arsenal would not "change the basic logic" of striking first in an attempt to gain the advantages of surprise. Despite that conclusion the review group believed that the United States required increased numbers of nuclear weapons "to assure the effectiveness of any U.S. retaliatory blow." And, to survive a surprise nuclear attack, the United States also required greatly increased air defense forces and civil defense programs. Still, no one suggested that insuring the survival of our ability to retaliate would restrain the Soviet Union from launching a surprise attack. Nor did any member of the group suggest that preparing to conduct preemptive strikes against Soviet strategic nuclear forces would reestablish our own ability to fight a nuclear war. At the very best, the review group concluded, increases in strategic nuclear and air defense forces would only delay the time when the Soviet Union felt strong enough to carry out a first strike attack. 39

The Bureaucratic Conflicts of Clearing the Policy Review Group's Report

Addition of the chapter on nuclear weapons during early March completed the review group's basic work of drafting a report. Three more meetings of the group with outside experts, including Chester Barnard, Henry Smyth, Robert Lovett and Ernest Lawrence were held, but those meetings had no significant impact on the shape or content of the group's report. The meeting with Barnard and Smyth on 10 March concentrated on
the problems of obtaining an international agreement proscribing nuclear weapons—a course the review group had already rejected. The meetings with Lovett and Lawrence on 16 and 20 March also contributed little that was new. Lovett generally endorsed the group’s conclusions but politely suggested that they might be written in simpler and more straightforward style—"Hemingway sentences" as he put it. Presumably, Lovett found the density of Nitze's writing difficult to penetrate.

Throughout the process of drafting, the military members of the review group worked in virtual isolation from the Secretary of Defense and the JCS. Secretary Johnson apparently showed little interest in the progress of the group’s work, but the defense members of the group also isolated themselves intentionally. This included not only General Landon, but also General Burns and MLC Chairman LeBaron who took an active part in the group’s final deliberations in late February and during the first three weeks of March. Their motives in maintaining this self-imposed isolation are open to various interpretations. Ostensibly, their purpose was to make it clear that neither the Secretary of Defense nor the JCS was committed in advance to any specific conclusions. As subsequent events demonstrated, however, the actual effect was to present both the Defense Secretary and the JCS with a fait accompli. For the JCS the problem was one of bureaucratic propriety, not policy substance. If given a choice, the JCS would naturally support an enlarged defense budget. But, the group’s report presented a serious challenge to Secretary Johnson, who was committed politically and personally to limited defense spending. Johnson's position was recognized from the
outset of the group's work, not only by the defense members, but by the State Department members as well. 41

The precise motives of the defense members of the review group are difficult to reconstruct. Hammond claims that all concerned were aware that Burns and Landon were "walking on eggs." It is entirely possible, however, that neither man ever realized just how delicate those "eggs" were. Johnson was a man of erratic and unpredictable moods. Burns and Landon simply may have misjudged how far they could go. Although both Burns and Landon enthusiastically endorsed the review group's general conclusion that American military capability should be improved, it is clear that their interpretation of what that would mean in increased spending was far more conservative than Nitze's interpretation. The fact that no concrete estimates of cost were included in the group's report may have misled Burns and Landon as to Johnson's possible reaction. In any case, it is difficult to imagine that either Burns or Landon, much less LeBaron, purposefully conspired to deceive Johnson or to undermine his position as Secretary of Defense. 42

If there was any bureaucratic design to sandbag the Defense Secretary—and any evidence of that is wholly circumstantial—it more likely originated in the State Department. From the outset of the review group's work, Nitze and his State Department colleagues were concerned that Johnson would somehow sabotage their effort. According to Hammond's account, they consistently questioned Landon about what might be acceptable to the JCS, but their primary interest in Johnson was to avoid a premature confrontation. That is fragile evidence of intrigue. However, when added to the elaborate preparations for briefing Johnson on the
review group's work and the method by which JCS and service department approval of the group's report was subsequently obtained, it suggests an effort to circumvent the Defense Secretary. Whether or not that was actually the case, Johnson's bizarre behavior when first told about the review group's conclusions adequately justified extreme measures of caution in dealing with him. 43

The specific decision of when and how to bring Johnson and the JCS directly into the process of the review group's work is difficult to trace. Apparently, sometime between 10 and 14 March, Nitze suggested to Acheson that he call a meeting with Secretary Johnson, General Bradley and the members of the review group to discuss the progress of the group's work. Acheson's invitation to Johnson carefully described the purpose of the meeting, scheduled for 22 March, as an interim report by the review group. In fact, the basic elements of the group's work were essentially complete. Nitze already had Acheson's tacit approval and presumably had good reason to believe the report would be substantially agreeable to the Joint Chiefs. 44

Elaborate preparations were made for the meeting in the State Department. Nitze discussed the meeting with Acheson on 21 March and later gave him written suggestions for prefacing the review group's presentation. Those included reminding Johnson that the group's work had been undertaken pursuant to a Presidential directive requesting a "fresh review unfettered by considerations of existing policies or commitments." Including Acheson, Johnson and Bradley a total of fifteen persons were invited to attend the meeting, a relatively large number for an "interim" progress report. In addition to Nitze and several
members of his Policy Planning Staff, Dean Rusk and Gordon Arneson of the State Department attended. General Burns, his assistant Najeeb Halaby, and General Landon represented Defense. James Lay and his assistant Everett Gleason represented the NSC staff and Admiral Souers attended as the President's consultant on national security affairs. The effect—intended or not—was to surround Johnson with advocates of the review group's report. In addition, the State Department took extraordinary precautions to prevent public knowledge of the meeting or its purpose. Ostensibly that was to relieve Johnson of any sense of being pressured. It was equally advantageous for the advocates of the review group's work in that it lessened the possibility of Johnson publicly disavowing any connection with their report.45

According to Acheson's account, a copy of the full draft report was available to Secretary Johnson on about 14 or 15 March. Prior to the meeting, General Burns and his assistant Najeeb Halaby prepared a two page summary of the report's conclusions, but Johnson would not read it. Apparently, he also refused to read a one page summary presented to him on the morning of 22 March. General Bradley was briefed by the Joint Staff Director, Admiral Arthur C. Davis just before leaving the Pentagon to attend the meeting, and may have discussed the report with Johnson as they rode together to the State Department that afternoon.46

Despite all the elaborate preparations, Secretary Johnson's behavior at the meeting confirmed the worst fears of Nitze and his State Department colleagues. As Acheson began the meeting Johnson interrupted abruptly. He said that he had had no opportunity to read the review group's paper, did not like being summoned to conferences without
adequate time to read the appropriate material, and would agree to no-
thing he had not studied. Acheson insisted that the purpose of the
meeting was only to hear a progress report on the review group's work
and it was not intended that any decision should be made immediately.

Johnson calmed down long enough for Nitze to give a brief summary of the
review group's analysis. When Nitze began to outline the group's con-
clusions, however, Johnson interrupted again, saying that he did not
want to hear what the conclusions were. Johnson then began a bizarre
and almost incoherent tirade. He accused the State Department of trying
to put him in a position where he would be forced to approve something
he had never seen before.

In an effort to salvage something from the meeting, Acheson sug-
gested that he and Johnson should at least authorize the review group to
continue its work along present lines. Johnson's reply was that he
would not express an opinion on that suggestion one way or another. In
frustration, Acheson adjourned the meeting. After "storming out" of the
conference room, Johnson summoned Acheson into his private office where
the Defense Secretary "began again to storm . . . that he had been in-
sulted." Before ushering Johnson to the door, Acheson warned him that
the State Department would complete the study alone and explain why to
the President.

Johnson's irrational behavior strengthened the hand of those senior
policy-makers in the State Department and the NSC staff who increasingly
favored improved American military capabilities as an essential element
of containment. When Souers and Lay—who were among that group—re-
ported Johnson's behavior to the President, Truman immediately
telephoned Acheson to assure him that Johnson would not be allowed to sabotage the review group's efforts. That was not a specific endorsement by the President of the group's report, which, of course, he had not yet seen. But, it encouraged Acheson and Nitze to act aggressively to neutralize the Defense Secretary.  

During the week following the 22 March meeting, the policy review group put the final editorial touches to its report. On 28 March Secretary Johnson flew to Brussels to attend a week long conference of the NATO Defense Ministers. Two days after his departure Nitze and Landon circulated their reports to key officials in the State and Defense Departments with a deadline for clearance of 5 April. Coincidentally or not, that was the date of Johnson's planned return to Washington.

The JSSC approved the review group's report on 31 March and passed it on immediately to the Joint Chiefs, who also approved the document with uncustomary speed. According to Hammond's account, the review group's report was not handled as a regular JCS document and presumably did not entail the publication of a formal JCS decision paper. Before the JCS considered the report, each of the service members was briefed by his service representative in the JSSC. Probably, General Bradley was briefed by the Joint Staff Director, Admiral Davis, who would have coordinating placing the document on the Chiefs' official agenda. The speed with which the Chiefs approved the report indicated more than the absence of objections to it on their part. It also indicated their willingness to endorse a policy potentially at variance with the well known commitment of Secretary Johnson to defense economy. As long as their actions remained within accepted bureaucratic channels, they were
apparently convinced that it constituted no challenge to the Secretary's authority. 51

The review group's report was also circulated to the three service secretaries and Military Liaison Committee Chairman LeBaron, all of whom promptly approved its conclusions. When Johnson returned to his office on 5 April, he was confronted by his subordinates' undivided opinion in favor of the report. If Johnson refused to add his own endorsement he could expect Acheson to send the report to Truman anyway. The knowledge that the Defense Secretary was unanimously opposed within his own Department would seriously damage, if not destroy, his authority and effectiveness. Realizing that he had been left without a choice, Johnson approved the report without argument. 52

Ironically, the situation in the State Department was a curious reversal of that at Defense. When the review group's report was circulated to key officials for clearance, many of those officials were critical of its conclusions. Deputy Assistant Secretary of State for European Affairs Llewellyn Thompson argued that the report's conclusions were not adequately supported. Thompson believed that a thorough reanalysis of the problem would show "that no very great increase in our present rate of expenditure would be called for, but rather a better allocation of resources . . ." Thompson's boss, the Assistant Secretary for European Affairs, George W. Perkins, agreed. 53

Assistant Secretary of State for Economic Affairs, Willard L. Thorp, challenged the premise in the review group's report that Soviet military capability as reflected in economic investment was increasingly greater than that of the United States. Thorp emphasized the economic
weakness of the Soviet Union and argued that Soviet military expendi-
tures were actually less than those of the United States in absolute
dollars. Thorp admitted that Soviet expenditures might actually buy
more military capability than an equal number of dollars would buy in
the U.S., but he doubted that the margin was significant. 54

In late March, Charles Bohlen was summoned to Washington from his
post as Minister in Paris to participate in the final preparation of the
review group's report. It is unclear how or why Bohlen was brought into
the process at that late date. But, by the time he arrived home the re-
port was already being circulated in the State and Defense Departments.
Bohlen was cautiously critical of the report. First, he challenged the
premise that the "fundamental design of the Kremlin is the domination of
the world," at least in so far as the premise was meant to imply that
the Soviet Union would subordinate all other considerations to that end
or accept "great risks" for its achievement. Bohlen felt the report
oversimplified and exaggerated the nature of the Soviet threat. By im-
plying the inevitability of war. Bohlen argued, the report was poten-
tially misleading in regard to the character of the military buildup
required by actual world conditions. Bohlen did not oppose improvements
in U.S. military capability, but he insisted that there should be a
clear distinction between military capabilities designed to wage cold
war and those required in the event of a hot war. 55

