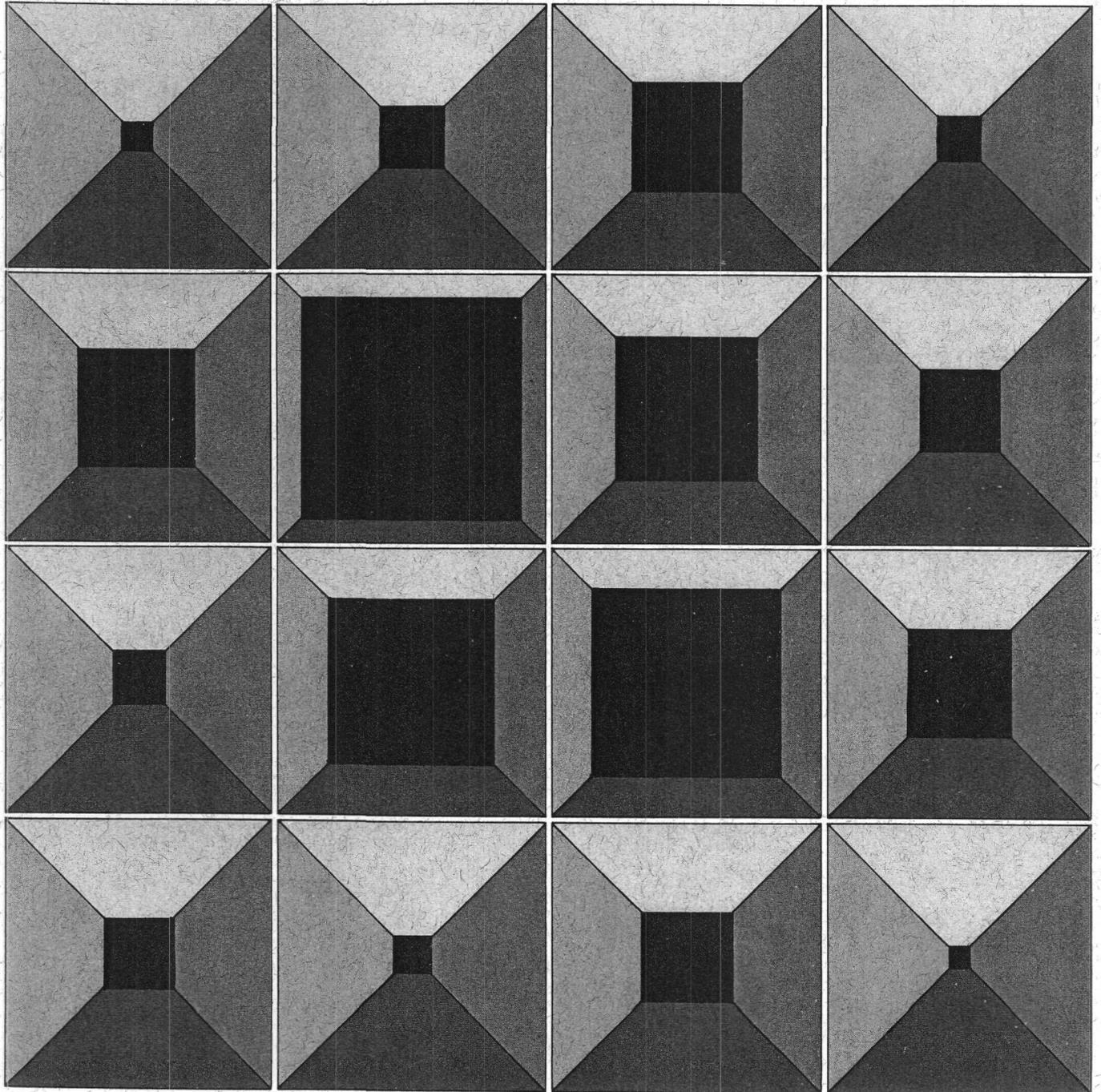
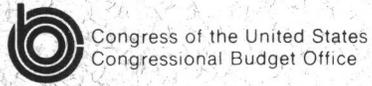


U.S. Ground Forces: Design and Cost Alternatives for NATO and Non-NATO Contingencies

A CBO Study
December 1980



**U.S. GROUND FORCES:
DESIGN AND COST ALTERNATIVES
FOR NATO AND NON-NATO CONTINGENCIES**

**The Congress of the United States
Congressional Budget Office**



E R R A T A

U.S. Ground Forces:
Design and Cost Alternatives
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Page 83, second full paragraph:

For ". . . 50,000 to 60,000 support personnel . . . "

Read ". . . 60,000 to 70,000 support personnel would have to be added to the active-duty force. (Of that number, 50,000 to 60,000 personnel would be needed to create new support units, and 10,000 would be used for additional base support.)"

PREFACE

The U.S. Department of Defense currently shapes the nation's military forces, and formulates its budgetary requirements, on the basis that a need might arise to engage simultaneously in a major war in Europe and a minor war elsewhere, most probably in the Middle East. In this context, this study assesses the current capacity of U.S. ground forces to meet the so-called "1 and 1/2 war requirement." This assessment includes an analysis of the current capabilities of NATO, using ratios of Warsaw Pact to NATO forces, and alternative approaches to improve those capabilities. The analysis also considers the current capabilities and ways to improve the Administration's proposed Rapid Deployment Force.

Undertaken at the request of the Senate Budget Committee, the study was prepared by Pat Hillier and Nora Slatkin of CBO's National Security and International Affairs Division, under the supervision of David S.C. Chu and Robert F. Hale. The authors particularly acknowledge the contribution of Edward Swoboda, who prepared the cost estimates, and Johanna Zacharias, who edited the paper. Valuable assistance was also given by Jennifer Hinman, Lawrence Oppenheimer, Joel Slackman, Michael Sullivan, Nancy Swope, and Dov Zakheim of CBO, and by Phillip Karber of the BDM Corporation. (Responsibility for the study rests solely with CBO, however, and not with any external reviewer.) Nancy Brooks prepared the paper for publication. The graphics were drafted by Andrew Hemstreet and his colleagues at Art Services, Inc.

In keeping with CBO's mandate to provide objective and nonpartisan analysis, this paper offers no recommendations.

Alice M. Rivlin
Director

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CONTENTS

	<u>Page</u>
SUMMARY	xiii
CHAPTER I. INTRODUCTION	1
Background	1
Plan of the Paper	4
CHAPTER II. FORCES REQUIRED TO DEFEND NATO EUROPE	7
Two Approaches to Defensive Strategy	8
The Opposing Forces	9
Force Ratios and Defense Strategies for the Central Region	15
NATO's Objective and Capacity for Self-Defense	18
Ground Force Requirements for NATO's Flanks	28
CHAPTER III. THE QUESTION OF WARSAW PACT HOMOGENEITY	33
Possible Factors Contributing to Unreliability	34
An Overview of Problems in the Eastern Bloc	36
Developments in Individual Countries	39
CHAPTER IV. FORCE REQUIREMENTS FOR NON-NATO CONTINGENCIES	45
Current and Potential U.S. Capabilities	46
Countering Soviet Threats in Iran, Iraq, and Turkey	48
Countering Soviet Aggression in States Not Contiguous to the Soviet Union	53



CONTENTS (continued)

	<u>Page</u>
Countering Non-Soviet Threats	54
Korea	67
Conclusions	71
CHAPTER V. OPTIONS FOR CONFIGURING U.S. GROUND FORCES	73
Companion Military and Political Issues	73
Alternative Objectives for U.S. Ground Forces	77
Force Options for 1 and 1/2 Wars	83

TABLES

	<u>Page</u>	
TABLE 1.	COMPARISONS OF NATO AND WARSAW PACT ARMIES COMMITTED TO THE CENTRAL REGION: 1979-1980	13
TABLE 2.	COMPARISON OF WARSAW PACT AND NATO FORCES AS ALLOCATED IN CBO'S ANALYSIS: END OF 1979	20
TABLE 3.	NATO/WARSAW PACT TACTICAL AIR FORCE BALANCE: 1979	26
TABLE 4.	CURRENT AND POTENTIAL U.S. GROUND FORCE CAPABILITIES FOR THE PERSIAN GULF, FIRST 16 DAYS AFTER MOBILIZATION	47
TABLE 5.	ARMIES OF THE GULF STATES: 1979-1980	58
TABLE 6.	COMPOSITION OF EASTERN MEDITERRANEAN COUNTRIES' GROUND FORCES: 1979-1980	66
TABLE 7.	NORTH AND SOUTH KOREAN ARMED FORCES, KEY MILITARY INDICATORS: 1979-1980	68
TABLE 8.	PROJECTED COSTS OF SIX U.S. GROUND FORCE ALTERNATIVES ABOVE CURRENT DEFENSE SPENDING LEVEL: 1982-1989	84



FIGURES

	<u>Page</u>
FIGURE 1. NATO'S AREA OF CONCERN IN EUROPE AND WESTERN ASIA	6
FIGURE 2. CORPS SECTORS OF MILITARY RESPONSIBILITY IN NATO'S CENTRAL REGION	11
FIGURE 3. WARSAW PACT/NATO GROUND COMBAT COMPONENTS, FISCAL YEARS 1974-1980	23
FIGURE 4. SHIFTING WARSAW PACT/NATO FORCE BALANCE: 90 DAYS FOLLOWING PACT MOBILIZATION	24
FIGURE 5. EFFECTS OF WARSAW PACT HOMOGENEITY--SHIFTING WARSAW PACT/NATO FORCE BALANCE SHOWING PACT FORCES UNIFIED AND SOVIETS FIGHTING ALONE: 90 DAYS FOLLOWING PACT MOBILIZATION	34
FIGURE 6. AREA OF U.S. CONCERN IN THE MIDDLE EAST AND WESTERN ASIA	44
FIGURE 7. KOREA AND ITS NEIGHBORS	53
FIGURE 8. COMPARISON OF FORCE STRUCTURE OPTIONS FOR THE WARSAW PACT/NATO CONTINGENCY: 90 DAYS FOLLOWING PACT MOBILIZATION	79

SUMMARY

Since 1969, the Department of Defense has based its design of U.S. ground forces, and shaped its budget, on the assumption that a need might arise for the United States to fight both a major and a minor war simultaneously. For this possibility, the department has articulated what it terms a "1 and 1/2 war requirement." The full war envisioned today is a conflict in Europe between NATO and Warsaw Pact forces; the lesser war is any one of a number of contingencies that might materialize outside Europe, but most probably in the Persian Gulf region. In deliberations about the appropriate size of the U.S. defense budget, the Congress will have to consider questions concerning the adequacy of U.S. ground forces and the costs of various approaches to meet the 1 and 1/2 war requirement.

The Congressional Budget Office's analysis of these issues points to several major conclusions:

- o With respect to the one full-scale war, as NATO's forces are now configured, the alliance could successfully defend itself against an attack by 90 Warsaw Pact divisions. But there is little likelihood that the Pact would so confine its attack. Even taking into account the Soviet Union's need to defend itself against the People's Republic of China and other potential threats, the Soviets would likely mobilize at least 30 more divisions, raising the threat to NATO's Central Region to 120 divisions.

At present, however, NATO's forces have too few divisions to defend against the 120-division threat. Even resorting to theater nuclear weapons would give NATO only a temporary respite before it would begin to feel the debilitating effects of Pact nuclear counterstrikes. Current U.S. plans for hastening the movement of reinforcements to Europe would not materially correct this imbalance.

- o In lesser contingencies outside Europe and not involving the Soviet Union, current U.S. forces are adequate to contend with the most plausible demands of helping other nations help themselves--that is, to contribute to regional, or collective, security in the Middle East. If the forces of countries most threatened by the Soviet

Union were strong enough to resist Soviet action and thus give the United States time to act, then current capabilities, enhanced by deploying a Marine amphibious brigade in the Indian Ocean and establishing a base for it on the island of Diego Garcia, would suffice to show the U.S. commitment to collective security.

- o The current program of improvements for the 1/2 war (embodied in the Administration's proposed Rapid Deployment Force) would shorten the time needed to move a force to a conflict in the Persian Gulf region. This improvement would be most useful in a conflict involving a Soviet attack on a noncontiguous state such as Saudi Arabia. It would enhance capabilities in other scenarios as well, but the need for such enhancement is not apparent.

The current program of improvements for the 1/2 war does not include the additional support forces required by a scenario involving Soviet aggression. Therefore, the needed support could be provided only by drawing upon NATO defense forces.

GROUND FORCE REQUIREMENTS FOR THE NATO CONTINGENCY

The critical question in assessing the NATO/Pact military balance is how the Pact nations might deploy their ground combat elements against NATO's Central Region (the area defined by Czechoslovakia, East Germany, Poland, and West Germany). Battles there would determine the ultimate outcome of a war. But at the same time, the Warsaw Pact could not ignore other possible fronts. How much of its ground combat elements the Pact would allocate to the protection of its northern and southern flanks, and to the Sino/Soviet border, is the key question.

The Current Imbalance in Conventional Forces

At present, the Department of Defense evaluates the capabilities of U.S. conventional forces against a threat of 90 Warsaw Pact divisions. In constructing a hypothetical war scenario for this study, however, 120 of the Warsaw Pact's total of 231 fully mobilized divisions are envisioned to be deployed against the Central Region, in recognition of the importance of that region and the relative security of the Pact's northern and southern flanks. The Iranian and Turkish armies, it is assumed, could

become threatening enough to convince the Soviet Union that keeping at least 24 divisions along its southern border was prudent. On the northern flank, Norway is thought to pose no threat to the Soviet Union, but eight Pact divisions are allocated to that flank on the premise that the Soviets might deem it necessary to attack northern Norway to protect the movement of a Soviet fleet based at the port of Murmansk. Another six divisions are allocated to the Soviet Union's strategic reserve. It is also assumed that the Chinese threat would tie down 46 Soviet divisions.

A buildup of the 120 Warsaw Pact divisions against NATO's Central Region would require about 35 days to complete. All the United States' continental European allies' forces, as well as those of Britain and Canada, are presumed to act in concert in the Central Region. Within about 10 days, NATO could confront some 90 Pact divisions. The threat might stay at that level for another 30 days, at which time the Pact would have available the full complement of 120 divisions. U.S. Marine Corps divisions are considered unavailable for the NATO war in this analysis, since they would be reserved for use in a minor contingency.

Assuming that NATO would take four days to detect a Pact mobilization and to mobilize in response, then two peak periods of Pact superiority would ensue. The Pact would have an advantage immediately after mobilization, both because NATO's mobilization would lag behind the Pact's and because of the shortage of NATO units stationed in Europe. The initial Pact advantage would erode quickly, however, as U.S. divisions with equipment prepositioned arrived. The arrival of 30 Pact divisions within 35 days after mobilization would restore the Pact's advantage, and NATO could not encroach upon it significantly until about day 90, when U.S. National Guard divisions and brigades would begin to arrive.

With the advantage the Pact could achieve after about 35 days of mobilization, the Pact could concentrate its forces against a single NATO corps, thus achieving a local force ratio of 6:1 while maintaining a 1:1 ratio in other sectors. As a result, NATO would have to draw on forces assigned to defend other corps sectors to reinforce the corps receiving the main attack; enough forces would have to be assembled to lower the principal local force ratio to 3:1. To maintain the strength to resist secondary attacks against corps sectors lending forces, NATO would have to gather reinforcements from at least three different corps. Doing so would involve long-distance movements of troops and equipment, and such reinforcements might arrive in the critical

sector too late to prevent a Pact penetration. Moreover, whether NATO's air forces could offset the Pact's ground force superiority is unclear. Thus, NATO's current force appears too small to ensure success of the conventional defense, suggesting an early resort to nuclear weapons.

The NATO Nuclear Deterrent Against Pact Forces Exceeding 90 Divisions

To counter a Pact force encompassing more than 90 divisions, the Department of Defense seems to assume that NATO's nuclear arsenal would have to be used. Indeed, NATO's nuclear weapons could conceivably give some respite from conventional Pact attacks, but the duration and value of such a reprieve are open to question. Soviet nuclear counterstrikes directed against NATO's highly vulnerable sea and air base facilities might virtually sever its ground forces from resupply and reinforcement. Although NATO strikes against Pact supply lines would certainly interrupt resupply efforts, the ever-present opportunity for Pact forces to haul supplies overland ensures them against such risks. Thus, Pact forces could probably recover from nuclear attack faster than could NATO, and they could thus establish their conventional superiority with comparative ease.

Political, Economic, and Military Initiatives

NATO could conceivably try to diminish the effects of the current force imbalance by means of various political, economic, and military efforts. These could be designed to limit the threat to the Central Region or to enhance NATO's conventional ground force capabilities there. To limit the threat, countries on the Soviet Union's periphery could be strengthened to heighten Soviet concern for its defenses in those areas. Further, policies toward Eastern European countries could be tailored to discourage their participation in an attack. Two possibilities for enhancing conventional ground force capabilities exist: the least expensive would be to add enough force to conduct an "elastic defense" (described below); alternatively, still more force could be added to preserve NATO's political boundaries.

A NATO Threat on the Southern Flank

This analysis rests on an assumption that the Warsaw Pact would keep 111 divisions equipped with 25,000 tanks out of a

Central Region battle to protect the southern flank and the Sino/Soviet border. At present, however, the armies of Greece and Turkey have a very limited capability for offensive action. Tying down that many Pact divisions might require some political and economic reinforcement. NATO nations could help these countries achieve stability and economic development, and secondarily, the military stature to give the Soviet Union concern about its own defenses. Such initiatives ought, at a minimum, to discourage the Soviet Union from shifting divisions from the southern flank to the Central Region. If they were highly successful, such efforts might even prompt the Soviet Union to shift divisions to the southern flank, which would dilute the threat in the Central Region.

Lessening the Threat in Central Europe

Other steps might go even farther in diminishing the Pact threat to NATO. This analysis is predicated on the presumption that 31 of the 120 Pact divisions that threaten the Central Region are contributed by non-Soviet nations. Were NATO able to encourage Czechoslovakia, East Germany, and Poland to pursue policies that preclude first strikes against NATO, then not only would the size of the threat be reduced, but the Pact's attack options also would be severely constrained.

Through its military deployments, NATO could also relax Eastern European anxieties about NATO's--particularly West Germany's--intentions. Putting a French corps into the NATO defenses in place of a West German corps could relieve Eastern European uneasiness stemming from the historic postwar fear of German militarism.

Nonmilitary Initiatives. Still other efforts could enhance NATO's security. Arms control in the form of limits on the size of conventional forces, or the rates of modernization of NATO's armies, could be useful in offsetting the current imbalance. (The Mutual and Balanced Force Reduction negotiations now ongoing involve discussion of such military limitations.) From NATO's standpoint, however, negotiators would have to exercise caution not to codify the current Pact advantage. Arms control that geographically separated forces positioned in Europe would also be useful in giving both sides assurance of longer warning time.

Increasing NATO's Central Region Capabilities. NATO strategists and the designers of U.S. ground forces can choose between

at least two possible objectives for conventional forces in Europe:

- o The force could be large enough to conduct an "elastic defense," which maintains its cohesion by trading ground for time; such a plan relies on NATO's mobilization potential to create and equip the divisions needed to restore lost territory. The equivalent of six fully supported armored divisions would have to be added to the armies of NATO's Central Region defenders. The U.S. share would be two fully supported divisions.
- o A second possibility would be to make the force large enough to conduct a "steadfast defense" that cedes no territory. To achieve this, NATO would have to add the equivalent of 11 1/2 fully supported armored divisions, of which the U.S. share would be five.

Building conventional forces for either objective would lessen NATO's vulnerability to short-warning conventional attacks. Assuming that all the allies would contribute their share of the buildup, NATO would have more divisions in Europe on the day of mobilization. This would reduce the need for the United States to have its reinforcements in Europe within 10 days of mobilization.

GROUND FORCE REQUIREMENTS FOR THE NON-NATO CONTINGENCY

In the Defense Department's view, the Middle East--particularly the Persian Gulf region--and Korea as well have the potential for involving the United States in a conflict outside Europe. South Korea's strong military posture, the very large advantages its defenders would realize from its rough terrain, and the strength it derives from an economy more than four times the size of North Korea's would seem to place a small demand for U.S. ground combat reinforcements. On the other hand, the petroleum reserves of the Persian Gulf region, as well as distance from the United States and proximity to the Soviet Union, make the Middle East a more pressing issue in the design of U.S. ground forces.

The analysis in this section tests the adequacy of the three U.S. Marine divisions set aside for the non-NATO contingency. CBO's analysis finds that the current U.S. force is large enough and can be delivered fast enough to handle Middle Eastern contingencies not involving the Soviet Union. To cope unilaterally with contingencies involving the Soviet Union--that is, without strong

cooperation from local armies--the U.S. force would have to be much larger unless the United States were purposefully to limit its aims. Such lesser objectives would involve either an area not contiguous to the Soviet Union (Saudi Arabia, for example), or a multilateral approach, or both. Other limited objectives could include the defense of Iranian oil fields and instances in which indigenous forces of a state bordering on the Soviet Union were capable of resisting Soviet aggression but still needed help. In the first two types of contingencies, effective U.S. action would probably depend on the ability to achieve a faster introduction of forces than would be possible with current strategic lift capabilities. In the latter type of contingency, the resistance of the indigenous forces would give the United States time to respond.

One major choice for the United States, therefore, is whether to acquire the capacity unilaterally to counter Soviet aggression against noncontiguous Gulf region states or to continue with the current and quite substantial capability. In either case, the needed quantity of ground combat forces in the U.S. Army and Marine Corps would be the same. The differences between the two objectives are that the force to counter Soviet aggression could get to the Gulf region faster, and it would have its own support. Choosing between these two objectives is a matter of deciding how much risk to accept in the Gulf region. Neither objective would be risk free.

The Capability for Collective Security in the Gulf Region

Assuming that the three U.S. Marine Corps divisions are allocated to the 1/2 war contingency, the United States now has ample capability to contribute to the collective security of the Middle East, and its forces could move fast enough to demonstrate support for a country under threat. The current ability to deliver 24,000 combat troops within two weeks' time ought to be adequate to show commitment.

Although with its current capabilities the United States could deliver enough troops, some improvement in the rate of delivery seems needed. After an initial surge of 3,000 troops in two days, the preponderance of reinforcements (20,000 troops) currently deliverable would require two weeks to arrive. Deploying a Marine amphibious brigade in the Indian Ocean and establishing a base for it on Diego Garcia would allow more than half of those reinforcements to arrive within seven days.