Bohlen clearly approved the development of conventional military
forces to reduce the United States' reliance on nuclear weapons, but he
argued that the West could not match Soviet conventional forces tank for
tank or man for man, and certainly not everywhere in the non-Soviet
world. Instead, he argued that the United States and its principal allies must rely on technological advantages to develop essentially defensive weapons and forces that would be most useful in deterring Soviet military aggression of either a limited or total character. None of the members of the review group had ever intended that the West should match Soviet conventional military strength item for item. But, that was made explicit by grafting Bohlen's comments onto the group's report. Actually, it had little real effect on the report's conclusions which remained quite vague about the exact shape of the proposed military build-up.56

Secretary of State Acheson added his formal approval to the review group's report on 7 April and the document was immediately sent to the White House. Initially, Truman indicated neither approval nor disapproval of the report's conclusions. At Lay's suggestion, he referred the document directly to the NSC with a request that the Council provide a detailed analysis of the specific programs required and estimates of probable costs. Because of the obvious implications of the report for the federal budget and the domestic economy, Truman directed the NSC to include the Economic Cooperation Administrator, Director of the Budget Bureau, and the Chairman of the Council of Economic Advisors in its deliberations.57

A New National Security Policy Takes Shape

Truman's decision to return the State-Defense report to NSC channels was a natural one. Because of its wide ranging budgetary and economic implications, the report could not be translated into policy without the
consensus of those elements within the Administration whose interests and attitudes were focused primarily on the domestic aspects of those issues. Moreover, the NSC had an increasing proprietary interest in coordinating the policies and programs of the various departments and agencies that would be affected by the policy review group's report. Truman's decision also reflected his own ambivalence toward the report's budgetary implications. In several instances during the following weeks, the President indicated an increasingly favorable attitude toward expanded defense and foreign aid budgets. But, pending the final recommendations of the NSC, he undertook no major budgetary initiatives. As in the debate over thermonuclear weapons, Truman was content to await the development of consensus within the bureaucracy before committing himself. 58

How consensus might be developed in favor of the review group's conclusions occupied Nitze and his State Department colleagues even before the group's report was transmitted to the President. In early April, Nitze briefed Presidential Counsel Charles Murphy and Budget Director Frank Pace in an effort to enlist their support. Murphy was impressed by Nitze's arguments, but Pace remained firmly opposed on economic grounds to even modest increases in defense spending. Both Murphy and Pace agreed, however, that no decisions could be made without knowing what specific programs were required and exactly how much they would cost. Presumably, both men influenced Truman's decision to throw the issue open within the forum of an augmented National Security Council. In the meantime, the Administration pursued its fiscal 1951 defense budget without significant change. 59
The review group's report was officially published as NSC 68 on 14 April. At its first meeting on the subject, six days later, the National Security Council agreed to establish an ad hoc working committee to prepare a detailed response to the President's request. The policy review group was narrowly representative of a small but influential segment of opinion in the State and Defense Departments. The interests and attitudes of the members of the review group were limited primarily to issues of foreign and defense policy. The ad hoc committee, on the other hand, was more broadly representative of those elements of the federal bureaucracy whose primary interests and attitudes were shaped by issues of domestic politics and economics. Despite the apparent division of basic interests within the ad hoc committee, the advocates of NSC 68 enjoyed one important advantage from the outset. The committee's task was to identify specific programs and estimate their cost, not to analyze the merits of the arguments presented in NSC 68 in favor of a military buildup.

The only member of the ad hoc committee who openly challenged NSC 68 on its merits rather than its potential expense was William F. Shaub, Deputy Chief of the Budget Bureau's Division of Estimates. Shaub questioned NSC 68's analysis of the Soviet threat and harshly criticized what he saw as the paper's too heavy emphasis on building up military power. Shaub, like Kennan, saw the sources and means of East-West conflict as essentially political and economic rather than military. Military power alone, he argued, could not solve what were essentially political and economic problems. But, paying for that power might undermine the nation's economic strength.
Other representatives of domestic interests within the ad hoc committee carefully avoided expressing opinions about the substantive military and foreign policy implications of NSC 68. The representative of the Council of Economic Advisors, Hamilton Dearborn, thought such an appraisal of NSC 68 was "outside the competence" of his agency. He insisted, however, that the ad hoc committee should carefully analyze U.S. economic capabilities to support increased spending in order to strike a realistic balance between economic, political and military strength.

The new Chairman of the Council of Economic Advisors, Leon Keyserling, ultimately emerged as an enthusiastic supporter of NSC 68. He was convinced that the United States economy could support a much higher level of sustained federal spending without severely affecting the standard of living. But, Keyserling's economic analysis was divorced from the foreign and military policy merits of NSC 68.62

Regardless of the attitudes of its members, the ad hoc committee was incapable of resolving basic policy issues. Indeed, the committee's role was intentionally limited to coordinating the development of program proposals and cost estimates. The actual work of developing those programs was the responsibility of the individual departments and agencies whose budgets were affected by NSC 68--Defense, NSRB, ECA. Although that offered certain advantages to the advocates of NSC 68 who were naturally concentrated in those same departments and agencies, it was also clear to both advocates and opponents of NSC 68 that the basic budgetary policy issues would be resolved later at a higher level.

Thus, before the war in Korea intervened, consensus within the ad hoc committee on broad policy issues remained innocuously vague. Regarding
the merits of NSC 68, the committee agreed in mid-May that the Soviet threat was of "increasing gravity" and that military power, together with political and economic power, was an essential weapon in the cold war. But, the committee also agreed that the level of military power must be sustainable for the long term future and must be compatible with maintaining a sound economy. The language was familiar. And, as in the past, the meaning of the language was flexible.63

Before the war in Korea effectively preempted the issue, it was clear to all concerned that the decisions on NSC 68 would turn on Defense Department proposals for expanded force and weapons programs. By comparison, foreign economic military assistance and strategic stockpiling programs were of much less consequence. Secretary Johnson had not given up his commitment to defense economy, but in the two months before the Korean crisis he began cautiously to hedge his position. By late April, Johnson was apparently convinced that Truman was leaning heavily toward increased defense spending. But, like other senior policymakers, Johnson expected the uncertainty to be resolved in the normal cycle of budget estimating. Thus, he was content to combine programming for NSC 68 with the routine preparation of the fiscal 1952 budget. On the logical, but ultimately wrong assumption that no major policy shifts were likely before 1 December when departmental estimates for fiscal 1952 were due, Johnson left the details of coordinating the Defense Department's programming efforts to General Burns. Responsibility for departmental contacts with the ad hoc committee were left primarily to Army Under Secretary Tracey Voorhees. In this way, Johnson apparently hoped to postpone taking a position one way or another on specific
budget issues until a clearer consensus emerged within the NSC. By distancing himself from the process of programming for NSC 68 Johnson found himself in an embarassingly neutral position when the Korean war abruptly foreclosed the policy debate. Moreover, he effectively surrendered control over the substance of defense programs to the military services and the NSC.\textsuperscript{64}

In the early stages of fiscal 1952 defense programming, before the outbreak of war in Korea, the military services were left to interpret the budgetary implications of NSC 68 almost entirely on their own. Johnson provided almost no guidance. Nor did the JCS succeed in establishing coherent and disciplined procedures to control the budget estimating process. In the past, the military establishment worked under the pressure of firm budget ceilings. The absence of ceilings for fiscal 1952 resulted in virtual anarchy. Even more than in the past, each service based its initial estimates on its own ideas about what it required. By late June the aggregate estimates of the three services amounted to almost $50 billion.\textsuperscript{65}

It is impossible to say what order of increase in defense budget levels would have been approved by the Administration had the Korean crisis not intervened. Although the Defense Department's $50 billion initial estimate for the fiscal 1952 budget was compatible with Nitze's original expectations for spending increases, it is doubtful that such a figure would have been accepted. Indeed, neither the Defense Department nor the Budget Bureau considered the estimate to be anything more than a first approximation. Following the outbreak of war in Korea, however, the fiscal 1951 defense budget was ultimately raised to a total
of $48.2 billion. A major part of that figure was directly attributable to the specific requirements of combat in Korea. But, a considerable portion of the increase was explicitly justified by Administration officials on the basis of expanded requirements for general defense capability in accordance with NSC 68.66

The specific division of increased expenditures, especially as they related to the division of conventional and nuclear warfare capability, is difficult to define precisely. A large part of the spending increase for conventional ground, air and naval forces was specifically required to conduct operations in Korea, but those forces also had general war applications. It appears, however, that the bulk of the spending increase not required or otherwise earmarked for use in Korea went to improve offensive and defensive capabilities for general nuclear war.67

NSC 68 was originally conceived as a basic reassessment of the relationship of American foreign and military policies and the utility of their continued reliance on nuclear weapons under conditions of nuclear mutuality. In so far as that reassessment established a general commitment to increased defense preparedness, it significantly altered the substance of national security policy. Ultimately, however, NSC 68 did not come to grips coherently with the role of nuclear weapons, either as a deterrent or a weapon of warfare.

A basic premise of NSC 68 was that nuclear mutuality, by underminding the deterrent and war fighting value of nuclear weapons, increased the threat of both direct attack against the United States and limited, local aggression against other "free nations," like that in Korea. Ostensibly, the alternative to continued dependence on nuclear weapons
was to expand American capabilities for conventional warfare. However, as it was outlined in NSC 68, that solution addressed only the threat of limited, local aggression, not the threat of direct attack. In contradiction of its basic premise regarding the utility of nuclear weapons, NSC 68 concluded that the United States had no practical choice but to continue to rely heavily on those weapons as the basis of its general war concepts. Caught between the obvious contradiction of their premises and conclusions, the authors of NSC 68 were unable to suggest what those concepts might be. Thus, the military planners were confronted with a statement of national strategic policy that rejected the political and military usefulness of nuclear weapons at the same time that it predicated American military posture for general war on the continued use of those weapons.
CHAPTER IX NOTES


9. Ibid., p. 297. JCS 2101, 4 Feb 50. Burn's deputy, Najeeb E. Halaby, was Director of the Office of Foreign Military Affairs.


11. Ibid., p. 299.

12. Ibid., pp. 300-01.
13. Re: the development of this stage of the drafting see Memo, Rusk to Nitze, 23 Feb 50, FR: 1950/I, pp. 168-68. According to State Department sources, copies of the early drafts of the review group's report no longer exist in the Department's files. No copies of early drafts were found by the author in JCS files. The evidence that does exist regarding the content of early drafts is detailed below. That evidence indicates that those drafts did not differ in any substantial way with the final version of the review group's report.

14. "A Report to the President Pursuant to the President's Directive of January 31, 1950," 7 Apr 50, attach to NSC 68, 14 Apr 50, AF OPD, 381.02 (4 Feb 50)S. 7, 335/341 (hereafter cited as NSC 68, 14 Apr 50). In re: to Nitze's principal authorship compare the style and content of the review group's report to other papers or memoranda drafted by Nitze/ See e.g., "Recent Soviet Moves," Study prepared by D/PPS (Nitze), 8 Feb 50, cited above.