If the Soviet Union must rely on air and sea routes to project and sustain an attack, U.S. air and naval forces could both limit the size of the Soviet force and interrupt supplies to it. These constraints together could enable U.S. ground forces as they are now sized to counter a Soviet attack on a noncontiguous state. To stem such an attack, however, the United States would have to be able to deploy a substantial force with appropriate support elements. The proposed Rapid Deployment Force would acquire the ships and planes to allow delivery of a large, fully supported force. However, the Rapid Deployment Force would contain the needed armored and mechanized forces and support elements only if forces needed to defend NATO were drawn upon.

To have a complete capability to counter Soviet aggression unilaterally without drawing on NATO forces would require some expansion of support forces and conversion of Marine units to armored or mechanized configuration. In the case of support forces, 60,000 to 70,000 support personnel would have to be added to the active-duty force. Conversion of the equivalent of a Marine division to armored or mechanized configurations would provide the same capability as is planned for the RDF without using a U.S. Army division.

ALTERNATIVE FORCES FOR THE 1 AND 1/2 WAR OBJECTIVE

Within the context of the political and economic aspects of a national security program, the military capabilities of the United States have to satisfy the Defense Department's 1 and 1/2 war criterion. Numerous alternatives are available; CBO has examined six, the total costs of which over the next eight years range from \$5.9 billion to \$80.3 billion above those of continuing the operation of current forces under today's policies. (In fiscal year 1981, the Defense Department has allocated approximately \$50 billion for U.S. ground forces and the ships and planes to move them.) Some alternatives show the possibilities of trading higher risk in one contingency for lower risk in another. The table at the close of this summary presents the costs of the alternatives over the eight-year period fiscal years 1982-1989.

Option I: Continue the Current Program of Shortening Reinforcement Time for NATO and Improve Capabilities in the Gulf Region by Basing a Marine Amphibious Brigade on Diego Garcia

This lowest-cost, highest-risk option would improve current U.S. capabilities by shortening the time needed to move U.S.

forces to both contingencies. For the NATO contingency, equipment would be prepositioned in Europe for five more divisions, bringing the total to nine. For the non-NATO contingency, a Marine amphibious brigade would be based on Diego Garcia. The eight-year (fiscal years 1982-1989) cost would be \$5.9 billion. This option would involve high risks in Europe but would fully fund and somewhat enhance the current mobility improvements program.

Because this option would make no change to the size of the U.S. Army or Marine Corps, it would not affect the overall conventional force balance in either contingency. Increased prepositioning of equipment for Europe would safeguard against a rupture in NATO's defenses against a 90-division Warsaw Pact force. Deploying a Marine amphibious brigade in the Indian Ocean would enhance U.S. efforts to contribute to collective security in the Persian Gulf region. If, however, the minor contingency involved the Soviet Union, indigenous forces would have to bear the larger share of the defense. Moreover, the support needed for the U.S. forces could only be provided at some expense to NATO's defense.

Options II-IV: Enhancing Capabilities for Either a NATO or Non-NATO Contingency, But Not Both

Option II (\$18.6 billion over eight years) would emphasize improvements to NATO capabilities. The U.S. Army would be increased by the equivalent of two fully supported armored divisions. Assuming that the NATO allies made comparable force increases, an elastic defense of Europe against 120 Warsaw Pact divisions would be possible, and there would be no need to go beyond prepositioning equipment in Europe for four divisions (which is the current prepositioning level). In the non-NATO contingency, deploying a Marine amphibious brigade in the Indian Ocean and establishing a base for it on Diego Garcia would enhance the U.S. capability to respond to collective security demands.

Option III (\$37 billion over eight years) would put greater emphasis on improving non-NATO capabilities. This option would fully fund programs proposed by the current Administration and would include all elements needed to make those programs satisfy the stated objectives. By acquiring ships and planes to speed the movement of U.S. forces, buying tanks and infantry fighting vehicles to give the Marines a better capability to fight armored formations, and adding the support forces needed in an encounter with Soviet forces, the United States could unilaterally counter Soviet aggression against a noncontiguous state.

NATO capabilities would be improved by fully funding and expanding the current program of prepositioning equipment in Europe for U.S. Army divisions. The risk would be high that the conventional defense in Europe would fail, leading to early resort to nuclear weapons because Pact conventional forces could achieve superiority within about 35 days of their mobilization.

Option IV (\$49.3 billion over eight years) would sacrifice the unilateral U.S. capability to counter Soviet aggression in the non-NATO contingency but would acquire the U.S. share of the additional forces needed to conduct a steadfast NATO defense against 120 Pact divisions. The U.S. Army would be increased by five fully supported armored divisions. Assuming that the NATO allies made comparable force increases, NATO could defend Europe without giving up territory. To assure speedy movement of U.S.-based divisions, equipment would be prepositioned in Europe for a total of six divisions, and eight additional fast roll-on/roll-off ships would be acquired. For the non-NATO contingency, deploying a U.S. Marine amphibious brigade in the Indian Ocean and establishing a base for it on Diego Garcia would improve capabilities in that region.

Options V and VI: Significantly Improving Capabilities for Both the NATO and Non-NATO Contingencies Simultaneously

As in Option III, both these options would acquire the capacity unilaterally to counter Soviet aggression in a state not contiguous with the Soviet Union, but they would also make substantial improvements in NATO capabilities, as in Options II and IV.

Option V is the lower-cost of these two options (\$47.9 billion over eight years). It would add the equivalent of two fully supported armored divisions to U.S. forces. This would account for the U.S. share of the additional conventional forces that NATO would need to conduct an elastic defense against 120 Pact divisions. Assuming that the allies would add their share of the forces needed, this option would not require prepositioning more than four divisions' equipment.

Option VI is the highest-cost, lowest-risk option (\$80.3 billion over eight years). For the NATO contingency, it would add the equivalent of five fully supported armored divisions, which is the U.S. share of the additional forces needed to conduct a steadfast defense of Europe against 120 Warsaw Pact divisions.

Assuming that the other NATO allies who defend the Central Region would add their share of the forces needed for a conventional balance, NATO would gain the capability to defend itself without resorting to nuclear weapons and without surrendering any appreciable amount of territory. Equipment for six divisions would have to be prepositioned in Europe and 16 additional fast roll-on/roll-off ships acquired.

SUMMARY TABLE. PROJECTED COSTS OF SIX U.S. GROUND FORCE ALTERNATIVES ABOVE CURRENT DEFENSE SPENDING LEVEL: 1982-1989 (In billions of constant fiscal year 1982 budget dollars)

Cost	Options					
	I	II	III	IV	V	VI
Initial Investment	3.1	10.5	21.4	28.8	28.8	49.2
Total Annual Operating Costs, 1982-1986	1.6	3.9	6.0	9.7	7.4	11.0
Total Recurring Annual Operating Costs, 1987-1989	<u>1.2</u>	<u>4.2</u>	<u>9.6</u>	<u>10.8</u>	<u>11.7</u>	<u>20.1</u>
Total Costs by End of 1989	5.9	18.6	37.0	49.3	47.9	80.3

SOURCE: Congressional Budget Office.



Any debate over the adequacy of the budget for the Department of Defense needs as a backdrop an assessment of the capabilities of the combat forces currently available and an understanding of how these capabilities compare with what the United States and its allies might seek to accomplish. This study analyzes the current ability of U.S. ground combat forces to execute the Department of Defense's scenarios of hypothetical wars and/or threats. The analysis leads to four conclusions:

- o At present, the North Atlantic Treaty Organization (NATO) has too few conventional forces to warrant great confidence in its ability to defend Europe;
- o To make up the U.S. share of the current shortfall in the NATO/Warsaw Pact military balance, two to five additional fully supported armored divisions would be needed;
- o The United States already has an impressive capability to help friends and allies in the Middle East; and
- o The newly organized military force to protect U.S. interests outside the NATO region, the Rapid Deployment Force (RDF), is planned to have capabilities that would make an important difference only in a scenario involving Soviet aggression against a nation not contiguous to the Soviet Union. (The RDF is discussed in greater detail in Chapter IV.)

BACKGROUND

The United States maintains both Army and Marine Corps ground combat elements. The Army has 16 divisions in the active-duty force and eight more in the National Guard. As shown on the following page, the active force is 58 percent armored or mechanized, whereas most divisions in the National Guard and Reserve are configured as light infantry.

Active Duty Forces

National Guard and Reserve Forces

Army

Four armored divisions
Six mechanized divisions
Four infantry divisions
One airborne division
One air assault division

Army

Two armored divisions
One mechanized division
Five infantry divisions

Marine Corps

Three infantry divisions

Marine Corps

One infantry division

The Administration's objective for the size of ground combat forces is to be able simultaneously to fight one major war and one minor contingency. ^{1/} Such a so-called "1 and 1/2 war capability" would give the United States the flexibility to protect its interests in places such as Korea, the Persian Gulf region, or the Mediterranean side of the Middle East without diminishing its capacity to contribute to the defense of NATO. Such a capability takes into account the risk that two simultaneous minor contingencies could require the United States to use forces needed for the defense of Europe.

In Europe, the United States must be prepared to participate with its NATO partners in the defense of the territory of any member nation. All 15 NATO members (see Chapter II) are pledged to regard an attack on one as an attack on all. To meet its responsibilities, the United States stations in West Germany the equivalent of five divisions with appropriate support forces. Moreover, it plans to use the forces based in the continental United States to reinforce NATO, should war occur.

The seven Warsaw Pact countries (see Chapter II) pose the only potential threat to the NATO alliance. Although it is unclear what factors could combine to make the potential threat a reality, the high cost to NATO of unpreparedness demands that NATO measure the adequacy of its forces against the assumption of an unprovoked attack by the Warsaw Pact. Furthermore, the possibility that the Soviet Union could use the Pact alliance's military superiority to extract political advantage in Europe or elsewhere gives added motivation for NATO to be concerned about the current military imbalance.

^{1/} Department of Defense, Annual Report, Fiscal Year 1980, p. 13.

NATO's strategic defensive posture has military advantages and disadvantages. Because defenders' forces can choose the tactically advantageous terrain where they would fight, they can pick the spots that offer them the most protection. Moreover, they can organize and coordinate their firepower to a degree unachievable by an attacker. These advantages make it unnecessary for NATO to match the Warsaw Pact man for man or tank for tank.

The disadvantage of the NATO forces' strategic defensive posture is that a Pact aggressor would be able to select the time and location of its attack. Unless NATO had strong enough forces everywhere to stem an attack, it would have the difficult problems of recognizing where the main effort was occurring and of shifting forces from less threatened areas to meet the main attack. If NATO mistakenly identified the location of the main attack, the likelihood that the defense would fail would be great.

For the minor contingency, friends and enemies are much more difficult to determine, because both the contingencies and the U.S. responses are uncertain. Between 1945 and 1975, the United States reacted with military forces in more than 200 contingencies in virtually every area of the world--in Central America, Europe, the Middle East, and Southeast Asia. ^{2/} These actions ranged from mere posturing by warships to extensive use of ground, air, and naval forces in efforts to stabilize local political conditions.

To simplify the analysis of requirements for minor contingencies, this study considers two types--those that might be caused by the Soviet Union, and those that might be caused by local conditions in Korea, the Gulf region, or the Mediterranean side of the Middle East. To determine the implications for U.S. ground force requirements for conflicts initiated by the Soviet Union, the analysis considers Soviet capabilities and the feasibility of U.S. countermoves. For the contingencies that could be caused by local conditions not directly related to Soviet interests, the study identifies potential sources of instability, the implications of local military balances, and plausible scenarios for the use of U.S. ground forces.

^{2/} For detailed treatment of the history of U.S. use of force for political purposes, see Barry Blechman and Stephen Kaplan, Force Without War (Brookings Institution, 1978).

PLAN OF THE PAPER

The likelihood that the United States could adequately help NATO accomplish its objectives in the event of a war in Europe, by what means and at what possible military costs, is assessed in Chapter II. Chapter III contains an analysis of the homogeneity--that is, the likelihood of a truly concerted effort--of the Warsaw Pact. Chapter IV assesses probable requirements for U.S. ground forces to protect U.S. interests outside Europe. An analysis of U.S. options for the development of future ground forces is presented in Chapter V.

Figure 1.
 NATO's Area of Concern in Europe and Western Asia



CHAPTER II. FORCES REQUIRED TO DEFEND NATO EUROPE

NATO's present military posture in Western Europe is a defensive one, predicated on the premise that any war would be initiated by a member nation of the Warsaw Pact alliance. NATO therefore maintains immediately available armies that are large enough to make an attack an expensive and risky--hence unattractive--undertaking for the Warsaw Pact. Thus, although NATO's primary objective is to deter war, its forces must be adequate in terms of numbers, equipment, training, and strategy to warrant a reasonable hope of a successful defense if deterrence were to fail. Secondly, NATO's military forces must be adequate to maintain the political positions of member nations in the international arena.

Because an attack could take any of a number of forms and could occur at any point along the border that separates the NATO and Pact nations (see Figure 1) or elsewhere, NATO has adopted what is called a "flexible response" strategy for its defense. This strategy is designed to enable NATO to meet an attack with a qualitatively equivalent response, and it relies on a combination of nuclear and conventional forces.

In accordance with the flexible response strategy, each NATO country contributes to the defense of Europe by assigning to the NATO military command some portion of its national defense forces. Belgium, the Federal Republic of Germany (West Germany), Great Britain, the Netherlands, and the United States have assumed the primary responsibility in that they have committed themselves to defend specific parts of West Germany. Other allies are prepared to provide forces to reinforce these front-line defenders

◄ Over the vast Eurasian land mass, NATO's defenses are divided among the Central Front (at the boundary that divides Germany), the northern flank (centered around Norway's North Cape), and the southern flank (including Greece and Turkey). Politically, as well as geographically, the latter is on the doorstep of the volatile Middle East. NATO nations not shown are Canada, Iceland, Portugal, and the United States.

or to contribute in some other way that is appropriate to their own geographic locations. 1/

The United States uses conventional forces both to defend the parts of Germany to which it is assigned and to reinforce other, less well defended sectors. The initial defense of the U.S. sectors is the responsibility of the Fifth and Seventh U.S. Corps stationed in the Federal Republic of Germany (West Germany) along the East German and Czechoslovakian borders. Each corps is assigned two divisions, an armored cavalry regiment, and supporting elements consisting of artillery, engineer, and logistics units. Eleven remaining active-duty Army divisions stationed in the United States could serve to reinforce the two Germany-based corps; they could also reinforce the corps of other nations or establish an operational reserve that the NATO commander could use as needed. In addition, eight U.S. National Guard divisions and approximately 20 brigades could probably be used as general NATO reinforcements after completing training.

TWO APPROACHES TO DEFENSIVE STRATEGY

A successful defense could be accomplished in one of two ways at significantly different costs. The first, a "steadfast defense," would involve NATO's deploying armies large enough to stop an attack at NATO's border while maintaining a mobilization capability to augment its forces. NATO's mobilization capability would have to equal the Warsaw Pact's; otherwise, Pact forces could eventually overcome the defenders. The other approach, an "elastic defense," would place relatively less emphasis on NATO's immediately available armies but more reliance on mobilization capability. A somewhat smaller army could maintain the homogeneity of NATO's defenses, while giving up some territory (presumably temporarily) to buy time. With that time, NATO would mobilize and create larger armies capable of launching an offensive to restore the original political boundaries. To make an elastic defense successful, NATO's mobilization capability would have to be superior to that of the Warsaw Pact.

1/ The 15 member nations of NATO are: Belgium, Canada, Denmark, Federal Republic of Germany, France, Great Britain, Greece, Iceland, Italy, Luxembourg, Norway, Portugal, the Netherlands, Turkey, and the United States. The seven signatories to the Warsaw Pact are Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, and the Soviet Union.

As they are now configured, NATO's armies are too small to maintain a defense of either sort, should the Pact nations launch a unified assault. (Chapter III considers the military ramifications of possible political disunity among the Pact nations.) The Pact armies' numerical superiority and the quality of their equipment probably would force NATO to resort to nuclear weapons early in a conflict. Escalation to theater nuclear warfare would almost certainly slow the Pact advance, but NATO's own vulnerability to nuclear strikes could erode the initial advantage gained by escalating to the nuclear level.

Although intangible factors such as quality of leadership, tactics, morale, and weather have often affected the outcome of battles and wars, NATO cannot rely on them. Even when such intangibles have favored one side over the other, they have not always allowed the weaker side to prevail. The numerically stronger of the opponents may be better able to take advantage of such unpredictable factors. NATO's problem, then, has to be how to manage the numerical relationship between itself and the Warsaw Pact.

THE OPPOSING FORCES

To bring the numerical relationship within what can be regarded as acceptable limits, NATO must lessen its own vulnerabilities and exploit those of the Warsaw Pact. Enlarging the armies of NATO's front-line defenders would directly reduce the numerical disparity while also improving the density of NATO's positioned defenses. Accelerating the modernization of NATO's armies could give the alliance a qualitative edge. From a strategic standpoint, modernizing Turkish forces, for example, would create a "credible threat" to the Soviet Union and could prompt the Soviets to deploy divisions against the southern flank rather than against the Central Region.

To show the magnitude of NATO's deficiencies and suggest alternatives to improve its posture, this chapter reviews the development of both NATO and Warsaw Pact conventional forces and compares the current balance of forces in Central Europe with the level needed to give NATO confidence in its conventional defenses.

NATO and the Warsaw Pact confront each other from the northern tip of Norway, throughout Central Europe, and into the Middle East (see Figure 1). The geography over which the two alliances confront one another encompasses three regions: a central portion

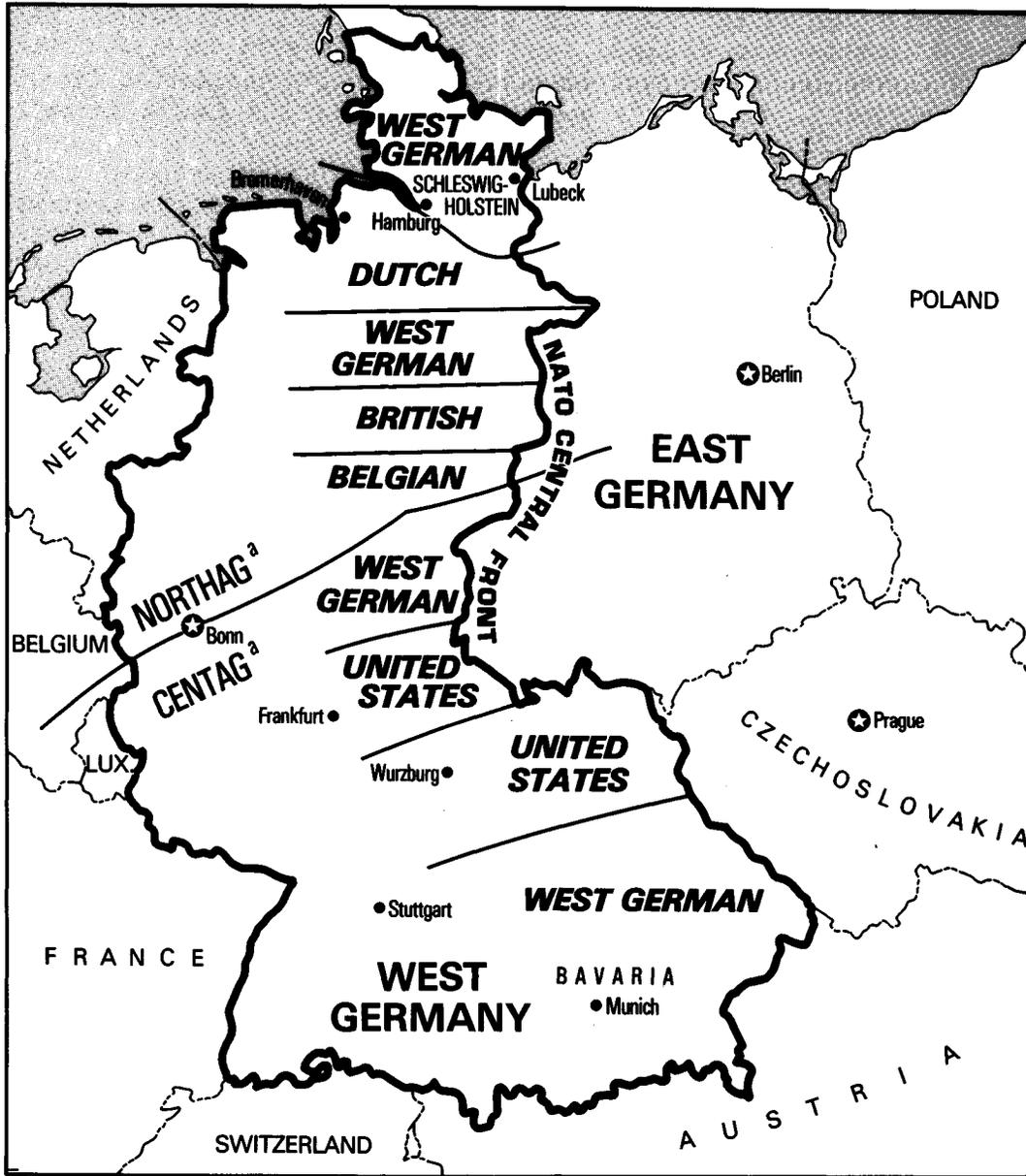
and two flanks. The northern flank includes the land mass of Finland, Norway, Sweden, and the Kola Peninsula of the Soviet Union. The southern flank is less well defined but can be considered to include Bulgaria, Greece, Italy, Hungary, Romania, Turkey, and Yugoslavia. The Central Region includes Austria, Belgium, Czechoslovakia, East Germany (the German Democratic Republic), France, the Netherlands, Poland, and West Germany.

In a war, both alliances would focus their efforts in the Central Region. Most of the political and economic power of Europe is located there, and it controls all overland access into and out of the Soviet Union. Therefore, major portions of the armies of the two alliances are positioned there. Military success in the Central Region would defeat the loser's best armies, ensure control of the economic and political power of Western Europe, and allow the winner to control access to the Soviet Union.

Although NATO is an alliance of 15 countries, only nine could effectively participate in defending the critical Central Region. The other six (Greece, Iceland, Italy, Norway, Portugal, and Turkey) could send forces, but most would have to depend on the strategic mobility forces, whose first priority would be to move U.S. reinforcements to Europe. In addition, Norway might have to protect itself against Soviet attacks from the Kola Peninsula. Of the defending nine, only Belgium, Great Britain, the Netherlands, the United States, and West Germany have assumed responsibility for defending specific sectors (see Figure 2). France remains formally uncommitted to any specific task but maintains three armored divisions in West Germany. Danish forces defend Denmark. Forces from Luxembourg and Canada are too small to assume defensive sectors, but they are available in reserve for NATO.