15. NSC 68, 14 Apr 50.

16. Ibid.

17. Ibid.


19. NSC 68, 14 Apr 50.

20. Ibid.

21. Ibid.

22. Ibid.

23. Ibid.

24. Ibid.

25. Ibid.

26. Ibid.

27. Ibid.

28. Ibid.

29. Ibid.

31. NSC 68, 14 Apr 50.

32. Ibid.

33. Ibid.


35. NSC 68, 14 Apr 50.


37. NSC 68, 14 Apr 50.

38. Ibid.

39. Ibid.


42. Ibid., pp. 300-01.

43. Ibid., p. 300.

44. Ibid., p. 303. Acheson, Present at the Creation, p. 372.


48. Ibid., pp. 373-74.

49. Ibid., pp. 373-74.


52. Ibid., p. 327. Acheson, Present at the Creation, p. 374.


56. Ibid.

57. Ltr, Truman to Lay, 12 Apr 50, attch to NSC 68, 14 Apr 50.


59. Ibid., pp. 328-32.

60. Memo, Lay to Ad Hoc Committee on NSC 68, 28 Apr 50, and Memo of Conversation by Lay, 2 May 50, both in FR: 1950/I, pp. 293-96, 297-98. Ad Hoc Committee members included: Nitze, General Burns, Thomas G. Lanphier, Jr. (Special Assistant to Chairman, NSRB), George C. Haas (Treasury Department), Richard M. Bissell, Jr. (Economic Cooperation Administration), William F. Shaub (Budget Bureau), Hamilton Q. Dearborn (Council on Economic Advisers), Charles S. Murphy (Special Counsel to the President), Mr. Montague (CIA), and Tracey S. Voorhees (Under Secretary of the Army). General Bradley also sat in on committee meetings during the early stages. As Executive Secretary of the NSC James Lay coordinated the committee's work.


65. Ibid., pp. 342-44.

66. Ibid., pp. 348-59.

67. Ibid., pp. 351-60.
During late 1945 and 1946 the military planners made a serious effort to define the strategic implications of the future possession of nuclear weapons and the means for their long-range delivery by America's enemies. The essential dilemma of atomic warfare, they recognized, was how to prevent unacceptable damage to oneself before a decision could be won by offensive action against the vital elements of the enemy's power. Air defense provided one possible solution to the problem, but not a sufficiently reliable one. The only other solution was offensive action against the sources of the enemy attack. To be effective, however, that course required that the United States strike first. Although the idea of preemptive warfare exercised considerable influence among military strategists for a brief period, it was never adopted, or even seriously discussed, by civilian policy-makers. By 1947 the military planners came to accept the fact that the United States would only retaliate after absorbing a first strike by the enemy.

While the American nuclear monopoly lasted, there was little incentive to reconsider the strategic problems associated with damage limitation. In the absence of strategic policy guidance from civilian authorities on the uses of nuclear weapons in war, and preoccupied with bitter
and complex interservice disputes over functions, forces and budgets, the military planners tended to focus on short-term strategic contingencies and ignore the problems of a still uncertain future. Although several long-range war plans were developed before September 1949, they gave little serious attention to the realistic implications of nuclear mutuality.

The shock of the Soviet atomic test forced the military planners to redirect their attention to the strategic problems of fighting a nuclear armed enemy and the essential dilemma of limiting the damage one must sustain in the inevitable exchange of blows. The assumption that the United States must absorb a first strike by the enemy before launching its retaliatory forces theoretically placed the burden of initial damage limitation on air defense. But, because of its technological limitations, air defense alone remained a fundamentally unsatisfactory solution to the problem. The successful delivery of even a relatively few nuclear weapons by the enemy might seriously hamper American military and economic mobilization for war. More importantly, it might also seriously damage America's capacity to retaliate. Without the ability to strike back effectively at the sources of Soviet power, not only victory but the very survival of the nation was imperiled.

Lacking confidence in the efficacy of a sufficiently reliable air defense, military planners placed renewed emphasis on offensive action against the enemy's strategic striking forces. The implications of that step for national strategic policy were clear. The effectiveness of a counterforce strategy necessarily depended on striking first. Indeed, as early as December 1949, Air Force strategists broke away from the
self-imposed political restraints observed by military planners since 1947 to urge the adoption of a national strategic policy of preemptive warfare. Except for a brief but non-committal allusion to the subject of preemption in NSC 68, however, civilian policy-makers continued to ignore the issue of when and how atomic weapons might actually be used in war. Of course, many civilian policy-makers doubted seriously whether there was any rational way in which they could be used. At least, the military planners confronted the issue of how to fight a nuclear war. Toward that end, by early 1950 both joint and Air Force war plans were being reconstructed on the basis of a tacitly preemptive, counterforce strategy.

The Background of Long Range War Planning

The first efforts by the military planners to develop strategic concepts and plans for the future came in response to the Finletter Commission hearings on national aviation policy in late 1947. In large part, however, those efforts were focused on the practical issues of determining aircraft production requirements for the Air Force and the Navy rather than a comprehensive analysis of the likely patterns of future general war. Long-range planning assumptions and threat estimates were manipulated to support the short range budget and force level aspirations of the services. Indeed, the planners gave far more detailed attention to short term aspects of roles and missions than to defining future strategic contingencies and new methods for dealing with them.
The first skeletal long range concept and plan, codenamed CHARIOTEER, was completed by the joint war planners in November 1947. The plan covered the period 1955-1956 and was based on the premise that atomic weapons would be available and used by both the United States and the USSR. CHARIOTEER generally resembled BROILER in as much as it placed heavy reliance on the effects of an early atomic air campaign against the war-making capacity of the Soviet Union. The planners recognized that the threat to our own war-making capacity posed by Soviet possession of atomic weapons required changes not only in the concept of the air offensive, but in the priority and phasing of other basic defensive and offensive undertakings. Nevertheless, the planners contrived to avoid confronting those issues by assuming that the United States would have at least a ten to one superiority in nuclear weapons. How many bombs each side would have was not stated, but the implication was that the Soviet Union would have a very few. Thus, limiting damage to the United States, even in a surprise attack, remained a relatively minor problem.

As in BROILER, the principal objectives of the atomic air offensive outlined in CHARIOTEER were major industrial and command and control centers. The destruction of those objectives, it was hoped, would result eventually in the collapse of Soviet war-fighting capabilities. Initial targets included nuclear weapons stockpiles and production facilities, but Soviet long range air forces were not even mentioned as an objective. The burden of damage limitation was placed on air defense forces until the strategic air offensive could take full effect on the enemy's capacity and will to continue fighting.
Even assuming that Soviet atomic capabilities were quite limited, it was evident to the planners that the strategy outlined in CHARIOTEER depended on how rapidly the strategic air offensive could bring about a decision. In a revision of the plan, completed in December 1947, the planners placed heavy emphasis on increasing the power of the atomic offensive and the speed with which it was delivered. They also placed increased emphasis on the potential psychological effects of the offensive on the enemy's will to continue fighting. They admitted, however, that there was no way to quantify or to predict the timing of those effects.3

The long range war planners continued to avoid confronting the strategic implications of the Soviet Union's eventual possession of atomic weapons in numbers sufficient to pose a major threat to the United States. A long range plan completed in March 1948 for a war beginning in 1952 was based on the assumption that the Soviet Union would not possess atomic bombs at all and would have only limited capability to deliver biological or radiological weapons, either overtly or covertly, against targets in the United States. Like CHARIOTEER, the new plan, codenamed BUSHWACKER, was essentially intended as a basis for establishing Air Force and Navy aircraft requirements. Although those requirements were ostensibly projected into 1952, the plan was little more than an extension of short term concepts and the capabilities of existing weapons systems. Also like CHARIOTEER, BUSHWACKER was built around a powerful atomic air offensive against vital elements of the Soviet war-making capacity aimed at achieving complete defeat of the enemy in as short a period as possible. Because it was assumed that the
Soviet Union would not possess atomic bombs, the problem of initial damage limitation was greatly simplified, if not entirely eliminated.4

The same disputes over functions and force levels that complicated emergency war planning during the spring and summer of 1948 precluded any substantial progress on long range planning. Until the beginning of 1949, CHARIOTEER and BUSHWACKER constituted the only basis for long range strategic analysis available to the joint planners, but neither plan was ever approved or even considered by the Joint Chiefs. In August 1948, however, following completion of preliminary studies of the SANDSTONE atomic weapon tests the JCS appointed a special ad hoc committee to reconsider the subject of long range war planning in the light of new possibilities for increasing the ultimate size of the nuclear weapons stockpile. The result was an outline war plan, codenamed DROPSHOT, for a war beginning in 1957.5

Completed in January 1949, DROPSHOT constituted only a marginal improvement over CHARIOTEER and BUSHWACKER as an analysis of the strategic problems of fighting a nuclear armed enemy. The DROPSHOT planners assumed that the Soviet Union would begin a war by launching a surprise attack with atomic weapons against the military-industrial capacity of the United States. But, the planners made no estimate of Soviet atomic capability. Nor did they analyze the nature or extent of the damage an atomic attack would cause. As in previous long range plans the burden of limiting damage was placed on air defense forces, although insuring the readiness of those forces was emphasized more strongly than in the past.6
Because of disagreement over the likely duration of a war in 1957, only the initial phase of DROPSHOT operations was outlined. As in previous long range plans the principal emphasis was on a powerful atomic air campaign against Soviet war-making capacity. For the first time, however, strategic air operations against Soviet atomic striking forces and atomic production facilities were given a high priority in the allocation of weapons and targets. On the assumption that the number of atomic weapons available in 1957 would allow greater flexibility in targeting, DROPSHOT also contained provision for limited atomic attacks against tactical and quasi-strategic objectives aimed at retarding Soviet ground advances and reducing Soviet submarine warfare capabilities. That provided a greater range of potential targets for naval aviation.\(^7\)

Despite the increased flexibility in targeting concepts reflected in DROPSHOT, the plan's principal aim was to achieve a rapid collapse of the enemy through atomic bombardment of industrial, population and command and control objectives. Therefore, Air Force planners insisted that the initial atomic attack should be carried out in the shortest possible time with the maximum force available. In that respect DROPSHOT resembled SAC EWP 1-49 completed in December 1948 and reflected the increased confidence of Air Force planners in their ability to achieve a rapid decision in a general war. In part, that confidence stemmed from the belief that air refueling systems and longer range aircraft such as the B-36 would soon allow the strategic air offensive to be launched from bases in North America from which it could be initiated more quickly and with less risk of interruption. To establish an operational
intercontinental delivery capability, however, would require a heavy investment in the strategic air force and its weapons. Under existing budgets, that implied a proportional reduction in the investment in non-strategic air weapons.

JCS discussion of DROPSHOT centered not on strategic concepts or even specific issues of targeting, but on the perennial issue of force requirements. The plan included a general provision for carrier task forces to participate in both strategic and tactical atomic air operations, but specific force levels and deployment schedules were not detailed. In an effort to establish JCS acceptance of the principle of carrier air participation in atomic operations, Admiral Denfeld insisted that the Chiefs tentatively approve DROPSHOT as the basis for continued long range planning. General Vandenberg resisted that effort, however. With General Bradley's support, he insisted that DROPSHOT should be returned to the planners for more detailed development of force requirements and deployment schedules. Denfeld acquiesced, but the intensified interservice debate over strategy and weapon systems that followed Secretary Johnson's cancellation of the Navy's flush-deck carrier (CVA) project in April brought long range planning to a virtual halt. Until the services could find some basis for agreement on short term plans and concepts, there was little incentive to analyze the strategic problems of the future.

Reevaluating the Patterns of Future Warfare

In the wake of the vitriolic charges and countercharges between the Air Force and the Navy during the summer of 1949, the Soviet atomic test was a sobering shock to military planners and civilian policy-makers
alike. The reality of the nuclear future had arrived with inevitable, but nevertheless surprising suddenness. In that context, the public airing of Air Force and Navy disagreements over strategic concepts in the "Unification and Strategy" hearings before the House Armed Services Committee in October came as something of an anti-climax. The yet unknown potential of Soviet atomic capabilities which formed a backdrop to the hearings tended to detract from the Navy's case against strategic bombardment. The calculated moderation with which Air Force officers stated their counter-arguments tended to discredit the Navy's claims as little more than the product of petty service jealousy.10

The "Unification and Strategy" hearings did not settle any of the disputes between the Air Force and Navy, but it did demonstrate, especially to the Navy partisans, the counterproductiveness of public conflict. The removal of Admiral Denfeld almost immediately after the hearings reinforced that lesson for the Navy. His replacement as Chief of Naval Operations, Admiral Forrest P. Sherman, was convinced that the Navy would accomplish more by confining its arguments to established JCS and Administration policy and planning channels. Within those limits, however, Sherman was prepared to continue the Navy's fight. Air Force officers also recognized that circumstances required less rigidity in their concepts for strategic air warfare. If they were not yet ready to share that function with the Navy, they were increasingly willing to re-examine the fundamental question of the proper objectives of atomic operations.11

Since the CROSSROADS atomic tests in 1946, the military planners had accumulated detailed knowledge of the physical efforts of atomic
weapons. Primarily, however, that knowledge was applied to offensive planning. No serious effort had been made to estimate the nature of the damage an atomic attack would have on the United States, or its impact on the military-industrial capacity of the nation to wage war in the aftermath. The report of the JCS Evaluation Board on the CROSSROADS Tests in 1947 indicated that the damage would be severe, perhaps even catastrophic, but no effort had been made to quantify the potential devastation. In early October, at the peak of the "Unification and Strategy" hearings in Congress, the JCS directed the Joint Intelligence Committee to analyze that problem as part of a broader examination of the military and political implications of Soviet possession of atomic weapons.12

The JIC analysis, completed in mid-February 1950, was based on the assumption that the Soviet Union would not have a significant stockpile of atomic bombs for several years. That conclusion was relatively reassuring for the short term future. For the longer term, however, the potential threat to American security was characterized by the JIC as extremely serious.13

The intelligence estimators doubted that the mere possession of atomic weapons would cause the Soviet Union to deliberately resort to war in pursuit of its objectives. But, the truculent and aggressive exploitation of the political and psychological potential of those weapons by the Soviets raised the serious risk of war as a result of miscalculation. That danger, the JIC believed, would increase as Soviet atomic capabilities improved over the next several years.14
Estimating Soviet atomic capability and the potential effects of its use against the United States was a less problematic issue for the JIC analysts. They based their analysis of Soviet atomic capabilities on a rough estimate of the probable growth of the Soviet weapons stockpile and means of delivery over the next four to five years. By mid-1950, the Soviets were expected to have no more than about ten to twenty weapons. Thereafter their stockpile might increase by an average of twenty to forty weapons a year. By mid-1954 or early 1955, the Soviets would probably have at least 200 weapons. As early as mid-1951, the JIC believed that the Soviets might have several hundred long range bombers of the Tupolev-4 type, similar to the B-29, capable of carrying out one-way atomic missions against virtually any target in the United States.

In the period before about mid-1952, relatively limited Soviet nuclear attacks might seriously hamper American mobilization for war by the partial destruction of a few key political and economic control centers. But, the JIC analysts doubted that such a limited attack could prevent American mobilization. The most serious threat in that period was to American nuclear retaliatory capability and the deployment of ground and sea forces as a result of attacks against key SAC bases and other military facilities in the United States and in forward base areas. Even in that case, however, the JIC analysts doubted that the effect would be crippling. By mid-1954 or early 1955, the effects of a much larger scale Soviet atomic attack would be far more devastating. Such an attack might inflict as many as ten million casualties and reduce the overall military-industrial capacity of the United States by as much as half. The effect would be to delay American military and
economic mobilization for war indefinitely or prevent it entirely. If successfully carried out, large scale surprise attacks against key Strategic Air Command bases would deprive the United States of an effective retaliatory capability. That event, the JIC believed, would probably prove decisive.\textsuperscript{16}

Even before the JIC completed its analysis of the implications of Soviet possession of atomic weapons, the JCS ad hoc committee on long range war planning renewed its efforts to confront the strategic problems of the future. The result was a major revision of Plan DROPSHOT, completed in mid-December 1949. Many aspects of the revised plan resembled the original. They also suffered from many of the same shortcomings. The revised plan still reflected the deep conflict between the short war and long war concepts of the Air Force and the Navy. Nevertheless, the revised DROPSHOT reflected a number of important changes, especially in the concept of the strategic air offensive.\textsuperscript{17}

DROPSHOT was divided into four phases of undetermined duration. Phase I extended from D-Day to the stabilization of the initial Soviet offensives and included the following basic undertakings: (1) securing the Western Hemisphere against Soviet attack, (2) launching an atomic air offensive against the Soviet Union, (3) holding the United Kingdom, the continent of Europe west of the Rhine, and parts of the Middle East and lower Persian Gulf, and (4) securing essential overseas bases and air and sea lines of communication. Phase II extended from the stabilization of the initial Soviet offensives to the initiation of major combined offensive operations by the western allies and included continuation of the atomic air offensive and the buildup of allied armed forces.
Phase III extended from the initiation of the allied offensive to the capitulation of the enemy and included intensification of the air offensive and a major land campaign in Europe to cut off and destroy Soviet armed forces. Phase IV consisted of establishing control of the Soviet Union and enforcing surrender terms.18

The principal changes in the revised DROPSHOT were in the priority of objectives for the strategic air offensive. First priority was given to strategic atomic and conventional attacks against "soviet facilities for the assembly and delivery of weapons of mass destruction." Second priority was given to atomic attacks against lines of communication, supply bases, troop concentrations, and submarine warfare forces in the Soviet Union and in the satellite and occupied areas of Europe that would retard Soviet offensives. Last priority was given to atomic attacks against general industrial and population targets. That constituted a dramatic reversal of target priorities. Although the initial damage limitation role was left, as in the part, very largely to air defense forces in the Western Hemisphere, the reversal of targeting priorities reflected a conscious effort by the planners to apply offensive capabilities to the problem.19

Placing retardation objectives above counter-industrial objectives was also a dramatic reversal of past practice. It reflected an important compromise between Air Force and Navy planners on the issue of what types of targets would contribute most to the rapid deterioration of Soviet offensive capabilities. In addition, the planners agreed that carrier air forces would participate in the atomic air offensive. No specific division of effort or of targets was outlined, but the
implication was that carrier aviation would concentrate on attacks against Soviet submarine warfare capabilities and other tactical and quasi-strategic targets within reach of carrier aircraft. Agreement between Air Force and Navy planners on those issues, in so far as they applied to long range planning, was due largely to the prospect of greater operational flexibility as the result of an enlarged atomic weapons stockpile. But, until larger numbers of atomic weapons were actually available, agreement on those issues in short term planning remained difficult.20

Despite their essential agreement on the priority of targets for long range war plans, Air Force and Navy planners continued to disagree over the cumulative effects of atomic bombardment and how or whether the air offensive along might be decisive. Navy planners conceded the central role of strategic air power in the initial phases of DROPSHOT, but they argued that in subsequent phases air power should be concentrated on supporting combined arms offensive operations aimed primarily at defeating Soviet armed forces. Air Force planners were relatively content with that compromise, since they continued to believe that a decision would be obtained by strategic bombardment in the early phases of war. In short term planning, however, Air Force strategists were less content with the compromise, since hedging against the possibility of a long war meant fewer resources would be concentrated on the initial atomic air offensive.21

The revised DROPSHOT marked several significant departures in joint strategic analysis relevant to fighting a general war against a nuclear armed enemy. Essentially, however, the plan, like its predecessors, was
a force requirements study. As such it was shaped by existing assumptions about budgets and force levels. A less circumscribed analysis of the future pattern of warfare was undertaken by the Joint Advanced Study Committee in November 1949. As a direct result of the Soviet atomic test, the Joint Chiefs recognized the need for an organization capable of providing the basis for evolving new strategic concepts and doctrine. In early November, the Chiefs agreed to transfer the Army Advanced Study Group to the JCS. Staffed by two senior officers from each service, the new JASC's first assignment was to study the pattern of future atomic warfare.  

The JASC study, completed in mid-February 1950, examined the possible characteristics of a general war with the Soviet Union during the period 1954-1960. The committee agreed that Europe would be the primary theater of any future general war, but air power, both strategic and tactical, would be the decisive medium of warfare. It was assumed that the Soviets would possess a "significant" stockpile of nuclear weapons (between 200 and 500), but the United States would retain a clear superiority in the total number of those weapons and, therefore, a greater flexibility in their use. Nuclear superiority, the committee concluded, would be essential to ultimate victory by the allies. Nevertheless, the potential damage that might be done to U.S. and allied capabilities by large scale nuclear attacks made the initial phase of hostilities critical to the outcome of the war.  

On the basis of those conclusions and assumptions, the JASC outlined four fundamental undertakings essential to allied victory. The first was to neutralize the air offensive capabilities of the enemy
against the U.S. and allied countries and to develop control of the air over our own and enemy territory sufficient to sustain an initial atomic air offensive. The second undertaking—to be initiated simultaneously with the first—was to defend the vital territory of Western Europe from enemy ground attack and to engage in selective delaying operations in other areas aimed at "making the occupation costs of the enemy exceed his occupational gains." The third undertaking was progressively to increase allied control of the air over enemy territory to the point where strategic and tactical air attacks against key targets could be carried out with minimum losses. If that achievement did not result in the collapse or capitulation of the enemy, the final undertaking would be ground and air campaigns directed at the heart of enemy territory.

The JASC emphasized the critical nature of initial operations by both sides. Although strategic surprise was unlikely, tactical surprise was quite probable. The primary objective of the enemy's initial atomic attacks would be American strategic retaliatory forces and facilities for the storage and production of atomic weapons. Initially, attacks against selected military-industrial and military-political command and control targets would be given a high priority. However, the committee argued that the Soviets would not immediately attempt an "all-out attack on either industry as a whole or the population of the Allies." The committee reasoned that the Soviets would limit their initial atomic objectives in the hope that the allies would do the same. Moreover, the committee believed that the Soviets would want to preserve the industrial potential of Western Europe for future exploitation. In regard to Soviet atomic attacks on Western Europe, the committee's reasoning was
probably sound. In regard to Soviet targets in the United States, the committee's conclusions were more the result of wishful thinking. They offered a convenient device for reducing the problem of initial damage limitation. If the Soviets did not immediately launch an all-out attack on U.S. urban-industrial targets, there would be time to counter the possibility of such an attack after the initiation of hostilities.25

Indeed, the success of the allied strategy outlined by the JASC depended almost entirely on the validity of the committee's assumption about initial Soviet atomic objectives. The initial objective of American strategic retaliatory forces "would be to neutralize or destroy the actual military means that the enemy has in-being to sustain his [atomic] offensive." That would be accomplished (assuming that there was a retaliatory force left intact) by attacking the air bases, nuclear weapons storage areas, certain critical transportation and communication facilities and a few key industrial targets that directly contributed to the enemy air offensive. Assuming that the Soviets would cooperate by limiting the objectives of their initial surprise attack, such a strategy would be to the advantage of the United States. Given its assumed superiority in numbers of atomic weapons and the means for their delivery, the United States could expend several atomic weapons to prevent the delivery of each enemy weapon.26

Under the circumstances defined by the JASC, the neutralization of Soviet strategic atomic striking forces was intended to preserve the military-industrial capacity of the western allies. Ultimate victory would depend on bringing that capacity to bear in the defense of Western Europe and other important areas and by creating the conditions for the
progressive destruction of the Soviet armed forces. Given the superiority of Soviet ground forces, the JASC anticipated that the role of air power, both tactical and strategic, would be decisive in a European war. Simultaneously with the launching of the air counter-offensive against Soviet strategic striking forces, American strategic air forces would launch an atomic counter-offensive against tactical and quasi-strategic targets in the USSR and elsewhere aimed at retarding Soviet ground advances. The objectives of those attacks would include large troop concentrations, logistic and transportation facilities, and above all the theater air power of the enemy. By reducing enemy tactical air capability, the allies would more easily achieve air superiority and increase their ability to bring both tactical and strategic air forces to bear on enemy ground offensives and other important targets. On that basis, the JASC anticipated that the allies would be able to carry out a successful ground defense of Europe along the Rhine, despite initial Soviet ground force superiority.