To organize its defense, NATO has divided its part of the Central Region into two army group zones and each of those zones into four sectors. The Northern Army Group (NORTHAG) zone is defended by four army corps. Each corps consists of at least two divisions. The corps occupy component sectors of the zone. Belgium, Great Britain, the Netherlands, and West Germany each provide a corps-sized force to defend the NORTHAG zone. The second zone is defended by the Central Army Group (CENTAG), which also has four army corps occupying sectors. The United States and West Germany each provide two corps-sized forces for CENTAG.

Figure 2.
Corps Sectors of Military Responsibility in NATO's Central Region



SOURCE: Adapted from Richard Lawrence and Jeffrey Record, *U.S. Force Structure in NATO* (Washington, D.C.: The Brookings Institution, 1974), p. 31 and also from U.S. Army materials.

^a NORTHAG (Northern Army Group) and CENTAG (Central Army Group) are the two subdivisions of NATO forces in West Germany. The line dividing the two runs from Belgium through West Germany, just south of Bonn, and into East Germany.

If the Warsaw Pact countries were to launch a strike against NATO, then their divisions would have to be allocated between the competing demands of the attack in Central Europe, the defense of their flanks, and the desire to maintain a few divisions as a strategic reserve. In a hypothetical example, a portion of the Soviet forces and all of the Czechoslovakian, East German, and Polish forces are engaged in attacking Central Europe. The remainder of the Bulgarian, Hungarian, Romanian, and Soviet forces are assigned to the Pact's southern flank and the Soviet Union's border with China.

A comparison of the forces that could meet in the Central Region shows the Warsaw Pact to be more uniform than NATO (see Table 1). Three Pact countries have conscript armies with two-year terms of service; the exception is East Germany, which has an 18-month term of mandatory service. In contrast, only four of NATO's armies are conscript; the rest are volunteer. Terms of service in the conscript forces vary from eight months for Belgian divisions stationed in West Germany to 15 months for West German soldiers.

Perhaps more important is the difference in the level of mechanization. The Pact forces are fully mechanized except for the airborne units of the Czechoslovakian and Polish armies, whereas NATO's armies still have large formations of regular infantry.

Improvements in Warsaw Pact Forces

A source of considerable concern to the Defense Department, the expansion and improvement of the Warsaw Pact nations' conventional forces achieved over the last 10 to 15 years is amply documented. ^{2/} Of even greater concern is the rate of improvement over the last three to four years. In 1978, the International Defense Review quoted published estimates that 2,000 of the newest Soviet tanks (the T-64 and T-72, which could be superior to NATO's main tanks) were in Soviet units stationed in East Germany. ^{3/}

^{2/} For the most recent description of Soviet force improvements, see Department of Defense, Annual Report, Fiscal Year 1981, pp. 35-37.

^{3/} "Soviet Double T64s in GDR," International Defense Review, No. 5 (1978), p. 668.

TABLE 1. COMPARISONS OF NATO AND WARSAW PACT ARMIES COMMITTED TO THE CENTRAL REGION:
1979-1980

Alliance and Country	Numbers of Army Personnel	Army Manpower as Percent of Population	Type of Military Service	Percent of Force Mechanized	Percent of Gross National Product Dedicated to Defense
NATO					
Belgium	62,300	0.6	Conscript (8-10 months)	70	2.7
Canada	29,300	0.1	Volunteer	100	1.8
Denmark	21,400	0.4	Conscript (9 months)	100	2.6
France	326,800	0.6	Conscript (12 months)	53	4.6
Great Britain	163,681	0.3	Volunteer	28 to 54	5.8
Luxembourg	660	0.2	Volunteer	0	1.0
Netherlands	75,000	0.5	Conscript (14 months)	90	3.8
United States	704,875 <u>a/</u>	0.3	Volunteer	60	5.8
West Germany	335,200	0.5	Conscript (15 months)	84	3.1
Warsaw Pact <u>b/</u>					
Czechoslovakia	140,000	0.9	Conscript (2 years)	97	3.9
East Germany	107,000	0.6	Conscript (18 months)	100	6.5
Poland	210,000	0.6	Conscript (2 years)	87	3.1
Soviet Union	1,339,740	0.5	Conscript (2 years)	100	11 to 15

SOURCE: International Institute for Strategic Studies, The Military Balance, 1979-1980 (London, 1979).

a/ Does not include manpower committed to one division in South Korea.

b/ Includes only those forces assumed deployed against Central Europe.

The most recent estimates show that the number has doubled within one year and that the newer T-72 tank has been added. Another 6,000 of the T-64 and T-72 tanks have been deployed throughout the Pact armies. 4/ Even more noteworthy is the estimate that the Soviet Union will introduce a new tank that could rival the United States' new tank, the XM-1, toward the end of 1980. 5/ Czechoslovakian, East German, and Polish tanks will reportedly be replaced in the near future as production in Czechoslovakia and Poland accelerates. 6/

The United States, on the other hand, will receive 86 XM-1 tanks in 1980 and will build about 720 a year beginning in 1983. 7/ If all the XM-1 tanks produced were immediately used to replace the roughly 3,000 U.S. tanks now in Europe, it would be 1985 before the U.S. NATO forces were completely modernized.

NATO similarly lags behind the Warsaw Pact in infantry fighting vehicles and multiple rocket launchers. The Pact reportedly has 15,000 infantry fighting vehicles already in the Czechoslovakian, East German, Polish, and Soviet armies. In NATO, only West Germany (with 2,100) and the Netherlands (with about 1,000) have been able to introduce an infantry fighting vehicle. The Warsaw Pact has 3,300 multiple rocket launchers, while NATO has only 200, all of which are manned by West German forces.

Until now, the field of antitank guided missiles was the one area in which the quality of NATO's weapons was undeniably superior. The International Defense Review recently reported, however, that the Soviet Union has equipped its attack helicopters with an antitank missile with a range of roughly five miles and a laser-guided capability to "home" on a target. 8/ If this report

4/ "Warsaw Pact T-64 and T-72 Tank Deployments," International Defense Review, No. 1 (1980), p. 20.

5/ "Soviet T-80 to be Deployed in 1980?" International Defense Review, No. 8 (1979), p. 1279.

6/ "Warsaw Pact T-64 and T-72 Tank Deployments," p. 20.

7/ "Army Traces Plan for Phasing of XM-1, M60 Tank Production," Aerospace Daily (November 6, 1980), pp. 31-32.

8/ "Soviet Tanks Equipped with Laser Designators for AGMs?" International Defense Review, No. 9 (1978), p. 1373.

is accurate, the Soviet Union has achieved a capability that the United States is still working to develop.

NATO's Response to Warsaw Pact Improvements

In response to Pact forces' modernization efforts, the NATO allies agreed in May 1977 to a 3 percent real annual increase in defense spending. That agreement included a long-term plan of improvements focused on NATO's most serious deficiencies, with the most notable improvement being the repositioning in Europe of equipment for three more U.S. divisions. This increase would bring to six the number of U.S. divisions with equipment prepositioned in Europe.

The repositioning program would not alter the overall comparative military strengths of NATO and the Warsaw Pact, however. With equipment prepositioned for some U.S.-based divisions and the capability to fly the personnel to Europe to join the equipment, the United States could deliver its reinforcing divisions faster than before. Thus, although this would improve conditions for NATO in the early period after mobilization, there still would be no increase in the size of the force and, therefore, no change to the overall military balance.

Simultaneous with these force-building moves and responses, the United States and the Soviet Union have tried to reach agreement on a reduction of forces in Europe. To date, the Mutual and Balanced Force Reduction negotiations have narrowed disputes in many areas, but an initial accord remains blocked by a few contentious issues.

FORCE RATIOS AND DEFENSE STRATEGIES FOR THE CENTRAL REGION

As suggested above, NATO's current forces do not warrant confidence in the alliance's ability to stave off an attack. NATO is numerically inferior, and other factors may do little to offset that inferiority. The terrain NATO defends does not offer mitigating topographical advantages, and NATO forces may not have a significant edge in terms of military intangibles such as leadership, training, morale, or tactics.

To alter this situation (assuming no change in the global strategic setting), NATO would have to add six divisions to its forces to be confident of maintaining an elastic defense and 11 1/2 divisions to conduct a steadfast defense.

The analysis supporting these conclusions is presented in two parts. The first part establishes the criteria for determining the adequacy of the force; the second assesses the current military balance.

Criteria for Assessing the Adequacy of NATO's Conventional Defense

An adequate conventional ground force is one that can maintain the continuity of its defensive line and provide the desired degree of resistance. A continuous defensive line denies the attacker the opportunity to reach behind-the-line areas with large forces, and thus it preserves the integrity of the defense and prevents catastrophic failure. Achieving the desired degree of resistance protects the mobilization and reinforcement processes necessary to implement the defender's longer-term objectives.

Maintaining a continuous, or "gapless," defensive line requires a force that has enough divisions to cover the front and at the same time maintain a 3:1 attacker-to-defender force ratio. A gapless line assures the defender that every attack will meet at least some resistance. A force ratio no worse than 3:1 is the U.S. Army's criterion for the successful defense of a particular position. 9/

Because the attacker has the option of concentrating on a single sector while the defender must defend all sectors, the overall, or theater-wide, relationship between attacker and defender cannot be as high as the 3:1 ratio deemed acceptable for the defense of a sector. With an overall 3:1 ratio, the attacker could achieve a 17:1 advantage in the sector chosen for the main attack while maintaining a 1:1 ratio for secondary attacks in other sectors. Such strength would almost certainly overwhelm the sector's defenses, and that could readily lead to the defeat of the entire theater's defenses. A choice between the two types of defense defined above--steadfast and elastic--must therefore be considered. A very strong force could steadfastly defend its initial positions. A weaker force must conduct an elastic defense.

To succeed, an elastic defense depends on the defender's ability to identify correctly where the main attack is being

9/ Department of the Army, Army Field Manual 100-5 (July 1976), p. 5-3.

made and to reduce the force ratio to 3:1 in that sector before a penetration occurs. If reinforcements had to travel far to get to the main attack sector, then the likelihood of enemy penetration would be high even though ground had been traded for time.

The theater-wide relationship between attacker and defender establishes the distance that reinforcements have to travel. An overall force ratio between 1.2:1 and 1.4:1 would allow the defender to muster enough reinforcements from the sector adjacent to the one bearing the brunt of the main attack, and would thus minimize the time for reinforcement. A theater-wide force ratio between 1.4:1 and 1.6:1 would require reinforcements to be drawn from two corps. For an attack directed against a sector in the middle of the defensive line, reinforcements would arrive as quickly as in the previous case. If, however, the main attack developed against a sector at one end of the defenses, then only half of the needed reinforcements could come from the adjacent sector. The other half would have to be drawn from a more distant sector, raising the possibility that the reinforcement of the critical sector could not be accomplished in time to prevent a penetration. Force ratios greater than 1.6:1 would require reinforcements to be drawn from three or more sectors, lengthening the reinforcement time and increasing the likelihood of a front-line penetration. 10/

The northern extremity of the European Central Region defenses seems vulnerable. As the analysis in later sections will note, the terrain in the north favors the attacker, and the density of NATO's defenders there is quite low.

The prudent course in preparing for an elastic defense, then, might be to assume that a Pact strike would most likely occur at the northern extreme of NATO's defensive line. Accordingly, the overall force ratio would have to be less than 1.4:1 to minimize reinforcement time and keep low the risk of a penetration.

In contrast to an elastic defense strategy, a steadfast defense holds its position and cannot trade space for time, nor can it rely on shifting forces. To conduct such a defense, a force must be strong enough in all sectors to meet the main attack with at least a 3:1 force ratio.

10/ For details of analysis, see Congressional Budget Office, Strengthening NATO: POMCUS and Other Approaches (February 1979), pp. 11-13 and Appendix C.

The theater-wide force ratio that would permit a steadfast defense is 1.2:1. Assuming that Pact forces would equally match NATO's in all but the main attack sector, the Pact would have insufficient forces remaining to concentrate against the sector it chose for the main attack. Thus, with a 3:1 local ratio, wherever the main strike occurred, NATO could repel its attackers.

NATO'S OBJECTIVE AND CAPACITY FOR SELF-DEFENSE

Since NATO's avowed objective is to deter war, it maintains both conventional and nuclear forces. The deterrence objective, however, has little value as a measure of the adequacy of NATO's force.

For purposes of assessment, the most useful objectives, therefore, are those NATO might adopt if deterrence failed, and the alliance actually had to defend Western Europe. These objectives can be expressed in operational terms. For instance, the principle of "forward defense" embodied in NATO's strategy specifies that the defense be conducted close to the border dividing Germany, lose as little ground as possible, and eventually recapture any lost territory. ^{11/} Either the elastic or the steadfast defense could be conducted close to that border, but the former probably would not minimize loss of territory and could not recapture the losses. Of the two scenarios examined here, the first is the one that the Administration now uses to test the capabilities of conventional forces. The other, a modification of the Administration's basic scenario, reflects different assumptions about the Soviet Union's strategy.

Certain elements are common to any scenario of a NATO/Warsaw Pact war. Principally, NATO's mobilization would follow the Pact's, because NATO's posture is defensive. Therefore, there must be an assumption about the time required for NATO to detect a Pact mobilization and to make its own decision to mobilize. Both scenarios examined here assume a four-day lag. Both scenarios also use the same assumptions concerning the arrival rate for divisions entering the theater of action in the course of the first 30 days. Beyond 30 days, however, the scenarios diverge.

^{11/} Federal Republic of Germany, Ministry of Defence, White Paper 1979: The Security of the Federal Republic of Germany and the Development of the Federal Armed Forces (Bonn, September 1979), p. 126.

The scenario used by the Defense Department envisions about 39 percent of the Warsaw Pact's total of 231 divisions and about 58 percent of NATO's divisions allocated to the Central Region. NATO's allocation is consistent with the physical limitations on the movement of NATO divisions (for example, NATO could not easily move Turkish divisions to Europe).

In the scenario, the rationale for the allocation of Warsaw Pact divisions is not clear. As stated above, the Pact must allocate its divisions among the competing demands of the Central Region, its northern and southern flanks, and the Sino/Soviet border; further, it may choose to hold some force in reserve. Presumably, the Pact's allocation decision would be affected by several factors, such as the potential of attacks on the periphery of Pact-dominated terrain, the need to allocate sufficient resources to the Central Region, and the general cohesion of the Warsaw Pact as a military alliance.

How these factors would be assessed and combined into a single battle plan is a matter of strategy, and strategists may differ both in their assessment of the factors and in the formulation of an appropriate battle plan. However, a scheme that allocates 90 Warsaw Pact divisions to the Central Region and 141 divisions to other regions, as the Defense Department's scenario does, would be plausible if Turkish or Chinese forces could threaten the survival of the Soviet Union, or if the Soviet Union could hasten the fall of NATO by launching large-scale offensives in either the northern or southern flank. As later sections will explain, none of these essential conditions exist at the moment, and there seems to be little chance of a significant change occurring soon.

The force allocation used in this analysis is founded on the presumption that the Central Region would be critical to either side. Success or failure there would determine the ultimate outcome of a war. Thus, both alliances would make their main effort there while conducting delaying actions elsewhere. (The one possible exception is that the Soviet Union might conduct very limited attacks against northern Norway to protect its naval forces as they move into and out of the port of Murmansk.)

This analysis therefore envisions 120 Warsaw Pact divisions (52 percent of the force) allocated to a Central Region campaign and the remaining divisions allocated among the demands for a strategic reserve, a force to protect the Sino/Soviet border, and protection for the northern and southern flanks (see Table 2).

TABLE 2. COMPARISON OF WARSAW PACT AND NATO FORCES AS ALLOCATED IN CBO'S ANALYSIS: END OF 1979 a/

Alliance and Country	Available in Central Region			
	Immediately After Mobilization		Two Weeks After Mobilization	
	Division Equivalents <u>b/</u>	Tanks <u>c/</u>	Division Equivalents <u>b/</u>	Tanks <u>c/</u>
Warsaw Pact				
Bulgaria	None	None	None	None
Czechoslovakia	10	3,400	10	3,400
East Germany	6	2,500	6	2,500
Hungary	None	None	None	None
Poland	15	3,400	15	3,400
Romania	None	None	None	None
Soviet Union	<u>31</u>	<u>10,500</u>	<u>59</u>	<u>18,800</u>
Total	(62)	(19,800)	(90)	(28,100)
NATO				
Belgium	2	334	2	334
Canada	1/3	57	1/3	57
Denmark	1 2/3	320	1 2/3	320
France	3	444	5	444
Great Britain	4 1/3	600 <u>d/</u>	5 1/3	600
Greece	None	None	None	None
Iceland	None	None	None	None
Italy	None	None	None	None
Luxembourg	One infantry battalion	None	One infantry battalion	None
The Netherlands	3	800	3	800
Norway	None	None	None	None
Portugal	None	None	None	None
Turkey	None	None	None	None
United States	5 2/3	3,000	9	3,000
West Germany	<u>14</u>	<u>3,779</u>	<u>14</u>	<u>3,779</u>
Total	(34)	(9,334)	(40 1/3)	(9,334)
Pact:NATO Ratio (Assuming simultaneous mobilization)				
	1.8	2.1	2.2	3.0

(Continued)

SOURCE: International Institute for Strategic Studies, The Military Balance, 1979-1980 (London, 1979).

a/ Force levels taken from The Military Balance, 1979-1980. Time-phased arrivals estimated by CBO.

b/ Brigades and armored cavalry regiments counted as one-third division.

TABLE 2. (Continued)

<u>Available in Central Region Four Weeks After Mobilization</u>		<u>Additional Reinforce- ments or Retained in Strategic Reserve</u>		<u>Committed Elsewhere</u>	
<u>Division</u>		<u>Division</u>		<u>Division</u>	
Equivalents <u>b/</u>	Tanks <u>c/</u>	Equivalents <u>b/</u>	Tanks <u>c/</u>	Equivalents <u>b/</u>	Tanks <u>c/</u>
None	None	None	None	10	1,600
10	3,400	None	None	None	None
6	2,500	None	None	None	None
None	None	None	None	6	1,000
15	3,400	None	None	None	None
None	None	None	None	11 1/3	1,500
89	27,000	38	9,000	46	12,000
(120)	(36,300)	(38)	(9,000)	(73 1/3)	(16,100)
2	334	None	None	None	None
2/3	32	None	None	None	None
1 2/3	320	None	None	None	None
5	444	7 1/3	606	None	None
5 1/3	900	None	None	None	None
None	None	None	None	13 1/3	970
None	None	None	None	None	None
None	None	None	None	8	1,030
One infantry battalion	None	None	None	None	None
3	800	None	None	None	None
None	None	None	None	Unknown	116
None	None	6	113	None	None
None	None	None	None	22 1/3	3,500
11 2/3	3,600	21	6,900	1	54
12	3,779	None	None	None	None
(41 1/3)	(10,209)	(34 1/3)	(7,619)	(44 2/3)	(5,670)
2.9	3.6	N/A	N/A	N/A	N/A

c/ T-54/55, Centurion, Leopard I, or better; includes tanks in war reserve storage.

d/ Great Britain is credited with 900 tanks; see The Military Balance, 1979-1980, p. 20. The British Defence Ministry, however, has claimed that Britain maintains only 600 tanks in Europe; see Secretary of State for Defence, Statement on the Defence Estimates, 1979 (London, February 1979), p. 13.

Bulgarian forces are in the "Committed Elsewhere" category because a likely mission for them might be to block Greek and Turkish forces from attacking the Pact's southern flank. The Soviet divisions in the same category are those deployed on the Sino/Soviet border. All Hungarian and Romanian and 38 of the Soviet divisions are categorized as "Central Reserve" because of the difficulty in judging how the divisions might be used. They certainly could be used against NATO but probably not during the first month or so following mobilization. The Soviet divisions conceivably could be held back during the early stages of a war either to protect a flank or to exploit an opportunity. The Hungarian and Romanian forces might be more useful in a defensive role against Greece and Turkey.

The ground forces of five NATO countries--Greece, Italy, Norway, Portugal, and Turkey--fall logically into the "Committed Elsewhere" category. As stated above, Norway's forces would probably be engaged on its northern border. Portugal's ground forces would have a long distance to travel, and the low level of Portuguese participation in the military aspects of NATO to date probably means that the necessary planning and preparation have not been done to make a long-distance move successful. Italy also would have to move its ground forces a long way to join a war in the Central Region, and how quickly the intervening railway systems could move Italian divisions to the Central Region is uncertain. Greece and Turkey have an even greater distance to travel, and the ships needed for the move probably would be used initially to transport U.S. divisions. Additionally, both of those countries would probably see themselves threatened directly by Soviet or Bulgarian forces, and they might be reluctant to dispatch divisions to Central Europe.

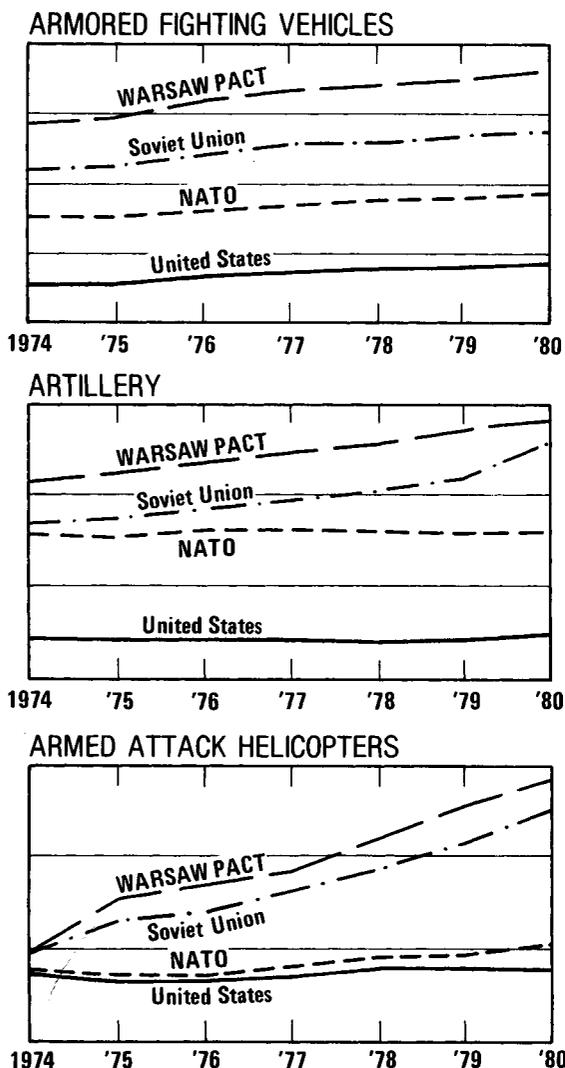
The three U.S. Marine Corps divisions are not considered available for the war in Europe. These divisions are assumed to be set aside to handle the simultaneous minor contingency specified by the Defense Department's 1 and 1/2 war objective.