Once the Soviet offensives on the ground and in the air were halted, allied strategy would progressively expand its air superiority over the territory of the USSR and its satellites in order to reduce Soviet capabilities for continuing the war. However, the objectives of atomic air attacks would be limited to the destruction of enemy air defenses and the aviation and petroleum industries supporting them and to continue tactical and quasi-strategic attacks on enemy armed forces and command and control centers in the theater of war.

The JASC argued against launching a strategic atomic campaign against general economic and population targets in the USSR. Only if
the Soviet government refused to concede defeat as a result of its inability to occupy Europe and continued the war, did the committee believe that an unlimited atomic campaign against Soviet urban-industrial targets was justified. Even then, the committee suggested that continued air and ground pressure on Soviet armed forces might be as effective in eventually forcing a Soviet surrender.  

The JASC study was in many respects a remarkable document. It reflected considerable doctrinal flexibility, particularly in the Air Force officers involved in its writing. The study not only accepted the reversal of strategic atomic targeting priorities already suggested in the revised DROPSHOT, but it argued that economic and population objectives should be dispensed with entirely, except as a last resort. Ultimately, however, the strategy proposed by the study was built on the flimsy assumption that the Soviet Union would voluntarily spare the core of American military-industrial capacity in its initial, surprise atomic attack in favor of strikes against American strategic retaliatory forces alone. The logic on which that conclusion was based was subject to serious challenge. The committee did not even consider the strategic implications of an all-out surprise atomic attack against the U.S. economy and population. Nor did the JASC analyze the problems of providing an effective air defense for both the retaliatory striking forces and the key urban-industrial elements of the nation's mobilization base.

The JASC study was widely circulated in the joint and service staffs. The precise impact of its conclusions are difficult to gauge, however. Judging from subsequent events its influence was relatively limited. Although Air Force strategists increasingly accepted the
reversal of targeting priorities in the initial atomic air offensive, few were willing to give up the concept of counter-industrial bombardment as the ultimately decisive instrument in a general war. Not only Air Force, but Army and Navy planners were also reluctant to accept the assumption that the Soviet Union would not initially target the military-industrial mobilization base of the United States, in addition to its strategic striking forces. Initial damage limitation concepts continued to focus on the role of air defense and the problems of allocating finite air defense resources. Indeed, that problem had already begun to occupy an increasingly high level of attention in joint planning.

Air Defense and the Damage Limitation Dilemma

When the Joint Strategic Survey Committee of the JCS first examined the implications of atomic weapons for future patterns of warfare in the fall of 1945, it concluded that the only defenses against those weapons were interception of their carriers in flight or offensive action against the sources of attack. Despite the likelihood of improvements in air defense technology, the JSSC doubted that interception of atomic weapons carriers could ever be a completely reliable defense. But, effective action against the sources of atomic attack, the committee agreed, would inevitably require the United States to strike first. Although the idea of preemptive attack exercised a degree of influence before late 1947, it was never considered as a serious alternative to national strategic policy. Indeed, few, if any, senior policy-makers even discussed the idea. Military planners came to accept the fact that the United States would only retaliate after absorbing an initial nuclear attack.
Therein lay the dilemma of atomic warfare—how to prevent unacceptable damage to oneself before a decision or at least the neutralization of the enemy's atomic offensive capabilities could be achieved. If the enemy had already carried out an atomic attack on the United States, offensive action against the sources of that attack could only prevent it from continuing. It could not mitigate the damage already done. Thus, by elimination of alternatives the practical burden of initial damage limitation fell on air defense forces capable of intercepting and destroying the enemy's atomic weapons carriers before they reached their intended targets.

While the United States enjoyed a monopoly of atomic weapons, however, air defense remained the object of benign neglect. The Air Force and the JCS established a basic organizational structure for continental air defense in 1946, but it remained an essentially hollow shell without effective operational capability. As a result of the Finletter Commission hearings, the Air Force drew up plans in early 1948 for a five year building and procurement program to establish a limited aircraft control and warning system in the United States and Alaska by the end of 1952. However, Air Force requests for funds to begin construction of the first phase of the system during fiscal 1950 were rejected by the Administration.

In October 1948, the JCS approved an Air Force request for a scaled down early warning system to be completed by the end of 1952 using existing radar and communications technology. The JCS admitted that such a system would have only limited effectiveness, but insisted that for the immediate future air defense requirements warranted only a relatively
low priority anyway. In March 1949, Congress authorized construction of the early warning system proposed by the JCS, but no funds were appropriated for it. By the fall of that year when the Soviet atomic test was announced, the United States possessed virtually no operational early warning capability. Moreover, there were only four understrength air defense interceptor groups in the active Air Force. Air National Guard units intended to supplement those forces remained without equipment or aircraft.\textsuperscript{34}

Shortly after the announcement of the Soviet atomic test, the Air Force began a reanalysis of the role of air defense in a future general war and the requirements of an effective air defense system. The conclusions of that reanalysis were submitted to the Joint Chiefs in mid-November. They reflected a sense of urgency about improving air defense capabilities, but also they reflected a sense of caution against a too hasty commitment to costly and ineffective measures that would drain away defense resources. The potential threat posed by Soviet possession of atomic weapons, General Vandenberg told the JCS, was very grave. Within the next several years, and possibly sooner, the Soviet Union would have the capability to "reduce the United States to chaos and military impotence in one blow." And, if a general war occurred, Vandenberg and the Air Staff analysts had no doubt that the Soviet Union would make the destruction of America's military-industrial capacity, as well as its atomic striking forces, the first priority of attack in order to remove the only major threat to the achievement of Soviet objectives in Europe and elsewhere.\textsuperscript{35}
In their present state of development and readiness, Vandenberg emphasized, U.S. defenses against air attack could offer no effective resistance to a surprise atomic attack. Even if fully funded, the level of projected air defense programs was inadequate to redress the balance. Vandenberg cautioned, however, that the problem was not only one of quantity. It was also one of the quality of existing air defense technology. It was necessary to provide the United States as soon as possible with the economically optimum system of air defense attainable with existing technology. But, it was more important to invest the bulk of available resources in the development of new technology to improve the effectiveness of air defense. General Vandenberg and the other Chiefs recognized that the practical problem would be to obtain increased appropriations to finance major programs of research, development, procurement and deployment of new air defense weapons without decreasing the already severely limited funds available for other essential defense programs.

Admiral Sherman was particularly sensitive to the impact expanded air defense programs would have on the division of the defense budget. Because of the political as well as the military ramifications of the air defense problem, Sherman warned that "it would be quite possible to expend almost unlimited sums of money unless careful balance [was] preserved" in establishing the priorities and objectives of strategic air defense. One hundred percent protection against air attack was impossible. "Past a certain point the amount of effort devoted to air defense [rose] so sharply as to rapidly encounter the law of diminishing returns." Therefore, Admiral Sherman argued, the degree of effort
devoted to air defense must be based on a careful calculation of costs as well as risks.\textsuperscript{37}

How much should be invested in the development of new air defense technology was a potentially divisive issue for the military chiefs. In regard to short term air defense programs, however, they agreed in principle on the need for caution. In January 1950, the JCS approved Air Force plans for a modest acceleration of the limited aircraft control and warning system authorized by Congress in March 1949. Fifty million dollars was hastily appropriated by Congress in October 1949 for partial construction of the earlier program. The Air Force and the JCS requested only $35.5 million in additional funds for fiscal 1950 to begin work on the accelerated program.\textsuperscript{38}

The major factor governing the scale of the air defense effort for the immediate future in both Air Force and JCS considerations of the problem was one of timing. In a presentation to the Chiefs in early March 1950, the Air Staff established 1 July 1952 as the earliest essential date for the completion of an operational air defense system for the United States and Alaska using existing technology. That objective was based on estimates of the growth of Soviet atomic capabilities and the effects of an atomic attack on the United States similar to that outlined by the Joint Intelligence Committee in February. According to the Air Staff analysts, mid-1952 was the earliest likely time at which the Soviet Union would be able to deliver an atomic attack of sufficient weight (approximately fifty bombs on key targets) to pose a serious though not a crippling threat to American war-making capacity.\textsuperscript{39}
According to the Air Staff analysts, Soviet capability to deliver a maximum of twenty-five atomic weapons on key industrial, atomic energy, and governmental targets in the United States by mid-1952 would "hamper our efforts to mobilize our armed forces and industry." The delivery of an additional twenty-five bombs against American strategic air forces would probably delay or reduce the effectiveness of retaliatory strikes. Although serious, the nature and extent of the Soviet atomic threat by mid-1952 did not justify an all-out air defense effort, the cost of which might far exceed its gains. Instead, the Air Force analysts argued that by mid-1952 the United States should deploy only that air defense system capable of reducing the effects of the projected Soviet attack to an acceptable scale. To achieve that required selective protection of vital industrial, atomic energy, and governmental targets, not protection for American industry and population as a whole. The most important objective of air defense was to protect the retaliatory striking forces. Decreasing the vulnerability of those forces to a surprise attack, the Air Force analysts reasoned, would not only preserve America's most vital war fighting capability, but it would also reinforce the deterrent effect of those forces in the first place.

The Air Force analysts agreed with the JIC estimate completed in February that the most serious threat from a Soviet atomic attack would not materialize until after mid-1954. No air defense system based on existing technology was likely to be economically effective against that threat. No one doubted that air defense would continue to play an increasingly important role in American strategic planning, but precisely what that role was to be and what share of defense resources it would be
given depended on the results of future technological research and development as much as it depended on the nature of the Soviet threat. Until both factors were more clearly defined, the military chiefs were determined to proceed with caution.  

**Emergency War Planning After the Soviet Atomic Test**

Although increasing attention was given to the future strategic problems of both offensive and defensive warfare as a result of the Soviet atomic test, that event had only limited immediate impact on emergency war planning. The existing Joint Outline War Plan at the time of the Soviet test was plan TROJAN, approved by the JCS in January 1949 as a temporary bridge between fiscal 1949 and fiscal 1950 war planning. Because of service disagreements over force levels and the geographical "locus of strategic effort, TROJAN, as it was approved, covered only the first ninety days of war and constituted nothing more than a basic outline for the initial atomic air offensive against Soviet war-making capacity.  

As a result of continued interservice disputes, the joint planners were unable to reach even a tentative agreement on a new JOWP to replace TROJAN until August 1949. The new plan, codenamed OFFTACKLE, was distinguished from earlier war plans by two principal factors. First, as a consequence of the Administration's political commitment to the NATO alliance, the main geographical locus of operations was shifted away from the Middle East toward the western Mediterranean, northwest Africa, and the United Kingdom. Second, while OFFTACKLE depended heavily on the effects of an early atomic air campaign against vital elements of the Soviet war-making capacity, nuclear targeting priorities were divided
between strategic counter-industrial objectives and quasi-strategic and tactical objectives. Strategic, counter-industrial objectives retained first priority, but greater recognition was given to the need to use nuclear weapons to immediately retard Soviet ground force advances.43

Both the locus of operations and nuclear targeting objectives were issues of intense interservice debate among the planners. The compromise of those issues reached in August 1949 resulted from the enforced priority of Western Europe and the pressure of the budget on force levels rather than genuine agreement on basic strategic principles. The planners were politically committed to defending at least a foothold on the European continent and preparing as soon as possible to carry out a successful counter-offensive to liberate Soviet occupied areas. To accomplish that objective within a reasonable time with available and mobilizable resources required the virtual abandonment of the Middle East. It also required that a considerable part of the strategic atomic effort be diverted to quasi-strategic and tactical objectives not only during the early months of war, but in subsequent phases as well.