The Balance Under the 120-Pact-Division Scenario

An overview of the composition of the Warsaw Pact and NATO nations' forces and the resulting force ratios, according to the 120-Pact-division scenario, is given in Table 2. The table displays the Pact's numerical superiority in terms of division equivalents and tanks. Figure 3 shows the Pact's superiority in armored fighting vehicles, artillery, and armed attack helicopters.

Figure 3.

Warsaw Pact/NATO Ground Combat Components, Fiscal Years 1974-1980



SOURCE: The Organization of the Joint Chiefs of Staff, *United States Military Posture for FY 1981* (Washington, D.C., 1980) pp. 17-18.

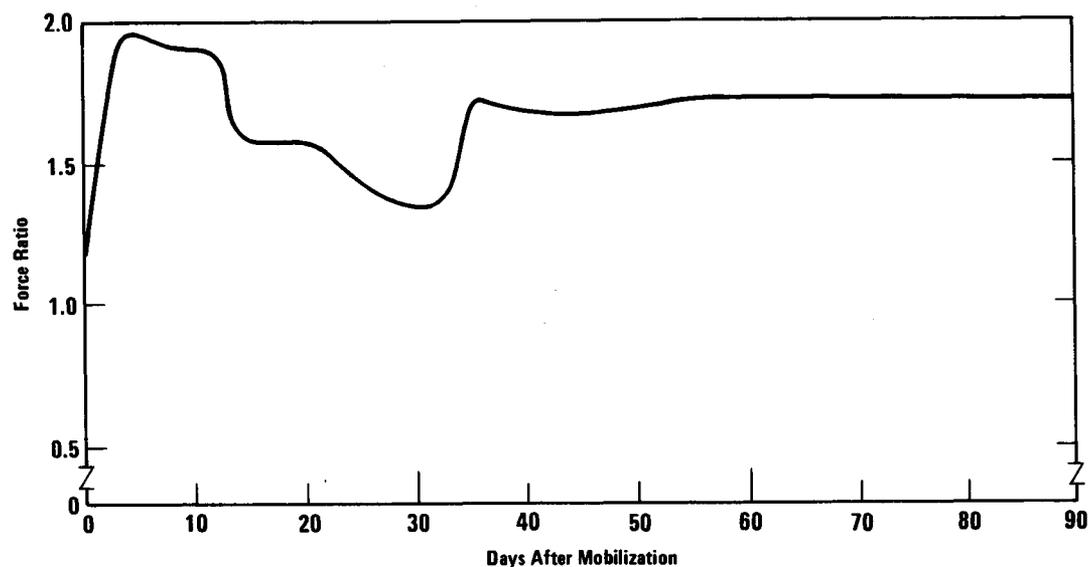
NOTES: Shows active-duty and reserve forces; does not include Marine Corps or Marine Corps Reserve. Numerical values for the vertical scales are not given because the Department of Defense does not make them publicly available.

Whether the Pact forces' overwhelming numbers would be decisive depends on many variables, of which only a few are quantifiable. The technological quality of the weapons could have a marked impact on the military balance. Indeed, NATO has relied heavily on superior technology to offset its numerical inferiority. The abovementioned intangible factors could also have a significant impact. Therefore, "bean counts" such as shown in Table 2 are not wholly satisfactory indicators of the force balance.

The Armored Division Equivalent (ADE) is an analytical tool devised by the Defense Department to compensate for the shortcomings of simple numerical tallies of divisions and weapons. In developing an ADE, a numerical value is assigned to every weapon, based on its technical capacity and possible use in combat. The strength of a unit is then determined by adding the sums for all the weapons the unit contains. Dividing the unit's "score" by the score for a standard U.S. armored division allows the strength of the unit to be expressed in terms of equivalent armored divisions.

Figure 4.

Shifting Warsaw Pact/NATO Force Balance: 90 Days Following Pact Mobilization



On the basis of an ADE analysis undertaken in 1976, the Defense Department gave its view of the conventional balance. ^{12/} CBO's update of that analysis to reflect the accelerated deployment of U.S. divisions achieved by recent programs and the assumed allocation of divisions shows that there are two periods after mobilization during which Warsaw Pact superiority could exceed acceptable limits (see Figure 4).

Pact forces appear to have an advantage of 2:1 when NATO first mobilizes, but that advantage would be diminished by the arrival of U.S. divisions and the full mobilization of NATO's other divisions. Within about four weeks, however, the Warsaw Pact could introduce enough additional divisions to raise its advantage back to about 1.7:1. The force ratio would remain stable at that level for a period of about 60 days, at which time the U.S. National Guard divisions would begin to arrive. The arrival of these divisions would lower the force ratio unless the

^{12/} Department of Defense, A Report to Congress on U.S. Conventional Reinforcements for NATO (June 1976), p. IV-3.

Soviet Union's mobilization capabilities could in the same time produce an equal number of divisions. 13/

According to CBO's analysis, NATO is most vulnerable in the first 10 days after it mobilizes. In that period, its divisions must assemble, move to defensive positions, and prepare fortifications. These tasks are more time-consuming for Belgian, British, and Dutch divisions because those countries rely heavily on reserve formations to bring divisions to wartime strength. Furthermore, once the divisions are in place, there are too few of them to form a gapless defensive line. On average, each division would have to cover 27 kilometers, which is about 35 percent more frontage than would be ideal for a U.S. division; and the situation would be even worse for the smaller Belgian and British divisions.

The Effect of Air Power on the Balance. Neither the force ratio nor force density analysis described above takes account of the effects of either side's tactical air forces. At present, no generally acceptable analytical method exists for measuring the effects of tactical air forces used in combination with ground forces. Nonetheless, the total capability of any force can be reasonably regarded as the sum of the capability of both its ground and air forces. To get a clearer sense of how much tactical air forces could favor NATO, one must consider not only the quantity and quality of opposing air forces but also the vulnerability to air attack of each side's ground forces. Table 3 compares the two air forces, showing numerical parity in offensive or ground attack aircraft and a major Pact advantage in fighter interceptors. 14/ The Pact advantage extends to ground-based air defense systems. The Pact has twice the air defense capability of NATO. If the systems deployed in the western military districts of the Soviet Union are counted, then the Pact appears to have a 4:1 advantage. 15/ Thus, although NATO is generally credited

13/ This update of the Defense Department analysis has not been adjusted for the technological developments that have occurred since 1976. If it were possible to do so from unclassified sources, the force ratio shown in Figure 4 might well appear too optimistic.

14/ These observations are corroborated in U.S. Joint Chiefs of Staff, United States Military Posture for FY 1981, p. 19.

15/ Military Posture, Hearings before the House Committee on Armed Services, 96:1 (February, March, and April 1979), Part 2, p. 514.

TABLE 3. NATO/WARSAW PACT TACTICAL AIR FORCE BALANCE: 1979

Type of Aircraft	NATO	Warsaw Pact	
		Central Region	Sino/Soviet Border
Ground Attack	3,574	3,035	925
Interceptor	428	2,863 <u>a/</u>	667

SOURCES: International Institute for Strategic Studies, The Military Balance, 1979-1980 (London, 1979) and CBO.

a/ Includes strategic air defense.

with qualitatively superior air forces, it is not clear that the alliance's qualitative advantages could overcome the Pact's superiority in interceptors and ground-based air defense systems. 16/

The Effects of Terrain on the Balance. Analysis of the defensive qualities of the West German topography provides little confidence that the force-multiplying effects that a defender can sometimes realize from the terrain would render theater-wide force ratios greater than 1.4:1 acceptable. NATO's major problem is the poor defensive features of the North German Plain.

As defender, NATO should not have to match Pact forces man for man or tank for tank, because its position should multiply the effectiveness of its weapons when it chooses the terrain to defend (see Chapter I). How much multiplication can be achieved depends on the defensive qualities of the terrain. Rocky mountains can protect the defender while severely impeding the attacker's advance. Open plains, however, offer very little protection to the defender and virtually no hindrance to the attacker's maneuvers. Since the central front runs through all types of landscape--flat, hilly, and mountainous--theater-wide force ratio calculations are based on an assumption of "average terrain."

16/ See United States Military Posture for FY 1981, p. 19.

CENTAG defends an area of moderately hilly terrain. In its area, valleys form natural attack routes and, although several are very broad, the parallel ridges hamper the attacker's maneuvers. In the valleys, the defenders can create protected firing positions, though few natural features are exceptionally good for the defense.

The Belgian sector and the southern part of the British sector have good defensive terrain. The Hartz Mountains in the British sector give the defender excellent advantages, but there is little to invite an attack there. In the Belgian sector, the good defensive qualities derive from the north/south direction of the valleys and ridges. An attack through the Belgian sector would face the very demanding task of attacking up the ridges and across valley floors while subjected to defensive fire from overlooking ridges. As in the British sector, however, an attacker could easily avoid the Belgian sector.

The flat farmland of the North German Plain with its characteristic patchwork of forests gives little advantage to the defender. Few, if any, obstacles would impede the attacker's advance or inhibit circumvention. Moreover, the defender here has no natural protection for its weapons and, in a fast-moving situation, there is very little time to entrench. Defense against force ratios even as favorable to NATO as 1:1 would be difficult in this sector.

The Effect of Theater Nuclear Weapons on Pact Conventional Superiority. For theater nuclear weapons to have a positive effect, NATO would have to realize a net gain from escalating to the nuclear level. In the past, when NATO had a clear superiority in tactical nuclear weapons, the military gain was evident. Today, however, there appears to be virtual parity, and it is no longer a foregone conclusion that NATO would gain more than it would lose by initiating nuclear war. 17/

Both NATO and the Warsaw Pact would use nuclear weapons against ground and air combat units and against transportation centers critical to the movement of supplies and combat units. The vulnerability of combat units per se is likely to be about equal on both sides. NATO may be better able to locate and

17/ For an assessment of the balance of theater nuclear forces in Europe, see The Military Balance, 1979-1980, pp. 114-119.

attack units, but its defensive positions would be relatively easy for a trained tactician to determine, which would allow the Warsaw Pact to prepare for the use of nuclear weapons. Thus, it is not at all clear that use of nuclear weapons would significantly change the balance of conventional forces.

NATO's dependence on airfields and ports to receive U.S. reinforcements and combat supplies could put the alliance at a disadvantage in a nuclear war. Simply put, such facilities are ideal targets; they are easy to destroy and most difficult to restore. Their loss would virtually isolate NATO from the United States. If the nuclear threshold were crossed early in a conflict, part of the U.S. reinforcements could not get to the battlefield, causing an even greater imbalance in conventional forces.

Warsaw Pact forces are not so dependent as NATO on such vulnerable transportation centers. Although Pact strategists would prefer to move supplies by rail, trucks could serve adequately. Reinforcement troops could use their own vehicles to travel to the battlefield. In other words, nuclear weapons could slow the delivery of Pact supplies and reinforcements but not cut them off entirely.

GROUND FORCE REQUIREMENTS FOR NATO'S FLANKS

The second component of NATO's ground force requirements is the defense of the northern and southern flanks. The requirements there are determined by the combined effects of Warsaw Pact and NATO objectives.

According to the analysis that follows--which is predicated on an assumption that war in the Central Region is either impending or already under way--NATO's principal concern is more likely to be how to keep Pact divisions tied down on the southern flank, rather than how to defend the flank against attack.

At present, NATO's flanks appear to be relatively secure. The terrain and long distances to worthwhile objectives would serve to limit Warsaw Pact action in those areas. Such limited action could include Soviet attacks against northern Norway to facilitate the movement of the Soviet fleet. Prestocking equipment in Norway to give the United States the option to reinforce that country quickly would help the Norwegians counter such attacks. However, the prospect of such limited attacks demon-

strates no clear need for U.S. forces beyond those required to defend the Central Region. The flanks, especially the southern flank, are most important as a potential diversion of Pact forces from an ongoing conflict in the Central Region.

Theoretically, the Pact forces could try either to outflank NATO, to secure limited objectives to facilitate naval operations, or to redeploy divisions to the Central Region. Of these options, only the latter two seem to be real possibilities, and it is not clear that either scenario would require NATO ground forces beyond those already available. Terrain, geography, and concern about opening another front would combine to make Pact outflanking maneuvers impractical.

Access to Decisive Objectives

The possibility of quick and complete victory leads military forces to seek an opponent's flanks. If the attacker can find or create an open flank and, by maneuver, reach a position from which to threaten the defender's survival, then the defender must leave his prepared positions and fight on the ground of the attacker's choosing. Such actions can confuse the defender and lead to the disintegration of its defenses. If, at the start of battle, the defender has no open flanks, the attacker seeks to create the same effects by penetrating the defenses.

As they are now configured, NATO's forces have no open flanks. Ground defenses extend from Norway to Turkey, and naval forces block the exits from the Baltic Sea and back up the Greek and Turkish forces that would block the routes into the Mediterranean Sea. This puts the Pact in the position of having to penetrate NATO's defenses.

It is unlikely, however, that the Warsaw Pact would choose either flank region for a main effort to penetrate NATO's defenses. Neither flank offers any real opportunity to reach a decisive objective. On either flank, a Pact force would have too far to travel, too many obstacles to overcome, and too many logistical difficulties to solve.

Limited Flank Attacks

Although outflanking maneuvers appear unlikely, limited attacks on the northern flank to secure free use of the port of

Murmansk, or against the southern flank to interrupt oil supplies, would be feasible, if difficult. A Soviet attack out of the Kola Peninsula to clear Norway's North Cape could involve a combination of airborne and amphibious assault or an overland attack. An overland attack would require 200 miles of travel over rough terrain. If the Norwegians with relatively limited allied contributions could move forces into position fast enough, an overland attack would proceed very slowly. On the other hand, an airborne/amphibious attack could be accomplished more quickly if the NATO forces were caught by surprise.

Even though either type of Soviet attack could probably succeed at the outset, the problems of supplying and securing the positions would gradually undermine the effectiveness of the Soviet force. Even if the Soviets do have large stores of supplies in Murmansk, the supply line from Murmansk to Norway's North Cape would still be 200 miles long, and allied forces could attack it by air and sea. If the Soviets chose to resupply overland, the route would be even more vulnerable. Moreover, the allied ground, air, and air defense forces could gradually encroach on the territory controlled by the Soviet army, forcing the invaders to pull back into smaller islands of defense. Eventually, the Soviet positions would become ineffective unless the Soviets withdrew forces from the Central Region battle to reinforce their positions significantly.

To give NATO the option of reinforcing Norway quickly, there is a possibility that the United States will preposition equipment in Norway. The stockpile being considered now would be sufficient for one U.S. Marine brigade. 18/

This analysis is based on an assumed allocation of three Marine divisions to the minor contingency. Thus, Marines would be available to reinforce Norway only if a minor contingency did not occur simultaneously with the NATO war.

An attack on NATO's southern flank to destroy or capture Middle Eastern oil fields would almost have to be airborne. The overland route from positions in the southern Soviet Union is long

18/ For a more detailed treatment of prestocking issues, see Congressional Budget Office, The Marine Corps in the 1980's: Prestocking Proposals, the Rapid Deployment Force, and Other Issues (May 1980).

and could easily be blocked by the defenses of the countries that the Soviet force would have to traverse to get to the oil (see Figures 1 and 6).

A Pact airborne operation would not be difficult to accomplish, but it would consume significant airlift resources, supplies, fuel, ammunition, and forces. Therefore, the operation would have to promise significant and immediate results to warrant diversion of those resources from the Central Region battle.

Although interruption of oil supplies would inevitably hurt the West, its immediate impact on NATO's military capability is uncertain. By reducing civilian consumption and using stockpiled oil and supplies from non-Middle Eastern sources such as Mexico, the North Sea, or West Africa, NATO might reasonably expect its military effort to be unaffected, at least in the short term. One has therefore to doubt the worth to the Pact alliance of an arduous and costly operation against the Persian Gulf oil fields, at least in the early stages of a war.

Diverting Soviet Divisions

Perhaps NATO's flanks are most important for their possible effects on the military balance in the Central Region. The analysis of force requirements to defend the Central Region is based on the assumption that 24 Soviet divisions could be tied down on the southern flank while 46 divisions could be occupied on the Sino/Soviet border. If any of these 70 divisions were free to transfer to the Central Region, NATO's needs in that area would be even greater than previously described. On the other hand, a "credible threat" in either the southern flank or the Sino/Soviet border region could persuade the Soviet Union to tie down more of its divisions in the defense of its flanks.

Keeping NATO's southern flank countries in the alliance and militarily strong is therefore critical. In peacetime, economic assistance and military aid would help Turkey to remain in the alliance and develop an army capable of threatening the Soviet Union's southern flank. If deterrence failed, the need to send ground reinforcements to Turkey and Greece to show concern and commitment might arise.

For such a politically motivated deployment, the United States could use a National Guard infantry division. These divisions, however, are ill-suited to participate in the mechan-

ized warfare that would prevail in the Central Region. Moreover, their current readiness is low, and they would need time to train if they were to be used in combat. On the other hand, the National Guard divisions probably already have the management expertise to move to Turkey, and they would need no training time in the United States to be used as a show of political commitment so long as they did not engage in combat immediately on arrival.

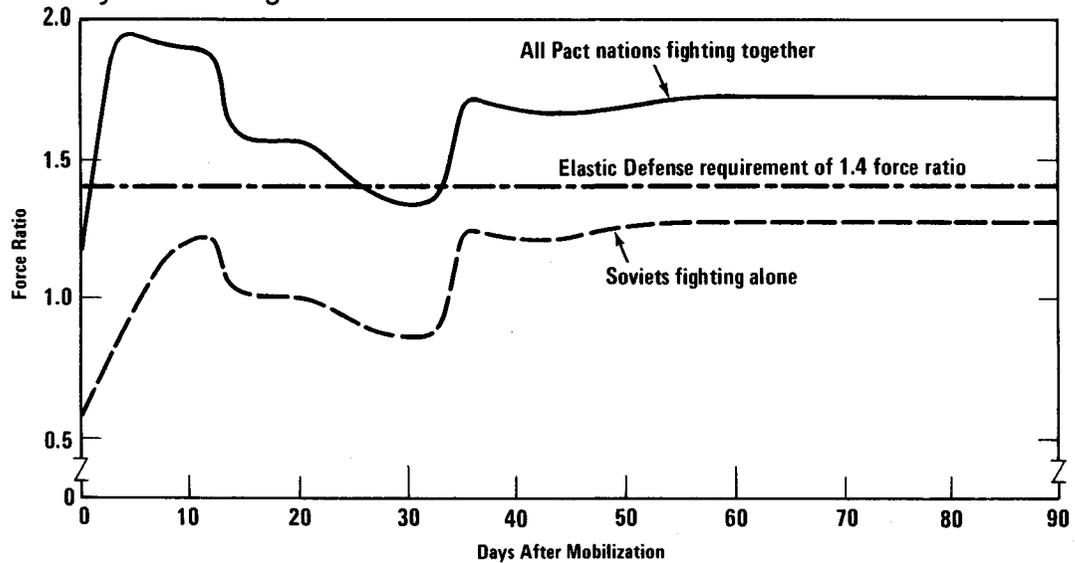
CHAPTER III. THE QUESTION OF WARSAW PACT HOMOGENEITY

For a Soviet attack on NATO to be effective, participation of the non-Soviet Warsaw Pact forces--particularly those of Czechoslovakia, the German Democratic Republic, and Poland--would be essential. ^{1/} Without the cooperation of the Soviets' Warsaw Pact allies, the ability of the Soviet Union to strike with little or no warning would be significantly degraded, as would the Pact's overall combat capability throughout the 90-day period following mobilization (that is, through M+90 days). To compensate for the lack of its Eastern European allies' support, the Soviet Union could draw on some of its divisions deployed on the Sino/Soviet border and on its southern flank. Doing so would prolong the Soviets' mobilization time considerably, however, and would thereby increase the risk of failure. Thus, for the Soviet Union, and in turn, for NATO, the question of Eastern European "reliability" (from the Soviet standpoint) is critical.

The analysis in Chapter II of Warsaw Pact/NATO force ratios rests on the assumption that the Soviets and their Eastern European allies would operate militarily as a coherent, unified body. This assumption is deemed essential in Defense Department planning in order to visualize the worst possible scenarios for NATO. If the assumption is questioned, however, and the extent to which the Soviets could rely on their Pact allies considered doubtful, then the analysis of force ratios in the event of a Soviet attack changes radically. In the initial 10 days after a Soviet mobilization, a force ratio of approximately 1.2:1 (expressed as Soviet Union to NATO) could be achieved in contrast to 1.6:1. Within four weeks, a stable force ratio of 1.2:1 could be achieved. (Figure 5 depicts the two courses of force ratios through M+90 days.) Thus, if the Soviets attacked alone, NATO could maintain a steadfast defense.

^{1/} Although Hungarian military forces have been allocated to the Central Reserve, Hungary is included in the discussion of political and economic trends within the non-Soviet Warsaw Pact countries.

Figure 5.
 Effects of Warsaw Pact Homogeneity—Shifting Warsaw Pact/NATO
 Force Balance Showing Pact Forces Unified and Soviets Fighting Alone:
 90 Days Following Pact Mobilization



POSSIBLE FACTORS CONTRIBUTING TO UNRELIABILITY

This chapter presents an overview of the political currents in Eastern Europe, suggesting that domestic pressures could conceivably deter the full participation by the Soviets' allies in a first-strike conventional attack. The political and economic conditions outlined below suggest some uncertainty underlying the assumption that the Eastern European armies would willingly participate in a Soviet-led attack against NATO.