In the atmosphere of bitter interservice rivalry in the late summer of 1949, it is remarkable that the joint war planners were able to reach any compromise at all on the OFFTACKLE concept. Indeed, the compromise was not formally consummated by the Joint Chiefs and might easily have fallen apart during September and October when the interservice debate reached its peak in the Congressional investigation of the B-36 program and public hearings on service "Unification and Strategy."

In large part, it was the lack of practical alternatives that kept the OFFTACKLE compromise together during September and October. The
shock of the Soviet atomic test may also have contributed a greater sense of flexibility on the part of Navy and Air Force planners, but that event had little immediate impact on the substance of emergency war plans. The basic problem confronting the OFFTACKLE planners was to stretch the limited resources available far enough to provide a reasonable chance of actually implementing the concept. The mobilization and deployment schedules assigned to the August draft of the plan were quickly found to be infeasible. During September and October, the joint planners substantially reduced the overall force requirements for OFFTACKLE. To accomplish that the planners were forced to accept increased risk, especially in the early phases of the plan. Beyond that, however, the plan finally submitted to the JCS in early November differed little from the compromise reached in August.\(^{44}\)

The Soviet atomic test had little specific impact on OFFTACKLE as it was presented to the NCS in November. The plan's assumptions were altered to include a tentative estimate of Soviet atomic capability through the end of 1950. But, until the JIC analysis of the implications of Soviet possession of nuclear weapons initiated in October was completed, the joint war planners recommended to the JCS that no fundamental changes in the plan be undertaken. On that basis, the JCS initially approved OFFTACKLE on 8 December, subject to future modification. In late January 1950, even before the JIC report was completed, the JCS extended OFFTACKLE to cover the period through June 1951. Implementing directives to that effect were dispatched to major unified and specified commands in mid-February.\(^{45}\)
Although the joint war planners established basic targeting priorities for OFFTACKLE, the actual details of target selection with dealt with independently by the JCS. Since October 1948, informal responsibility for recommending atomic targets to the JCS had rested with the joint Air Intelligence Group assigned to the Air Intelligence Division of the Air Force. That arrangement was essentially a temporary expedient growing out of the inability of the Joint Chiefs to agree on a formal organizational locus for target selection. The Air Force argued in favor of assigning the responsibility permanently to the Air Intelligence Group, but the Navy and Army preferred a forum less dependent on the Air Force intelligence structure.  

In late July 1949, the Air Intelligence Group completed the atomic and conventional target systems for OFFTACKLE. Although the joint war planners had not yet reached full agreement on targeting priorities for the plan, the atomic system recommended by the Air Intelligence Group was based on the same compromise between counter-industrial and retardation objectives that was ultimately embodied in the August draft of OFFTACKLE. The atomic target system consisted of 200 separate aiming points located in 104 Soviet urban areas, with an additional seventy-two atomic bombs allocated for re-attack missions.

The majority of the 220 targets in the OFFTACKLE system were counter-industrial objectives, the destruction of which was intended to cripple Soviet war-making capacity. Specific targets included petroleum refining, electric power, and atomic energy facilities in addition to other key military-industrial objectives. The Air Intelligence Group deliberately rejected the "will of the Soviet population to continue fighting" as an
objective of atomic bombardment. However, specific aiming points were
chosen in such a way as to maximize "bonus" damage to general industrial
and population targets. The decision to concentrate atomic attack on a
few key industrial systems rather than on blanket destruction of urban-
industrial areas was based on three factors. First, there was no way to
accurately gauge the effect of blanket attacks on the Soviet will to
fight. Second, although blanket attacks would result in more widespread
damage to Soviet industry as a whole, it would result in less severe
damage to specific, key industrial targets. Finally, concentration on
key targets would require fewer bombs.48

In addition to the primary counter-industrial objectives, the
OFFTACKLE target system recommended by the Air Intelligence Group in-
cluded transportation and communication facilities, fuel distribution
systems, war materiel stockpiles, and military-political command and
control installations located in Soviet urban areas. The destruction of
those objectives was intended specifically to retard the offensive oper-
ations of Soviet ground and tactical air forces. Although Army planners
apparently requested that the Air Intelligence Group allocate a number
of atomic weapons to the destruction of Soviet military formations in
the field, such objectives were not included in the OFFTACKLE target
system. Air Force target planners insisted that intelligence on such
objectives was inadequate to warrant the allocation of atomic weapons to
their attack. The Air Force target planners agreed that attacks on such
objectives were desirable, but, until the size and flexibility of the
weapons stockpile increased to a greater degree, they insisted that
retardation objectives be confined to urban areas where the targets were
fixed and where there was the possibility of obtaining important "bonus" damage to other objectives as well. 49

The target system recommended for OFFTACKLE by the Air Intelligence Group was approved by the Air Force Target Panel and submitted to the JCS by General Vandenberg at the end of August. Because of continuing disputes over the appropriate organizational locus of the target selection function, JCS consideration of the proposed system was delayed while the Joint Intelligence Committee reevaluated the basic intelligence on which the system was based. The JIC's report, completed in late November, concluded that the counter-industrial objectives outlined in the target system were satisfactory, but existing intelligence was inadequate to accurately assess the effectiveness of the retardation objectives in the system. Despite the ambiguity of the JIC's conclusions regarding the retardation objectives and an increasingly intense dispute over who would control target selection, the JCS tentatively approved the OFFTACKLE target system on 8 December when it also approved the basic war plan. 50

Analyzing the Strategic Air Offensive

In January 1950, the Air Intelligence Group began work on a revised target system for OFFTACKLE. That effort, like the original target system recommendations approved in December, was aimed at exploiting the growing flexibility of the atomic weapons stockpile by increasing the weight and effectiveness of the atomic air offensive and expanding its basic objectives. In the meantime, however, there was still considerable concern within the Army and Navy about the Strategic Air Command's ability to successfully deliver the atomic offensive as planned. In
April 1949, the JCS had directed the Weapons System Evaluation Group to undertake a comprehensive analysis of that problem. Fragmentary information, leaked from preliminary studies in support of the WSEG evaluation, contributed considerable fuel to the interservice debate that culminated in the B-36 investigation and the "Unification and Strategy" hearings in August, September and October. When it was finally completed in February 1950, however, the WSEG study provided an admirably balanced appraisal of the capabilities of Air Force strategic bombardment systems. By discrediting the more exaggerated claims of both the Air Force and the Navy about the effectiveness of strategic bombing, the WSEG study introduced a new sense of realism and cooperativeness in joint strategic planning.51

The WSEG evaluation was based on the target system for OFFTACKLE. At the time the study was completed, however, the existing Air Force atomic operational plan—SAC EWP 1-49—was based on an expansion of the old TROJAN target system. Thus, the operational aspects of the WSEG study were based on Air Force interpolations of EWP 1-49 and projections of SAC deployment capability in early 1950. In part, those interpolations and projections were the product of preliminary work by the SAC staff on a new operational air offensive plan. But, the new plan, SAC EWP 1-50, was not completed until May and it differed in several important respects from the operational and targeting assumptions used by WSEG. The WSEG study assumed that the main weight of the atomic offensive would be delivered by a total force of 570 medium bombers (B-29/B-50) operating from forward bases in the United Kingdom and using terminal staging bases in the Cairo-Suez area or elsewhere in the Middle East. That force would account for 251 of the 292 initial and reattack
atomic sorties planned for the OFFTACKLE target system. The remaining 41 initial and reattack sorties against the most remote Soviet targets would be carried out by a force of 54 B-36 aircraft operating from bases in Alaska. Based on existing logistic capabilities, the WSEG analysts assumed that the majority of the initial and reattack missions would not be completed for at least 30 days following the initiation of the offensive.52

The most difficult problem for the WSEG analysts was to define the parameters of Soviet air defense capability against the type of attack SAC might carry out. Existing intelligence was extremely limited on such critical factors as the number, type, and performance characteristics of Soviet interceptor aircraft, early warning, ground control and airborne intercept radars, antiaircraft rocket and artillery forces and equipment, and electronic countermeasure capabilities. Moreover, there was virtually no information on the quality and training of Soviet air defense personnel, or the general state of readiness of their equipment. Thus, the WSEG analysts assumed two levels of overall Soviet air defense capability. But, they frankly admitted that those limits did not necessarily bracket actual Soviet capability.53

The WSEG analysts concluded that an atomic air offensive on the scale of OFFTACKLE could be carried out by the Strategic Air Command, if Soviet air defense capability did not exceed the upper limit established in the Group's study. However, the WSEG analysts warned that severe logistic and operational deficiencies would limit the margin of feasibility to the barest minimum. The most serious logistic problem confronting the striking force was the condition and vulnerability of
forward bases in the United Kingdom and terminal staging bases in the Middle East. At the time that the WSEG study was completed, facilities at those bases were judged inadequate to support the scale of operations contemplated in OFFTACKLE. How quickly those facilities could be prepared in an emergency would be a critical factor in the success of the air offensive. More importantly, the WSEG study reemphasized the potential vulnerability of those bases to Soviet air attack during the early phases of a war. Whether the initial atomic offensive could be completed before U.K. bases became untenable or whether the initial offensive would result in quickly degrading Soviet air capabilities against those bases remained problematical.

In addition to those problems, the aviation fuel reserves and air transport resources available to support the OFFTACKLE air offensive were only barely adequate. It was anticipated that to deploy SAC units to U.K. bases in the time period established for the air offensive would require virtually every aircraft in the Military Air Transport Service inventory. Limited fuel reserves would require abandoning plans for supplementary, conventional air attacks. It would also require paring down the number of reconnaissance and escort sorties in support of the atomic offensive to an absolute minimum. The WSEG study estimated that the atomic air offensive would be limited to a total of about 2,000 aircraft sorties. About 625 of those would be required for initial deployments. The escort and bomb carrier requirements of the air offensive would account for approximately 875 sorties. That left only about 500 sorties for reconnaissance and damage evaluation missions. As a practical matter, however, aircraft attrition due to all causes would quickly
reduce the number of available aircraft to a level far below that needed to support the 2,000 sortie allocation. The most severe effect of that situation would be on damage evaluation and reattack capabilities. The WSEG analysts concluded that the overall attrition of the striking force by Soviet air defenses and the consequent ability of the striking force to destroy the assigned targets would depend in large measure on the methods employed, especially whether the attacks were massed or dispersed or whether they were carried out in daylight or darkness. Based on the upper level of Soviet air defense capability, night attacks (either massed or dispersed) were judged to be the least lethal to the striking force. Night attacks would also result in the delivery of a greater number of bombs within the designated target areas. Because of the higher probability of visual bombing accuracy, however, daylight attacks would result in more severe damage to individual targets within the target areas bombed.

The WSEG analysts estimated that about one-third of the striking force would be lost in carrying out either massed or dispersed night attacks. Those attacks would result in the delivery inside the target areas of about eighty percent of the bombs launched. However, as a result of the inaccuracy of existing radar bombardment systems only about one-half of the individual targets attacked would be destroyed beyond repair. Losses for massed daylight attacks were estimated at about one-half of the striking force. Only about seventy percent of the bombs launched would be delivered inside the target area. But, the use of visual bombardment systems would result in the total destruction of two-thirds of the individual targets engaged.
Taking into consideration the operational capabilities of the striking force and the effects of Soviet air defenses, the WSEG analysts estimated that overall seventy to eighty-five percent of the atomic bomb carriers sortied would successfully deliver their bombs to the intended target area. That amounted to about 205 to 248 of the 292 total bombs allocated for the OFFTACKLE air offensive. Cumulative limitations on bombing accuracy were expected to result in the total destruction of only about 102 to 164 of the 220 individually designated targets. The remainder of the targets would suffer varying degrees of repairable damage. The choice between day or night attack was, therefore, a difficult one. Night attacks would result in more widespread damage to a greater number of target complexes with smaller losses to the striking force. Daylight attacks would result in more severe and permanent damage to individual, key targets, but with a correspondingly higher cost to the striking force.

Three basic solutions to that dilemma were suggested by the WSEG analysts. First, the striking force could appreciably improve the effectiveness of night attacks by improving the accuracy of radar bombardment. The WSEG study assumed that radar CEPs for "easy" and "difficult" targets would be 3,000 and 5,000 feet, respectively. Based on a damage radius of 4,000 feet, the average percentage of damage to point targets would range between 0.34 and 0.63 using radar bombardment systems, whereas damage to point targets engaged in visual acquisition systems would average as high as 0.90. Improved radar CEPs would close that gap significantly. A second solution was to engage each point target with more than one bomb. That would not only raise the percentage of
destruction to individual targets, but would increase the percentage of
target areas actually engaged. It would also significantly increase
"bonus" damage to other objectives within the target areas. The last
solution suggested by the WSEG analysts was to increase the power of
existing weapons in order to compensate for operational losses and bomb-
ing inaccuracy. The most economical of those solutions would have been
to improve bombing accuracy. The more attractive solution, both tech-
nologically and strategically, was to increase the number and power of
the weapons themselves.\(^{59}\)

Despite demonstrating a number of serious operational, logistic and
intelligence deficiencies in existing plans for the atomic air offens-
itive, the WSEG study generally vindicated the Air Force's confidence in
the capabilities of its strategic bombardment systems. However, the
WSEG study did not address the more fundamental issue of how the atomic
offensive in OFFTACKLE would effect the war-making capacity of the
Soviet Union. The Harmon Committee report of May 1949 assessed the
effect of the smaller scale atomic offensive in TROJAN on Soviet indus-
trial capacity. That report concluded that destruction of the 147 tar-
gets in TROJAN would result in a thirty to forty percent reduction in
overall Soviet industrial production and a much higher percentage reduc-
tion in certain key military industries. By implication, the larger
scale offensive in OFFTACKLE would increase that effect, though not
necessarily in proportion to the increased number of targets.\(^{60}\)

Neither the WSEG study nor the Harmon Committee report assessed the
effect on Soviet offensive capabilities resulting from destruction of
retardation objectives. More importantly, neither study considered the
effect of a Soviet atomic strike on the ability of U.S. strategic air forces to retaliate with maximum impact. Following completion of the WSEG study in February, both of those issues took on a gradually increasing importance in both Air Force and joint planning.

**Toward New Operational Air Warfare Plans and Concepts**

The first clear responses to the strategic implications of nuclear mutuality began to appear in short range war planning during the early months of 1950. Although those responses were consummated only gradually over the following two years, they manifested an effort to confront the realities of general warfare in a nuclear age. That trend was most evident in the operational plans and concepts of the Strategic Air Command.

In December 1949, while the WSEG study of SAC capability to deliver the atomic offensive was still being prepared, General Curtis LeMay told General Vandenberg that the problem of insuring delivery went beyond the operational factors being considered by WSEG. "Our readiness [to conduct atomic operations]," he said, "will depend materially upon our ability to avoid or to absorb the effects of enemy attempts to immobilize our atomic striking force before it can be committed to combat." The magnitude of that problem was enormous. Its solution would require not only a heavy investment in increased military forces, but radical changes in strategic thinking about how atomic air warfare should be conducted.61

LeMay believed that a large scale expansion of air defense forces was a high priority. But, air defense alone could not fully protect either the strategic striking force or the economy and population of the nation. It was necessary, LeMay insisted, "to adopt the objective of completely avoiding enemy attack . . . by destroying his atomic force
before it can attack." That required an intelligence system capable of locating the Soviet striking force and providing reliable strategic warning when attack by that force was imminent. It also required agreement at the highest level of government to authorize an immediate preemptive attack when strategic warning was received. 62

At an Air Force Commanders' Conference in April 1950, LeMay expanded on the theme of the timing and objectives of the atomic air offensive under conditions of nuclear mutuality. As Soviet capability to carry out a surprise, nuclear attack against the United States increased over the next year or two, LeMay insisted that Air Force targeting priorities "would have to shift from enemy industrial targets to counterforce targets. It would be an empty victory for us to succeed in destroying his country; if at the same time this country were destroyed, or even seriously damaged." LeMay did not suggest that the Air Force should abandon counter-industrial objectives in strategic air warfare. On the contrary, the destruction of such objectives would be essential to victory, but to avoid mutual defeat it was first necessary to destroy the enemy's striking force "before it can destroy us." 63

To avoid a devastating surprise attack on the United States, LeMay reiterated, required reliable strategic warning and a national strategic policy predicated on immediate, preemptive attack in response to warning. In addition, LeMay argued that to avoid a Soviet first strike even after strategic warning was received, the United States must build an intercontinental striking force "so that our [atomic] attack can be launched in a matter of hours—not days." That force must also be large enough to carry out the expanded missions of the atomic air offensive. 64
The increasing vulnerability of forward bases, even to conventional air attack, had made the development of a reliable intercontinental striking force a major program priority in SAC since early 1949. The B-36 and aerial refueling systems for medium bombers promised the quickest fulfillment of that goal. But, by early 1950 neither system accounted for more than a fraction of actual SAC operational capability. In fact, technical problems with the two active B-36 groups had resulted in their being deleted from the existing war plan (SAC EWP 1-49) in January. They were not reinstated until May or June.65

To accomplish the objective of an intercontinental striking force, Air Force and Strategic Air Command program plans for the period 1950-1953 emphasized the priority of expanding the number of active B-36 groups and the number of aerial refueling tankers available to support the medium bomber force. Air Force and SAC planners were also convinced that the expanded objectives of the strategic air offensive as a result of Soviet possession of atomic weapons would require a significant enlargement of the striking force over the next two years. At least a third of the striking force would be committed to counterforce objectives at the outset of hostilities. Depending on the effectiveness of initial air offensive operations, SAC strategic planners calculated that counterforce attacks alone might account for as much as half of the total strategic air effort, perhaps even more. The remainder of the striking force must be of sufficient size to carry out the counter-industrial and retardation campaigns immediately following the initial counterforce offensive. At the same time the striking force must retain the flexibility to resume counterforce operations if necessary.66
Air Staff target planners initiated studies to identify specific, key counterforce objectives in December 1949. Intelligence on the composition and deployment of the Soviet Long Range Air Force was extremely limited, however, and progress was slow. Nevertheless, by March 1950 the target planners had tentatively identified a total of 153 potential objectives, including 82 airfields, 19 command and control centers, 20 atomic weapons stockpile or production points, and 32 submarine base facilities. Those targets were incorporated by Strategic Air Command planners in a new operational war plan, SAC EWP 1-50, completed in May 1950.  

SAC EWP 1-50 was generally based on the OFFTACKLE concept, but the plan radically altered and enlarged the original OFFTACKLE target system by incorporating the 153 counterforce objectives identified by Air Force target planners. For the first time in any short term plan, counterforce objectives were not only included, but they were given priority over either counter-industrial or retardation objectives. The plan called for the immediate initiation of intercontinental strikes against counterforce targets by four to five B-36 and air refueled B-50 groups operating from bases in Alaska and possibly Newfoundland or Labrador. The counter-industrial and retardation strikes originally outlined in the OFFTACKLE target system would be carried out between D+6 and D+12 days, or as quickly as practicable, by ten or eleven non-air refueled medium bomb groups operating from or staging through forward bases in the United Kingdom.  

Although it constituted an important first effort to confront the strategic problems of nuclear mutuality, SAC EWP 1-50 suffered from
overwhelming deficiencies. At the time the plan was submitted in May 1950, SAC did not possess in operational condition aircraft and crews necessary to carry it out. Nor did the Air Force or the Military Air Transport Service possess the logistic capability to support such a rapid deployment of forces. Moreover, base facilities both in North America and the United Kingdom were inadequate to meet the requirements of the plan. Following the diversion of SAC medium bomb groups to support the military effort in Korea after June 1950, the forces necessary to carry out a plan on the scale of SAC EWP 1-50 were completely unattainable with existing resources. 69

Because it was obviously infeasible, SAC EWP 1-50 was never approved by either the Air Force or the JCS as an operational war plan. Nevertheless, it had a significant impact on subsequent planning and programming concepts, both in the Air Force and the Joint Staff. When the revised target system for OFFTACKLE begun in January 1950 was completed in August, it reflected the same priority of objectives for the atomic air offensive as that originally outlined in SAC EWP 1-50. Of course, the feasibility of actually carrying out the air offensive outlined in the jointly revised OFFTACKLE target system was no greater than the feasibility of carrying out SAC EWP 1-50. Deficiencies in forces, logistics and base facilities would persist for some time. 70

The preemptive counterforce strategy embodied in SAC EWP 1-50 and the revised OFFTACKLE target system provided a theoretically rational concept for fighting a general war against a nuclear armed enemy. In practical terms, however, the concept was dependent for success on several factors. First, the concept required that the United States
maintain a substantial superiority over the Soviet Union in the size and power of its nuclear weapons stockpile in order to guarantee the operational flexibility necessary to have sufficient confidence in the ability to completely neutralize the enemy's striking power. But, once the relative numbers of weapons on each side reached a certain level even substantial superiority might not be enough to ensure a successful counterforce attack.

The second factor affecting the practicability of a preemptive counterforce strategy was the reliability of strategic warning. After early 1950 the military planners placed increasingly heavy pressure on the CIA and the Armed Forces Security Agency to establish systems of intelligence collection that would provide reliable and timely indication and warning of an impending atomic attack. The inability of the intelligence agencies to accomplish that task undermined the fundamental objective of the planners' counterforce concept. 71

Assuming that strategic warning was available, the third factor affecting the success of a preemptive counterforce strategy was the ability to respond quickly enough to neutralize the enemy striking force before it was actually launched. A major objective of the Air Force strategists in their efforts to create an intercontinental striking force was to reduce the time required to deliver an initial atomic offensive to a matter of hours rather than the days or possibly weeks needed to deploy striking forces to forward bases. But, even a response measured in hours might prove too slow.

The final and perhaps most uncertain factor affecting the success of a preemptive counterforce strategy was whether, in fact, the President
would authorize a first strike. There was no national policy on when, how, or even if the United States would use nuclear weapons in war. Assuming that strategic warning of an impending attack were received, valuable time would be consumed debating how to respond. Inevitably, there would be serious questions about the reliability of the indications of warning. The fact that existing military plans were predicated on an immediate response might weigh heavily in favor of a decision to preempt. But, what the policy-makers would or would not do in such an unprecedented situation—having never analyzed the alternatives—was wholly unpredictable.

Therein lay the most serious contradiction of American defense policy and strategy as they were developed between Hiroshima and the Korean war. Having constructed defense policy on the deterrent power of nuclear weapons, the civilian policy-makers failed realistically to confront the issue of how those weapons would or could be used if deterrence failed. That problem was left solely to the military planners. Despite the implications of NSC 68 for policy and strategy for limited warfare on the pattern of Korea, the fundamental contradiction between the role of nuclear weapons in policy and strategy and the practical usefulness of those weapons in general warfare remained unsolved.

2. Ibid.

3. JSPG 499/2, 3 Dec 47, Rpt, JSPG to JSPC, sub: CHARIOTEER, CCS 452 US (8-1-47)S. 2.

4. JSPG 500/2, 8 Mar 48, Rpt, JSPG to JSPC, sub: BUSHWACKER, CCS 381 USSR (3-2-46)S. 11.

5. JCS 1920, 16 Aug 48, Note by Secs to JCS, sub: Ad Hoc Committee to Develop Long-Range Plans for War with the USSR; JCS 1920/1, 31 Jan 49, Rpt, Ad Hoc Committee to JCS, sub: same (Plan DROPSHOT), both in CCS 381 USSR (3-2-46)S. 28.