Even if the standing armies of Eastern Europe were to participate at the outset of a Soviet attack, how effectively they would fight in a sustained engagement is questionable, particularly if success were not immediate. The focus of this chapter therefore is on the willingness of the general populace of non-Soviet Pact nations--rather than the political bodies--to work in concert with the Soviet Union. In past years, the people of Czechoslovakia, and more recently, of Poland, have shown a proclivity to dissent when domestic issues became compelling. Such popular dissent could quickly affect the military both in

peacetime and in the event of a mobilization. In peacetime, domestic economic pressures have slowed the growth rate of defense budgets. In wartime, popular dissent might prevent an effective military effort.

The armies of the Eastern European countries rely heavily on conscription; approximately 70 percent of the Warsaw Pact peacetime force as a whole is made up of draftees. ^{2/} Since the length of military service varies between 18 months and two years, approximately one-half of all conscripts, or more than 150,000 soldiers, enter these armies from civilian life every year. It is doubtful, therefore, that army personnel would remain uninfluenced by civilian dissent for long. As a result, political use of military force could well be constrained by prevailing civilian sentiments.

Popular support for government actions in Eastern Europe rests largely upon the governments' ability to satisfy the economic needs of their populations. The recent history of the region illustrates that the governments, through economic programs, have attempted to satisfy some of the concerns of their people in hope of averting dissent. For example, following the abortive attempts at institutional reforms in Czechoslovakia in 1968, the governments purposefully tried to secure political stability through a policy of consumerism. The relatively stable political climate of the early 1970s was attributable largely to improved economic conditions, such as relatively easier access to inexpensive consumer goods and food. This stable climate prevailed until the mid-1970s, when the economic situation began to deteriorate, characterized by price increases in raw materials and shortages of food and quality consumer durables.

The recent workers' strikes in Poland--triggered by the July 1980 price increase for food--demonstrated the willingness of the populace to express dissatisfaction with the government's economic program. In attempts to accommodate some of the workers' concerns, the government granted major concessions, including the right to form independent trade unions to represent workers in labor-related issues. If the Polish agreements were implemented, they would stand as a significant achievement for the workers in both economic and political terms. At present, the response of

^{2/} See International Institute for Strategic Studies, The Military Balance, 1979-1980 (London, 1979), pp. 13-16.

the Warsaw Pact governments, particularly that of the Soviet Union, to continuing unrest in Poland is difficult to gauge. Even if the Pact were to respond with military force (which seems not out of the question at the time of publication of this paper), the Polish experience is likely to represent a potential flaw in Warsaw Pact homogeneity.

AN OVERVIEW OF PROBLEMS IN THE EASTERN BLOC

In response to regional economic difficulties, the Soviet Union has proposed increased integration within the Council for Mutual Economic Assistance in agriculture and energy development, and stronger modernization programs in the areas of defense and light industry. While most Eastern European governments have publicly endorsed these programs, their participation appears to be less than enthusiastic and, to some extent, has been subordinated to national priorities and considerations. This section addresses some of the issues affecting the region, such as energy and military budgets.

Oil

Much attention has focused on the future of Soviet oil production and on the effects of possible shortages on the Soviets' ability to meet the growing energy needs of the Eastern European countries. There are indications that, after weighing the political costs, the Soviets will continue to supply oil at prices somewhat below those on the world market in order to avoid more serious economic and political disruption in Eastern Europe. ^{3/} Such economic displacement would have serious ramifications for political stability within the Warsaw Pact alliance.

The crucial problem for Eastern Europe, however, is and will continue to be the rising costs of imported oil. Regardless

^{3/} The Soviets have indicated that they are planning to curb petroleum exports to Western Europe as oil production falls short of the 1980 targets. This would allow Moscow to achieve its July 1979 goal of increasing energy exports to Eastern Europe by 20 percent. See "Soviets Trimming Crude Oil Exports to West for 1980," Petroleum Intelligence Weekly (December 3, 1979), pp. 1-2.

of the source of oil, petroleum prices will certainly continue to go up and will eventually be passed on to the populations. Such increases could potentially be destabilizing for the region. Three times in the last decade, Polish workers have vigorously protested price increases in consumer goods. In 1970, the Baltic riots led to the demise of Wladyslaw Gomulka's regime, and in 1976, workers' riots forced Edward Gierek's government to rescind steep price hikes on food. In 1980, strikes have led to promises of major reform. This sequence of events implies that Eastern European leaders must carefully consider possible public reaction when instituting further price increases.

The sharp increase in 1975 in the price of Soviet exports of oil and natural gas, coupled with the imposition of a new system of annual price adjustments, aggravated economic conditions within Eastern Europe. Prior to 1975, the Eastern Europeans paid under \$3 per barrel for Soviet crude oil, or one-quarter of the world market price. By 1977, the price of Soviet crude oil had risen to approximately \$9 per barrel, 4/ still 25 percent below the \$12 per barrel benchmark price for Saudi Arabian crude oil. This increase came as a shock to the Eastern European economies, which had been anticipating the continued delivery of cheap Soviet oil and gas. In 1979, prices for imported Soviet crude still continued to lag about 25 percent behind the world market price. 5/

On top of the oil price increases, the Soviets placed limits on future oil exports to Eastern Europe, based on 1975 delivery schedules. Skeptics expressed concern that such a restriction would harm the nations' planned economic growth. Desiring more efficient economic growth, officials had shifted their economies from reliance on coal toward use of oil and natural gas. The Soviets, therefore, eased some of the limitations and offered opportunities for joint investment projects in their

4/ For a more detailed analysis of the energy situation in Eastern Europe, see John R. Haberstroh, "Eastern Europe: Growing Energy Problems," in Joint Economic Committee, Eastern European Economies Post-Helsinki, Committee Print, 95:1 (August 1977), pp. 383-4.

5/ See Eric Morgenthauer, "Soviet-Bloc Countries Also Face Problems Meeting Energy Needs," The Wall Street Journal (July 6, 1979), p. 1.

energy undertakings. In return for such participation, the Eastern Europeans were promised increased Soviet oil deliveries.

The amount of Soviet oil purchased under agreement, however, is increasingly inadequate to meet Eastern Europe's rising energy needs. Eastern Europe is making up the difference with oil bought by hard currency or exports valued at world market prices. In addition, the Eastern Europeans have increased investment in the future development of their own domestic energy sources--coal in Poland, oil in Romania, and nuclear reactors in Czechoslovakia and Hungary.

An alternative might be to import additional natural gas from the Soviet Union. Estimates suggest that the Soviet Union contains one-third of the world's proven reserves and could export gas to Eastern Europe. Whether this alternative would be a feasible solution in the short run depends on the capacity of existing pipelines and the ability of Eastern Europe to adapt its industry to the use of gas.

Military Budgets

The low rates of growth in the 1979 defense budgets for Eastern Europe represent the leaderships' understanding that they cannot afford substantial increases in defense outlays because of increasing economic stress. In response to Soviet requests for increases in the 1979 defense expenditures to finance continued modernization, the 1979 Eastern European defense budgets rose only modestly over 1978 levels, ranging from 5 percent growth in the case of Poland to zero growth for the Romanians. ^{6/} Although it is difficult to assess the extent of real growth represented by these figures because of the inability to account for inflation, the planned growth in published defense expenditures for 1979 is slower than the average rate for the entire decade. Some countries--notably Czechoslovakia, Hungary, and Romania--will achieve only modest or low rates of modernization during this period, with the replacement of the T-55 tank as the probable emphasis of their programs. This implies an understanding on the part of Eastern European leaders that any attempt to divert scarce resources

^{6/} The increases in the 1979 defense budgets for the other non-Soviet Warsaw Pact countries are as follows: 3.3 percent for Czechoslovakia, 4.3 percent for the German Democratic Republic, and 3.5 percent for Hungary.

from consumer needs to defense spending could heighten internal political tensions.

Human Rights

The passage of the Final Act of the Conference on Security and Cooperation in Europe in 1975 provided much of the impetus for the burgeoning human rights activism within these countries. Deteriorating economic conditions in the 1970s only agitated societal tensions that had existed in the region for more than a decade. The governments soon found themselves under growing pressures from intellectuals and the church to fulfill promises for human rights, freedom of emigration, and increased contact with the West. Reformists, however, were not calling for the dissolution of the socialist system, but merely for expansion of and respect for human rights.

The domestic climates vary considerably, and internal pressures have been distinct in each country. They range from a pragmatic leadership in Poland faced with many well organized dissident groups to a hard-line government in the German Democratic Republic, which has been effective in silencing its critics. The Janos Kadar government in Hungary appears relatively stable and pursues policies that minimize vocal dissent. Czechoslovakia, on the other hand, has a less moderate government that must deal with a small but cohesive group of human rights activists.

DEVELOPMENTS IN INDIVIDUAL COUNTRIES

Poland

Under Gierek's leadership, the Polish government demonstrated a sensitivity to domestic pressures, which led the government to pursue relatively pragmatic economic policies. Fearful that increases in official prices would trigger domestic unrest, the government established a two-tiered pricing system that employs both an official price and a free market price. The latter involves "commercial shops," which sell approximately 20 percent of all meat purchased in the country. ^{7/} The government has been

^{7/} See Radio Free Europe Research, "Commercial Shops Increase Their Meat Allocation," Situation Report #14 (July 9, 1980), pp. 2-3.

promoting these specialty stores, which sell higher quality meat at higher prices. This device has not only contributed to inflation but has also enabled the government to pass on to consumers the increased production costs and has dampened demand for the higher quality meat. Such methods seem effective in stabilizing official prices only temporarily. In July 1980, as shortages persisted, however, the Polish government was forced to raise consumer prices. The introduction of higher food prices sparked massive strikes that threatened the country's political stability. Eventually, the crisis led to a reorganization of the political leadership--including Gierek's resignation--and to promises of political and economic reform.

Persistent agricultural problems have been at the heart of the country's economic malaise. Because of unfavorable weather conditions over the past several years, the shortfall in grain production necessitated expensive imports from the West, approximately 8 million tons in 1979 alone. ^{8/} This problem has been compounded by poor management techniques, such as the lack of equipment modernization and antiquated transport systems, in an agricultural sector composed primarily of small private plots. Although the government might substitute more abundant crops, such as corn or potatoes, for grain, self-sufficiency in agriculture for Poland remains a distant goal. In the meantime, the need to continue to import will contribute to Poland's sizable debt to the West--the largest in Eastern Europe, estimated at \$20 billion.

The German Democratic Republic

The foreign and, to a lesser degree, domestic policies of the Erich Honecker government mirror those of the Soviet Union. Though there is evidence of political disaffection, no organized opposition movement will probably develop. ^{9/} The Honecker

^{8/} See Radio Free Europe Research, "Gierek on Agriculture: Lower Grain Harvest Announced," Situation Report #19 (August 31, 1979), pp. 6-8.

^{9/} One indicator of political disaffection is the growing number of people attempting to emigrate illegally to the West. Since 1970, 80,000 East Germans were allowed to emigrate legally, while 43,000 traveled to the West illegally. See Radio Free Europe Research, "Dissent in the GDR," Background Report #226 (October 17, 1979).

government maintains strict internal control; it has been effective in containing the dissident movement by exiling outspoken critics before they are able to mobilize opposition. Increased exposure to the West, particularly to the Federal Republic of Germany, has been a major concern to the government. New laws have been enacted, restricting contact with journalists and levying increasingly harsh penalties for passing on information deemed detrimental by the state.

Although the German Democratic Republic is considered to be the most developed economy in Eastern Europe, recent economic difficulties--illustrated by the failure to achieve the 5 percent growth target for national income in 1979--have contributed to the worsening political climate. Agricultural problems, causing shortages of food, have been persistent. In the past, the German Democratic Republic has been the second largest Eastern European importer of U.S. grain. Imports from the West, however, have been drastically reduced because the increased costs of raw material imports from the Soviet Union have led to trade deficits. This deteriorating trade balance may necessitate further reductions in imports of Western grain needed to make up the shortfall in domestic production.

Hungary

The Hungarian leadership has been responsive to internal demands through the implementation of the New Economic Mechanism. These economic accomplishments--particularly the relatively high standard of living--illustrate why little vocal dissent exists within Hungary today. Conditions should remain stable as long as such domestic policies prevail.

Under the New Economic Mechanism, the Kadar government has introduced a number of market-oriented reforms, which include the decentralization of some decisionmaking authority to the enterprise management and the introduction of profit incentives. These reforms, together with a more productive agricultural system, have led to a higher standard of living for Hungary's general populace. Growth in industrial production, however, has lagged; the decentralization of decision-making has given control to local managers, who are more concerned with maximizing short-term profits than with meeting overall production standards. Consequently, many of the consumer goods are of lower quality and are not competitive on the

Western market. 10/ In response to these difficulties, the government is planning to remove price subsidies and to increase competition within the economy. 11/ The short-term effects of these programs may be potentially destabilizing as consumer prices rise.

Czechoslovakia

The domestic policies of the Gustav Husak government in Czechoslovakia closely resemble those of the Soviet Union. Little attempt to appease critics has been made. Charter 77, the nation's most vocal human rights group, remains relatively small and has been unsuccessful in influencing the direction of Czechoslovakian domestic policy.

The economy of Czechoslovakia--considered one of the most advanced in Eastern Europe--is currently facing serious problems, including declining growth rates and labor productivity. Agricultural production has suffered considerably; the shortfall in the grain crop is expected to be approximately two million tons lower than the planned harvest. 12/ This will compel Czechoslovakia to import grain from the West in the face of declining Soviet grain exports; the Soviets have been able to supply the Czechoslovakians with only small quantities of cereal grains during the last few years. This course of events will undoubtedly damage Czechoslovakia's efforts to earn foreign currencies.

10/ See, for example, Thomas A. Vankai, "Eastern Europe: Will Its Agricultural Import Boom Last?" in U.S. Department of Agriculture, Foreign Agriculture (August 1979), p. 10; and Ivan Volgyes, "Limited Liberalization in Hungary," Current History (March 1976), pp. 107-8.

11/ See U.S. Relations with the Countries of Central and Eastern Europe, prepared by the Foreign Affairs and National Defense Division, Congressional Research Service, for the Subcommittee on Europe and the Middle East, House Committee on Foreign Relations, 96:1 (1979), pp. 61-62.

12/ See Radio Free Europe Research, "Poor Harvest Prospects," Situation Report #27 (September 5, 1979).



Figure 6.

Area of U.S. Concern in the Middle East and Western Asia



CHAPTER IV. FORCE REQUIREMENTS FOR NON-NATO CONTINGENCIES

Outside Europe, U.S. interests could be threatened in many ways and in many places. The possibilities range from renewed war in Korea to Soviet-instigated revolt in Latin America. The region of most immediate concern, however, is the Middle East (see Figure 6). How the United States might respond to any particular situation would depend on three factors: the political environment both within the United States and between the United States and the local powers in the embattled region; the military options available; and the importance of the U.S. interests threatened. This chapter presents an analysis of a selected group of minor contingencies (that is, the "1/2 wars" in the Defense Department's presumed 1 and 1/2 war requirement) for which U.S. military involvement seems possible in the context of current events and concerns.

The Middle East, portions of Southwest Asia, and Korea are considered potential areas for contingencies requiring U.S. forces. 1/ In these areas, either the Soviet Union or local elements could precipitate a contingency. Since the Defense Department's overall force-design objective specifies only one minor war simultaneous with a major one, an evaluation need only focus on the most demanding of the lesser contingencies. 2/

1/ The Caribbean, though another possible area of concern, is not examined here since whatever military force could suffice for other non-NATO contingencies could also suffice there.

2/ This notion is not universally accepted. See William Kaufmann, "Defense Policy," in Joseph A. Pechman, editor, Setting National Priorities (Brookings Institution, 1980), p. 309.

◀ U.S. policy in the Middle East focuses on the possible need to protect immense reserves of petroleum north and east of the Iranian city of Abadan, as well as those along the Saudi Arabian coast of the Gulf. The proximity of the Soviet Union to the region heightens U.S. concern for a military presence there.

CURRENT AND POTENTIAL U.S. CAPABILITIES

The United States now has a substantial capability to dispatch ground forces to the theater of a minor war. The three U.S. Marine divisions--one based on the east coast of the United States, one on the west coast, and one on the Japanese island of Okinawa--give the United States a good capability to "show the flag" with conspicuous maneuvers, handle small military operations, or create a larger force by drawing units from two or more divisions. To be of use in the Persian Gulf area, the latter capability would require two or three weeks' time. With the Army's airborne division as the lead unit for an assembly of large formations and Marine units from Okinawa, the United States could assemble a 24,000-man force in the Persian Gulf within two weeks.

The recently conceived Rapid Deployment Force (RDF) could double current U.S. capability for action in the Persian Gulf region, bringing the total number of troops available for combat there to 49,200. By prepositioning equipment and supplies on the Indian Ocean island base of Diego Garcia, an additional 12,000-man U.S. Marine brigade could be introduced within nine days of a decision to mobilize. 3/ A mechanized Army division could be added in the first two weeks by the proposed procurement of eight fast roll-on/roll-off ships. These ships would also take some of the burden off the airlift, making possible the movement of a brigade of the Army's 82nd Airborne Division. Table 4 compares current capabilities with those that would result from the proposed materiel prepositioning and increased sealift capabilities.

In fact, the proposed RDF goes farther than Table 4 shows. 4/ Other key features are the purchase of 100 CX strategic airlift planes by 1987 and the development of a system of bases on the western coast of the Indian Ocean. These proposed plans, combined with prepositioned equipment and ships, would give the United States the capability to bring to the Gulf region a force

3/ The island of Diego Garcia is 2,500 miles south and east of the Strait of Hormuz. Since 1973, the United States has maintained a low-frequency communications station there.

4/ The RDF proposal includes no plan to add troops. Therefore, any force requirements larger than could be met by the three Marine divisions would involve borrowing troops now committed to NATO's defense.

TABLE 4. CURRENT AND POTENTIAL U.S. GROUND FORCE CAPABILITIES FOR THE PERSIAN GULF, FIRST 16 DAYS AFTER MOBILIZATION

Day from Mobilization	Current			With Rapid Deployment Force		
	Number of Troops	Peacetime Base	Means of Transport	Number of Troops	Peacetime Base	Means of Transport
First	1,000 (airborne)	Vicenza, Italy	Airlift	1,000 (airborne)	Vicenza, Italy	Airlift
Second	1,000 (airborne)	Ft. Bragg, North Carolina	Airlift	1,000 (airborne)	Ft. Bragg, North Carolina	Airlift
Ninth	2,200 (Marine)	Afloat in Mediterranean	Sealift	14,200 (12,000 Marine) (2,200 Marine)	U.S.-based Afloat in Mediterranean	Airlift Sealift
Sixteenth	20,000 (12,000 Marine) (8,000 Army, mechanized)	Okinawa, Japan Ft. Stewart, Georgia	Sealift Airlift	33,000 (12,000 Marine) (16,000 Army) mechanized) (5,000 Army, airborne)	Okinawa, Japan Ft. Stewart, Georgia Ft. Bragg, North Carolina	Sealift Sealift Airlift
Total	24,200			Total 49,200		

SOURCES: Statement by senior official of the Department of Defense and CBO. For report of senior official's statement, see Washington Post, February 2, 1980, p. 1.

of 110,000 troops in a matter of 40 to 50 days. Furthermore, sufficient forces based in the United States would be earmarked for RDF duty to permit a total of more than 200,000 troops to be moved to the Gulf region if required.

COUNTERING SOVIET THREATS IN IRAN, IRAQ, AND TURKEY

The analysis that follows suggests that current U.S. capabilities could handle the most plausible engagement not involving the Soviet Union. For a battle started by the Soviet Union in an adjacent state, however, neither the current capability nor the maximum achievable with the RDF would suffice unless the army indigenous to the state under Soviet attack were capable of an effective defense. If not, then the United States could accomplish only modest objectives, and even those would become less feasible if the Soviet Union succeeded in largely subduing the country and could turn its full attention to ousting U.S. forces.

U.S. forces could be more successful in meeting a Soviet-initiated attack in a state that does not share a border with the Soviet Union. Under these circumstances, a Soviet invasion would have to rely on vulnerable air and sea routes. Quick action by U.S. air and naval forces could conceivably limit both the size of the Soviet force deployed and the amount of supplies available to sustain combat. The RDF could then be effective.

Soviet Capabilities to Project Ground Combat Forces

As the discussion above suggests, the Soviet Union's greatest military strength would be in areas that its forces could reach by overland routes. For more distant locales, the Soviets currently possess neither the aircraft nor the shipping capacity to move significant armored or mechanized forces over long distances quickly. If they succeeded in introducing such forces, supplies would have to come by way of long sea or air lines, which are extremely vulnerable. If the United States were to counter such a move, the Soviets' risk of failure would be high.

The Soviets' ability to dispatch and sustain airborne infantry forces is better, however. Soviet airborne infantry could effectively combat the infantry forces that constitute the defenses of many small nations. The Soviets could have difficulty fighting the more heavily armored Arab forces. They would,

however, be effective in assisting revolutionary forces, particularly under circumstances in which a national army had become either a participant in the revolution or ineffective in defending the status quo.

Soviet Mechanized and Armored Forces Against Contiguous Nations

A Soviet attack on one of its adjacent neighbors would presumably rely on armored or mechanized forces rather than airlift or sealift resources. Even so, the Soviet Union would have to use great care in selecting an area of attack. Although the Soviets would have a comparative military advantage over the United States in any state contiguous to the Soviet Union, operations against Turkey or Iran would involve covering long expanses of very rough terrain. Without opposition, the Soviets could ultimately overcome these natural difficulties. If, however, indigenous forces opposed the Soviet advance, and if they received help from the United States, then the combination of natural and military obstacles could defeat the Soviet effort.

The following discussion assesses the potential Soviet threat to Iran, South Korea, and Turkey. At present, Iran and Turkey are the only nations contiguous to the Soviet Union's southern border where the potential for Soviet military action poses relevant questions. Afghanistan and the People's Republic of China, although also contiguous to the Soviet Union, present difficult and quite different situations. In Afghanistan, the Soviet Union has already taken military action. A Sino/Soviet war would be qualitatively different from the Defense Department's concept of a minor contingency. Hence, these two countries are excluded from consideration here. South Korea, however, is considered even though it is not contiguous to the Soviet Union, because overland routes through North Korea give the Soviets direct access to South Korea (see Figure 7).

Iran. Normally, 24 Soviet divisions are stationed in the southern Soviet Union. 5/ According to most reports, 13 divisions are on or close enough to the Iranian border to be used there, and 11 have received more men to improve readiness. In addition to these regular army units, the Soviet Union could have 50,000

5/ The International Institute for Strategic Studies, The Military Balance, 1979-1980 (London, 1979), p. 10.

to 60,000 KGB border guards in the vicinity equipped with tanks, armored fighting vehicles, and self-propelled guns. 6/ The border guards are organized into motorized formations (brigades or divisions) and trained to operate outside their national boundaries. 7/ These formations could perform rear area security for the regular army formations, permitting the latter to concentrate on offensive action. With a higher level of mobilization to bring the regular divisions to full strength, the Soviet Union could commit a sizable force to an invasion while maintaining a large pool of divisions to draw on for reinforcement without disturbing the five motorized rifle divisions now engaged in Afghanistan.

The three overland routes into Iran from the Soviet Union are narrow roads through mountains. Invading Soviet divisions would have to travel 300 miles before reaching Tehran and 650 miles to the oil fields around Abadan (see Figure 6). The invasion would be slow even if uncontested; resupply of the advancing column would use the same roads, crowding the narrow passages and making it difficult to replenish fuel and other supplies quickly.

The route from Afghanistan is no easier. Two routes lead to Tehran: one is 650 miles long through rugged mountains; the other is 1,000 miles through equally difficult terrain. The only overland route to the oil fields is 1,200 miles of difficult, circuitous roads.

If such an invasion were contested, the Soviet force would take even longer to reach its objective. As recent events have demonstrated, the mountainous terrain of Afghanistan is ideally suited to defense. Long-range observation and excellent firing positions for the defender make it possible for small groups of defenders to inflict substantial casualties and cause long delays in an invader's movement. The attacking force would have to rely on infantry formations to clear the way for the armored forces, which would be roadbound for the most part. Such clearing operations would inevitably be slow and costly.

6/ The Soviet Union is credited with 200,000 KGB border guards. This analysis assumes that at least one-third would be in the vicinity of the Turkish and Iranian borders. See The Military Balance, 1979-1980, p. 11.

7/ Friedrich Wiener, The Armies of the Warsaw Pact Nations (Vienna: Carl Ueberreuter, 1974), p. 100.

Assuming, however, that an invasion did reach an objective within Iran, the goal would be at the end of a long, tenuous supply line that could be interrupted quite easily by indigenous forces. If the Iranians succeeded in keeping their military force intact, then operations against the Soviet supply line might well enable a combined U.S./Iranian force to halt the invasion. The Iranians themselves could probably mount the ground attacks on the supply line, since small teams armed with explosives and machine guns would be effective. U.S. air support probably would be needed to curtail or stop delivery of supplies.

If the Soviet invasion were uncontested by Iran, the options for the United States would be uncertain. Much would depend on the Soviet Union's preparation time and on the response by the United States and other Gulf states.

In general, the strategic equation in Iran is very much against the United States with or without an RDF capability if Iran does not defend itself. The United States could accomplish a modest ground defense of the Iranian oil fields provided it reacted fast enough, but even that objective could be jeopardized in time. If the United States could react quickly to Soviet preparations, erecting a defensive perimeter around a substantial part of the Iranian oil fields should be possible. The current U.S. capability of 24,000 men probably could do this job within two weeks, and the proposed RDF capability could do it better. But even with the RDF, the U.S. position would be weak.

Even in the face of natural and military resistance, the Soviets could ultimately achieve a position within range of their ground-based air forces. This would undermine the advantages of U.S. naval and tactical air support for the U.S. defensive island. Because the Persian Gulf severely confines the maneuvers of any naval fleet, U.S. aircraft carriers would find it increasingly difficult to defend themselves and provide air support to the ground forces while the Soviet land-based air threat increased. If U.S. ships were forced to leave the Gulf, the aircraft carriers would be more than 1,000 miles from the U.S. defensive island, making it difficult to contribute to any campaign. Primary reliance would have to shift to ground-based air support, which itself would be increasingly difficult to sustain in the face of a growing Soviet ground-based tactical air capability.

Thus, if the United States acted quickly, it could accomplish a modest objective--securing the Iranian oil fields. But the Soviet Union's advantage of large forces supplied overland would seem to put time on the Soviets' side. The United States could,

of course, reinforce its positions. But that would mean drawing on the divisions needed to defend Europe, giving the Soviet Union the option to expand the war to Europe. Furthermore, so long as the Soviets can use overland routes, they can always exceed any U.S. buildup in the Persian Gulf region.

If U.S. action were delayed until a Soviet offensive had actually begun, then the Soviet Union, by putting its airborne units into the area of the oil fields, could deny to the United States the opportunity to establish a defensive island there. The United States could deploy its forces somewhere nearby such as Iraq (assuming that Iraq politically supported U.S. efforts), with the hope of conducting a successful attack on the Soviet units in the oil fields. But the Soviets might be able to reinforce their airborne units faster than the United States could establish itself in Iraq.

Turkey. A ground invasion of Turkey also would be taxing for the Soviet Union. The distances to interior political objectives like Ankara and Istanbul are long and arduous; the terrain is so well suited to defense that an overland invasion would be very unattractive. An amphibious landing to gain control of the narrow exit from the Black Sea would be a more practical approach but still difficult if the Turkish army were prepared to defend. A surprise move would have a better chance of success.

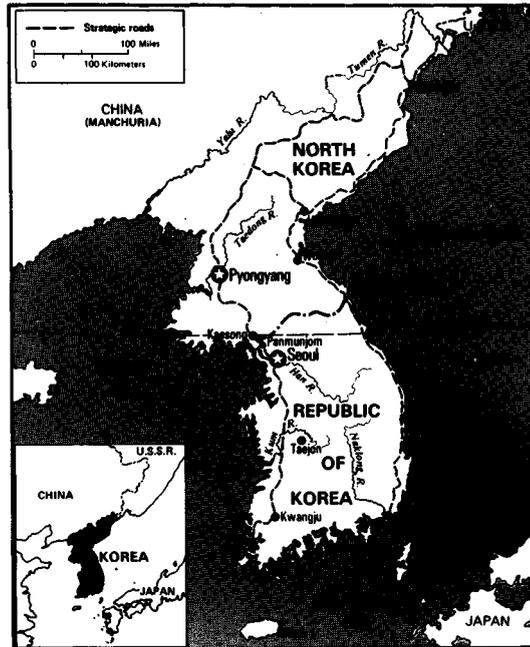
A successful operation would be extremely difficult for the United States to oppose directly. Marines and airborne units of the U.S. Army could be used to counter any Soviet attack on the Bosphorus and Dardanelles straits, but Soviet naval forces would present a formidable opponent. On the other hand, the United States could limit its response to air and naval attacks on the Soviet ships in the Bosphorus and the Dardanelles, thereby neutralizing the advantages gained by Soviet forces in capturing those passages.

What could prompt a Soviet attack on Turkey and the Dardanelles, short of a general war with NATO, is unclear. The only likely cause would be Turkey's denial of transit rights through its waterways. Unless such a move were part of an overall NATO plan executed in anticipation of war, Turkey's interests would seem to be better served by keeping those passages open.

Korea. In conjunction with North Korea, the Soviet Union could move forces overland to attack South Korea. The terrain is so constraining there, however, that the operation would have to be considered very risky.

The Soviets' common border with North Korea is only 10 miles long (see Figure 7). A major river defines the border. One end meets the Sea of Japan, and the other joins China. Once inside North Korea, a Soviet force would have only two routes to follow to reach a point from which it could threaten South Korea. One route follows Korea's east coast, and the other closely parallels the North Korea/China border for 250 miles before it turns south down the middle of the peninsula. Thus, a Soviet invasion would require the acquiescence of China for both the initial troop movement and subsequent supply convoys--an unlikely prospect, in light of current Sino/Soviet relations. It is remotely possible that an unprovoked U.S. assault on North Korea could prompt the Soviets and Chinese to cooperate militarily; but at present, little seems likely to move China to condone a Soviet presence in North Korea.

Figure 7.
Korea and Its Neighbors



overland routes to an invasion area, a Soviet buildup of forces and supplies would be relatively slow. Air and sea routes would be long and hence vulnerable. Moreover, qualitative deficiencies in Soviet naval forces available to defend such routes would give U.S. forces major advantages. 8/

COUNTERING SOVIET AGGRESSION
IN STATES NOT CONTIGUOUS TO
THE SOVIET UNION

The Soviets' military advantages in an invasion of an adjacent country would not exist in an invasion of a noncontiguous state. Without

8/ For more details on Soviet naval forces' sea and air projection capabilities, see Congressional Budget Office, U.S. Projection Forces: Requirements, Scenarios, and Options (April 1978), pp. 57-60.

If the United States could begin operations against Soviet air and sea routes in the early phases of an invasion, then expulsion of the invasion could be likely. Early interdiction of the routes would limit the size of Soviet ground combat elements introduced, because the aircraft that would be used to carry troops are ill-suited for penetrating contested airspace. Similarly, resupply of troops already on the ground would be difficult and therefore unreliable. With constraints on the size and supplies of the Soviet force, the proposed U.S. RDF could be formidable enough to expel or defeat the attack. However, because the Soviet force would consist of units equipped at least with light armored vehicles, the RDF would have to include units with substantial anti-armor capabilities, some with tanks and infantry fighting vehicles.

COUNTERING NON-SOVIET THREATS

In analyzing non-Soviet threats to U.S. interests and the implications for U.S. force levels, the difficulties in constructing plausible scenarios for using forces of large scale (that is, involving more than one division) immediately become conspicuous. On the other hand, it is easier to imagine many advantages in--or even necessities for--using relatively small forces to further U.S. interests.

The problem with estimating requirements for this category of peacetime activity is that the range of possible events and military responses is quite wide. Furthermore, it is entirely plausible for two or more events to occur simultaneously. Therefore, picking any one scenario or any set of scenarios is an arbitrary decision.

Although force levels for such contingencies will ultimately be established arbitrarily, historical perspective is useful in forming a decision. Analysts have enumerated as many as 215 incidents since World War II that involved the use of U.S. military forces to further political objectives. One study shows that ground force combat units were used in 54 percent of these incidents. 9/ In no more than 15 percent was a force larger than one battalion used. Marine Corps ground combat units were used

9/ See Barry M. Blechman and Stephen S. Kaplan, Force Without War (Brookings Institution, 1978), Chapter Two.

twice as often as Army units, and in most instances the Marine Corps units were already deployed on amphibious ships in the region of the incident. More than 28 percent of the incidents involving the Army occurred in Europe. At least once (in 1964 in the Dominican Republic), an Army airborne division was used to reinforce Marine Corps ground combat units.

Past dependence on the U.S. Marine Corps is not hard to understand. The Marines are trained, equipped, and organized for flexible and quick action. More important, they have been deployed on amphibious ships near the trouble spots and thus were readily available.

In light of this past experience, it is useful to survey conditions on the Mediterranean side of the Middle East, in the Persian Gulf region, and in Korea. As mentioned above, these are the places where the United States might be likeliest to use military force to protect its interests. Several points emerge from this survey. First and most important is the need to develop multilateral partnerships that include regional and European powers committed to maintaining stability. Second is the need for flexible military forces to be deployed in the vicinity of possible trouble spots to enable the United States to act quickly and appropriately. And last, direct military intervention is the least desirable method for protecting U.S. interests.

The Gulf Region

Reliance of the United States and its trading partners on Persian Gulf petroleum focuses attention on the area and heightens concern over stability. Protecting against lengthy interruptions in the delivery of oil is likely to be of prime interest.

Recent events have called much attention to the region's volatility and to the United States' restraint from dealing with crises militarily. The OPEC oil embargo of 1974-1975 and the revolution in Iran as well as the seizure of the U.S. embassy and its personnel in 1979 did not prompt the United States to use ground combat or any other military units to protect its interests. Similarly, the United States has not entered the current Iran/Iraq war. In each case, the United States could have used force, but perhaps the difficulty in formulating and implementing long-term policies that would foster stability has been the ultimate deterrent to the use of military force.

Whether the Soviet Union itself has been or will ever be a primary source of instability in this area is unclear. But it has demonstrated the willingness to take advantage of indigenous unrest to further its own interests. In so doing, it could encourage or amplify the effects of inherent instabilities.

Sources of Instability. Clearly, the potential for instability in the Gulf region is great. The new Iranian government, for example, remains incapable of creating unity. So long as Iran remains fractured, it will be unpredictable and a source of instability. Iranian rulers could magnify disagreements with neighboring states in attempts to foster internal unity. Tribes seeking autonomy could be encouraged and nurtured by external powers to foment revolution as a means of gaining influence. Leftist factions might gain enough influence to give the Soviet Union an entry to mount a presence in the region and create the possibility of confrontation with the United States.

Social unrest, too, contributes to the instability of the area. The modernization that now characterizes development efforts in most Arab states is seen by the poor as widening the gap between the rich and themselves. With few tangible benefits accruing from the modernization programs, the poor can only conclude that the wealthy ruling class is corrupt. This dissatisfaction is exacerbated when the poor can contrast their circumstances with the vastly better living standards in Europe or Japan they see on television or in newspapers and magazines. ^{10/} Thus, there seems to be ample reason for the poor to be inclined to express their discontentment.

The rift between the ruled and the rulers is as wide as that between the rich and poor, because in most cases the rich are the rulers. Even though the Saudi rulers receive petitioners weekly and rule with the counsel of about 50 religious elders, they are still accused of elitism and favoritism. On religious grounds, their legitimacy was questioned by the group that seized the Mosque in Mecca in 1979. In Oman, the Dhofar insurgency, which was put down in 1976 with the help of Iranian

^{10/} These points were made by Ahmad Bahaeddine, editor, Al-Arabi, in a speech at the Fifth Annual Symposium, "The U.S., Arabia, and the Gulf," Center for Contemporary Arab Studies, Georgetown University, April 10-11, 1980.

and Jordanian troops, is a continuing threat of unknown proportions. 11/

Persistently underlying this generally restless situation, the question of a nation for the Palestinians continues to pervade Arab world politics. The Palestinian populations of the Arab states seem to have the power and influence to make the question an important factor in policy considerations. It affects internal politics, regional policies, and Arab cooperation with the United States in solving security concerns. Many Arabs believe that, until the nationhood issue is resolved, the Palestinians will be a potentially disruptive and radical force.

Regional Military Forces. In the Gulf region, the only army capable of extended conflict outside its country's own borders was Iran's pre-revolutionary army. That army was large enough to challenge its neighbors. (See Table 5, which depicts the sizes and composition of armies in the Gulf region.) Furthermore, its 0.76 combat-to-support ratio indicates that it had the logistics assets to support projection beyond its borders. (U.S. forces in Germany have a 0.72 combat-to-support ratio.) Based on its performance to date in the conflict with Iraq, the Iranian army's capabilities were significantly degraded by the effects of the revolution.

The Iraqi army has more divisions than any other in the region but far less support capability. It does appear to be well able to defend the homeland, however. Projection beyond its own borders would be possible for only short periods and short distances. The Iraqi army could probably overwhelm Kuwait, but the longer and more demanding operations necessary to conquer either Iran or Saudi Arabia would probably be beyond its capacity.

The other armies in the region appear to have no more capability than that required for self-defense. The armies are small and seem to have insignificant support capability.

Plausible Scenarios for U.S. Military Intervention. Given the political, social, and military environment in most Gulf states, wars started by revolution will constantly threaten stability. U.S. military intervention in such wars is unlikely

11/ David E. Long, The Persian Gulf: An Introduction to Its Peoples, Politics, and Economics (Westview Press, 1978), p. 56.

TABLE 5. ARMIES OF THE GULF STATES: 1979-1980

Country and Population (in millions)	Number of Army Personnel	Division Equivalent	Medium Tanks	Support Manpower	Combat-to-Support Ratio
Iran (39.3)	285,000	7 1/3	1,700	162,000	0.76
Iraq (12.7)	190,000	9 1/3	1,800	35,000	4.4
Saudi Arabia (8.0)	35,000	2	350	10,000	2.5
North Yemen (7.5)	35,000	3 2/3 or more	232	None	None
United Arab Emirates (0.9)	23,500	1 2/3	None	12,000	0.96
South Yemen (1.9)	19,000	1 or more	260	None	None
Oman (0.9)	16,200	1	None	4,200	2.86
Kuwait (1.2)	9,000	1	280	None	None
Qatar (0.2)	4,000	1	12	Less than 1,300	2.1
Bahrain (0.4)	2,300	1/3 or less	None	Less than 1,000	1.3

SOURCES: International Institute for Strategic Studies, The Military Balance, 1979-1980 (London, 1979); and CBO.

to be appropriate. Some form of international aggression will continue as a possibility and may become the most plausible cause for the United States to use force.

Revolutionary Scenarios. A revolution in any state could cause an interruption in oil deliveries to the United States and

its trading partners. In an oil-producing state, the uprising would be the direct cause of the interruption, and after the disturbance subsided, production might be reduced even if the old government survived. If the revolution occurred in a non-producing state, there could be secondary effects--such as sunken ships blocking waterways--that could limit oil shipments.

The usefulness of U.S. military intervention in preventing or forestalling such an interruption of oil supplies is unclear. Most oil fields are spread over large areas and are difficult to protect. Furthermore, parts of the production and supply systems--such as pumping stations, pipelines, and loading docks--are very vulnerable to sabotage. U.S. military forces could separate factions or, in cooperation with the local army, protect the personages of a threatened government; this was the case in the U.S. interventions in the Dominican Republic and Lebanon. But military force could not guarantee political solutions suitable to the United States. Furthermore, the anti-U.S. feelings that seem prevalent in the Persian Gulf states now would further complicate U.S. military intervention and would increase the likelihood of sabotage to the oil delivery system. U.S. military intervention in the case of an internal revolt therefore seems to be an implausible scenario for U.S. force planning.

Conflicts Between Gulf States. In considering scenarios of conflict between Gulf states, the question of the plausibility of the United States as a policeman arises. For the United States to assume this role would require regional agreement that U.S. intervention is acceptable. In addition, the United States must have the military capability to take action.

Regional acceptance of U.S. intervention would depend on circumstances. At present, there seems to be widespread aversion in the Middle East to either a U.S. or a Soviet military presence. However, an attack by South Yemen on Oman to encourage a resurgence of the Dhofar rebellion, or a marked expansion of the current Iran/Iraq conflict, could change current attitudes. If a South Yemen attack occurred at a time when other Arab countries that might be inclined to help Oman were preoccupied, U.S. assistance might be welcomed. Likewise, an attempt by Iran to interrupt the traffic of oil tankers through the Strait of Hormuz could motivate Saudi Arabia to seek more U.S. assistance.

Neither of such circumstances would present a great military problem for the United States. South Yemen's small military force, even though it has been equipped by the Soviet Union, should be no match for the 24,000-man force that the United

States could deploy in two weeks' time. However, the possibility of a countermove by the Soviet Union to support South Yemen would argue in favor of a U.S. capability closer to that envisioned for the RDF (that is, 110,000 men dispatched to the area within 40 to 50 days).

Iraq has been considered a potential aggressor against its Arab neighbors. It has already shown its hostility towards Iran. Its hard-line political attitude toward Israel, its apparent ties to the Soviet Union, the size of its army, and its 1973 border dispute with Kuwait have been the main ingredients in this assessment.

Lately, however, a new Iraqi foreign policy has emerged. Iraq has separated itself politically from the Soviet Union, purged the local Communist party, and called for a collective security pact of the Arab states in the Gulf region. These new directions seem to diminish the threat of Iraqi aggression against its Arab neighbors. Iraq's foreign policy could change, however. It is necessary, therefore, to examine the implications for the United States of Iraqi military action against an Arab neighbor.

Besides Iran, possible targets for Iraqi aggression include Jordan, Kuwait, Saudi Arabia, and Syria. The analysis here does not examine the Syrian case, because the likelihood that interruption of oil deliveries would result from an Iraqi/Syrian conflict appears slight. This does not imply, however, that the United States need have no interest in such a conflict. Syria's mutual friendship treaty with the Soviet Union presents the possibility that the Soviet Union would move forces to support Syria--certainly a cause for U.S. concern, though not necessarily one that ought to involve U.S. ground forces.

Whatever else might result from the war between Iran and Iraq, a lengthy interruption of Iranian oil deliveries is almost a certainty. Iraq's capture of the oil fields around Abadan and the destruction of oil-producing facilities will not be quickly undone. Even if the United States had had the RDF capability at the outbreak of the Iran/Iraq conflict, whether the damage to the oil facilities could have been prevented is uncertain.

To separate the forces of Iran and Iraq, the United States could intervene only with the agreement of the two parties. For that purpose, however, the current 24,000-man capability ought to suffice.

An Iraqi invasion of Kuwait could happen very quickly. Iraq's army is large, and Kuwait's is very small. The United States probably could not react fast enough, even with the RDF, to prevent an Iraqi invasion. If, after securing Kuwait, Iraq continued to provide Kuwaiti oil at pre-invasion production rates, the United States would have only "moral"--hence, politically sensitive--grounds for countering the invasion. A less controversial and more likely move might be to encourage regional opposition to the takeover.

If, on the other hand, Iraq refused to produce Kuwaiti oil, then some sort of a U.S. military response would be more likely. Even so, the high level of anti-U.S. sentiment in the region would argue for any U.S. action to be part of a multi-lateral operation. In such a case, time would be available for the United States to move military forces while political powers maneuvered to establish the international aspects of the response. A U.S. military force as large as the RDF might be needed. The speed with which it could move would give the United States important flexibility, but fast deployment would not be essential because other nations would need time to assemble their contributions.

An Iraqi invasion of Jordan or Saudi Arabia seems most unlikely. The implications of such aggression could have severe negative effects on Iraq. Furthermore, both countries present difficult military targets.

Saudi Arabia's most significant advantage is its geography. The country's size and inhospitable terrain make it difficult to conquer, especially with a largely untried army. The Saudis' other advantage is their importance to the United States: heavy reliance on Saudi oil would assure a vigorous U.S. response to any attack on Saudi Arabia.

There is no apparent motive for Iraq to attack Jordan. If there were, however, Iraq would confront both an Israeli and a U.S. response. Israel would almost certainly respond out of fear that a strong and possibly hard-line Iraq with control over Jordan could threaten Israeli survival. In addition, the United States has demonstrated continuing support for the perpetuation of the kingdom of Jordan.

For either scenario, the RDF would certainly give the United States an advantage; but for these scenarios, speed of movement might not be so important. With almost 2,800 tanks and an army of

about 200,000 (on paper), the Iraqi army is formidable. The Iraqi army is largely untried, however, and is low on support. It might present no match for the RDF. On the other hand, if Iraq's army were able to withstand the initial effects of combat with U.S. forces, then its superiority in tanks would have to be offset by reinforcements from the United States.