6. Ibid.

7. Ibid.

8. Ibid.

9. JCS 1920/2, 7 Mar 49, Memo, C/S, USAF to JCS, sub: Long-Range Plans for War with the USSR; JCS 1920/3, 18 Mar 49, Memo, C/S, USA to JCS, sub: same; JCS 1920/4, 4 Apr 49, Memo, CNO to JCS, sub: same, all in CCS 381 USSR (3-2-46)S. 30.


12. JCS 2081, 8 Nov 49, Rpt, D/JS to JCS, sub: "Strategic Implications of Soviet Possession of Atomic Weapons," and JCS 2081 DECISION, 29 Nov 49, CCS 471.6 USSR (11-8-49)S. 1.


14. Ibid.

15. Ibid. See also JIC 513/1, 11 Apr 50, Note by Secs to JIC, sub: "USSR Long-Range Bombing Capabilities," CCS 373.24 US (9-8-49)S. 1; and "Estimate of Soviet Air Capabilities," USAF Air Intelligence Division Study No. 146/18, 1 Oct 49, AFSHRC 142.048-146/18.

16. JCS 2081/1, 13 Feb 50.
17. JCS 1920/5, 19 Dec 49, Rpt, Ad Hoc Committee to JCS, sub: "Long-Range Plans for War with the USSR" (revised DROPSHOT), CCS 381 USSR (3-2-46) BF, pt. 3.

18. Ibid.

19. Ibid.

20. Ibid.

21. Ibid.


23. JASC 508, 15 Feb 50.

24. Ibid.

25. Ibid.

26. Ibid.

27. Ibid.

28. Ibid.

29. Ibid.

30. Ibid.

31. Ibid.

32. See Chapter I.


34. JCS 1899/2, 29 Sep 48, Rpt, JSPC to JCS, sub: Radar Fence Program; and JCS 1899/2 DECISION, 20 Oct 48, CCS 413.44 (7-1-48)S. 1. See also Sturm, "American Air Defense," p. 193.

35 Memo for Record by General Fairchild, 30 Sept 49, Fairchild Papers, Bx 1, General Correspondence File. JCS 2084, 16 Nov 48, Memo, C/S, USAF to JCS, sub: Air Defense of the United States, CCS 373.24 US (9-8-49)S. 1.

36. Ibid. and JCS 2084 DECISION, 22 Nov 49.


40. Ibid.


42. See Chapter VII.

43. See Chapter VII.

44. JCS 1844/46, 8 Nov 49, Rpt, JSPC to JCS, sub: "Joint Outline Emergency War Plan OFFTACKLE," CCS 381 USSR (3-2-46)S. 41.

45. Ibid. and JCS 1844/46 DECISION, 8 Dec 49. See also JCS 1844/49, 7 Dec 49, Memo, CNO to JCS, sub: "Joint Outline Emergency War Plan OFFTACKLE;" JCS 1844/55, 18 Feb 50, Rpt, JSPC to JCS, sub: "Directives for the Implementation of OFFTACKLE," both in CCS 381 USSR (3-2-46)S. 42, 45; JCS 2081, 8 Nov 49; and JCS 1844/53 DECISION, 26 Jan 50, Note by Secs to JCS, sub: "War Emergency Planning, CCS 381 (1-26-50)S. 1. Note that OFFTACKLE was subsequently known as SHAKEDOWN.

46. See e.g., JCS 1805/11, 24 Jan 49, Memo, C/S, USA to JCS; JCS 1805/12, 17 Feb 49, Memo, C/S, USA to JCS; JCS 1805/13, 24 Aug 49, Memo, C/S, USAF to JCS, all in CCS 471.6 (10-16-45)S. 9, pts. 1-3. The Air Intelligence Group was first organized in the Air Intelligence Division of the AAF in December 1945. However, as a result of continuing disputes over the control of atomic operations, the JCS never agreed on the assignment of specific functions to the Group. Following the Newport meeting in August 1948, Secretary of Defense Forrestal informally assigned the Group responsibility for recommending atomic targets to the JCS as a temporary measure.

47. Memo, D/I, USAF to D/P&O, USAF, 21 Jul 49, sub: Target System Recommended for the Strategic Air Offensive, in AF OPD 384.5 (6 Dec 48), 335/341. See also JCS 1952/11, 10 Feb 50, Rpt, WSEG to JCS, sub: "Report on Evaluation of Effectiveness of Strategic Air Operations," CCS 373 (10-23-48)BP 2C & 2D. The specific Soviet urban areas to be attacked remain classified, but the system probably included most, if not all, of the seventy urban areas in the TROJAN target system. See Chapter VII.


51. JCS 1952/11, 10 Feb 50. Re: background of WSEG study see Chapter VIII.

52. JCS 1952/11, 10 Feb 50.

53. Ibid.

54. Ibid.

55. Ibid.

56. Ibid.

57. Ibid.

58. Ibid.

59. Ibid.

60. See Chapter VII.

61. Ltr, LeMay to Vandenberg, 12 Dec 49, LeMay Papers, Bx D1, Document B-3111.

62. Ibid.


64. Ibid.


66. Memo, LeMay to Finletter, 11 May 50, LeMay Papers, attch to General LeMay's Diary (Jan-Jun 50), Bx B64, Folder 2.

68. Ibid. See also Ltr, LeMay to D/P&O, USAF, 16 May 50, AF PO 381 SAC (29 Mar 49)S. 2, 335/341, and Memo, Finletter to Vandenberg, 12 May 50, Vandenberg Papers, Bx 84.

69. Ltr, LTG I. H. Edwards to LeMay, 29 Sep 50, sub: SAC EWP 1-50, AF PO 381 SAC (29 Mar 49)S. 3, 335/341.

70. Re: revised OFFTACKLE target system see JSPC 877/131, 10 Aug 50, Rpt, JSPC to JCS, sub: Target Selection for the Strategic Air Offensive, CCS 373.11 (12-14-48)S. 2.

BIBLIOGRAPHY

MANUSCRIPT AND ARCHIVAL MATERIALS

Guides to Manuscript and Archival Materials:


Manuscript Collections:

Orvil A. Anderson Collection. A. F. Simpson Historical Research Center, Maxwell AFB, Alabama.


Vannevar Bush Papers. Library of Congress, Manuscript Division, Washington, DC.

Charles P. Cabell Collection. A. F. Simpson Historical Research Center, Maxwell AFB, Alabama.

Ira C. Eaker Papers. Library of Congress, Manuscript Division, Washington, DC.


Hugh J. Knerr Papers. Library of Congress, Manuscript Division, Washington, DC.

Hugh J. Knerr Collection. A. F. Simpson Historical Research Center, Maxwell AFB, Alabama.


Curtis E. LeMay Papers. Library of Congress, Manuscript Division, Washington, DC.

Curtis E. LeMay Collection. A. F. Simpson Historical Research Center, Maxwell AFB, Alabama.


Robert Patterson Papers. Library of Congress, Manuscript Division, Washington, DC.

Thomas S. Power Papers. Syracuse University Library, Syracuse, New York.

Carl A. Spaatz Papers. Library of Congress, Manuscript Division, Washington, DC.

Hoyt S. Vandenberg Papers. Library of Congress, Manuscript Division, Washington, DC.

Ennis C. Whitehead Collection. A. F. Simpson Historical Research Center, Maxwell AFB, Alabama.

Archival Materials:

Records of Headquarters, Army Air Forces. Record Group 18, National Archives and Records Service, Modern Military Branch, Washington, DC.
Records of the Office of the Secretary of War. Record Group 107, National Archives and Records Service, Modern Military Branch, Washington, DC.

Records of the Assistant Secretary of War for Air. In Record Group 107 (Records of the Office of the Secretary of War), National Archives and Records Service, Modern Military Branch, Washington, DC.

Records of the Joint Congressional Aviation Policy Board. Record Group 128, National Archives and Records Service, Legislative, Judicial, and Fiscal Branch, Washington, DC.

Records of the United States Joint Chiefs of Staff. Record Group 218, National Archives and Records Service, Modern Military Branch, Washington, DC.


Records of the Secretary of the Air Force. Record Group 340, National Archives and Records Service, Modern Military Branch, Washington, DC.

Records of Headquarters, United States Air Force. Record Group 341, National Archives and Records Service, Modern Military Branch, Washington, DC.


Official Files and President's Secretaries' Files. Harry S. Truman Library, Independence, Missouri.

Special Collection of Central Intelligence Agency Papers. National Archives and Records Service, Modern Military Branch, Washington, DC.


Special Collection of William D. Leahy Papers (Leahy Files). National Archives and Records Service, Modern Military Branch, Washington, DC.

PUBLIC DOCUMENTS


Committee on Armed Services. To Authorize the Secretary of the Air Force to Establish Land-Based Air Warning and Control Installations for the National Security, and for Other Purposes, Hearings, 81/1. Washington, DC: GPO, 1949.


Senate. Subcommittee of the Committee on Appropriations. Department of Defense appropriations for 1951, Hearings, 81/2.


BOOKS, MONOGRAPHS, AND OFFICIAL HISTORIES


PERIODICAL LITERATURE


Caldwell, Cy. "Strategic Bombing and Strategic Thinking." *Aero Digest* (December 1949).


Combs, Cecil E. "The Air Offensive In Overall Strategy." Air University Quarterly Review (Spring 1948).


Dickman, Joseph L. "Douhet and the Future." Air University Quarterly Review (Summer 1948).

Eaker, Ira C. "No Invader Can Take the Nation: The Danger is That We May Give It Away." U.S. Air Services (June 1947).


Futrell, Robert F. "Preplanning the USAF: Dogmatic or Pragmatic." Air University Review (January-February 1971).

Gaddis, John Lewis. "Was the Truman Doctrine a Real Turning Point?" Foreign Affairs (January 1974).


"H-Bomb." Commonweal (February 17, 1950).


"Interview with Major General Curtis E. LeMay." Army and Navy Register (January 12, 1946).


____. "Survival in the Atomic Age." Air Affairs (December 1950).

____. "We Cannot Afford to Stop Thinking." U.S. Air Services (June 1947).


Murphy, Charles J. V. "The U.S. as a Bombing Target." *Fortune* (November 1953).


Poole, Walter S. "From Conciliation to Containment: The Joint Chiefs of Staff and the Coming of the Cold War." *Military Affairs* (February 1978).


Reid, John D. "Sentinels of United States Foreign Policy. *Air University Quarterly Review* (Fall 1949).


____. "Operational Concepts for Modern War." *Air University Quarterly Review* (Fall 1948).


____. "If We Should Have to Fight Again." *Life* (July 5, 1948).


"White Star vs. Red Star." Newsweek (May 17, 1948).


Wolk, Herman S. "Roots of Strategic Deterrence." Aerospace Historian (September 1972).

Wright, Quincy. "Political Consequences of the Soviet Atom Bomb." Air Affairs (Spring 1950).

UNPUBLISHED MATERIAL


ORAL HISTORY SOURCES


USAF Oral History Interview K105.5-140 (U), Unknown interviewer with MG Hugh J. Knerr, 10 October 1967. Office of Air Force History, Washington, D.C.

Interview (U), L. D. O'Brien with GEN Curtis E. LeMay, 17 February 1976, Newport Beach, California. Transcript in possession of author.

USAF Oral History Interview K239.0512-714 (S), Unknown interviewers with GEN Curtis E. LeMay, January 1965. A. F. Simpson Historical Research Center, Maxwell AFB, Alabama.


Interview (U), M. Green with MG John B. Montgomery, 8 August 1974, Los Angeles, California. Office of Air Force History, Washington, D.C.


BIBLIOGRAPHIES