The Mediterranean Side of the Middle East

The principal concern of Arab foreign policy in this western portion of the Middle East is Israel, not oil. Egypt, Jordan, Lebanon, and Syria all border on Israel, and all have been involved in Arab/Israeli wars. For these Arab states, the post-World War II period has been dominated by Israel and, more recently, by the directly related problem of a Palestinian homeland. Thus, an analysis of the likelihood of U.S. military involvement in this region, separate from the rest of the Middle East, is appropriate.

The United States has a long-standing interest in peace and stability in this region, and it has acted militarily as well as politically to foster these objectives. On numerous occasions the United States has used naval formations off the eastern shores of the Mediterranean to demonstrate commitment to a particular policy. Only once, however, has the United States gone so far as to emplace ground forces.

The emplacement in 1958 of Marines in Lebanon occurred under conditions that do not now prevail and that seem unlikely to recur. In the late 1950s, the U.S. concern that Communist elements would use Egypt's President Gamal Abdel Nasser to gain advantage in the Middle East predisposed the United States toward action. ^{12/} When Lebanese President Camille Chamoun's request for help in maintaining order was punctuated by the fall of the Iraqi monarchy, all the elements for triggering a U.S. military response converged. Thus, U.S. Marines joined the Lebanese army in keeping peace, while the Lebanese political process selected a new leader with broader appeal.

The United States remains concerned that Communism in the Middle East could give the Soviet Union the opportunity to establish a meaningful presence there, but the political

^{12/} Blechman and Kaplan, Force Without War, p. 231.

climate has shifted. Under President Anwar al-Sadat, Egypt has expelled Soviet advisors and has turned to the West for help. The threat of Arab countries' unification under a possibly pro-Soviet United Arab Republic never materialized, and in fact the republic itself dissolved. To be sure, Communism has not disappeared from Middle Eastern politics, nor have the opportunities for the Soviet Union to take advantage of turmoil altogether vanished. But there is less cause for U.S. concern. Accordingly, there is less motivation for U.S. military action as drastic as the emplacement of ground combat forces.

Today, a gesture similar to the Lebanese president's bid for U.S. assistance in 1958 is an unlikely occurrence. Syrian and U.N. security forces, and Israel's willingness to assist the Lebanese Christians, have created a situation in which external powers are already involved, and it seems unlikely that the fragmented Lebanese leadership would ask another foreign power to assist. In Syria, the principal deterrents would be the popular view of the United States as Israel's protector and as the motivating force behind what many people perceive as the westernization of Arab culture.

Jordan's problems seem to be more related to economic development, and they are far less explosive than those of any other country in the region. Egypt's problems are also economic, but substantial concern over the West Bank/Gaza autonomy (that is, the Palestinian nation) issue could cause internal political problems.

The usefulness of U.S. forces in restoring stability, should this autonomy issue flare up, appears very low. Thus, there seems to be a paucity of plausible scenarios requiring the introduction of ground forces in the region. Clearly, however, the least probable circumstances that could arise are those demanding engagement of a large U.S. ground force within a short period. But this assessment does not lead inevitably to the conclusion that the United States need not maintain a capability for military intervention. Circumstances could shift again, and the President should have a military option for responding to events in a persistently unstable part of the world.

Sources of Instability. The sources of instability on the eastern rim of the Mediterranean fall into two categories: those that could disrupt the region as a whole, and those with primary effects localized in a specific country. In the first category, the most conspicuous issue is the Palestinian question. In the

second category, there are the political instabilities of Lebanon and Syria, as well as the economic difficulties of Egypt.

The Palestinian question affects every country in the region, and West Bank/Gaza autonomy is perhaps the major obstacle to Arab acceptance of the Egyptian/Israeli peace treaty formulated at Camp David in 1979. The continuing presence of Palestinians in southern Lebanon is a hindrance to ending Lebanon's civil war and is a source of conflict and turmoil within Israel. Moreover, the Lebanese civil war keeps Syria's military involved in Lebanon.

Beyond the Palestinian homeland question, there are political and religious tensions that, when aggravated by shifting economic conditions, generate strong pressures for change. Syria is experiencing steep inflation, and its President, Hafez al-Assad, seems to be achieving even greater concentration of political power within the Alawite Muslim minority sect. 13/ The Assad government seems to be growing ever more arbitrary and inefficient. Political assassination with religious overtones has become a commonplace feature of Syrian life. In 1979, 60 army cadets of the Alawite sect were murdered by the Muslim Brotherhood, a right-wing Sunni group. On March 8, 1980, the daily political assassinations gave way to widespread attacks on government buildings and strikes by local merchants. 14/

The U.N. peacekeeping force of 6,500 men has stabilized the situation in southern Lebanon to the extent that many villagers have been able to return home. Despite this imposed peace, the prospects for long-term stability will not be good until the Palestinian problem is resolved and until the Muslim and Christian communities can work out an acceptable political system for governing. 15/

13/ "Syria Moves on Reforms to Ward Off Troubles," The Middle East (November 1979), p. 14.

14/ "Time Runs Out for Assad," The Economist (March 22, 1980), p. 35.

15/ Hermann F. Eilts, "Some Reflections on the Middle East," in The Middle East After Partial Peace: What Lies Ahead?, 33rd Annual Conference of the Middle East Institute, October 1979.

Although Egypt is not free of religious discord, its problems seem related more to economics and to peace with Israel. President Sadat has survived severe criticism from other Arab states for his independent treaty with Israel. Quite possibly, if the Egyptian people could see an economic advantage in peace, and if Israel were to show flexibility in its West Bank/Gaza negotiations, then popular support within Egypt for Sadat's policies toward Israel could strengthen.

Regional Military Forces. The military history of this region has demonstrated that quantitative military superiority does not guarantee success on the battlefield. In the several Arab/Israeli conflicts, Israel's tactical proficiency has prevailed despite the tremendous numerical advantage of its opponents' combined forces. Even though the forces of Egypt, Jordan, and Syria outnumber Israel's by 1.5:1 in tanks and 1.7:1 in divisions (see Table 6), it is not at all clear that Israel is militarily jeopardized.

Although the Arab armies have had since 1973 to absorb the lessons of the last war, their motivation may have waned in the face of other pressures. The Egyptians, having gained through negotiation what could not be achieved by military actions, have turned their attention to economic development; this may have relieved pressures for military improvement. Syria's internal political and economic problems may have diverted attention from learning how to martial the Arab numerical superiority against Israel.

As for conflict between Arab states, Syria appears to have the military capability but not the current political will to attack Jordan. After aborting attempts to help the Palestinians resist forcible expulsion from Jordan in 1970, Syria seems to have no reason at the moment to assault Jordan. The Syrians now have military forces in Lebanon and, according to at least one account, are anxious to leave in order to concentrate on solving their political and economic problems at home. 16/

The Egyptian army, too, is large enough to present a threat to other Arab countries, but Egypt's geographic isolation virtually precludes aggression against any Arab state except Libya.

16/ "Assad Acts Abroad to Keep Home Front in Order," The Middle East (August 1979), p. 14.

TABLE 6. COMPOSITION OF EASTERN MEDITERRANEAN COUNTRIES' GROUND FORCES:
1979-1980

Country and Population (in millions)	Number of Army Personnel	Division Equivalents	Numbers of Tanks	Support Manpower	Combat-to- Support Ratio	Reserves
Egypt (40.5)	350,000	15	1,600	178,000	0.97	500,000
Syria (8.4)	185,000	8 or more	2,700	89,000	1.1	100,000
Israel (3.8)	138,000	15 2/3	3,050	55,000	1.5	460,000
Jordan (3.1)	60,000	4 1/3	500	10,000	5	30,000
Libya (2.9)	35,000	1 2/3	2,000	16,000	1.2	None
Lebanon (2.7)	8,000	1 or less	None	2,000	3	None

SOURCE: International Institute for Strategic Studies, The Military Balance, 1979-1980 (London, 1979).

On Egypt's western border, Libya is indeed accessible, however, but it has forces considerably inferior to Egypt's. Whether the historical political disputes between Egypt and Libya could ever precipitate large-scale conflict is unpredictable.

Plausible Scenarios for U.S. Military Intervention. On the basis of the political instabilities and military imbalances of the eastern Mediterranean countries, a cause for U.S. military intervention in the region appears unlikely. The United States has already refused to get involved in the latest Lebanese civil war. The possibility of a Soviet military presence does not seem so great today as it appeared in 1958, when U.S. Marines landed in Lebanon. U.S. ground combat forces are particularly ill-suited for internal disputes, either to referee a battle between religious forces or to solve economic grievances. With the Egyptian/Israeli peace treaty in effect, the probability of an Arab/Israeli war now appears to be low, and the probability of U.S. military intervention even lower. But none of the above

means that the United States should ignore the area in its military planning. Although conditions could change quickly, present circumstances provide little rationale for maintaining a substantial military capability designed specifically for operations in this region.

KOREA

Similarly, the requirement for U.S. forces in South Korea appears quite small, primarily because the South Korean army is strong and the terrain offers major defensive advantages. The army does need improved tactical mobility, however.

The Korean Military Balance

South Korea's population is twice the size of North Korea's, and its gross national product is more than four times that of North Korea. The two armies, however, are about the same size (see Table 7). There is no estimate available of North Korean reserves, but since the length of service for conscripts is five years in contrast to two and one-half years in South Korea, one can infer that North Korea has only half as many reserves. 17/

North Korea has more divisions, but the divisions have about 65 percent the manpower of South Korean divisions; therefore, the disparity in combat strength is not as great as a comparison of divisions might suggest. The major difference between the two armies is North Korea's greater emphasis on mechanization, armor, and fire support weapons. The North Korean army is superior in tanks by a ratio of 2.6:1, in armored personnel carriers by 1.6:1, and in artillery-type weapons by 2.7:1.

North Korea's tank superiority is not necessarily a decisive advantage. Topographical features restrict tanks to relatively small, well-defined areas. Without room to maneuver, the full weight of the North Koreans' tanks could not be applied against the South Koreans' defenses. The problem can be illustrated by a much simplified portrayal of a tactical situation.

17/ The Military Balance, 1979-1980, pp. 68-9.

TABLE 7. NORTH AND SOUTH KOREAN ARMED FORCES, KEY MILITARY INDICATORS:
1979-1980

	North Korea	South Korea	Ratio (North Korea- to-South Korea)
Population	17,580,000	37,760,000	0.47
Gross National Product <u>a/</u>	10.5	46.0	0.23
Total Active Forces	632,000 to 672,000	619,000	1.1:1
Total Reserve Forces	260,000	1,240,000	N/A
Composition and Equip- ment of Ground Forces			
Combat divisions <u>b/</u>	45 2/3	20 1/3	2.2:1
Marine divisions <u>b/</u>	None	1 2/3	N/A
Manpower in divisions	456,600	336,000	1.4:1
Tanks	2,200	860	2.6:1
Armored personnel carriers	800	500	1.6:1
Artillery	3,500	2,104	1.7:1
Rocket launchers	1,300	None	N/A
Mortars	9,000	5,300	1.7:1
Anti-aircraft guns	5,000	106	N/A
Air Force Equipment			
Combat aircraft	565	254	2.2:1
Airlift aircraft	250	32	7.8:1
Helicopters (troop carriers)	60	None	N/A

SOURCE: International Institute for Strategic Studies, The Military Balance, 1979-1980 (London, 1979), p. 68.

NOTE: N/A = Not available.

a/ In billions of constant 1978 dollars.

b/ North Korean divisions are modeled after Soviet and Chinese divisions, and number about 10,000 men each--roughly 65 percent of the strength of South Korean divisions, which follow U.S. division organization. Most of the manpower differences, however, lie in combat support and logistics troops. Actual deployed combat strength in a North Korean division, including weapons, is roughly the same as that of a South Korean division. Brigades are counted as one-third division.

Assuming that all of the 15-mile-wide avenue on the west coast is usable by tanks and that the North Koreans position their tanks no farther apart than 25 yards, then only 1,000 of their 2,200 tanks could attack South Korean defenses at any one time. By the same ground rules, South Korea could deploy its 860 tanks, creating a 1.2:1 force ratio for an initial engagement. South Korea could maintain that ratio if its tanks could put out of commission (in military parlance, "kill") two to three of the attacker's tanks for every one it lost. Given that South Korea would be defending and that it could prepare field fortifications to protect its tanks' firing positions, emplace obstructions to slow the attack, and plan for the coordinated application of supporting fires, a 3:1 kill ratio in tanks might be achievable.

The North's superiority in armored personnel carriers, transport aircraft, and troop-carrying helicopters could be significant. These assets give the North Koreans the ability to shift troops faster and in larger quantities than could the South Koreans. With the capacity to assign only four miles of front to each defending division, the South Koreans would probably not have to leave a gap in their defenses, but if they did and the North Koreans discovered it, the North Koreans could exploit the gap more quickly than the South Koreans could close it. 18/

Topographical Considerations

Terrain is such a dominant factor in assessing the military balance between the two Koreas that conventional measures of military strength do not fully apply here. In assessing the Korean military balance, one must examine the numbers in the context of the terrain to judge their real military significance.

The geography of Korea gives South Korea significant assets for defending against an overland assault from North Korea. The peninsula is only 100 miles wide at the 38th parallel, through which the division between North and South Korea runs and where South Korea maintains its first defense line. (In Europe, the Dutch, with forces one-seventh as large as South Korea's, defend

18/ Frontage for defending divisions in Europe could range from 56 miles if a surprise attack were achieved by the Warsaw Pact to 19 miles if U.S. reinforcements could arrive before a war started.

an 80-mile front.) This permits the defender to anchor both flanks, knowing that only an amphibious operation could circumvent that position. A high, rugged mountain chain runs down virtually the entire length of the peninsula's east coast. Ridges running east-west make excellent defensive positions, greatly magnifying the capabilities of the South Korean defenders.

There are only two overland avenues for armored attack (shown in Figure 7), but neither is easy going. The one on the east coast is only about six miles across--barely wide enough for a division--with only one major road. An attacker would have to travel 235 miles down that narrow corridor to reach Pusan, the only decisive objective within reach. This route looks sufficiently unattractive to make it useful for no more than a secondary effort and one that could easily be stopped. The other avenue is on the west coast. It is about 15 miles wide, enough for two or perhaps three divisions, and leads directly to Seoul, which is only some 42 miles from the border. This avenue presents problems for South Korea, but even though the ground is relatively flat, the defender would have several major advantages.

First, the Imjin River that runs east-west just below the 38th parallel would offer an excellent obstacle to an attack. Second, if the North Koreans breached those initial defenses, the Han River on the west flank and the mountains on the east flank would surely restrict offensive maneuvers.

North Korea's armored forces would be reduced to acting as a battering ram, which could be slowed by all manner of man-made obstacles and by the fire of antitank weapons directed from observation posts in the mountains on the east flank of the corridor. With limited mobility, the forces forming the battering ram would make excellent targets for close air support.

Attacking infantry forces could move down the center of the peninsula. The mountains would make the going slow, but if one or two ridges could be surmounted so that elements reached one of the east-west valleys, they could move west down the valley and enter the flat lands south of Seoul. This would seriously disrupt South Korea's defense. Such a maneuver would be very difficult to accomplish, however. In the mountains, even small defensive units can successfully hold positions, and thus the attacker's success would depend on avoiding such positions.

The South Koreans, on the other hand, must ensure that they could position infantry forces in front of the North Korean

attack. Doing so would require good tactical mobility--the ability to move units considerable distances in short periods of time.

CONCLUSIONS

Should the Soviet Union choose to use ground forces against adjacent countries, it would have a distinct advantage that would be extremely difficult and expensive for the United States to overcome by itself. Therefore, if the United States is to protect its interests in such countries, the most practical option is to forestall Soviet aggression altogether. U.S. policies that further regional stability, strengthen indigenous forces, and offer backup military assistance could accomplish that goal.

To counter non-Soviet threats to U.S. interests, there is a premium on quick reaction even though that may mean initially using a small force (of, say, 3,000 to 4,000 men). The U.S. Marine Corps has the ability to fill this role, but it needs to be more widely deployed if reaction time is to be kept short. In particular, a Marine brigade with amphibious capabilities needs to be deployed closer to the Gulf. 19/

In areas where the Soviet Union would have to project forces entirely by air or sea, the United States might have the comparative advantage because of the strength of its naval and air forces. In such locations, the United States might be able to isolate Soviet forces and eventually overcome them.

To counter Soviet military moves outside Europe, the United States must choose carefully what ground it fights over. Moreover, it must cautiously design its methods to take advantage of whatever weaknesses exist in the Soviet position. This argues not for more forces, but for the forces acquired for other reasons to be flexible. It also suggests that sometimes, as in Afghanistan, the United States may not have an option to use military force at all.

19/ For a more detailed discussion, see Congressional Budget Office, The Marine Corps in the 1980s: Prestocking Proposals, The Rapid Deployment Force, and Other Issues (May 1980), pp. 41-45.

CHAPTER V. OPTIONS FOR CONFIGURING U.S. GROUND FORCES

On the basis of earlier assessments of the military balance in Europe and of the political and military climate in the possible locations of a minor war, this chapter identifies six alternative forces that meet the Defense Department's requirement for a 1 and 1/2 war capability. The alternatives differ in the specific scenarios they assume, in the risks they entail for the United States, and in their costs. The least expensive approach, costing some \$5.9 billion over an eight-year span, would combine the Defense Department's current program of mobility improvements for the NATO contingency with some enhancement of current U.S. capabilities for the Persian Gulf region. ^{1/} At the other end of the spectrum, an alternative costing \$80.3 billion over eight years would markedly increase the size of the U.S. Army to defend NATO and would fully fund the Defense Department's mobility improvements for the 1/2 war contingency. The four choices in between vary in the emphasis they place on force structure increases for NATO and on mobility improvements for the 1/2 war contingency. Included among these alternatives is a fully funded version of the present Administration's programs for both contingencies.

COMPANION MILITARY AND POLITICAL ISSUES

As approaches to meeting the Defense Department's 1 and 1/2 war requirement are assessed, certain peripheral but critically pertinent issues must also be weighed. These secondary concerns are both military and political in nature, and they could have bearing on U.S. policies and actions both in Europe (the scene of the Defense Department's one full-scale war scenario) and in Western or Eastern Asia (where a 1/2 war might occur). Such U.S. initiatives could range in scope from the military details of buttressing NATO's defenses in Europe to political measures to fortify the independence of Iran, Turkey, or other nations. A selection of what may be the most important of these secondary

^{1/} All cost figures are expressed in constant fiscal year 1982 budget dollars.

matters is discussed below as background for assessing the alternative means for meeting the Defense Department's requirements.

Encouraging a Defensive Posture in Eastern Europe

As Chapter III makes clear, the Soviet Union's attack options are severely constrained if it cannot count on full participation by its Eastern European allies. In view of this constraint, NATO might stand to gain considerable security by influencing the Soviets' Pact allies to assume a strictly defensive posture.

In the political and economic arena, the United States, in concert with its NATO allies, could foster confidence and independence in Eastern European countries by following policies tailored to the individual needs of each country. The United States could promote cultural and educational exchanges, and it could make Western goods more available to foster economic growth and nurture cooperation within Europe. At the same time, NATO could take opportunities to reduce Eastern Europe's reliance on the Soviet Union. Freer trade and private U.S. investment are seen as ways to help these countries develop and prosper. The United States could extend assistance and help alleviate the food production and distribution problems plaguing Czechoslovakia and Poland.

To complement such policies, insulating relations with Eastern Europe from the negative effects of U.S./Soviet confrontation elsewhere could be beneficial. If the Eastern European countries became concerned that NATO might react in Europe to Soviet moves in such distant places as Afghanistan, then the Communist governments could feel compelled to adopt hard-line policies toward NATO. The ultimate effect of such a concern might be to encourage closer military cooperation between the Soviet Union and the other Pact nations.

Militarily, the United States would need the cooperation of France and West Germany to make NATO's forces appear more strictly defensive and thus assuage long-standing anxieties in Eastern Europe over West Germany's military power. One such possibility would be to substitute a French corps for the West German corps that now occupies a defensive sector in NATO's NORTHAG zone (see Figure 2). (The West German corps would then be placed in reserve in NATO's rear area, where it could strengthen NATO's defenses by increasing NATO's ability to counter any attacks in the critical North German Plain.)

Influencing the Soviets' Deployment Options

The military balance in Europe's Central Region is sensitive not only to assumptions concerning Pact unity in an attack but also to the Soviet Union's strategy for allocating its own divisions among competing concerns. At present, the Soviet Union maintains roughly 24 divisions along its southern border and 46 divisions on the Sino/Soviet border. If the Soviet Union were to adopt a first-strike strategy in Central Europe and shift a substantial number of divisions to face NATO, NATO's defensive problems would be significantly worse than Chapter II suggests. On the other hand, a Turkish threat on the southern border and a Chinese threat on the eastern border could cause Soviet strategists to adopt a more cautious course.

Soviet strategists probably would find the Chinese forces troubling but not seriously threatening. Chinese forces would have great distances to travel before reaching any Soviet industrial centers worth destroying, and although the Chinese army is large, it seems to lack the logistic capability to support a massive, long-distance campaign. Moreover, minimal Soviet divisions probably could inflict major delays on a Chinese army that is largely inexperienced in mobile warfare. Consequently, Soviet strategists might find it unnecessary to reinforce their Far Eastern forces. They are also unlikely to reduce those forces.

NATO would appear to have more leverage to influence Soviet strategists by improving the Iranian and Turkish forces on the Soviet Union's southern flank. Forces in Turkey or Iran capable of extended offensive action would be within striking distance of crucial objectives in the Soviet Union and would thus cause Soviet planners considerable concern. To create a believable threat on the southern flank would be difficult, however. Neither the Iranian nor the Turkish army is now capable of offensive action, and major political and economic obstacles must be overcome before those armies could be improved.

Arms Control Measures

Arms control in the form of force reductions in Europe, such as those now being debated in the Mutual and Balanced Force Reduction negotiations, could give NATO more warning of an impending attack, but it would not change the overall military balance. Soviet forces stationed inside the Soviet Union, instead of in East Germany, would have farther to travel to reach attack posi-

tions. This would give NATO more time to prepare its defenses. If enough Soviet forces were moved back to the Soviet Union, the possibility of a surprise or a short-warning attack would be significantly diminished.

To ensure that force reductions would enhance security, NATO would need to be able to build up its forces as fast as the Soviet Union can. Transatlantic U.S. withdrawals in return for transcontinental Soviet withdrawals would not maintain that essential equilibrium. But if, in place of U.S. withdrawals, a portion of the West German standing army were converted to Home Defense units, then the post-mobilization buildup rates could be equal. 2/

Agreements limiting the size of forces or modernization rates could be important elements in guaranteeing NATO's security. But pursuing such agreements while NATO's defenses are deficient would require precautions against codifying the current imbalance in conventional forces.

Field Fortifications and Barrier Systems

NATO's forces are trained to enhance the defensive qualities of the terrain whenever time is available. But little such preparation appears to have occurred to date. Therefore, NATO must be planning to do the bulk of such work after mobilization. How much could be accomplished would depend on the time between mobilization and the actual start of war.

In peacetime, it may be politically impractical to expect the West Germans to build extensive fortifications, lay mine fields, or erect barriers in avenues of attack; but it might be considered acceptable to build such systems selectively. One of NATO's most pressing problems is not having enough forces both to occupy defensive positions and to form an operational reserve with which to repel breakthroughs. A system of barriers and fortifications from Hamburg across Schleswig Holstein to the Baltic Sea coast near the city of Lubeck (see Figure 2) would make it feasible to shift units from the defense of Schleswig Holstein to operational reserve status. Another system in Bavaria along the border with

2/ Home Defense units have a cadre of active-duty personnel in peacetime. On mobilization, trained reservists would join the units to bring them to full strength.

Austria would give the small forces assigned to that area better prospects for a successful defense without calling for reinforcements. These two systems could not be considered impenetrable defenses (a claim often made for the Maginot line). Rather, they would help smaller forces to defend sectors, freeing troops to form an operational reserve that could focus on the critical North German Plain.

New Technology

Technological improvements in NATO's equipment could change the military balance as surely as could force increases. Furthermore, the change might last longer if the new technology were not easily duplicated by the Soviets. Marginal improvements in quality, however, such as a faster or more survivable tank, are not likely to shift the balance significantly and might only offset comparable changes in Pact forces. On the other hand, a tank requiring half the crew of current tanks that can achieve the same or better kill capability, endurance, and cross-country speed would allow NATO to have more armored forces in its standing armies without raising manpower levels. Without similar technology, the Pact would either have to accept the new balance or increase the size of its armies--a politically difficult choice.

Regional Defense Agreements

The United States could encourage the Middle Eastern Gulf states to take military responsibility for the first line of their defense. Such an approach, if it worked, would be optimal. Not only could the regional powers react to threats more quickly and forcefully than could the United States; they could also immediately apply significant economic and political pressures on the aggressor. Further, regional unity could have a major deterrent effect on the Soviet Union. From the United States' standpoint, perhaps the greatest benefit would be allowing U.S. forces to stay out of the area.

ALTERNATIVE OBJECTIVES FOR U.S. GROUND FORCES

As Chapter II states, the first step in developing ground force alternatives for the 1 and 1/2 war criterion is determining what objectives they must meet. This section identifies some possible objectives and appropriate forces for NATO and non-NATO

contingencies. For a full-scale NATO war, the possibilities range from relying on theater nuclear weapons to deter attacks of more than 90 Pact divisions to having the conventional capacity to conduct a successful steadfast defense against 120 divisions. For the non-NATO war, the possibilities are to have a force capable of reinforcing regional partners (a "collective security" force) or to have the mobility assets (that is, airplanes and ships) that would give the United States the independent capability (a "counter-Soviet" force) to oppose Soviet aggression against a noncontiguous state such as Saudi Arabia.

The NATO Contingency

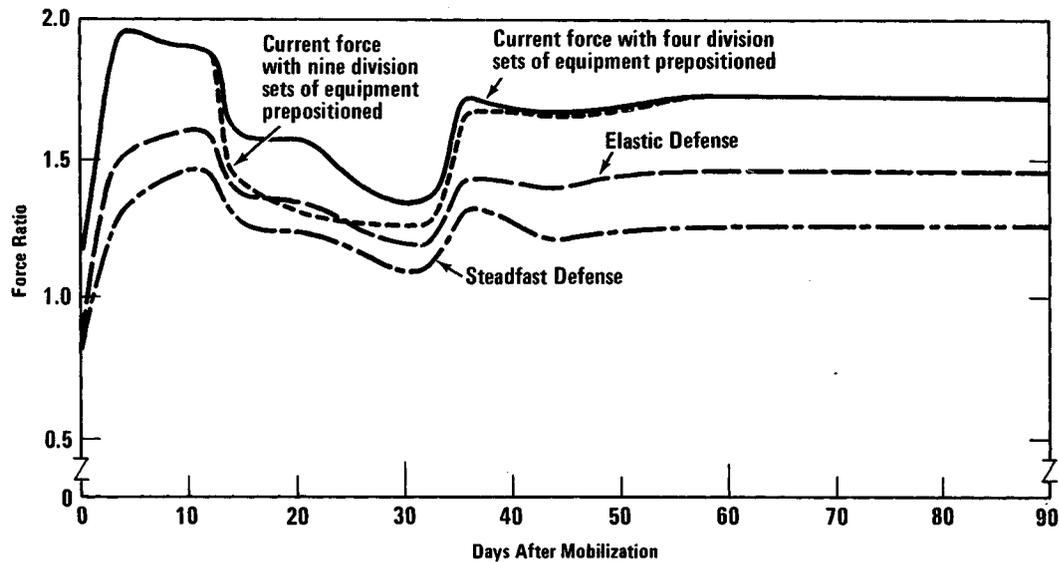
In designing a defense program for NATO and sizing U.S. ground forces, the principal decision is how much risk to take. As Chapter II points out, relying on nuclear weapons to offset the present imbalance in conventional forces would seem to entail a high risk, since the Warsaw Pact has improved its own nuclear arsenal. A modest increase in U.S. ground forces would diminish the risk somewhat by giving NATO the ability to conduct an elastic defense (defined in Chapter II) against a threat of 120 Pact divisions. A more ambitious increase in conventional forces would give NATO a reasonable prospect of halting a 120-division attack at or near the border and would better offset the risks. Figure 8 presents the effects on Pact/NATO force ratios of the alternative approaches discussed below.

Current Policy. The United States' present conventional forces are sized to defend NATO against a threat of 86 to 90 divisions, and it relies on theater nuclear weapons to deter or respond to greater threats. Current policy aims to increase from four to nine the number of divisions for which equipment would be prepositioned in Europe to speed the deployment abroad of divisions based in the continental United States.

Relying only slightly on the wartime intangibles mentioned in Chapter II and on the peripheral efforts outlined earlier in this chapter, such a force could conduct a successful conventional defense for about 35 days after a Warsaw Pact mobilization, assuming that NATO mobilized within four days of the Pact's mobilization. Beyond that time, if theater nuclear weapons had not deterred the Soviet Union from committing more than 90 divisions, this approach would rely very heavily on intangible and peripheral factors.

Figure 8.

Comparison of Force Structure Options for the Warsaw Pact/NATO Contingency: 90 Days Following Pact Mobilization



NOTE: NATO mobilization is presumed to lag four days behind Warsaw Pact mobilization.

Elastic Defense. To conduct an elastic defense, in which some ground may be traded for time, conventional forces are sized to defend against a 120-Pact-division threat. U.S. forces would be increased by the equivalent of two armored divisions with an appropriate share of nondivisional combat support. The other NATO allies would increase their armies by the equivalent of four fully supported armored divisions. These increases would permit NATO to achieve a theater-wide force ratio (measured in ADEs) no worse than 1.4:1 at any time after it mobilizes. The program for prepositioning equipment in Europe could be stopped at the end of 1980 when there would be enough equipment prepositioned for four divisions, because the increase in allied force structure would permit U.S. divisions to arrive later.

Under the best of circumstances, this option would enable NATO to maintain a homogeneous defense against an attack that came within 90 days of a Pact mobilization, assuming that NATO forces mobilized within four days of the Pact forces. A Pact attack

occurring within the first 30 to 40 days of mobilization would meet stubborn NATO resistance. If the Pact delayed its attack until sometime after day 35 of mobilization, NATO defenses would have to give up territory, but the likelihood that Pact forces could rupture the defenses would still be low.

To limit the manpower needs entailed by this option, National Guard infantry divisions could be converted to serve as nondivisional combat support units. National Guard divisions are not now maintained at readiness levels high enough to permit deployment within 90 days of mobilization; part of the problem is the lack of training time. Because nondivisional combat support units are smaller and require less training, they are better candidates for early deployment.

Even with its limited manpower needs, however, this option would raise the costs of recruiting enough personnel with the appropriate training and skills. The estimated costs are contained in the closing portion of this chapter.

The force increases required by this approach might appear antithetical to the Mutual and Balanced Force Reduction negotiations, but such need not be the case. Increasing the size of the U.S. Army would not directly affect the size of NATO forces deployed in West Germany. Increases for the other NATO allies' armies would be the only concern. Such increases, however, could be accomplished by forming units that would not become operational until after mobilization. Units designed along the lines of West Germany's Home Defense groups would include an active-duty cadre that maintains unit cohesion, but the remainder of personnel would not be on hand without the stimulus of an attack. Such units are not now a subject of the force reduction talks.

Steadfast Defense. By adding the equivalent of five U.S. armored divisions plus nondivisional combat units and six and one-half fully supported armored divisions to the forces of the other NATO allies, NATO could achieve a theater-wide force ratio of 1.2:1 against 120 Pact divisions while conducting a steadfast defense that would cost the alliance no ground. As in the elastic defense approach, National Guard infantry divisions could be converted to the needed nondivisional combat units. Similarly, the European allies could confine their force increases to home defense units to suit the terms of a force reduction agreement.

Moving this expanded U.S. force across the Atlantic to Europe within 30 days of mobilization would require improvements

in the United States' transport capability. These could be achieved by prepositioning in Europe sets of equipment for more than four divisions, by building more ships, or by buying strategic airlift planes. What means of transport, or combination of means, would be optimal requires detailed study. For illustrative purposes, this study assumes a combination of more equipment prepositioning and expansion of the sealift fleet. In particular, equipment would be prepositioned for a total of six divisions, and 16 additional fast roll-on/roll-off ships would be needed.

The personnel added to the U.S. Army for this steadfast defense would increase Army manpower by about 115,000 by fiscal year 1986. Rough estimates of the added costs of recruiting these personnel are given below. It must be noted, however, that Army strengths at the high end of the spectrum exceed all experience under the current all-volunteer force. Thus the difficulties and costs of meeting such recruiting goals are highly uncertain, which suggests that this option might require the Congress to consider Army manpower policies other than the all-volunteer approach.

The Non-NATO Contingency

At present, the most demanding non-NATO contingency, as Chapter IV indicates, involves the Middle East. In this area, the major choice for the Congress is whether to fund a capability to counter Soviet aggression against a country such as Saudi Arabia or to continue with the current and quite substantial capability to help Gulf states maintain stability and defend themselves. Whichever choice were made, the quantity of ground combat forces in the Army and Marine Corps would not change. The differences between the two objectives are that the counter-Soviet force would have more mobility assets to move forces to the Gulf region quickly, and it would have more support forces available to sustain operations without using those allocated to NATO's defense.

Collective Security Force. With collective security in the Middle East as an objective, the United States would maintain a capability to demonstrate quickly its commitment to the defense of a country. The forces necessary to accomplish the defense, however, would be gathered from the various nations with interests in the region. In particular, the threatened nation would have to provide a significant portion of its own military defense; the United States would offer only a share of the military capability needed. But that share would have to be able to enter the area quickly.

U.S. forces are already equipped to make such a quick display of commitment, but it would require two weeks to reinforce the initial elements, a hiatus that could be critical. Within 48 hours, the United States could deliver 3,300 combat troops to the area. Within another seven days, some minor reinforcements (some 2,200 troops) could be delivered. Something between one and two weeks would elapse before two fully supported brigades (20,000 troops) could arrive.

The arrival of troops could be accelerated by deploying a Marine amphibious brigade in the Indian Ocean and maintaining a base for it on the island of Diego Garcia, which is within about five days' sailing time of the Persian Gulf. Therefore, the full brigade could easily be available within about a week. With such an enhancement, the current capability (24,000 troops within two weeks) ought to be sufficient to man the U.S. share of a collective security force, assuming there were no conflict with the Soviet Union.

Conflict involving the Soviet Union could raise questions about the adequacy of current U.S. capability to contribute to Middle Eastern security. Such questions are affected by what scenario is envisioned. If the threatened country is one that shares a border with the Soviet Union and that is weakened by internal dissent, then there would be little that the United States could do. If, however, the country could resist Soviet aggression for some period, then there would be time for a collective security force to help; in such a case, current U.S. capabilities could suffice.

Unilateral Counter to Soviet Aggression. As observed in Chapter IV, the United States could unilaterally counter Soviet aggression only if that aggression were directed against a state not contiguous with the Soviet Union. If the Soviet Union had to rely on air and sea routes to project and sustain its forces, U.S. air and naval forces might well be able to limit the size of the force the Soviet Union could emplace and curtail delivery of Soviet supplies. Together, the two constraints could enable U.S. ground forces to counter a Soviet attack.

To be successful in such an effort, the United States would have to be able to deploy a substantial and fully supported combat force. The current force deploys too few troops with too little armored or mechanized capability, and it would have to draw on support forces allocated to NATO. The proposed Rapid Deployment Force would acquire the ships and planes needed to allow

delivery of a large, fully supported force, but it would not bring the needed support forces nor the necessary mechanized equipment.

As the RDF is currently envisioned, it would contain the needed armored and mechanized forces and support elements only if forces needed to defend NATO were drawn upon. The armored and mechanized forces needed for NATO could be replaced by U.S. Marine forces, but in their current configuration, those forces are not well suited for combat in Europe: they have too few tanks and no infantry fighting vehicles. 3/

To have a complete capability to counter Soviet aggression unilaterally without drawing on NATO forces would require some expansion of present support forces as well as conversion of Marine units to armored or mechanized configuration. Some 50,000 to 60,000 support personnel would have to be added to the active-duty force. Conversion of the equivalent of a Marine division to lightweight armored or mechanized configurations would give almost the same capacity as that planned for the RDF without using an Army division. Thus, that would seem to suffice.

FORCE OPTIONS FOR 1 AND 1/2 WARS

The options outlined in this section for sizing U.S. ground forces involve a combination of NATO and non-NATO objectives. The first, and least expensive, choice involves a high level of risk in both the NATO and non-NATO contingencies. The converse is true for the highest-cost choice. Four intermediate options illustrate different admixtures of cost and risk.

The six options vary enormously--from \$5.9 billion to \$80.3 billion over an eight-year span--in the costs they would entail above those of continuing the operation of current forces under today's policies. (In fiscal year 1981, the Defense Department has allocated approximately \$50 billion for U.S. ground forces and the ships and planes to move them.) Table 8 presents CBO's projections of these possible additional costs.

3/ The President's authority to call reservists to active duty could be used to offset somewhat the risk associated with using NATO support units in the non-NATO contingency.

TABLE 8. PROJECTED COSTS OF SIX U.S. GROUND FORCE ALTERNATIVES ABOVE CURRENT DEFENSE SPENDING LEVEL: 1982-1989 (In billions of constant fiscal year 1982 budget dollars)

Cost	Options					
	I	II	III	IV	V	VI
Initial Investment	3.1	10.5	21.4	28.8	28.8	49.2
Total Annual Operating Costs, 1982-1986	1.6	3.9	6.0	9.7	7.4	11.0
Total Recurring Annual Operating Costs, 1987-1989	<u>1.2</u>	<u>4.2</u>	<u>9.6</u>	<u>10.8</u>	<u>11.7</u>	<u>20.1</u>
Total Costs by End of 1989	5.9	18.6	37.0	49.3	47.9	80.3

SOURCE: Congressional Budget Office

Option I: Continue the Current Program of Shortening Reinforcement Time for NATO and Improve Capabilities in the Gulf Region by Basing a Marine Amphibious Brigade on Diego Garcia

This option would provide a force sized for the Administration's current NATO policy (that is, to confront a Pact threat of some 90 divisions and rely on nuclear weapons to counter larger forces) and the collective security objective for a non-NATO contingency. No increase in force structure would be required, but equipment would be prepositioned in Europe for five more Army divisions (for a total of nine) and a base established on Diego Garcia for a U.S. Marine amphibious brigade. These changes to the U.S. military posture would cost \$5.9 billion over the eight-year period fiscal years 1982-1989. 4/

4/ Cost discussions include not only the pay and allowances for manpower at 1981 pay rates, but also costs to recruit added personnel. These increased recruiting costs assume that

With this option, all Army divisions based in the continental United States could be delivered to Europe within 10 days of a decision to move. This should enable NATO to conduct a stubborn but elastic defense against 90 Warsaw Pact divisions. NATO would have to rely on nuclear weapons either to deter the Soviet Union from committing more of its conventional forces or to defend against newly committed Soviet forces.

For the non-NATO contingency, the three U.S. Marine divisions would serve as the force reservoir for the collective security force. Geographical dispersion of the divisions should permit satisfactory response time to most 1/2 war contingencies. Deploying a Marine amphibious brigade in the Indian Ocean and maintaining a base for it on Diego Garcia would allow the brigade to be in the Gulf region within one week instead of two.

For Europe, the merits of this option rely on the effectiveness of NATO's nuclear weapons and the speed of its conventional reinforcements, combined with a failure in Warsaw Pact unity. In the Middle East, current U.S. capabilities would have to deter direct Soviet aggression in all instances except when local political conditions were such that even the full capabilities of the RDF would not deter Soviet aggression.

enlistment bonuses made available for scarce recruits would be used to meet higher recruiting goals; use of across-the-board pay raises or other approaches could cost substantially more. The added costs also make assumptions about Army personnel policies. The ratio of officers to enlisted personnel is assumed to remain constant at current levels, as are numbers of recruits who are female or who have prior military service. For male recruits without prior military service, the Army is assumed to meet the targets for test scores mandated by the Congress. The added costs also assume that the proportion of male recruits holding high school diplomas remains at about 55 percent, which is the average level experienced since the all-volunteer force was introduced. The costs in this study do not include any that might be needed to increase the size of the Army career force, which could be desirable under some options. (For further discussion of manpower issues, see Congressional Budget Office, Costs of Manning the Active-Duty Military [May 1980], and also an overall review of manpower and other defense issues forthcoming in 1981.)

Options II-IV: Enhancing Capabilities for Either a NATO or Non-NATO Contingency, But Not Both

Relying less on confidence in the effectiveness of nuclear weapons as a deterrent in Europe, Option II, costing \$18.6 billion over eight years, would emphasize improvements to NATO capabilities. The U.S. Army would be increased by the equivalent of two fully supported armored divisions. Assuming that the NATO allies made comparable force increases, an elastic defense against 120 Warsaw Pact divisions would be possible, and there would be no need to go beyond prepositioning equipment in Europe for four U.S. divisions. As is the case with Option I, for the non-NATO contingency, deploying a Marine amphibious brigade on Diego Garcia would enhance the U.S. capability to respond to Middle Eastern collective security demands.

For nearly twice the sum, Option III, costing \$37.0 billion over eight years, would put greater emphasis on improving non-NATO capabilities but would still depend on a nuclear deterrent in Europe. This option would fully fund programs proposed by the current Administration, including the RDF, and it would comprise all elements needed to make those programs satisfy stated objectives. By acquiring ships and planes to speed the movement of U.S. forces, buying lightweight tanks and infantry fighting vehicles to give the Marines a better capability to fight armored formations, and adding the support forces needed in an encounter with Soviet forces, the United States would have the capability unilaterally to counter Soviet aggression against a noncontiguous or remote state such as Saudi Arabia. NATO capabilities would be improved by fully funding and expanding the current program of prepositioning equipment for U.S. Army divisions in Europe. The risk of failure of a conventional defense of Europe would persist, however, leading to early resort to nuclear weapons, because the Pact forces could achieve superiority within about 35 days of mobilization.

Option IV, costing \$49.3 billion over eight years, would obviate the need to rely on a nuclear deterrent in Europe. It would trade off the unilateral ability to counter Soviet aggression in the non-NATO contingency in exchange for the U.S. share of the additional forces NATO would need to conduct a steadfast defense against 120 Warsaw Pact divisions. The U.S. Army would be increased by five fully supported armored divisions; assuming that the NATO allies made comparable force increases, NATO could defend Europe without giving up territory. To assure the timely arrival and deployment of U.S.-based divisions, equipment would be pre-

positioned in Europe for a total of six divisions and eight additional fast roll-on/roll-off ships acquired. For the non-NATO contingency, as in the above options, a Marine amphibious brigade based on Diego Garcia would be deployed in the Indian Ocean.

Options V and VI: Significantly Improving Capabilities for Both the NATO and Non-NATO Contingencies Simultaneously

Like Option III, both these options would achieve the capacity unilaterally to counter Soviet aggression in a noncontiguous state while making substantial improvements in NATO capabilities, as would Options II and IV. For the non-NATO contingency, this option would acquire the same assets as Option III.

Option V is the lower-cost of these two options, at \$47.9 billion over eight years. It would add the equivalent of two fully supported armored divisions to U.S. forces for NATO. With comparable buildups of other allies' armies, it would enable the alliance to conduct an elastic defense against 120 Warsaw Pact divisions without resort to nuclear weapons. This option would not involve repositioning equipment in Europe for more than four U.S. divisions.

Option VI is the highest-cost, lowest-risk option; its cost would be \$80.3 billion over eight years. For the NATO contingency, it would add the equivalent of five fully supported armored divisions, which would constitute the U.S. share of the additional forces needed for a steadfast defense against 120 Warsaw Pact divisions. Assuming that the other NATO allies who defend the Central Region would also add their share of forces, NATO would gain the capability to defend itself without resort to nuclear weapons or surrendering any appreciable ground. Equipment for six divisions would have to be prepositioned in Europe and 16 additional fast roll-on/roll-off ships acquired to assure delivery of U.S.-based divisions within 35 days of a Pact mobilization.

Choosing Option VI would be consistent with the views that war in Europe is best deterred by having both a conventional and a nuclear force balance; that secondary initiatives could not successfully limit the Warsaw Pact threat to 90 divisions; and that political boundaries in Europe must be preserved, not restored. For the non-NATO contingency, Option VI would concur with the judgment that today's capability of 24,000 troops within two weeks' time would indeed be inadequate to deter Soviet aggression in the Gulf region.

